# The Worshipful Company of Engineers (Incorporated by Royal Charter 2004)

# **The Swordsman Newsletter**

















August 2006 Issue 16

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### **COVER PHOTOGRAPHS**

Top Left	Polesden Lacey. Even now the Clerk's lady is working!
Top Centre	At the Black Country Museum.
Top Right	Pamela investing Mary with the Master's Lady's Brooch.
Centre	Clandon Regis Golf Club.
Bottom Left	Flowers and Loving Cup at the Brooch Lunch.
Bottom Centre	Legging the Barge through the Black Country Tunnel.
Bottom Right	The Master in Cornwall.

### FORTHCOMING EVENTS

14 – 17 September	Out of Town Meeting	Cornwall
29 September	Election of Lord Mayor	Guildhall
4 October	Ladies Luncheon	Armourers & Braziers' Hall
27 October	Annual Banquet	Mansion House
11 November	Lord Mayor's Show	
13 December	Carol Service	Tower/Carpenters' Hall
23 January 2007	City Visit	Old Bailey/Cutlers' Hall
27 January	<b>Election Court Service and Dinner</b>	Wax Chandlers/St Vedast
23 March	United Guilds Service	St Paul's Cathedral
24 April	Common Hall and Installation	Plaisterers' Hall

### **EDITORIAL**

Barely a week goes by without there being some activity of the Engineers' Company. In this sixteenth edition of The Swordsman I have included reports on most of these and on the previous page I show the attractive programme for the next few months. It is your loss if you do not join us. The Master has given a report on some of his activities in June and the Master's diary seems to have got even busier in the four brief years since I was Master.

It is also four years now since I was elected to the Livery Committee which is the link between the various Livery Companies and the City of London Corporation. One of the Committee's responsibilities is the City Briefings which are held three or four times a year. These are intended to assist Liverymen and Freemen in understanding the work and workings of the City and their relationship to it. They are particularly aimed at new Freemen and Liverymen but wives, husbands and partners are also welcomed.

Thes Briefings run from 5:00pm until 7:00pm and are followed by a buffet. The next dates fixed are 5th October 2006, 14th November 2006 and 13th February 2007. If you would like to go or would like more information contact the Clerk or Gillie Hayes of the Wax Chandlers' Company who organizes the events on 020 7606 3591 or <a href="mailto:liverycourses@chandlers.ndonet.com">liverycourses@chandlers.ndonet.com</a>. If you have not been on a course do try to attend one – where else will you get a free buffet!

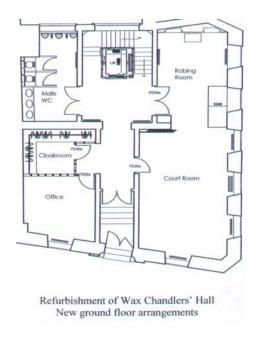
Thank you once again to all the reporters who give so much colour to their reports. If I have missed asking some one who is burning to use their literary talents please do let me know. Also do not forget to let me have your feedback.

Raymond Cousins

### THE CLERK'S CORNER

The Engineers' Company has been successfully embedded in Wax Chandlers' Hall for just over 4 years now and it has been a good HQ arrangement for us. It will be even better soon when the Hall itself completes an internal refurbishment. However, there is some disruption scheduled in the meantime, which, when you look at the Events Calendar, is why a number of our usual Livery events here have either been curtailed temporarily or relocated to other halls.

The internal refurbishment of Wax Chandlers' Hall, costed at over £0.5M, is due to begin in August and will last until Christmas. It will complete an overall process of work on this historic building whose external elements were upgraded in 2004. At the heart of the work is the enlargement of the lift shaft and replacement of the lift itself which needs to comply with disabled users requirements by becoming full-size for wheelchairs. There is already a new WC for disabled users in the basement which will be reached by the new lift. The new lift pit is expected to cut through the foundation of the medieval brew house which stood on the site and archaeologists believe an



east-west Roman road runs across or near to this proposed pit. The Hall's stairs around the lift shaft will be given stone paving and the stair window enlarged.

Most visible internally will be the changes to the ground floor and internal entrance area. A ground floor plan is attached to show that the Court Room wall is to be removed to produce a much longer room more suitable for pre-dinner receptions. The room area currently occupied by Sion College, who are moving, will become a proper cloakroom and there may be a small meeting room facility available too. The male WC will be completely refurbished as will the ladies' on the first floor. All the doors in the public part of the Hall will be enlarged for wheelchair access and the refurbishment will incorporate a number of features to make the building more energy efficient.

All the fittings in the public rooms of the Hall will be updated for fittings and redecorated in a consistent style; the Livery Hall (dining room) will an audio loop system installed. Original William IV furniture has been purchased to increase the Hall capacity to 68 for dining. Overall, the Clerk of the Wax Chandlers tells me this is the first major internal expenditure in 30 years on the Hall and the intention is to produce a wellbalanced corporate facility that retains the heritage of their building. Our Company will of course benefit from this in the long run but in the near term spare a thought for Stephen and me in the midst of the building contractors for this autumn and be forgiving over any disruption that it may bring to our service. As an aside, I have asked for a discount on our rent over this period when the full utility of the Hall is reduced.

Turning now to other matters, I always brief new Liverymen on the dress code for our normal City events and I thought that it might be worth a short general refresher on this. Firstly, for gentlemen, when the dress is 'black tie', this literally means plain black for the bow ties and the jacket with a white, not coloured, shirt. When the dress is 'white tie', this means a black evening tailcoat worn with a white waistcoat and white tie. Should we request white tie at the Mansion House, for example, we would invariably offer a black tie alternative as acceptable in the Company's event calling notice. For ladies, there are no formal rules and I do not attempt to venture into this dangerous area but usually shirk the issue by saying, 'the equivalent for ladies' after the gentleman's dress

announcement. Additionally, if the event calls for 'decorations' then these would be those given by the State as insignia of orders or medals for gallantry; 'badges' mean those associated with Livery. I hope that this is of help but, in the event of doubt, just give our Office a call and we can advise appropriately to avoid any potential embarrassment.

Although it seems a long time ahead, the year 2008 is one that will include the 25<sup>th</sup> Anniversary of the Company. The Programme Committee is already beginning to put a shape on to the year's activities including a livery dinner at Ironbridge on 13<sup>th</sup> September 2008 but have asked me to say that they would welcome ideas from members for any more special events in the year. Junior Warden, Chris Price, is Chairman of the Committee and he would be pleased to hear from you on this or, indeed, any other topic associated with our future programme. In this context of general ideas, Liveryman Don Ives has suggested that a Classic Car section is formed and if anyone is interested in setting this up and running it with him, please contact Don direct.

Finally, Stephen and I wish you all a relaxing Summer and that you are then ready to enjoy our events of the Autumn season.

Graham Skinner

# INSTALLATION COURT AND COMMON HALL 25 April 2006

The Installation Court and Common Hall were held for the first time at Skinners' Hall this year. After the first short general business of the Court, this meeting was adjourned to the large Court Room where the Court was joined by many Liverymen and guests. Four Freemen were invested with the Livery and welcomed into the Company and their photographs are included in the Personalia Section at the end of this edition. This was the first time that the Investiture had been made entirely in public. It was quite a strain on the Clerk who had to introduce the large Court individually to the new Liverymen. The Master then gave a brief talk about the Livery and the City and encouraged the new Liverymen to support the Company's Charitable Trust.

The Master then opened Common Hall and gave his report on the year which is printed below.

After the approval of the accounts, the Clerk announced the results of the ballot for new Court Assistants. Air Vice Marshal Patrick O'Reilly, Mr David Scahill and Dr. Clive Walker made their declaration and were welcomed to the Court by the Master. Their photographs are also in the Personalia Section.

The Master then announced the results of the Election for Master and installed Commander Bryan Gibson MBE as Master for the year ensuing to great acclamation.

The new Master's first task was to announce the results of the election for the Wardens and he duly installed Rear Admiral David Bawtree, CB, DL as Senior Warden, Mr Tony Roche, FREng as Middle Warden and Mr Chris Price, FREng as Junior Warden. To quote Chris Price, it's rather like entering Noah's Ark as two Naval Officers are followed by two former Presidents of the Institution of Mechanical Engineers.

Common Hall was then closed and everyone moved to the reception room for a celebratory glass and to welcome yet more guests to the reception and dinner.

At the start of Dinner the new Master presented the Immediate Past Master, Bob Hawley, with his own Goblet so that he could begin to enjoy his retirement and we then settled down to an excellent repast. At the conclusion the Master welcomed all the guests and the City Remembrancer, Paul Double, wittily responded telling us much about the working of the renamed City of London Corporation.

Raymond Cousins

# THE MASTER'S SPEECH AT COMMON HALL

It is a requirement of the Constitution of our Royal Charter that we report each year, through what is in effect an Annual Report and at an AGM, on the status, progress and work of your Company against its objectives, so I will deal with the financial year ending on 31st December 2005.

Because the Master is installed in April this is in effect a joint report from the Immediate Past Master, Major General Ted Wilmot and myself. Don't take this to mean I will pass any awkward questions to Ted - these will be answered by the Clerk!

But right at the start I would like to thank Ted for

passing on to me an efficient, and on some occasions a well oiled machine, and a team of excellent people.

Thanks to all the hard work put into the Company by previous Masters, each of whom made a significant contribution to the progress of the Company, it has been an excellent year in the life of a new emerged Company.

We recruited 35 new Members, including our first new Freeman at CEng level, taking our total membership to 311 against a total of 297 at the same time the previous year, a true indication of the spirit of the Company. In fact at the clothing in

February we clothed a record number of 7 new liverymen.

You have all received the Annual Report so I will not dwell on details but cover some highlights.

We saw the first full cycle of nominations and a ballot for Candidates for the Court.

Under the competent control of The Clerk and the Beadle the administration of the Company's procedures ran smoothly in every sense, including changing our bank to the Royal Bank of Scotland.

We are now well settled in to the Wax Chandlers Hall, where the location is a great asset particularly to the Master when the Guildhall becomes a second home and St. Paul's his parish church. We are most grateful to our Landlord, The Master of the Wax Chandlers.

Our ability to communicate with the Livery and the City was professionally carried out by our Company Webmaster, David Mitchell, and through several printed editions of the Swordsman, under the new Editorship of Raymond Cousins; both of whom deserve our grateful thanks. No one is safe from Raymond in his quest to get articles.

The Court and its Committees worked hard in the year and their activities are highlighted in the Annual Report. The results of a questionnaire indicate a higher degree of satisfaction for our activities.

We decided to change the timing of our Annual Out-of-Town Meeting to relieve calendar congestion at the end of the year and allow the Master to meet more people part way through his year and this move also evened up the work on The Clerk's Office. So we held two such meetings last year. The first under Ted to Chatham in April and mine to the North East in September. Both events were a great success. Such events are very valuable as we often see Liveryman and their Partners who are unable to attend our City functions. Having read the last Swordsman newsletter I was delighted to discover the literary talents of so many of you. All the little cameos brought back treasured memories.

Amongst our "other" formal events were the

Awards Ceremony and the Annual Banquet at the Mansion House, when alongside many others, we had the pleasure of the Company of the Lord Mayor, the Lady Mayoress, the Sheriffs and their ladies and the Korean Ambassador and his charming wife in National Costume.

