IMechE Aerospace North West

Meeting Minutes

A meeting of the IMechE Aerospace North West committee was held on Monday 22th June 2015 at David Lloyd Club, Chorley. The meeting commenced at 18:30 till 20:30.

<table>
<thead>
<tr>
<th>Chairman</th>
<th>Euan Mason</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vice Chairman</td>
<td>Vacancy</td>
</tr>
<tr>
<td>Immediate Past Chairman</td>
<td>Ivan Dean</td>
</tr>
<tr>
<td>Hon Secretary</td>
<td>Rebecca Donald-Lopez</td>
</tr>
<tr>
<td>Hon Treasurer</td>
<td>Manuel Donald-Lopez</td>
</tr>
<tr>
<td>Committee members</td>
<td>David Ball</td>
</tr>
<tr>
<td></td>
<td>David Barrett</td>
</tr>
<tr>
<td></td>
<td>Martin Baxter</td>
</tr>
<tr>
<td></td>
<td>Paul Gardner</td>
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<td></td>
<td>Kevin Hudson</td>
</tr>
<tr>
<td></td>
<td>Martin Hyman</td>
</tr>
<tr>
<td></td>
<td>Asim Javed</td>
</tr>
<tr>
<td></td>
<td>Euan Mason</td>
</tr>
<tr>
<td></td>
<td>Andrew Medd</td>
</tr>
<tr>
<td></td>
<td>Iain Minton</td>
</tr>
<tr>
<td></td>
<td>Thurai Rahulan</td>
</tr>
<tr>
<td></td>
<td>Graham Roe</td>
</tr>
<tr>
<td></td>
<td>Clive Winby</td>
</tr>
</tbody>
</table>

1 ANW ATTENDEES

David Ball IMechE Power Industries Division NW Centre Chair
Martin Baxter BAE Systems
Ivan Dean Immediate Past Chairman ANW
Manuel Donald-Lopez BAE Systems / Hon Treasurer IMechE ANW
Martin Hyman Business Consultant
Thurai Rahulan University of Salford / Royal Aeronautical Society
Paul Gardner Aircelle
Andrew Medd Education Advisory Group

Apologies were received from

David Barrett IMechE Business Development Manager
Iain Minton Aircelle
Graham Roe Royal Aeronautical Society
Arreyhon Alemi Rail Industry
Clive Winby SILCOMS Ltd.
Rebecca Donald-Lopez BAE Systems / Hon Secretary IMechE ANW
Euan Mason BAE Systems / Chairman Lancashire Area & ANW

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West

Improving the world through engineering
2 MINUTES FROM THE LAST MEETING
The minutes from the last meeting were agreed to be the true and accurate record.

3 TREASURERS REPORT
See Appendix 3.

4 AEROSPACE DIVISION & HQ UPDATES
It was reported that HQ are planning on setting up an Aerospace Centre in Hong Kong.

5 SCHOOLS SUPPORT & WIND TUNNEL UPDATE
It was noted that the wind tunnel was ready for use at the Lancashire Science Fair on the 25 - 27th of June.

6 EVENTS & ACTIVITIES PROGRAMME - 2014 / 2015

6.1 Event Feedback Composites Event 2: Sustainability
Date: Tuesday 27th May 2015
Venue: Canberra Club, Samlesbury
Time: 18:00 for 18:30
Speaker: Alex Edge, Business Development Manager ELG Carbon Fibre
Title: Composites Sustainability
Organiser: Clive Winby

Clive Winby and Manuel Donald-Lopez attended the event on behalf of the committee. All who registered attended the event. The talk was interesting and generated a good Q&A session. Attendance was lower than anticipated due to holding the event when BAE SYSTEMS have a 3 day week. In future events at the Canberra club should avoid this particular week.

7 EVENTS & ACTIVITIES PROGRAMME - 2015/ 2016

7.1 York Aviation Museum Visit on “Rolling Thunder Day”
Date: Bank holiday Monday 31st August 2015
Venue: York Aviation Museum, Elvington
Title: York Aviation Museum Visit on “Rolling Thunder Day”
Organiser: Rebecca & Manuel Donald-Lopez
Transport has been booked and a group booking at the museum has been made to ensure that the lower admission price of £5 is achieved. This is normally £10 on an event day.

