

**Tuesday 14 July 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick

Jim Dowd

Chris Green

Liz McInnes

Dr Tania Mathias

Graham Stringer

Derek Thomas

Matt Warman

### ***1. Declaration of Interests***

Members disclosed their interests, pursuant to the resolution of the House of 13 July 1992. (See Appendix).

### ***2. Committee working methods***

The Committee considered this matter.

*Ordered*, That the public be admitted during the examination of witnesses unless the Committee orders otherwise.

*Resolved*, That witnesses who submit written evidence to the Committee are authorised to publish it on their own account in accordance with Standing Order No. 135.

### ***3. Programme of work***

*Resolved*, That the Committee inquire into The science budget.

*Resolved*, That the Committee inquire into The big data dilemma.

*Resolved*, That the Committee inquire into Science in emergencies.

### ***4. POST Board***

*Resolved*, That Nicola Blackwood be the Committee's nomination to the POST Board.

### ***5. Committee visits***

*Resolved*, That the Chair would represent the Committee at the Parliamentary Office for Evaluation of Scientific Choices and Technology (OPECST) conference in Paris, in a representative capacity.

[Adjourned till Wednesday 15 July at 9.50am.

### **Wednesday 15 July 2015**

Members present:

Nicola Blackwood, in the Chair

Chris Green	Graham Stringer
Liz McInnes	Derek Thomas
Dr Tania Mathias	Matt Warman
Carol Monaghan	Daniel Zeichner

#### ***1. Declaration of Interests***

Members disclosed their interests, pursuant to the resolution of the House of 13 July 1992. (See Appendix).

#### ***2. The science budget***

Jo Johnson, Minister of State for Universities and Science, Gareth Davies, Director General, Knowledge and Innovation, Philippa Lloyd, Director General, People and Strategy, Department for Business, Innovation and Skills, gave oral evidence.

Sir Paul Nurse, President, Royal Society, Professor Richard Parker, Chair, Research and Secondments Committee, Royal Academy of Engineering, Lord Stern of Brentford, President, British Academy, and Professor Sir John Tooke, President, Academy of Medical Sciences, gave oral evidence.

[Adjourned till Tuesday 8 September at 2.00pm.

## Tuesday 8 September 2015

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Liz McInnes  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman  
Daniel Zeichner

### ***1. Royal Botanic Gardens, Kew***

Draft Special Report (*Royal Botanic Gardens, Kew: Government Response to the Committee's Seventh Report of Session 2014-15*), proposed by the Chair, brought up, read the first and second time, and agreed to.

The Government response to the Seventh Report of Session 2014–15 was appended to the Report.

*Resolved*, That the Report be the First Special Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

### ***2. Current and future uses of biometric data and technologies***

Draft Special Report (*Current and future uses of biometric data and technologies: Government Response to the Committee's Sixth Report of Session 2014-15*), proposed by the Chair, brought up, read the first and second time, and agreed to.

The Government response to the Sixth Report of Session 2014–15 was appended to the Report.

*Resolved*, That the Report be the Second Special Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

### ***3. Future programme***

The Committee considered this matter.

### ***4. The science budget***

Dr Ruth McKernan, Chief Executive, Innovate UK, and Martyn Sené, Deputy Director and Operations Director, National Physical Laboratory, gave oral evidence.

David Sweeney, Director (Research, Education and Knowledge Exchange), Higher Education Funding Council for England, Professor Rick Rylance, Executive Group Chair, and Professor Philip Nelson, Executive Group Chair-elect, Research Councils UK, gave oral evidence.

[Adjourned till Tuesday 15 September at 2.00pm.]

## **Tuesday 15 September 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Liz McInnes

Dr Tania Mathias  
Carol Monaghan  
Derek Thomas  
Matt Warman

### ***1. The science budget***

*Ordered*, That the following written evidence relating to the science budget be reported to the House for publication on the internet:

Rolls Royce  
The Russell Group  
Royal Academy of Engineering

### ***2. The big data dilemma***

The Committee considered this matter.

*Ordered*, That the following written evidence relating to the big data dilemma be reported to the House for publication on the internet:

ICAEW  
Department for Environment Food & Rural Affairs  
Dr Kevin Macnish  
Brunella Longo  
Mediatrac  
Big Brother Watch  
CompanyNet

UK Data Service  
British Pharmacological Society  
Involve  
UK Computing Research Committee  
National Oceanography Centre  
ESRC Consumer Data Research Centre, Professor Paul Longley and Keith Dugmore  
Direct Marketing Association  
Nuffield Council on Bioethics  
Big Data Strategic Research Initiative, University of Cambridge  
Ms Susan Hall  
South London and Maudsley NHS Foundation Trust NIHR Biomedical Research Centre  
Food Ethics Council  
GARNet  
ESRC Big Data Network, Phase 2  
Experian  
British Heart Foundation  
Smart Energy GB  
Innovate UK  
Jisc  
Swanbarton Ltd  
Royal College of Physicians  
Association of Medical Research Charities  
Mydex CIC  
Information Commissioner's Office  
Genetic Alliance UK  
The Royal Society  
Medical Schools Council  
Food Standards Agency  
BCS,  
The Chartered Institute for IT  
techUK  
E-infrastructure Leadership Council  
National Physical Laboratory  
ANS Group  
University of Edinburgh  
Royal Statistical Society  
Fujitsu Services Ltd  
EMC  
Nesta  
Digital Science  
British Vehicle Rental and Leasing Association  
Pure Storage  
British Library  
Insurance Law Research Group, University of Southampton

Institute for Analytics and Data Science, University of Essex  
Internet Advertising Bureau UK  
Ernst & Young LLP  
British Veterinary Association  
Research Councils UK  
Wellcome Trust  
SAP  
Microsoft UK  
John Innes Centre  
Barclays Bank plc  
Alzheimer's Research UK  
The British Academy  
The Institution of Engineering and Technology and the Royal Academy of Engineering

*Resolved*, That the Committee visit the Hartree Centre, Daresbury.