At the Ladies Luncheon the guest, Baroness Pauline Perry gave a fascinating talk. The Wardens lecture on the topic of Red-R and then the Carol Service, were all well attended and very happy occasions. We had the honour of Dame Judith Mayhew Jonas presenting the Bridge Lecture, 'The Arts, Engineering and Technology' as a joint event with City University.

In addition to the River Cruise, other less formal events included a visit to the Guildhall Art Gallery, a lecture on the history of the London Bridge, a dinner to watch fireworks after the Lord Mayors show and the Annual Golf Match. Two informal lunches in the Cotswolds, organised by Penny Taylor, set an excellent precedent for similar events in the future.

Now, as Chairman of Trustees, I would like to turn to the Engineers' Charitable Trust Fund which has had a good year overall. The full accounts of the Trust are approved and these will be filed with the Charity Commission as usual, but copies can be requested by Liverymen from The Clerk if required.

In essence, the Trust Fund ended the year with fund balances of just over £351,000 representing an increase of around 23.5% on the year before. About a quarter of this increase was the result of the drive started by Ted, to raise money for our Charitable Trust Fund by encouraging individual liverymen to make one-off donations and to increase their annual giving. In fact, donations increased by almost 50% and my thanks go to everyone who so generously contributed over the year through their regular contributions or into the plate at our 2 church services - but The Clerk tells me we can always do better and he will facilitate direct debit forms for The Trust Fund later. The other element of the increase came from closer attribution and control of our costs, plus market value improvements and healthier returns on our investments, which are in a Common Investment Fund with JP Morgan

Fleming. The result was that, under the scrutiny of the Charity and Grants Committee, we had sufficient income in the year to fulfil the main objects of the Trust. Firstly, to encourage engineering professional education with our full range of annual Company awards the prizes were presented publicly at our Awards Dinner at Haberdashers' Hall on 12<sup>th</sup> July 2005. Our second object is to help relieve poverty and hardship. This was applied to specific individuals, who might for example, have been unable to complete their engineering degrees at UK universities for financial reasons or, more generically and globally, in the support of RedR/IHE (Engineers for Disaster Relief/ International Health Exchange) of which we are their only livery company patrons amongst 18 leading organisations. We also gave modest donations to other general charities as well, such as the British Legion Poppy Appeal and to the Mansion House Scholarship Scheme to name but a few.

Within the overall Trust funds, those that are restricted for specific awards are in generally good health too and, in this category, as my gift to the Company I decided to found a prize, "The Fiona and Nicholas Hawley Award for Excellence in Environmental Engineering." This will go to a recipient who is under 30 and a resident of the UK and is a postgraduate in a technology discipline. The first award will be in 2007.

Originally I set a target for the Capital at £50K so as to be able to award a significant prize of at least £2500. In the event, thanks to support from a great number of good friends and in particular members of the Company I have so far raised a total of £88K towards a new target of £100K

Significant contributions so far have come from:

Astra Zeneca
BP International Ltd.
British Energy Group Plc.
Fidelity Management I.E.T. Ltd
Dr. Robert Hawley
Laing Plc.
HSBC Holdings Plc
RWE npower
Scottish Power
Shell Exploration and Production
The Society of Environmental Engineers (who will be part of the judging panel)

The Go-Ahead Group Plc. (A Liveryman who does not wish to be named) AMEC Plc BSI Costain Plc. **ETB** National Grid Plc. RWE Thames Water Plc. The Water Conservation Trust Aliis cum Humanitate EC (UK) I.A.C. Ltd. Keir Group Plc VT Group The Royal Academy of Engineering The Worshipful Company of Water Conservators

I have read this list out because now all these organisations know our Company that much better which was one of my objectives as Master and they will be reminded of it annually.

Weir Group Plc



The Past Master Investing the New Master

Pamela and I have had the privilege of representing your Company at many events in the City, a privilege we deeply appreciate.

It has also been a privilege to work with the court and to be able to express our thanks to the Clerk and, in particular Margaret his wife, the Beadle and the team of Wardens who have so ably supported me in my year in office.

We have drawn particular strength from the friendship of our Honorary Chaplain, Michael West. Some time ago I said he was also such an

able businessman that we could swap jobs. His response was, "Fine. - I have two christenings to conduct tomorrow."

One thing I have relearned in my year of office is how good Pamela is at writing and giving speeches. I should have known because years ago when I was promoting the nuclear cause (as if I have ever stopped) a PR firm wrote a speech for me. She saw it on the Sunday morning before it was to be given on the Monday. She completely rewrote it and it was a great success. You should have seen her face when the Head of the PR firm said he was so proud that his people could write such a brilliant speech.

In the two year period prior to my year of office and particularly during my year, Pamela has been a most wonderful supporter and I would like to thank her in public for all her work, kindness, help and, at times, putting up with my stressful moments.

So you see, it has been a busy and happy year and we thank all of you present for making it so.

I will now take questions before I hand you over to the Master Elect for a review of our Company financial accounts.



New Master, Commander Bryan Gibson presenting a Past Master's Goblet to the Immediate Past Master, Robert Hawley

# THE NEW MASTER'S SPEECH AT DINNER

Wardens, Masters, Prime Wardens, Chief Commoner, Mr Remembrancer, Ladies and Gentlemen.

A very warm welcome to Skinners' Hall and to our Installation Dinner. We thank the Master & Wardens of the Skinners Company for the use of their beautiful Hall. May I particularly welcome all the personal guests of our Liverymen and the partners of our official guests and also the four new Liverymen who were clothed earlier this evening. Over the years I have often been asked why the Livery movement has continued and flourished in London whereas only a limited number of Companies, such as the Cutlers in Hallamshire, have survived in other cities. I believe the answer can be summed up in one word 'relevance'. The modern Livery Companies have been formed because their trades and professions have seen positive advantages in being represented within the square mile.



The New Master, Commander Bryan Gibson

Twenty three years ago we were the junior company at number 94 but now 13 other companies are below us in the order of precedence. However, there hasn't always been an expansion and in the past companies have merged or even died away for example Starch-makers, Hatband-makers, Pursers, Pinners, Maltmen, Galoche-makers, Viginal-makers and Heaumers (The heaume was a massive helmet).

Over the short time of our existence, I believe we have clearly met our objective 'to promote the development and advancement of the science, art and practise of engineering'. In this we have had the support of the Royal Academy of Engineering

and the engineering institutions. I am particularly pleased to welcome Dr. Richard Dolby, the President of my own Institution The Institute of Materials, Minerals & Mining and to be able to thank the Institute for all their support over the years when I combined being on the staff of the Institute with being Clerk.

Throughout the 70's I was also very involved with the Institution of Nuclear Engineers as a member of Council, Chairman of the Membership Committee and a Vice-President from 1976-78 so it is also a pleasure to welcome the Vice-President of that Institution, Dr. Edmund Morgan-Warren. My links with the Institute of Marine Engineering, Science & Technology are rather more tenuous but their Director General and I did serve together in the Royal Navy so I am pleased to see Keith Read here tonight. Our relevance to engineering was clearly demonstrated in 2004 by being the first Livery Company in 47 years to be awarded a Royal Charter which owes a great deal to the assistance and encouragement of the Clerk to the Privy Council and I am personally delighted that Alex Galloway is with us tonight. (I am, of course, aware that another Livery Company received its Royal Charter on the same day but I am reliably informed that ours was approved first).

In drafting a Charter and Ordinances, words are important and the fewer the better which reminds me of the story of two religious leaders fishing by the side of the road. As each car passed they held up a sign which read, "The end is near! Turn yourself around now before it is too late!" The sign annoyed one driver, who drove by shouting "Religious nuts". Shortly afterwards there was a great splash. One religious fellow turned to the other and said, "I wonder if we should have written "Bridge Out" instead?

The next way in which Livery Companies are relevant in today's society is in their charitable activities. Any group aspiring to the grant of livery has to have a substantial Charitable Trust Fund and most Liverymen are aware of not only the charitable activities of their own company but also the enormous contributions made collectively each year by all the livery companies. But if they are to receive on-going support, our charitable activities have to have the support of our Livery. Successive Masters have found how difficult it is to raise additional unrestricted funds whereas funds for

specific projects are more forthcoming. Those of you who attended Common Hall earlier this evening will have heard of the success of the Immediate Past Master in raising very substantial funds for the new Fiona & Nicholas Hawley Award for excellence in environmental engineering. Is it too simplistic to see Bob's success as being due to the relevance of the new award.

We have, over the last two years, been reviewing all our awards and prize funds to ensure that they continue to meet the current situation and some of the results of this review will be obvious at our Awards Dinner in July. We did have one award fund where, due to changed circumstances, the monies could no longer be used for the original We were fortunate in being able to consult the original donor with the result we have been able to create a new Heritage Engineering Award which will be made to an individual or that has made organisation a significant contribution to the understanding and development of engineering through the interpretation of historical sites or processes preferably as part of an education programme. This Company has, from its inception, been involved with the Ironbridge Gorge Museum which is visited annually by over 50,000 school children on educational visits in which a study of the past does much to attract engineers of the future. During my year we will also be visiting the Black Country Museum and the Geevor Tin Mine in Cornwall both of which also have their own educational programmes. I will therefore be looking at ways of attracting funding for the new Heritage Engineering Award so that we can give further encouragement to educational activities in this field. One of our main charities is Red-R (the Register of Engineers of Disaster Relief) and I am sure that the generous support of the Livery for this charity reflects the relevance and necessity of this body.

Thirdly and finally, the Livery Companies have survived and prospered because of the very close connection with the City of London and its governance which is certainly unique within the United Kingdom. As Liverymen we still elect the Sheriffs and nominate two Aldermen for election as Lord Mayor. My wife and I have chosen the theme for our year as "Engineers and the City" as we believe that as a Livery we still have much to learn about the City. But firstly may I welcome the Masters of the Plumbers' Company, the Turners'

Scientific Instrument Makers' Company, the Company the Environmental Cleaners' and together with the Prime Wardens of Blacksmiths' Company Shipwrights' and Company. All companies with which we share many professional interests. I have also enjoyed welcoming the Learned Clerks of these Companies many of whom I had the pleasure of working with over the years. And a warm welcome to the Master Woolmen who is here as the private guest of Past Master Raymond Cousins.



Mr Paul Double, the Remembrancer

I am delighted that Annie Gale, the Principal Assistant to the Rt. Hon. The Lord Mayor is with us Annie has had the unenviable job of tonight. managing the Lord Mayor's diary for over 20 years and I always found her help and advice invaluable. It was a real pleasure when I found her name just above mine in the same honours list. It is also a pleasure to welcome the Chief Commoner, Mr. Gerald Pulman. And so finally to our principal guest, Paul Double, the Remembrancer to the City of London. I believe this is the first time that we have ever entertained the Remembrancer so you are, Sir, particularly welcome. As a Company we have embraced many of the traditions and customs of the City but I suspect the office of the Remembrancer, one of the City's Oldest & High Offices, is perhaps the least well known. So we

look forward, Mr. Remembrancer, to hearing about your office and its duties.

I therefore ask all members of the Company to join me in the toast "Our Guests".