7.2 Air Accident Investigation

Date: WAS Tuesday 2\textsuperscript{nd} June 2015 NOW TBD
Venue: Lecture Theatre Warton
Time: TBD
Speaker: Keith Conradi Chief Inspector of the AAIB in Farnborough
Title: Air Accident Investigation
Organiser: Martin Baxter

It was suggested that this event should be planned in for the 27\textsuperscript{th} of October 2015

**Action:** Martin Baxter Secure a speaker and Warton Lecture Theatre for the October Date

7.3 Visit to Airbus at Broughton

Ivan Dean reported that his contact had not been in touch so a visit is unlikely.

**Action:** Ivan Deak to follow up if possible

7.4 Undercarriage by APPH in Runcorn

Despite the very specific date and location specified by David Ball in the May meeting it appears that the required date is actually 3\textsuperscript{rd} of November rather than 2\textsuperscript{nd} week of October.

**Action:** Martin Hyman to ask APPH contacts if a Speaker can be provided

7.5 Met Office Aviation Forecasting

Martin Hyman reported that he had been in contact with the head of aviation from the met office, Rachel Deakin. He reported that they could do a talk on the 22\textsuperscript{nd} of September. This was agreed and added to the calendar.

**Action:** Martin Hyman to determine if a speaker can be provided for 2016

7.6 UK Astronaut

Martin Baxter mentioned that he had contacted the UK space agency but they did not seem too enthusiastic
8 ANY OTHER BUSINESS

8.1 RAeS Activities

Thurai Rahulan reported that 2016 will be 150th Anniversary of RAeS and there will be a joint event with IET, IMechE would also be welcome. There are no details as yet.

9 AEROSPACE EVENTS ORGANISED BY OTHERS

See Appendix 4.

10 DATE OF NEXT MEETING

Next meeting: Monday 7th September 2015 – at David Lloyd Club, Whittle le Woods, Chorley at 18:00 for 18:30.

11 DATE OF PROPOSED IMECHA COMMITTEE MEETINGS 2015

- Monday 19 January 2015
- Monday 2 March 2015
- Monday 20 April 2015
- Monday 18 May 2015
- Monday 22 June 2015
- Monday 7 September 2015
- Monday 19 October 2015
- Monday 7 December 2015

12 AEROSPACE DIVISION MEETINGS

Aerospace Board Meetings

- Monday 26 January 2015
- Monday 20 April 2015
- Monday 22 June 2015
- Monday 09 November 2015

Aero Division Technical Committee Meeting

- Monday 23 March 2015

13 REGIONAL MEETINGS

- Monday 16 March 2015 NWR AGM
Monday 13 April 2015

Monday 6th July 2015

Minutes taken by:
Manuel Donald-Lopez
Hon Treasurer IMechE Aerospace North West
22nd June 2015
### Appendix 1

**IMechE ANW 2014/2015 Programme**

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>VENUE</th>
<th>TITLE</th>
<th>LECTURER</th>
<th>ORGANISER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 29th September 2014</td>
<td>18:00</td>
<td>P&amp;M Aviation Rochdale</td>
<td>Micro light factory tour Repeat event</td>
<td>Roger Patrick</td>
<td>Thurai Rahulan assisted by Martin Hyman</td>
</tr>
<tr>
<td>Wednesday 8th October 2014</td>
<td>19:30</td>
<td>Canberra Club Samlesbury</td>
<td>Additive Layer Manufacturing</td>
<td>Mike Murray Head of Airframe Integration, Air Platform, MAI, BAE Systems</td>
<td><strong>Joint</strong> with RAeS Preston Branch</td>
</tr>
<tr>
<td>Wednesday 19th November 2014</td>
<td>18:30 for 19:00</td>
<td>Canberra Club Samlesbury</td>
<td>Advanced Aerospace Manufacturing</td>
<td>Jon Carberry, BAE Systems</td>
<td><strong>Joint</strong> with Lancs Area R Cook R Donald-Lopez</td>
</tr>
<tr>
<td>Friday 20th March 2015</td>
<td>13:30 for 14:00</td>
<td>Fire Training Centre Chorley</td>
<td>Fire Training Centre Visit</td>
<td>NA</td>
<td>Martin Baxter</td>
</tr>
<tr>
<td>Wednesday 22nd April 2015</td>
<td>18:00 for 18:30</td>
<td>Marriott Hotel, Manchester Airport, M56 Junction 6</td>
<td>Rolls-Royces Service Desk on Wing Monitoring of Engines</td>
<td>Matt Burns, Rolls Royce Head of Operational Service Desk</td>
<td>Clive Winby</td>
</tr>
<tr>
<td>Wednesday 27th May 2015</td>
<td>18:00 for 18:30</td>
<td>Canberra Club Samlesbury</td>
<td>Composites Event 2: Carbon Composites Sustainability</td>
<td>Alex Edge, Business Development Manager ELG Carbon Fibre</td>
<td>Clive Winby <strong>Joint</strong> Badge with Manchester Area</td>
</tr>
<tr>
<td>Saturday 27th June 2015</td>
<td>-</td>
<td>University of Central Lancashire, Preston</td>
<td>Lancashire Science Festival</td>
<td>NA</td>
<td>Lancashire &amp; YMP</td>
</tr>
</tbody>
</table>

[http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West]
Appendix 2

IMechE ANW 2015/2016 Programme

<table>
<thead>
<tr>
<th>DATE</th>
<th>TIME</th>
<th>VENUE</th>
<th>TITLE</th>
<th>LECTURER</th>
<th>ORGANISER</th>
</tr>
</thead>
<tbody>
<tr>
<td>Monday 31st August 2015</td>
<td>TBD</td>
<td>York Aviation Museum, Elvington</td>
<td>York Aviation Museum Visit on “Rolling Thunder Day”</td>
<td>NA</td>
<td>Rebecca &amp; Manuel Donald-Lopez</td>
</tr>
<tr>
<td>22nd September</td>
<td>TBD</td>
<td>UCLAN</td>
<td>Met Office Talk</td>
<td>Rachel Deakin</td>
<td>Martin Hyman</td>
</tr>
<tr>
<td>Tuesday 27th October 2015</td>
<td>18:00 for 18:30</td>
<td>Warton Lecture Theatre</td>
<td>AAIB</td>
<td>Keith Conradi</td>
<td>Martin Baxter</td>
</tr>
<tr>
<td>3rd November 2015</td>
<td>18:00 for 18:30</td>
<td>John Dalton Building, Manchester University</td>
<td>Undercarriage Design and Development</td>
<td>TBD</td>
<td>Martin Hyman &amp; David Ball</td>
</tr>
<tr>
<td>9th December 2015</td>
<td>19:30 – 21:00</td>
<td>Canberra Club Samlesbury</td>
<td>Taranis Flight Testing</td>
<td>TBD</td>
<td>Joint Badge with RAeS</td>
</tr>
<tr>
<td>January 2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>February 2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>March 2016</td>
<td></td>
<td></td>
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<tr>
<td>April 2016</td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>May 2016</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>TBD 2015</td>
<td>TBD</td>
<td>Kaman, Darwen</td>
<td>Composites Event 3: Carbon Composites Manufacture</td>
<td>Visit to Kaman Composites UK</td>
<td>Martin Hyman</td>
</tr>
</tbody>
</table>
Appendix 3