The new Master, Commander Bryan Gibson and Mrs Mary Gibson

### LADIES BROOCH LUNCH

### 26 April 2005

The Brooch Lunch on 26 April was a lovely relaxed occasion which all the Ladies enjoyed after having been to the formal Installation Dinner the previous evening.

We assembled for a glass of champagne in the Wax Chandlers' Hall before taking our places at the table. The Immediate Past Master's Lady, Mrs Pamela Hawley, asked us all to stand for a minute or two to remember Jean Turner who died very suddenly on 22nd April. Jean was a Past Master's Lady and a most kind and generous friend to us all. She will be greatly missed.

After a delicious lunch of prawn and crab salad, followed by tasty duckling and a chocolate pudding, we raised our glasses to the Queen. Mrs Pamela Hawley looked back over the past year, which had gone all too quickly. She emphasised that our Livery has the reputation of being one of the most friendly and she passed on her thanks to Stephen Grundy, the Beadle and to Graham Skinner, the Clerk. She then gave special thanks to Graham's wife, Margaret, who had been such a great friend and support throughout the year. After presenting Margaret with a beautiful bouquet of flowers, she then wished Mary Gibson every success for the following year which was already under "well under way" after the previous night's dinner. She also hoped that Mary would take time to enjoy it all! After a splendid speech, Pamela handed the Ladies Brooch to Mary.



Pamela Hawley and Mary Gibson

Mary than rose and said how difficult it would be to follow Pamela after her splendid year and thanked her for all her kind words. She then performed her first function by presenting Pamela and the PastMaster's Lady's Brooch which had been so kindly donated by David Mitchell.



Mary Gibson

The tradition of this lunch started 12 years ago when Joan Clerehugh invited the Past Master's Ladies to a very special lunch at Kew. Since then we have been entertained at the House of Lords and Carlton House Terrace. Our home for the past three years has been the Wax Chandlers' Hall, so we ladies have had quite a memorable history with much tradition.

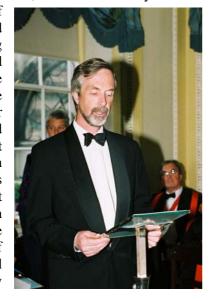
After the speeches and such a happy occasion we all had an opportunity to say farewell to our friends before wending our way home.

Cynthia Hammersley

# THOUGHTS OF THE JUNIOR LIVERYMAN ON BEING INVESTED WITH THE LIVERY

Looking at the rich diversity of eminent Engineers within the Worshipful Company, I was reflecting on what I would have in common with them. Now I have two certain things: being, even if only for a few seconds, the newest Liveryman and

the experience of the ceremony and emotions of being clothed admitted to the Livery. Everyone will have had their own thoughts and feelings at that precise moment in their lives. Perhaps in sharing mine it will remind even the most venerable amongst you of your own special moments on entry into the Company.



Andrew McNaughton making his declaration

Some of my feelings were predictable but some were quite unexpected. Take the latter; having faced the world's media, jousted with John Humphries on "Today" and addressed endless conferences, what I absolutely did not expect was the feeling of trepidation, developing nicely into terror, as I approached the lectern to read out the Declaration! Of course part of it was not wanting to let down my Supporters, all of whom were present (thanks Tony, Yvonne and Richard); but the fact that the Clerk had helpfully decided it would be good to perform the clothing ceremony "in public" in front of the company assembled for the AGM and Installation ourt added a certain frisson. And my three fellow new liverymen, led off by my old friend Jean Venables, hardly helped by performing flawlessly before it was my turn.

Leaving fear aside, there was something rather deeper, very special, of being accepted into a group which is beyond the everyday world of pecuniary or career positioning. In the moments before the ceremony my mind went wandering over some of the gently stern words our Clerk had used when describing the Christian and charitable mission of

this, and other, livery companies. So the part of the Declaration on upholding the values of the Company sprang into life before me.

Other memories have firmly taken hold: the cheerful but firm control of our Clerk, masterminding the event much as directing a squadron of slightly distracted and wayward pilots - I have seen him in a film I'm sure, but I'll keep mum on the actor playing him... And then there was Steve-the-Beadle (as Mrs McNaughton kept calling him), here, there and everywhere; no part of the organisation or detail left to chance either throughout the clothing or later on at Dinner.

Then there was the expected, the excitement and happiness of the occasion. This was made far, far greater by the many words of congratulation, encouragement and general good cheer of the liverymen and their spouses (spice?) most of whom were, up to that point, total strangers. That again seemed to set the Company apart, the sheer friendliness exuded, which my wife and I were to talk about in the hours and days afterwards and which lingers as the dominant first impression of my being a Liveryman.



Andrew McNaughton being welcomed by the Master

So, to Graham, Steve and the outgoing Master in particular I would like to express my heartfelt thanks for creating an occasion which was, genuinely, unforgettable. And to everyone else who, through their kind words created a wonderful sense of being welcomed, I would like to say "thank you" too. And, as the new boy in the school, I will try very hard not to end up in detention too often.

Andrew McNaughton

### VISIT TO THE MANSION HOUSE 18 May 2006

We gathered at the Mansion House as a fullscale emergency was in progress with police cars, vans, horses and even bicycles closing the roads around the Bank of England and Mansion House to investigate a suspect package in Princes Street. As the time for our visit approached the emergency was called off and our tour and subsequent lunch looked safe. What a sad sign of the times that we live in!

The mansion House was designed in 1737 by George Dance the Elder to emphasize the growing importance of the City and its Mayoralty. The building was completed in about 1753 and although altered over the years can still be recognized from the pictures of the time. We entered the building through the Walbrook entrance where we were greeted by the Keeper of Walbrook Hall by Mr John Davies who was to be our genial guide around the Mansion House. The Hall was originally designed for stabling up to eight horses but converted into what is a very pleasant entrance in 1846 after a period as a storage area.

We progressed to the first floor via the North West staircase whose walls were hung with important Dutch and Flemish paintings bequeathed by Lord Samuel of Wych in 1987. More were to be seen in the Saloon and other rooms. Our guide spent some time talking about the



impressive chandeliers in the Saloon especially the cleaning routine. I suspect that some of us were ahead of him when he made a comment about the very funny episode involving Del Boy, Rodney and Uncle Albert attempting to clean a pair of chandeliers.

Next we filed into the Long Parlour which Lord Mayors used for dining and receiving guests. Interestingly the windows on the saloon side were closed up when the central courtyard was roofed over in1795 but the windows retain all of their architectural details. The room was originally partitioned at one end to allow gentlemen to use the chamber pots which were kept in the pot cupboard The cupboard is still there but I suspect that more modern and discreet facilities are used today! We then visited the State Drawing Rooms containing the magnificent Nile Suite of chairs and sofas dating from 1803. The Master informed me that every Master of our Company had been photographed sitting in one of the chairs and his turn was to come later this year. I was impressed by the tasteful opulence throughout the building showing the power and wealth of the City. A very fitting place for its Lord Mayor.

The Egyptian Hall was, for me, the most beautiful room so far. It is of course the function room for banquets and dates from the original by George Dance the Elder but it has been altered considerably over the years most notably the replacement of the flat ceiling with the coffered barrel vaulted ceiling by George Dance the Younger thus proving that he was chip off the old block when it came to style. The large stained glass windows at each end were extensively damaged by the Luftwaffe in WW2 but were painstakingly restored with only a small area lost.

Finally we were allowed to visit the vault where all of the gold, silver gilt and silverware is kept including the original gold Lord Mayor's chain and sword in its bejewelled scabbard. The original chain is too fragile for him to wear now and so an exact replica was made and that is the one that we see him wearing these days. It was a special treat to be allowed to visit the treasure house with its magnificent collection of tableware and ornaments including two items saved from the Great Fire in 1666. We entered through a massive safe door and I noticed a much smaller version with a glass bolt at the back which served as a fire exit. It seemed to me to be incongruous and where would one escape to with an armful of treasure? Health'n'Safety rules again I suppose.

We then had a very pleasant lunch in another vault at Swithins restaurant nearby to complete an enjoyable day.

Clare Curtis

### WARDEN'S LECTURE 26 May 2006

This years, well attended, Wardens Lecture was an erudite presentation given by the Junior Warden, Mr. Chris Price FREng., on the subject of 'Engineering Success - and promoting understanding in the City' and particularly focussing on the recent achievements of Rolls Royce in the aerospace sector. Several members recalled the events of 1971, when the City and Government had not appeared to understand Rolls Royce very well, and it was particularly interesting to see how the Company had used the technology that had been so expensively acquired and was now a world leader in aerospace engines.

The Junior Warden explained some of this success was due to a policy of 'Inventing once, using many times' and he delighted the audience with animated graphics showing how the successful Trent family of engines, with their modular design, could be adapted readily to 'Marine Trent' for shipping and 'Industrial Trent' for power stations. He also said that tough targets were the key to success; the modern aero engines use a third of the fuel of past aircraft like the Comet, and the short term target is to reduce that to a fifth, with a corresponding halving of CO2 and an 80% reduction in NOX emissions.

But the main reason for leading the field was the continuing investment in 27 University Technical Centres, worldwide, which were the research engine for the company and on which all the applications were based. This meant that Rolls Royce owned all its technology and could lever off the established base. He said that the City now understood this and had also recognised the add ons; the embedded sales and services that could add value to the business.



Junior Warden - Chris Price

Summarising, he felt that RR represented now what the City wanted: a focussed, balanced business; consistent strategy, strong products, invested in technology and cash positive.

Interestingly, my guest was an engineer who has now become a City financier. This talk opened his eyes to what engineers really do, and he has promised to be less risk adverse in future!

Richard Groome

### **Engineering Success and Promoting understanding in the City**

The bridge between Engineering and the City is at the heart of our Worshipful Company's objectives. Earlier in my career, I became aware of the very different perceptions of an industrial company that can exist, notably, in the mind of engineers working in that company and in the financial community of the City. Taking this and the interest that members of our Worshipful Company always take in the engineering company I now work for, Rolls-Royce plc, the subject of the way that Rolls-Royce has, in recent years, achieved a much more favourable view in the eyes of the City immediately sprang to my mind.

Shareholders and share-watchers among you have talked with me about the disappointing fall, and the subsequent and much more gratifying rise in Rolls-Royce's share price. You may have noted how much I enjoy talking about Rolls-Royce.

So, given time to gather my thoughts, I have decided to reflect on what I have heard about the subject, and to show you how I think it all fits together; under the title "Engineering Success and Promoting understanding in the City" will focus on achievements in the Rolls-Royce's civil aerospace business and reflect views from the City.

I have been working for Rolls-Royce for almost ten years. It has been a very interesting period in the history of the company, although I think all of its first 102 years could reasonably be described as interesting. This last decade has been one of significant growth, and of a transformation in share price and sentiment towards Rolls-Royce in the City. How has this happened? To what extent has it been due to the efforts of engineers? The City can be sceptical about the efforts of engineers.

I must declare, before I get into any details, that I have selected the Rolls-Royce information in what I am going to describe to you has been already shown to analysts and shareholders. Other information is in the public domain. I am not attempting to give you any advice – or to make a sales pitch to you (despite the heavy use of the company logo on the slides I am using). Moreover, I am not claiming any significant role in the major change I am going to tell you about. I enjoy my work in Rolls-Royce, bringing views and ideas to the very large engineering part of the enterprise and to its relationships to its internal and external supply chains, but this is not fundamental to the aspects I am addressing today.