ANW Finances

Projected Expenditure for period January 2015 to December 2015

<table>
<thead>
<tr>
<th>Date</th>
<th>Event</th>
<th>Expense Description</th>
<th>Credit (£)</th>
<th>Debit Predicted (£)</th>
<th>Balance Predicted (£)</th>
<th>Debit Actual (£)</th>
<th>Balance Actual (£)</th>
<th>Notes</th>
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<tbody>
<tr>
<td>Dec-14</td>
<td>End Balance from 2013</td>
<td></td>
<td></td>
<td></td>
<td>2586.28</td>
<td></td>
<td>2586.28</td>
<td></td>
</tr>
<tr>
<td>Jan-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>2499.36</td>
<td>112.30</td>
<td>2474.18</td>
<td></td>
<td>Higher than last years average meeting cost</td>
</tr>
<tr>
<td>Mar-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>2412.38</td>
<td>86.00</td>
<td>2386.18</td>
<td></td>
<td>No Invoice</td>
</tr>
<tr>
<td>Mar-15</td>
<td>Fire Training Centre Visit</td>
<td>Venue Hire and Catering</td>
<td>100.00</td>
<td>2312.38</td>
<td>0.00</td>
<td>2312.38</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mar-15</td>
<td>Composites Event 2: Carbon Composites</td>
<td>Venue Hire and Catering</td>
<td>100.00</td>
<td>2212.38</td>
<td>0.00</td>
<td>2212.38</td>
<td>Event postponed</td>
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<tr>
<td>Mar-15</td>
<td>Manufacture</td>
<td></td>
<td></td>
<td></td>
<td>2212.38</td>
<td></td>
<td>2212.38</td>
<td></td>
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<tr>
<td>Apr-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>2125.38</td>
<td>102.00</td>
<td>2033.44</td>
<td></td>
<td>Joint meeting with Lancashire, ANW Paid this time.</td>
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<tr>
<td>Apr-15</td>
<td>Rolls Royce Operational Service</td>
<td>Venue Hire and Catering</td>
<td>250.00</td>
<td>1875.38</td>
<td>323.75</td>
<td>1749.63</td>
<td></td>
<td>Marriott Hotel cost more than budgeted venue</td>
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<tr>
<td>May-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>1788.38</td>
<td>86.00</td>
<td>1633.79</td>
<td></td>
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<tr>
<td>May-15</td>
<td>Composites Event 3: Carbon Composites</td>
<td>Venue Hire and Catering</td>
<td>150.00</td>
<td>1583.38</td>
<td>0.00</td>
<td>1683.38</td>
<td>No Invoice to date</td>
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</tr>
<tr>
<td>Jun-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>1551.38</td>
<td>0.00</td>
<td>1653.79</td>
<td>Moved to September</td>
<td></td>
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<tr>
<td>Aug-15</td>
<td>Yorkshire Aviation Museum Visit</td>
<td>Transport and tickets</td>
<td>400.00</td>
<td>1151.38</td>
<td>0.00</td>
<td>1653.79</td>
<td>Event Added</td>
<td></td>
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<tr>
<td>Sep-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>1964.38</td>
<td>0.00</td>
<td>1633.79</td>
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<td></td>
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<tr>
<td>Sep-15</td>
<td>Air Accident Investigation</td>
<td>Venue Hire and Catering</td>
<td>150.00</td>
<td>914.38</td>
<td>0.00</td>
<td>1633.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Oct-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>87.00</td>
<td>827.38</td>
<td>0.00</td>
<td>1633.79</td>
<td>Moved from June</td>
<td></td>
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<tr>
<td>Oct-15</td>
<td>APPI Undercarriage Lecture</td>
<td>Venue Hire and Catering</td>
<td>250.00</td>
<td>577.38</td>
<td>0.00</td>
<td>1633.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Nov-15</td>
<td>Air Bus Visit</td>
<td>Venue Hire and Catering</td>
<td>0.00</td>
<td>577.38</td>
<td>0.00</td>
<td>1633.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dec-15</td>
<td>Committee Meeting</td>
<td>Venue Hire and Catering</td>
<td>100.00</td>
<td>477.38</td>
<td>0.00</td>
<td>1633.79</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Sum Total Meeting Costs | 709.00 | 383.20 |
| Total Events Costs | 1000.00 | 323.75 |
| Total Equipment Costs | 6.00 | 240.64 |
| Total Expenditure for Year | 1705.00 | 959.95 |
| Year End Balance | 477.38 | 1633.79 |
### Nat West Account Ledger

<table>
<thead>
<tr>
<th>Description</th>
<th>Credit</th>
<th>Debit</th>
<th>Running Balance</th>
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<tbody>
<tr>
<td>Opening Balance</td>
<td></td>
<td></td>
<td>£2,586.38</td>
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<tr>
<td>January Committee Meeting</td>
<td>£112.20</td>
<td></td>
<td>£2,474.18</td>
</tr>
<tr>
<td>March Committee Meeting</td>
<td></td>
<td>£96</td>
<td>£2,388.18</td>
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<tr>
<td>Gifts for Speakers</td>
<td>£242.64</td>
<td></td>
<td>£2,145.54</td>
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<tr>
<td>Rolls Royce Event Venue Hire and Catering</td>
<td>£323.75</td>
<td></td>
<td>£1,821.79</td>
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<tr>
<td>Apr Committee Meeting</td>
<td>£102.00</td>
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<td>£1,719.79</td>
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<tr>
<td>May Committee Meeting</td>
<td>£86.00</td>
<td></td>
<td>£1,633.79</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td></td>
<td></td>
<td><strong>£1,633.79</strong></td>
</tr>
</tbody>
</table>