I will use the relative position of the share price to the FTSE 100 as an indicator of City sentiment. It would be fair to say that this gives an average view, not a short-term one which might indicate the relative balance between "buy", "hold" and "sell" advice from the analysts, or between managers of funds with high, medium or low risk investment policies. Equally, the short-term ripples are not my subject, but rather the averaged performance.

# RR vs FTSE 100 Total Shareholder Return PTO FTSE 100 Rolls-Royce 1987 1990 1995 2000 2003 2000

Looking at the movement of the Rolls-Royce share price since flotation in 1987, the clearest conclusion is that the Company matched or under-performed the market for most of this period and recovered in the past three years. The periodic dips in the aerospace market are evident, but the most dramatic move was the fall shortly after the "9/11" terrorist attacks in the US in 2001 when hijacked commercial airliners were used as weapons of mass destruction. This caused a rapid drop in travel, which was further impacted by the SARS outbreak. Following this, the share price dropped to an all-time low early in 2003. Since then, there has been a slow recovery in air transport, but there is no direct relationship between this and the share price recovery.

Ignoring the short term special causes of price movement, it might be argued that this is all about national and industrial trends, with the industrial proportion of the UK economy shrinking, combined with the cycles of the air transport industry. I think there's much more to it than that, which is down to what Rolls-Royce, and its engineers have been doing.

Pausing to look at national trends, I was surprised to see how much change there has been in the UK's top quoted companies over recent years. The composition of the FTSE 100 index has changed markedly since its inception in 1984. Industrial companies now make up under one tenth of the index whereas they made up a quarter in 1984. Across the spectrum of the top 100 companies, there has been huge change. Of the inaugural members of the original FTSE100 list in 1984 just 37 are in the index now. Looking at the Industrial Companies in the index, there were 26 in 1984 and there are just 9 today. We know that there has been a trend in the minds of politicians and the public away from the industrial sector, and that may have influenced the investment community, but I don't believe there is any significant correlation between this and the downward sections of the share price trend I showed earlier.

It is what Rolls-Royce has been doing that has more powerfully influenced City sentiment. With the acquisitions of BMW Rolls-Royce, Allison and Vickers, Rolls-Royce built its four-sector business model (covering power for civil and military aerospace, marine and the energy sector), with its prime product – gas turbine engines, and the technology that supports them - addressing these four sectors.

For the last ten years, the company's message to the investment community has been the same, and this is it.

Power systems for land, sea and air

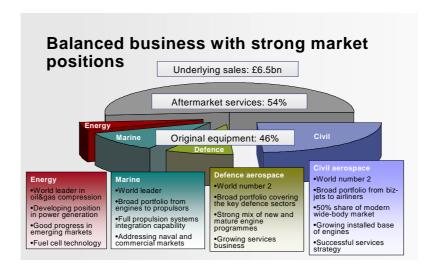
- Addressing four global markets
- Investing in technology, capability and infrastructure
- Developing a competitive product portfolio
- Growing market share / installed base of engines
- Adding value for our customers through the provision of product-related services

Long-term business model with programme lives often exceeding 50 years

This message has been used so many times that in recent versions the heading has been changed to "consistent strategy"

I will say more about the investment in technology, and the development of a competitive product portfolio shortly. Investment in infrastructure is massive with current projects valued at £200m, mainly in UK. I will illustrate the growth in market share, the installed base, and the growth in product-related services.

Looking in more detail, the position that has been achieved is of a balanced business with strong market positions.



The shape of the business shown here is the current position, and its growth to this position is summarised in the following table.

	1981	1991	2001	2005
Order book £bn	3	7	14	23
Sales £bn	1.4	3.5	6.3	6.6
Employees 000	56	61	43	36
% Aftermarket	20	30	40	54
Aftermarket sales £bn	0.3	1.0	2.5	3.5
Net cash £m	(300)	52	(501)	335

I will come back to this table as I discuss various factors in the growth of the business, but the first point to note is that by 2005 the total sales of the business had just passed the 2001 level, after the effects of "9/11" and SARS, and within this, aftermarket sales were well above the 2001 level.

Growth of the order book has been achieved through very substantial spending on product development, and on the technology that supports it. The level is around 10% of sales, and despite the heavy costs of engine development and certification that are included in these, the proportion that is what we call R&T (Research and Technology), i.e. it is applicable to multiple future products, is between one quarter and one third of this. These are huge costs, but they are essential to the future of the business. Fortunately, a proportion of the funding can be attracted from external agencies and partners, though not without a struggle.

Just looking at the Civil sector, the development of the Trent engine family, over more than a decade, has moved Rolls-Royce from a minor player in the large wide-body airliner market to having a 50% share. Overall, a 30% civil market share is being achieved today, up from between 10 and 15% through the 1980s.

The Trent engine family has been grown from its beginnings in the 3-shaft RB-211 with successive introduction of new technology elements of 3-D aerodynamics; tiled combustors; profiled end walls to the blades; swept fans and contra-rotation of the shafts. More is being added in successive members of the family, building on technologies, which have been matured, or de-risked, on earlier members of the family.

"Invent once, use many times" is a strong theme in our work. In the Trent family it brings benefits in lower weight, smaller size, greater robustness and higher performance retention in service. The 3-shaft concept enables these advantages with its independence of fan and compressor speeds. Contra-rotation has been introduced in the Trent 900 for the Airbus A380 "super-jumbo" along with technology refinements to further reduce noise and emissions.

In this engine, the by-pass ratio (the ratio between the volume of air propelled down the by-pass duct by the fan to the air passing onto the core to enable the working cycle of the engine) is up to 8. The smaller, hotter-running core enables greater efficiency, seen by the customer in lower fuel burn. The A380 flew for the first time in April 2005 and is due to enter service towards the end of this year.

There are synergies between the sectors at the product level. The Trent 800, powering several versions of the Boeing 777 has been developed for marine propulsion. The core has whole modules common to the aero engine while the power turbine extracts propulsion power rather than driving the fan. For industrial use in power generation and in pumping oil and gas, a booster is added to bring the core power output up to the same level as in the aero version, and the combustion system is totally changed to burn natural gas; and to do so at very low emissions levels.

Synergies are also strong at the technology level, notably in the computational modelling of fluid flow. In this and other aspects of technology, common systems, tools and processes allow us to maintain flexibility to move people to work on technology applications in products for the four sectors.

On the technology theme, it is well-known that Rolls-Royce has an exceptionally-well developed network of University Technology Centres which now number 26 (of which 20 are in the UK). Requirements and programmes are planned well ahead, but all that is beyond my scope today.

The City likes short to medium term returns but this kind of technology is very long-term. Many investors have come to learn that such technology is essential to the future prosperity of Rolls-Royce. Spend on Research, technology and product development has contributed to competitive positions on new generation programmes, and is essential to the future too.

These levels of investment and products, whose returns only turn positive a decade into their lives, are not the norm across the range of quoted companies, and tend to be treated with suspicion. Without the pain of high investment, and the associated uncertainty, Rolls-Royce would not have the sales and the order book that is has today.

Investor sentiment reflects this, and not only in the share price movement. These are some direct quotes:

"Rolls-Royce strategy is all about growth of the installed base and investment in existing and future technology. This enables them to expand their installed base and then leverage that to capture more revenue. This is what the last decade and the high R&D levels have been about. They are now beginning to reap the rewards".

"One of their key strengths is the technology which has been accumulated over many years. This is a major barrier to entry. There are only two players in the world who have the technology, full stop – GE and Rolls-Royce".

"They are world leaders with their technology which they have developed and own. This is a key part of the business model and a key reason what we own the shares".

But they remember the issues too.

"The Industrial Trent has been a major issue. It was late, it was over budget, it cost a huge amount in rectification and provisions and then the market disappeared. I wonder if they will ever get a return on all that investment. This is what they are supposed to be good at".

This was an issue of technology readiness. We are even more careful, now, to measure technology readiness, and to use it when we can be confident that it will be mature when the products are due in service.

It is fair to say that the improved control of research, technology and product development has turned all this into a positive factor in City eyes, although on average the move is from mildly negative to mildly positive.

Returning to the "consistent strategy", I would like to reflect on the adding of value for customers through the provision of product-related services, based on the growth of the installed base

The growth of the fleet of Rolls-Royce civil engines reflects the growth in sales and market share over the last ten years or more. The relationship between the fleet size and its spares consumption is reasonably predictable as many component lives are limited to particular numbers of flight cycles, to maintain safe operation. For the time being, the vast majority of spares are provided by the original equipment manufacturers. Growth in the installed base over the past ten years has increased the potential spare part sales, over up to 30 years, by \$20bn.

Provision of spare parts and maintenance services is only part of the picture. Increasingly these are offered as part of a package in which the operator takes less of the risk of unscheduled maintenance, and pays for this total care throughout its use of the engine. RR has introduced such services, and an increasing proportion of our engines are taken on these terms by their owners and operators. Engineers have played a key role in this, and will continue to develop engine health monitoring systems that can predict and detect anomalies in engine performance and reduce operational disruption as well as the costs of repairs.

We saw earlier that aftermarket services have risen to over half of revenues. This had long been predicted in what the company presented to investors and analysts for many years. Its value appeared to be discounted by many as "jam tomorrow".

After the "9/11" terrorist attacks, air travel declined significantly, and you might have been forgiven for thinking that Rolls-Royce service revenues would decline. Indeed, many hundreds of airliners were parked at the dry dessert airfields to await the return of business, or dismantling. However, the comparative youth of Rolls-Royce engines in the world airliner fleet meant that they were among the ones that kept flying. Services revenues continued their upward trend throughout, although the growth was very modest in 2002.

At above the 50% level of total company revenues; with growth in service revenue rising even faster than our engines' flying hours, and with the total care business model, the aftermarket business is now more widely accepted as a positive factor in the business.

Growth of the total order book is another key factor. The compound growth of firm orders has been 14% per annum over the four business sectors including contracted services as well as product orders. The civil aerospace sector continues to grow faster than global economic growth. You may argue that this is unsustainable, but it continues. Asia is strong in economic growth, and Rolls-Royce's order book is growing most strongly here, having tripled in the past 5 years.

There is no doubt that investors are influenced by a company's exposure both to sectors and to global regions where growth is above the norm, and to strong performance in these areas. This growth in the order book shows one of the most positive influences on the City perception of RR in recent years.

There are other key factors showing improvement over the decade. As well as the 14% compound growth in the order book and 11% compound growth in services revenue, total sales growth has been 6% pa compound while sales per employee have grown by 8% compound. Other costs, notably product costs, have been improved in recent years, although now, with rising demand and constrained supply in materials and manufacture, further improvement gets tougher.

Cash has shown a big improvement too, from a neutral flow in the first 4 years of the last decade to the recent strong performance, although the impact of "9/11", and the restructuring that had to follow it, caused a sharp drop in 2002.

Undoubtedly cash flow performance is a big driver of investor sentiment, so this is another positive to add to my picture of improving sentiment for Rolls-Royce in the City.