Manuel Donald-Lopez  
Hon Treasurer  
IMechE Aerospace North West
Appendix 4

Aerospace Events organised by others 2015

**RAeS Preston Branch Events**

- **BRANCH EVENT**
  - **FLYING THE SHUTTLEWORTH COLLECTION**
    - Preston Branch

- **BRANCH EVENT**
  - **V22 OSPREY**
    - Preston Branch

- **BRANCH EVENT**
  - **TYPE 45 DESTROYER**
    - Preston Branch

- **BRANCH EVENT**
  - **TARANIS FLIGHT TESTING**
    - Preston Branch

- **BRANCH EVENT**
  - **WESTLAND 100TH ANNIVERSARY**
    - Preston Branch

- **BRANCH EVENT**
  - **US MILITARY SPACE PROGRAMMES**
    - Preston Branch

**IMechE Aerospace Division Events**

**JUNE 2015**

**Surface Engineering in Automotive and Aerospace Industries**

Date: **Wednesday, June 10, 2015** | **Active Event**
Event Type: **1 day Seminar**
Location: **Leeds**

Hear how surface engineering is a valuable tool in achieving both better environmental sustainability and reduced whole life-cycle costs in the automotive and aerospace industries.

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West
Smart Satellites 2015: From Up There To Down Here

Date: Thursday, June 25, 2015 | Active Event
Event Type: 1 day Seminar
Location: Leicester

Coinciding with the Institution’s first report on the UK Space Strategy, this seminar will highlight the R&D and technology required to meet the space challenge.

Advances in Composite Materials - Engineering Sustainability

Date: Thursday, October 08, 2015 | Active Event
Event Type: 1 day Seminar
Location: Bristol

This event joins the research leaders from industry and academia in advanced composite manufacturing to address scientific challenges and accelerate developments of composites technologies.

REGIONAL EVENTS

MAY 2015

Aircraft Testing and the Brimstone Missile Lecture

Date: Thursday, May 14, 2015
Event Type: 0 day Technical Lecture
Location: Amesbury, Salisbury

This event is ideal for anyone interested in Qinetiq and the projects they are currently undertaking You will gain an understanding of the Brimstone Missile and aircraft testing You will earn 3 CPD hours You will have the opportunity to network with peers Cost Free to attend

http://nearyou.imeche.org/near-you/UK/North-Western/Aerospace-North-West

Improving the world through engineering
The use of composite materials in aircraft engines - RAeS Cambridge

Date: Thursday, May 14, 2015  
Event Type: 0 day Talk  
Location: Cambridge

David Cook will discuss the applications of composites within aircraft engines and how new composite materials may influence the design of future engines and aircraft. (RAeS Cambridge)

Concorde – an incredible aircraft

Date: Thursday, May 21, 2015  
Event Type: 0 day Technical Lecture  
Location: Rotherham

Learn more about some of the more interesting technical features of the aircraft and a typical commercial flight from London to New York from the pilot’s perspective.

Skylon - The Future of Space Transportation - IET

Date: Thursday, June 04, 2015  
Event Type: 0 day Talk  
Location: Cambridgeshire

Dr Robert Bond of Reaction Engines will discuss the need for better space transportation and the SKYLON solution to the problem (IET Eastern Region)

Weekday Technical Visit: Airbus: ‘Space Craft don’t just happen’

Date: Thursday, June 11, 2015  
Event Type: 0 day Technical Visit  
Location: Portsmouth

A visit to Airbus (Astrium) in Portsmouth
Forty Years of the Hawk - RAeS Cambridge

Date: **Thursday, September 10, 2015**
Event Type: **0 day Talk**
Location: **Cambridge**

John Newton and Steve Blee of BAE Systems will talk about the Hawk aircraft. (RAeS Cambridge)