The final factor I must mention is one which is more difficult to work with, and that is the strength of the US dollar. Civil aerospace revenues are largely in dollars, while a high proportion of our costs are in UK pounds. Hedging and switching costs to dollars provide some defence. In the last year or so, it appears that strengthening of the dollar has encouraged the upward movement in the Rolls-Royce share price, and the converse appears to be the case too.

In summary, the investment community in the City has warmed to Rolls-Royce in the last three years because the Company has met many of the criteria for good investments, beyond the basics of the balance sheet and P&L account.

Without attempting to put these in rank order for the average investor, if such a being existed, here is my list.

### City targets & Company achievements

- A balanced business not over-reliant on one sector or region.
- A consistent strategy, and consistent delivery in line with guidance given.
- A growing order book and market share based on a strong product portfolio.
- Well-placed in sectors and regions with above average growth.
- Predictability of future revenues.
- Cash positive.
- Technology and investment to sustain the business.

I will not repeat the comments I have already made on most of these. The one I must just expand on is the consistency of delivery. Since the end of 2001, when the effects of "9/11" began to be understood, Rolls-Royce has delivered what it said it would. This is to the credit of the Chief Executive, Sir John Rose, and his top team who have taken great pains to explain everything to the investment community as well as to control the finances and deliver the results.

The positive influence of the products and the technology are the result of consistent strategy and leadership from successive main board directors of Engineering & Technology (two of whom, Phil Ruffles and Mike Howse are liverymen of our Worshipful Company) and the former Chairman, Sir Ralph Robins. Added to these

are the undoubted commercial skills that have secured new customers for the new products in a much wider part of the market than was achieved in the past.

The City may not look for teamwork, but it appreciates the results. Rolls-Royce has gained a position where it is valued as a sound company in the FTSE100 and is held by a good spread of the large steady growth investment fund managers (whereas just a few years back its shareholder register included fewer, higher risk funds). The challenge is to continue the delivery in line with the trends, which, to a considerable extent, set the expectations that are reflected in the share price.

Chris Price

The author gratefully acknowledges material included in this paper, and in its presentation on 26<sup>th</sup> May 2006, which has been sourced from Rolls-Royce plc and includes information compiled by Bob Cowell of Mackinson Cowell. Charts reproduced here are Rolls-Royce copyright © and may not be reproduced without permission.

After lunch, the Senior Warden, David Bawtree, chaired a wide-ranging and fascinating discussion arising out of the presentation by Chris Price.



The discussion started out by a proposition that shareholder value depended upon the level of customer bonding with the brand, and the recent rising share price of Rolls Royce had benefited from an excellent brand. Chris responded by saying that the brand had suffered in the past from unreliable product, which had been overcome by focussing on achieving greater product maturity at an early stage. The conversation moved onto whether the City was swayed by analysis or by sentiment, with analysts looking back and sentiment looked forward. Perhaps warm feelings rather than analysis had made the dramatic change recently in the share price.

Discussion moved onto the trend for customers to purchase much more than equipment and a bunch of spares. 70% of all contracts were now "total care",

namely an engine plus lifetime support. The prospect was that the engine for the 787 would be sold 100% as total care. Airlines wanted to pay by the flight or by the hour, and not actually own the engine. Rolls Royce is a leader in this change.

The possibility of foreign ownership of Rolls Royce was discussed, and the importance of the unique technologies and skills developed over years by Rolls Royce being under UK ownership. It was observed that the main shareholders of Rolls Royce today were long-term institutional shareholders, who were looking for the longer-term investment. The value of a company like Rolls Royce to the UK's stock of world class engineers was also raised, as Rolls Royce recruited significant numbers of top young engineers and provided research opportunities for many more. Such an environment is of strategic importance for the future of the country as a whole.

A view was expressed that the recent success of Rolls Royce may have changed some city attitudes. The future depends on the success of companies like Rolls Royce, who stayed with their technology and developed technology for the longer term, instead of "selling the family silver". Perhaps other countries such as France or the USA would be more protective of such a national asset. Hope was expressed that the government would understand the importance of retaining and supporting such enterprises.

The excellent lecture by Chris Price had stimulated a thought provoking discussion over a wide field. The final question asked was to the Company, what should we in Livery be doing as a Company as a result of this experience?

Bill Bayley

### VISIT TO BLACK COUNTRY MUSEUM 20 JUNE 2006

A party of 23, including the Master, Past Masters, Assistants, the Clerk, liverymen and their partners, visited the Black Country Museum in Dudley on the 20<sup>th</sup> of June this year. Although the forecast was dismal we had fine weather for this most interesting and instructive day out.

First, we were addressed by the Museum's Director, Ian Walden, on the background to the Museum. The site covers 26 acres and has been expanded since its beginnings 30 years ago. Ian explained that the Black Country includes towns around Dudley situated on a ridge which contained a thick 30 foot deep coal seam as well as limestone and iron ore. All these ingredients were needed for the smelting of iron and steel and contributed to the region's importance in the Industrial Revolution. Ian explained that although Birmingham is part of the West Midlands conurbation it is not considered part of the Black Country and that there is some controversy as to whether or not Wolverhampton can be included as it was originally a market town dealing in wool.



John Campbell and Mike Cooper leaving the mine

We were allotted a very helpful guide who showed us the first steam engine, invented by Newcomen. Then we donned hard hats and were led down a drift mine called the Racecourse Colliery. This was definitely not for the fainthearted as we walked along in near darkness through some very low timber-lined tunnels and saw illuminated tableaux of how miners used to work at cutting the coal in candlelight and how pit ponies brought the coal to be loaded into skips and hoisted aloft by winding gear. Children of ten and upwards worked in this mine in the nineteenth century and we were awed by the

toughness of these Midlands people who helped create the vast wealth of the British Empire.

Our next visit, great fun, was to the local Church of England School. Here we became Victorian pupils and any girl wearing make-up or jewellery was labelled a 'Jezebel' by the strict schoolmaster, who wielded his cane and made all of us learn our tables and the alphabet by rote. Next we practised copperplate writing on our slates.



Mary Gibson, 'Jezebel', showing her painted nails

The 'Jezebels' were called out in front of the class and tested on their rote learning. Most did very badly and got the cane, except for Penny Taylor, who could recite the alphabet backwards without a hitch. Penny was the schoolmaster's star pupil; the rest of the ladies were told off for talking and not sitting with their backs straight and their heads held properly.



Mollie Cooper receiving the cane

On our way to lunch we passed a Toll house and the fairground. The fairground had many attractions in it, which a lot of us could remember from our childhoods, the old-fashioned swings and roundabouts and a giant helter-skelter slide.

After a lunch of steak and ale pie fit for a Black Country navvy we were ready for the canal trip. This was most eerie. The barge we sat in immediately vanished into black tunnels which ended up in the flooded remains of a great limestone cavern big



Getting ready for the trip through the tunnels

enough to hold three enormous cathedrals. These had been flooded when they exhausted their usefulness.

One of the liverymen present, John Campbell, told us how, over 20 years ago, he had acted as the Engineer on the refurbishment of these tunnels after decades of neglect prior to their being reopened to the public. Here again, illuminated commentaries and tableaux helped us understand the history of this canal, which had been created by Earl Dudley after much valuable limestone had been excavated. To get a barge through the tunnel, men used their feet against the walls and 'legged' it through while their horse, used to the procedure, walked across the hill to meet the barge when it finally re-emerged from the tunnel. Towards the end of our trip two of our party, Tony Roche and Raymond Cousins gave a practical demonstration of how this 'legging' process worked and were much applauded by the rest of us for doing it.



Test Links for the Titanic Chains

After the excitements of the canal trip our party split into two, most ladies explored the nineteenth century houses and shops in the Museum's small reconstructed town while the engineers went on to see the carter's yard, the chain-making shop and the rolling mill, not to mention the lifting bridge. We all met up for a tea before most regretfully saying our goodbyes.



Bryan Gibson at tea

John Campbell Mike Cooper Mollie Cooper

### MASTER'S MIDSUMMER MARATHON June 2006

June was a fascinating and very hectic month with a number of unique events as part of a schedule which included no less than 23 separate engagements. There were the usual but no less fascinating events including The Pewterer's Company "Pewter Live", The Firefighters' "Master's Reception", HMS SULTAN's Livery Day and Charity Reception, SETPOINT Surrey's "Festival of Science & Technology", Cornwall & the City Reception in The Mansion House, The Scientific Instrument Makers' Banquet in the Mansion House, Lunch at The Old Bailey, the Election of Sheriffs and our own Company visit to the Black Country Museum. The month finished on a sadder note with the Memorial Service for Founder Member, Sir Alan Veale. There are, however, three events which warrant special mention.

# Cornwall and the City – Visit to the Royal Cornwall Show.



The Lord Mayor and Pikemen on Parade

The current Lord Mayor, Alderman David Brewer, is a Cornishman who has maintained strong links with his native county. He was, therefore, invited by the Lord Lieutenant of Cornwall to bring a civic party to the Royal Cornwall Show near Wadebridge which he duly did and 66 Livery Companies were represented; 44 by their Masters. Our visit started with a Dinner at Cabilla Manor Farm near Bodmin, the home of the High Sheriff of Cornwall. Finding this remote location was interesting particularly with directions which read "Turn right 400 yards before...." Thank goodness for an airman as Clerk. A large clear plastic marquee had been erected in the grounds with truly magnificent views across the Cornish countryside and we enjoyed champagne, courtesy of the Master Grocer, on the lawns. The dinner had a Cornish theme and was not dissimilar to the menu we had already selected for our September dinner in Pendennis Castle although we have added Cornish wines. The next day we travelled to the Royal Cornwall Showground and a chance to view all the exhibits. After lunch in a marquee attached to the

Members Enclosure it was time to robe. temperatures in the low 80's, many of us decided to remove our jackets before putting on our robes and badges. None of us could recall any other event at which so many Livery Masters had been robed outside London. Needless to say, the show was running late and we were kept standing, in processional order, for almost an hour but our sympathy went to the Pikemen of the Honourable Artillery Company, the Lord Mayor's Bodyguard, who also had to stand in full uniform. One moment of light relief was an impromptu inspection by the Lord Mayor before he boarded his open coach and also the light-hearted banter as we discussed which of us would win "Best in Breed". And then it was off for a circuit around the main ring and the salute taken by the Lord Mayor; we followed the prize giving of all the prize cattle, sheep goats etc so we had to watch where we walked whilst acknowledging the applause of the crowds. As part of the show there was a "Cornwall and the City" marquee with displays by the Turners', Pewterers' & Broderers' Companies. After this unique experience a reception in the President's Marquee brought the day to a close.



The Master and Clerk awaiting instructions, Don't they look hot!

Next morning we were off again for breakfast at the Eden Project followed by a most amusing talk by the founder Tim Smit. A two hour tour of the Biomes with Anjie our most knowledgeable guide ended with lunch back in "The Core" which gave Graham, our wives and I an excellent insight into what awaits us in September. Overall an experience not to have been missed.

# H.M. The Queen's 80<sup>th</sup> Birthday Luncheon in the Mansion House.

This was one invitation which was totally unexpected and it was an honour and privilege for Mary and me to represent the Company in the Mansion House on Thursday 15<sup>th</sup> June. Besides the Engineers', only eight other Livery Companies were represented all of whom had direct connections with either The Queen or Prince Philip. As you can imagine we suddenly started taking an interest in the BBC Television programmes on "The Great British Menu" so, unusually, we knew the menu in advance. It was a glorious sunny day as we walked from the office to the Mansion House to join 350 other dignitaries or VIP's - the BBC didn't seem able to decide which we were! The flower arrangements in the Egyptian Hall of peonies, roses and sweet peas gave a marvellous feel and scent of summer. The speeches by The Lord Mayor and The Queen were amusing and set the tone for an extremely friendly and relaxed occasion. Inevitably the menu was the main talking point. The smoked salmon starter was delicious and the roasted turbot with mussels and oxtail was a fascinating combination. The venison was excellent and the custard tart was also good. As The Queen commented choosing a menu by means of a competition is unusual but it seemed to have worked.

We all wondered whether it was pure chance that the 4 chefs came from England, Northern Ireland, Scotland and Wales! As we left the Egyptian Hall, the 4 chefs were lined up in the Grand Salon looking slightly bemused as they received the congratulations of the guests. A unique occasion we will always remember.

### The Ironbridge Livery Weekend 16 to 18 June

In the early 1980's, our Founder Master, Sir Peter Gadsden as President of the Ironbridge Gorge

Museum Development Trust started an annual visit in June by Masters and Clerks for a tour of the various Museum sites. Originally a one day event, it has expanded over the years to include a Livery Dinner with Sir Peter in the chair, a full-day tour and a President's Ball chaired by the President of the Museum Trust which is also open to all "Friends of the Ironbridge Gorge Museum". I first attended in 1987 and this year was my 20<sup>th</sup> successive Livery Weekend although for the past 10 years I have acted as a guide. It has become a 'must do' event for most Masters and this year 75 Companies were represented.

It is impossible to do justice to all Museum sites in one day so the Tour concentrates on the four main sites of Coalbrookdale which includes the Darby Furnace, the Museum of Iron and the Quaker Houses, Coalport, Jackfield Tile Museum and Blists Hill and also includes a walk over the Ironbridge. Even after 20 years there is always something new to see and it is interesting to see the reactions of those making return visits. Besides up-dating the visitors on the new developments, most guides concentrate on the educational work of the Museum which is of direct interest to many of the Livery Companies. Each year some 55,000 school children come on organised visits although the size of the two Youth Hostels is a limiting factor given that many have to travel from all parts of the UK. The main hostel will undergo a major refurbishment this autumn.

Although the majority of the funding for major projects comes from 'public' or European sources some matched funding is always required but the leverage is such that £1,000 of donations releases £42,000 of public money. The Development Director and I worked out that if each Livery Company gave an unrestricted donation of £250.00, this would release well over £1 million pounds. I hope I managed to get this message through to all the other Masters.

On the Sunday, the weekend ended with a visit to the Cosford Aero Museum which was made much more interesting with all the additional information provided by our Clerk.

Bryan Gibson Master

# THE ENGINEERING AWARDS DINNER 4 JULY 2006

This year for our Awards Dinner we ventured South across London Bridge and just outside the City to Glaziers' Hall where we were welcomed most hospitably on a hot summer evening. The reception room gives a wonderful view of the City across the river.

Many Committee Meetings had been held during the day culminating in a Court Meeting at Glaziers' Hall. This ended with the Clothing of five new Liverymen bringing our total full membership to 310. A record. The photographs of the new Liverymen are in the Personalia Section at the end of this edition.



The Master, Wardens and Principal Guests

After an excellent dinner the Master and the principal guest, Rear Admiral Neil Latham presented various prizes and awards which are described below. Unfortunately not all the award winners were able to be present which explains the lack of some photographs. Several of the servicemen were on active duty and Victoria Pollock was on her honeymoon! Particular praise should go to Major Cullen as it is the second time that he has won an award, the first being four years ago.

Raymond Cousins

### **Cadzow Smith Award**

Established in 1996, the Cadzow Smith Engineering Awards were endowed by the Eastern Group plc in recognition of the outstanding services to engineering of its former Chairman, Dr. James C Smith CBE FREng FRSE, now a Past Master of the Company. The awards are for excellence on an accredited undergraduate engineering course conducted at one of the eleven universities within London and the Home Counties. Besides academic excellence, the recipients of the Awards must have demonstrated self-confidence, professional awareness, leadership and sound common sense.

Winner 2006 (Prize £1500) - Victoria Pollock, from Imperial College, impressed the judging panel to win with her record of leadership both prior to enrolling on the MEng course in Electrical and Electronic Engineering when she obtained a Gold CREST award as a leader of a team of students to develop a back-up system for temperature control of stored chemicals, then in the gap year leading a team of three in a CROWN factory for the modification to manufacturing process and later being project manager of the third-year project group. Overall, she demonstrated commitment and enthusiasm for engineering, both in academic work and in practical

work for her sponsor and, additionally, she has a strong record of community service and participates successfully in a range of extra curricula activities.

Highly Commended Runner-Up 2006 (Prize £500) - Jennifer Horrocks, from King's College, displayed a refreshing view of engineering as a vehicle for enabling creativity, exemplified by her

third year project on the design of a 'Greek temple structure that will sway in the wind' and also demonstration work with Engineering Art. Her warm personality has clearly had impact within King's College, where she became President of the Engineering Society.



Work during the vacations has given her sound practical experience and her experience overseas, coupled with capability in foreign languages, give her a sound platform for the future. The panel judged her achievements worthy of commendation.

### **Baroness Platt of Writtle Award**

The award has been established to recognise engineering excellence amongst those pursuing final year studies leading to the academic qualifications for entry to the Engineering Council's Incorporated Engineer grade. The award is named after Court Assistant Emeritus, The Baroness Platt of Writtle CBE FREng in recognition of her work in support of the Engineering profession in general and Incorporated Engineers in particular. The award consists of a prize, medal and certificate. The award was made for the first time in 2002 and the Engineers' Company wishes to acknowledge the assistance of the IET in selecting that award winner.

Winner 2006 (Prize £1000) - Lyndsey McAndrew is in the final year of a BSc in Mechanical engineering at Nottingham Trent University and in a very close contest is winner for 2006. A very focussed young engineer, she has already shown significant leadership and achievement skills, particularly at Toyota Cars, where she is already promised a place after graduation. The judging panel saw in her a real enthusiasm and passion for engineering and her sponsor described her as an

excellent ambassador for the University, and engineering in general.

### Mercia Award

The Award is made annually to a student under 30 and provides a medal and bursary towards the cost of a taught or research programme of postgraduate studies in Medical Engineering.

Winner 2006 (£500) - Gemma Whatling from Cardiff University gained a First Class Honours M Eng degree in July 2005. During her undergraduate studies she was a winner of the Young Engineer for Wales Award and a finalist in the WISE Excellence Awards, she is currently a Science and Engineering Ambassador for SETPoint, and she has been extensively involved in promotion the engineering for women and young people. She is now registered for a PhD at Cardiff to analyse and characterise the kinematic function of total knee replacements, research which informs and supports orthopaedic surgeons and rehabilitation specialists in relation to implant designs and surgical techniques. Her progress demonstrates strong enthusiasm and commitment to the application of engineering within orthopaedics and rehabilitation.

### **Water Engineering Award**

A joint award with International Water Association, commenced in 2005, and is awarded annually for postgraduate study in Water Engineering judged through the best presentation and paper at the 2006 IWA UK Young Researchers Conference.

Winner 2006 Andrea Meniconi is currently a visiting PhD student at **Imperial** College London but obtained the equivalent of a first class honours degree Chemical in Engineering at the University of Bologna. He qualified as Fellow of the Italian Institute of



Engineers and is a member of the Bologna Engineering Council. He is now registered as a PhD student in the Depart-ment of Chemical, Mining and

Environmental Engineering at the University of Bologna. Andrea's paper was entitled "Aerobic Cometabolic Biodegradation of 1,1,2,2-Tetrachloroethane: a Microcosm Study". The paper was based on his previous work in Bologna, the aim of which is the design of a bioremediation treatment of chlorinated solvents-contaminated groundwater through in situ cometabolic process stimulation.

### **Stephenson Award**

The award is intended for those who have been particularly successful in encouraging young people to study engineering with an emphasis, but not exclusively, on mechanical engineering. In 1997, members of the Institution of Mechanical Engineers made donations to fund a Worshipful Company of Engineers Loving Cup to mark the 150th Anniversary of the Grant of their Royal Charter. Donations in excess of those needed for the Loving Cup were used to establish the Stephenson Award and further donations were received in 2001 & 2005.

### Winner 2006 (Prize £500) - Dr Ian Gray is head of

Science and Physics at Harrow School. Since 1994 he has **EESE** been an contact teacher in different three schools/colleges linking with 8 different enginecompanies. ering His support of the scheme is such that he has co-ordinated the EESE Scheme Launch at Harrow



School for the past four years and is currently planning the event and a possible Celebration and Assessment Day for academic year 2005/06. The outstanding nature of his teams' projects have meant that for the last four years Harrow School have achieved Exscitec Platinum Awards (equivalent to 1<sup>st</sup> year undergraduate study). He is now a member of the Exscitec moderating body and contributes significantly to all EESE events. A large proportion of Ian's students go on to study Engineering at university. In 2002 he was presented with an EESE Gold Star award. He has delivered the Science & Engineering Ambassadors INSET to Ford Motor Company engineers and is a key liaison teacher with

the National Science Museum. Student feedback has always highlighted his outstanding support and input into projects. His charismatic teaching and promotion of engineering as a career has influenced hundreds of students into choosing careers in science, technology and engineering.

### THE SERVICES ENGINEERING AWARDS

### **The Services Engineering Undergraduate Award**

Awarded to an officer graduating from the Defence Technical Undergraduate Scheme who has achieved outstanding academic performance and demonstrated clear leadership and commitment to a professional engineering career in the Armed Forces.

Sub-Lieutenant Simon Willmore is one of the Royal Navy's University Cadet Entrants and is about to graduate with a MEng in Electronics from Southampton University where he has been a member of Thunderer Squadron. Throughout his time in the Squadron he has played a full and active part in Squadron life, participating in a wide range of its activities which he frequently helped plan and implement, regularly acting as an additional member of staff. He stands apart from his peers in terms of his all round contribution to the Squadron and approach to his studies. Consequently it is judged he is destined to have a very good Service career as a Weapon Engineer and he commences his Systems Engineer Management Course (Weapon Engineer) at HMS Collingwood this coming September.

### The Services Engineering Postgraduate Award

Awarded to an officer completing a post graduate technical degree who has achieved overall academic excellence and contributed most to the advancement of technical knowledge or its application through a research project.

**Lieutenant William Bennett RN** studied for an MSc in Marine Engineering (Electrical Option) at University College London between September 2004 and September 2005 and he will officially graduate at the UCL's Post-Graduate Ceremony 2006. William was an outstanding student who worked hard during his studies and was an inspiration to all his student colleagues. He scored some of the best marks ever

recorded in the examinations and the quality of his coursework was out-standing, often con-taining



original ideas and thoughts. His group project work was to design, over a threemonth period, Economic Exclusion Zone Vessel (Surface Effect Ship) which was sponsored by British Maritime Technology. For his individual project William undertook a challenging project in

the field of electrical engineering relating to the All Electric Ship concept that is being developed by the Royal Navy. He was able to show that the improvements to the waveform quality in electric ships could be achieved with power electronic systems and that these are likely to be smaller and cheaper than conventional passive filter designs. William was awarded a distinction for the course overall.

### **The Services Engineering Training Awards**

Awarded to a Warrant Officer or Senior Rating / Non Commissioned Officer of each of the three Services for outstanding achievement in initial or continuing engineering training, measured through leadership and the professional inspiration given to others.

Royal Navy - Chief Petty Officer Marine Engineering Artificer Alexander Goddard is an instructor in the Propulsion Section of the Royal



Naval School Marine Engineering Defence within the of Electro-College Mechanical Engineering at HMS Sultan. He is exceptional Senior Rating, providing instruction of the highest calibre, backed meticulous up by preparation and delivered with the

clarity and confidence born of his extensive subject knowledge. During the absence of his superior officer he has ably stepped up to the mark, providing leadership, drive and motivation for his colleagues whilst demonstrating outstanding engineering acumen to deliver workable solutions. Involved in all aspects of Service life, he has coordinated many successful extraneous activities which have demanded a significant amount of time management, organisational and team working skills.

Army - Staff Sergeant (Foreman of Signals) Lee Clark began training as a Foreman of Signals on course number 75 at The Defence College of Communications and Information Systems in September 2004. From the very start of the course, Staff Sergeant Clark was determined to do well. He applied himself to the course, coped well with the most demanding aspects of the training and contributed to the spirit of a course who were characterised by their team ethos. demonstrated excellent engineering and management skills throughout the course and proved his competence both in the classroom and under field conditions. During the Applied CIS Project phase, he led his syndicate in designing and developing a radio interface system for Special Forces to use on non-Special Forces vehicle platforms. This project was sponsored by 18 (UKSF) Signal Regiment and was required to test technological options to solve a real CIS impacting on the conduct of operations today. The work completed on the project has been highly praised and will be taken forward for potential implementation by the sponsor. His particularly strong academic performance and his professional approach throughout the course; resulted in the achievement of the award of The Royal Signal Institute Gold Medal for top student on the course and the award of the Institution of Engineering and Technology prize for best academic performance.

### Royal Air Force - Chief Technician Leslie Jones is

a Training Supervisor within Avionics Training Squadron at School No 1 of Technical Training. Defence College Aeronautical Engineering at Cosford and there he has demonstrated that he is outstanding an instructor and mentor. knowledge understanding of the



values and ethos of the RAF together with his ability to listen, inspire, guide and support have been vital in his dealing with every aspect of staff and trainee welfare where he provides duty of care of the highest standard. He is an outstanding leader and role model for trainees both in the professional sense and in his personal standards. Always seeking personal development he has attained Licentiateship with the City and Guilds in Electrical Engineering (LCGI Elect Eng), an HNC in Electrical Engineering and he is studying for an MA in Management.

### **The Services Operational Engineering Awards**

Awarded to an officer, from various Service and Corps areas, who has best made the application of professional engineering judgement or technical innovation to contribute significantly to the maintenance or enhancement of operational capability or effectiveness in any theatre of operations, including the UK.

### **Royal Navy Operational Engineering Award**

(Called the "Thunderer" award to sustain the heritage of this name within The Worshipful Company of Engineers)

Lieutenant Commander Graeme Rook. currently serving in Fleet Headquarters, has been nominated for this award in recognition of his outstanding personal contr-ibution to the delivery of the **CENTRIXS** coalition network capability to



ships operating in the Northern Arabian Gulf in support of the Global War on Terror. Against a backdrop of scarce MoD resource and funding, he has developed innovative procurement methods, applied carefully balanced operational judgement, and successfully co-ordinated global contractor effort across six countries to ensure that CENTRIXS was available to the Combined Task Force Commander in the Gulf during its period of UK Command from HMS Bulwark. The network remains crucial to supporting the large multinational force protecting the offshore oil rigs that are crucial to maintaining Iraq's flow of oil and hence its economy. Lt Cdr Rook's total dedication and enthusiasm to his work

has affected the total success of the UK-led operation.

### **Royal Engineers Operational Engineering Award**

Lieutenant Colonel Steven Boyd has commanded 62 Works Group Royal Engineers in the delivery of infrastructure engineering support to British Forces in Afghanistan. This has been a complex and demanding task that has required the drawdown of facilities in the north, whilst simultaneously maintaining support in Kabul, and constructing new infrastructure in the south in Kandahar and Helmand Province. Against a background of political delays and a rapid deployment, he has achieved the initial operating capability at all key bases. This has involved the project management of around \$90M worth of work in a fledgling contract market, which included a 2000 man camp that was built completely from scratch and was an outstanding example of operational engineering.

### **Royal Signals Operational Engineering Award**

**Major Nigel Cullen** was responsible, during warfighting operations in Afghanistan and Iraq, for providing user input to all communication projects, high-profile and complex ICS systems. He led the introduction of logistic information systems

employing modern wireless technology over distance and developed a working environment for deployed formations that provided critical environmental protection. During 2 Signal Regiment's conversion CORMORANT Major Cullen set new engineering standards,



driving forwards an ethos of service delivery management well matched to the provision of ICS to high readiness forces. He designed and delivered a network providing voice and IP services for over 1000 staff officers across the Joint Rapid Reaction Force, using CORMORANT before it had even been accepted into service. His insistence on a rigorous engineering approach, focused on the delivery of services, created the conditions for the acceptance of this vital communications bearer system into operational use.

# **Royal Electrical & Mechanical Engineers Operational Engineering Award**

**Lieutenant Colonel Colin McClean**, then a Major, was employed as SO2 (ES) Ops and Plans for



Operation TELIC 7. The demands of both have been enormous with the complexity of recent operations, a dramatic increase in the usage of the mission critical equipment, the huge growth in the number range and equipment urgent Operational

requirements (UORs)

and the deployment of complex BOWMAN combat net radio fits on operations for the first time. In addition he has also taken on the new challenge of Transitional planning. An officer of boundless energy, engineering excellence and exceptional attention to detail he has made an outstanding contribution to the delivery of equipment support on Operation TELIC 7. His leadership and drive has been both inspirational and impressive and his exceptional performance ensured that equipment issues did not constrain vital military operations.

### **Royal Air Force Operational Engineering Award**

Leader Squadron Mike Partridge is currently employed as the Senior Engineering Officer on Number 39 Photographic (1 Recon-naissance Unit) Squadron, Royal Air Force Marham. As such he has responengineering sibility for a small, but strategically important, fleet of three Canberra



PR9 aircraft. The nature of the aged aircraft is such that on a daily basis he is hampered by a lack of spares and a myriad of airworthiness issues that would overwhelm a lesser individual. Nevertheless, he has shown the determination and resourcefulness to overcome problems to ensure the availability of airframes to meet the Squadron's high-profile

operational missions that are routinely flown throughout the world. In particular, early in 2005, the Squadron deployed for 5-months in support of Op HERRICK. Due to early successes achieved by the Squadron, the task grew beyond expectation. If the maintenance work were to be undertaken with full homebase support it would have taken at least 3 weeks per aircraft; with a minimal deployed footprint and a fragile logistics chain, significant operational impact was expected. Undeterred he compiled a wellreasoned plan and, despite some complicated emergent work, through his inspired and proactive leadership, the activities on both aircraft were completed within 7 weeks. His sound planning and management skills ensured that not a single operational sortie was lost throughout the period ensuring the success of the Canberra in support of the war against terrorism.

### The Services Engineering Support Award

Awarded to a serviceman who has contributed most, through the application of engineering skills including the use of leadership, management and technical acumen to meet material availability targets for any of the Armed Forces.

Major Neil Thorpe REME arrived in the Defence Logistics Organisation in January 2005 and since then has used Oil Health Monitoring information to reduce the number of incidents of No Fault Found in heavy armour gearboxes by 15% thus improving the availability of fit gearboxes for operational use. He developed a complex database to allow the Integrated Project Team to reduce key Line Repairable Unit turn round times and increase stocks to support operations in Iraq. He produced an excellent business case to procure a new Auxiliary Power Unit for the UK's Main Battle Tank fleet.

### MASTER'S TOAST TO THE GUESTS

Wardens, Alderman, Masters, Common Serjeant, Ladies & Gentlemen.

A very warm welcome to Glaziers' Hall for our Annual Awards Dinner. This Hall is unique in being the only Livery Hall technically outside the City boundaries but because it is built on land owned by the Corporation of London for the foundations of London Bridge it is considered to be part of the City. We also have connections with the Glaziers' Company as 3 of our Past Masters were Liverymen

of that Company before we were formed. Indeed, the late Trevor Crocker, who was also a Past Master Glazier, chaired the Working Party which oversaw the conversion of the ground and first floors of this building into a Livery Hall in the early 1980's and which is now also used by the Scientific Instrument Makers' Company and the Launderers' Company.

In the original plans, the River Room in which we held the Reception was supposed to have a balcony over the Thames but inadequate funds meant this was



The Master, Bryan Gibson, in full flow

abandoned. However the full length opening doors were still installed and Trevor, mindful of health and safety requirements ordered the doors to be kept permanently locked. On showing a group around the Hall, a visitor commented on how dangerous the doors were but Trevor reassured him they were always locked and confidently tried the door.

It was only the very quick reactions of one of the party which stopped him descending to the river and ensured his survival to be our 7<sup>th</sup> Master. You may have noticed that the doors are now also secured with padlocks and chains.

At our Installation Dinner in April, I drew attention to the relevance of Livery Companies to modern society in relation to our profession, the City and charitable activities. The annual charitable giving of the Livery Companies now exceeds £42 million and this dinner clearly demonstrates our commitment in promoting and encouraging engineering excellence and achievement. Prizes and awards form a major part of this activity but we should not overlook the other ways in which our Charitable Trust Fund supports our members and the profession.

Besides our regular support to RedR, the Royal British Legion and the Mansion House Scholarship Scheme we have this year contributed to the establishment of a new City of London Bursaries for Cornwall to provide bursaries for students to attend colleges in Cornwall attached to the Combined Universities of Cornwall one of whose site near Falmouth which we will visit in September includes the Camborne School of Mines.

We also give regular support to the Ironbridge Gorge Museum with which I have been personally associated for over 20 years so I am pleased to welcome this evening Michael Clifford, the Chairman of the Ironbridge Gorge Museum Development Trust.

Our first prizes were awarded in 1986 and we have steadily increased the scope and range of our prizes ever since. We aim to ensure our awards remain relevant and take account of changing circumstances and the interests of our members. Next year we will make the first award under the Hawley Environmental Engineering Award, established by the Immediate Past Master, and I hope it won't be too long before we can make an award from the new Heritage Engineering Award for which I have taken the lead.

As you have heard from the Clerk we have recently reviewed all our prizes and awards with the biggest changes being in the Service Awards and we were grateful to Liveryman, Rear Admiral Neil Latham for his assistance as a member of the Working Party and also for helping me to present the awards this evening. Neil has also been the focal point for two of the awards.

We hope the changes not only retain individual Service identities but also reflect the increasingly triservice nature of our Armed Forces. We are always delighted to welcome our Honorary Liveryman, the Chief Royal Engineer, General Sir Kevin O'Donogue

and as Chief of Defence Logistics to be associated with the first award to his Corps. The Stephenson Award which we have also just presented, is funded by Liverymen who are members of the Institution of Mechanical Engineers so it is a particular pleasure that the President of that Institution, Liveryman Alec Osborn, is with us this evening and could be associated with the award.

As always it is a delight to welcome all the prize winners here this evening and to congratulate them. I hope you are all enjoying the experience of a Livery Dinner. Of course we wouldn't know anything about the recipients if it wasn't for their sponsors and sponsoring departments and we are pleased so many of the sponsors are represented here this evening to see their nominees receive their awards. The Clerk and I very much appreciate the work put in by all the sponsors without whom we wouldn't be able to make the awards. You are all most welcome.

From the City we are delighted to welcome Alderman Nick Anstee, incidentally the son of an RAF Serviceman, who many of you will remember spoke at our Winter Livery Dinner in January 2003 when he was the Aldermanic Sheriff. His Honour Judge Brian Barker was only appointed as the Common Serjeant of London last year and is a Court Assistant of The Worshipful Company of Coopers. We are pleased he is able to join us this evening.

We also extend a very welcome to the Masters of the Wheelwrights', the Constructors' and the Information Technologists' Companies together with the Deputy Master of the Honourable Company of Master Mariners and the Senior Warden of the Lightmongers' Company. We are also very pleased to welcome all the private guests here this evening.

One of the great pleasures of being a Liveryman is the opportunity to meet old friends and colleagues not only within our own Livery but also those of other Companies. When I was clothed as a everyman, I was surprised and delighted to find my Commanding Officer from the Royal Naval Engineering College at Manadon, Spam (or Peter) Hammersley, as a member of the Court and then 4 years later we worked together as Master and Clerk.

One of our guests here tonight reminded me when we met up again a few weeks ago that I once had cause at Manadon to tell him off although Commodore Gerry Thwaites of HMS SULTAN used rather more colourful language when recalling the encounter.

Which leads me to our principal guest, Rear Admiral Neil Latham whom I again first knew as a young Sub Lieutenant. Neil's final year degree project was undertaken in my Department of Materials Technology and I know he did very well although neither Neil nor I can remember the topic of his project. We next met when Neil was the Commanding Officer of HMS SULTAN and shortly afterwards he became a Freeman and Liveryman of this Company.



Rear Admiral Neil Latham

On being promoted Rear Admiral he was appointed Commandant, Defence College of Management & Technology, part of the Defence Academy of the United Kingdom, which many of us remember as the Royal Military Collage of Science at Shrivenham. As I mentioned previously, Neil has been particularly helpful in our review of Service Awards and in coordinating the nominees for two of them. I am personally pleased a former student has agreed to be our principal guest and speaker this evening.

I would now ask all members of the Company to join me in the toast to "Our Guests"

### ANNUAL GOLF DAY, DINNER – AND MORE! 21 July 2006

Following a number of years at Frilford Heath Golf Club in Oxfordshire, the event moved south of the Thames for the first time when the Annual Golf Day, Dinner and More! centred on Clandon Regis Golf Club, a few miles east of Guildford. For the golfers,



On the 18th Green

the day comprised a 9-hole Texas Scramble in the morning followed by the Trophy Stableford 18-hole competition in the afternoon. Golfers and Daytrippers assembled at 09.00 at the club for bacon rolls and coffee before setting out on their different endeavours. For the golfers it was straightforward, picking up their cards, course planners and equipment and presenting themselves in predetermined teams at the first tee to let the



The Master, The Master Wax Chandlers and David Scahill organiser

competition commence to clearly defined rules.

For the day-trippers, it was not quite as simple. They needed to decide to where they would journey, and this gave the club time to prove that its coffee pots were indeed bottomless! Eventually they decided on the National Trust House and Gardens at Polesden Lacey, about five miles from the golf club.

After the morning round, the golfers refreshed themselves with cold vichyssoise soup and sandwiches before tackling the main event. The Day-trippers enjoyed a tour of the house followed by a leisurely lunch and then a walk around Polesden Lacey gardens. Both groups enjoyed (!) temperatures in the mid-30s centigrade.

The 18 morning golfers increased to 21 for the main afternoon event, including the Master Wax Chandler, and these and the four Day-trippers were joined by eight more diners in the evening to bring the dining total up to thirty. The diners included the Master, who was celebrating his birthday, and his Lady and all enjoyed a first rate meal prior to the Awards Ceremony at which the Master presented the Men's Competition prizes to the Winner: Sarsfield Brolly (a guest of Phillip Edwards) with 42 points, and runner-up Roger Edwards (the Master's son in law and a member of the Master's team) with 38 points.



John Huffell collecting the winner's trophy

The Ladies Competition was won by Patricia Huffell with 29 points. The Worshipful Company of Engineers Golf Trophy went to the highest scoring Liveryman, John Huffell with 32 points, only shading out Chris Price with the same number of points because of a better back-9 score. David

Jefferies, the Master Wax Chandler, won both the nearest the pin and straightest drive competitions but insisted that one of the prizes be raffled for the Master's Charity.



The Master and Guest, Sarsfield Brolly, the overall winner

The Texas Scramble was won by the intrepid team of Peter Hammersley, Tony Roche and David Scahill.



Peter Hammersley receiving the prize for the Texas Scramble

Next year's event will again take place at Clandon Regis Golf Club on 27<sup>th</sup> July 2007, subject to confirmation, so put the date in your diaries!

David and Gill Scahill

### INFORMAL LUNCH 16 July 2006

The Mill House Hotel in the village of Kingham, situated in the beautiful Cotswold countryside between Stow on the Wold and Chipping Norton, was the setting for the Company's third informal Sunday Lunch. The weather was glorious which enabled the group of 20, including the Master, the Clerk, other Liverymen and Guests, to chat informally in the attractive gardens before making their way to the dining room for the excellent lunch provided. The menu offered ample choice, including vegetarian options.



The Master and Clerk with other Diners

After lunch, the party retired to the lounge for coffee and tea before leaving for home, taking with them the memory of a delightful day. The event was expertly organised by Penny Taylor, to whom we all express our thanks, and, having had such an enjoyable time, we look forward to our next informal gathering.

Denver and Paddy James

### Leonard John Weaver CBE DUniv CEng FIEE FIMMM FIMechE Master 2000/2001

Len Weaver died on 24th June 2006 just weeks after his 70<sup>th</sup> birthday. His funeral was held in Leatherhead Parish Church on Friday 14<sup>th</sup> July conducted by the Company Chaplain, The Reverend Michael West. Len was born and brought up in East Africa and served with the Kenya Regiment from 1955 to 1957 before coming to England to study at Battersea College of Technology, which later became the University of Surrey. He was particularly proud of the Honorary Doctorate, which he received from Surrey University in 1991, and he subsequently endowed a prize, which bears his name. While at College and working hard on his studies he enjoyed, with much enthusiasm and no little skill, time on the Rugby field, the cricket pitch and the amateur dramatic stage.



Len's career started at AEI Ltd and continued as Works Manager at PYE-TMC before joining PE Consulting Group in 1966 of which he became a

Director in 1975 and Chairman from 1979 – 82. He then became Chairman of a number of companies including Polymark International plc, Pearson Engineering Ltd, Jones & Shipman plc, Manifold Industries Ltd, Eutech Engineering Solutions Ltd and The Engineering Link Ltd all of which benefited from his management. He was awarded a CBE in 1990 for services to industry.

He was also very active with various Institutions being President of the Institute of Management Consultants 1983-84, Vice Chairman of the British Institute of Management from 1993-97 and President of The Institution of Manufacturing Engineers 1990-91. He was one of the driving forces behind the merger of The Institution of Manufacturing Engineers with The Institution of Electrical Engineers and subsequently served on the Council of the IEE from 1991 to 1996. He was one of the few Englishmen to be elected to Fellowship of the American Society of Manufacturing Engineers.

Len was one of the earliest members of the Engineers Company becoming a Freeman in February 1984 and a Liveryman in July 1984. He joined the Court in April 1991 becoming Junior Warden in 1997, Middle Warden 1998, Senior Warden 1999 and was installed as Master in April 2000. He took a particular interest in the recruitment of new members and was instrumental in the formation of a separate Membership Committee; membership matters having previously been the responsibility of the Finance and General Policy Committee. During his year as Master he opened discussions with the Clerk to the Privy Council on the likelihood of a Royal Charter and, when in 2003, this seemed a real possibility, the then Master Sir David Davies asked Len and me to enter into formal negotiations with the Privy Council. His drafting of the Petition to Her Majesty The Oueen was masterful and ensured we were the first Livery Company in 47 years to be granted a Charter. In preparing the petition he built on his second life long love of the written word and his passion for literature.

He had a most successful year as Master although his habit of always arriving at functions "just in time" gave his Clerk many anxious moments! A member of the MCC he always regretted not being able to arrange a visit to the Long Room at Lord's. For all of us the highlight of his year must be the Out-of-

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Town Meeting to York, which allowed Len to indulge his passion for railways. Who could forget his delight at being able to ride on the footplate of the Sir Nigel Gresley on the North Yorks Railway or our evening function at the National Railway Museum?

However Len's lasting legacy to the Company is the magnificent "Millennium Centrepiece" which he presented at the end of his year. Len funded a prize at the Guildhall University for the design of a centrepiece to represent engineering over the centuries and he and I had great fun judging the entries. We finally had to choose between two quite different but superb designs and Len was so impressed he funded an additional runner-up prize. We then had many meetings with the chosen

designer as the work progressed and I know Len was delighted with the final result. All of us who knew



Len will always be reminded of him when the centrepiece is displayed at our functions.

Bryan Gibson

## **PERSONALIA**

Congratulations to the New Court Assistants installed on 25th April 2006



Air Vice Marshal Patrick O'Reilly CB, FIEE



Dr Clive Walker FIMMM



Mr David Scahill FIMechE

Congratulations to the New Liverymen invested on 25th April 2006



Jean Venables, OBE,FICE



John Ferrie, CBE, FREng FIMechE



Nigel Thomas FICE



Andrew George McNaughton FICE

### Congratulations also to the New Liverymen invested on 4 July 2006



Dr Simon Patrick Waldram FIChemE Btech, MS PhD C.SCI



Andrew James McNaughton FICE



Christopher John Elston FIMechE FIEE MA



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Harold Arnold Carrier FIMechE

We are sorry to report the deaths of Sir Alan Veale and of Mrs Jeanette Turner, wife of Past Master, Lawrence Turner, very soon after the completion of his year as Master of the Fanmakers' Company.

We are also sorry to report the death of Past Master Dr Leonard Weaver CBE on 24 June 2006. He was Master in 2000-2001 and, with the current Master, was very influential in obtaining the Royal Charter in 2004. An obituary is included elsewhere in this edition.

On a happier note, congratulations to Denis and Pam Filer who celebrate their Golden Wedding Anniversary on 17th August.