### ***3. Science in emergencies***

The Committee considered this matter.

*Ordered*, That the following written evidence relating to science in emergencies be reported to the House for publication on the internet:

Paul Browning, University Of Worcester  
The Pirbright Institute  
MicroPharm Limited  
British Society for Immunology  
Professor John McCauley, Director of the Crick Worldwide Influenza Centre, The Francis Crick Institute  
Academy of Social Sciences  
National Institute for Health Research Health Protection Research Unit in Emerging and Zoonotic Infections  
HM Government (Department of Health)  
Science Media Centre  
Professor Trudie Lang, University of Oxford

### ***4. Future Programme***

The Committee considered this matter.

## ***5. The science budget***

Professor Graeme Reid, Chair of Science and Research Policy, University College London, Naomi Weir, Acting Director, Campaign for Science and Engineering, and Nicola Dandridge, Chief Executive, Universities UK, gave oral evidence.

Professor Sir Mark Walport, Government Chief Scientific Adviser, Government Office for Science, gave oral evidence.

Professor Brian Cox, gave oral evidence.

[Adjourned till Wednesday 16 September at 2.00pm.]

## **Wednesday 16 September 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Liz McInnes  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman  
Daniel Zeichner

### ***1. The science budget***

*Ordered*, That the written evidence received from Miss Tessa Burrington relating to the science budget be reported to the House for publication on the internet.

### ***2. The big data dilemma***

*Ordered*, That the following written evidence relating to the big data dilemma be reported to the House for publication on the internet:

Wellcome Trust Sanger Institute

Greater London Authority and Transport for London

Lloyd's Register Foundation

Department for Business, Innovation and Skills and the Department for Culture, Media and Sport

The Open University

The Institute of Cancer Research, London

PHG Foundation  
The Farr Institute of Health Informatics Research  
Science and Engineering South Consortium

***3. Future programme***

The Committee considered this matter.

***4. Evidence check: Innovation and accelerated access to healthcare***

*Resolved*, That the Committee take evidence on Innovation and accelerated access to healthcare.

***5. Evidence check: Driverless cars***

*Resolved*, That the Committee take evidence on Driverless cars.

***6. Evidence check: Artificial intelligence***

*Resolved*, That the Committee take evidence on Artificial intelligence.

***7. Evidence check: Digital government***

*Resolved*, That the Committee take evidence on Digital government.

***8. Evidence check: Genetic modification and gene editing***

*Resolved*, That the Committee take evidence on Genetic modification and gene editing.

***9. Evidence check: Facilitating working away from the office***

*Resolved*, That the Committee take evidence on Facilitating working away from the office.

***10. Evidence check: The science and technology challenges and opportunities for an ageing population***

*Resolved*, That the Committee take evidence on Science and technology challenges and opportunities for an ageing population.

***11. Evidence check: Smart cities***

*Resolved*, That the Committee take evidence on Smart cities.



**12. Evidence check: Smart meters**

*Resolved*, That the Committee take evidence on Smart meters.

**13. The Bodleian Library, University of Oxford**

*Resolved*, That the Committee visit the The Bodleian Library, University of Oxford, on 19 November 2015.

[Adjourned till Tuesday 13 October at 2.00pm.]

**Tuesday 13 October 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Matt Warman

**1. The big data dilemma**

*Ordered*, That the following written evidence relating to the big data dilemma be reported to the House for publication on the internet:

British Standards Institution  
GBG  
British Bankers' Association  
Professor Sir John Tooke, President, Academy of Medical Sciences

**2. The science budget**

*Ordered*, That the following written evidence relating to the science budget be reported to the House for publication on the internet:

The Worshipful Company of Scientific Instrument Makers  
Universities UK  
Met Office  
Royal Society of Biology  
Innovate UK

Department for Business Innovation & Skills and the Department for Education

### ***3. Science in emergencies***

*Ordered*, That the following written evidence relating to Science in emergencies be reported to the House for publication on the internet:

The Academy of Medical Sciences and the Royal Society  
Public Health England  
Microbiology Society and the Society for Applied Microbiology  
Medical Research Council  
Wellcome Trust  
Epidemic Diseases Research Group, University of Oxford

### ***4. Advanced genetic techniques for crop improvement***

Draft Special Report (*Advanced genetic techniques for crop improvement: Government Response to the Committee's Fifth Report of Session 2014-15*), proposed by the Chair, brought up, read the first and second time, and agreed to.

The Government response to the Fifth Report of Session 2014–15 was appended to the Report.

A letter from the European Commission was appended to the Report.

*Resolved*, That the Report be the Third Special Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

### ***5. The science budget***

Jo Johnson MP, Minister of State for Universities and Science, and Gareth Davies, Director General, Knowledge and Innovation, Department for Business, Innovation and Skills, gave oral evidence.

Bernard Ross, Chief Executive Officer, Sky Medical Technology Ltd, James Bromley, Chief Operations Officer, SwiftKey, and Dr Paul Beasley, Head of Research and Development UK, Siemens, gave oral evidence.

[Adjourned till Tuesday 20 October at 2.00pm.]

**Tuesday 20 October 2015**

Members present:

Nicola Blackwood  
Victoria Borwick  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman

*In the absence of the Chair, Dr Tania Mathias was called to the chair.*

**1. The science budget**

*Ordered*, That the written evidence received from Royal Botanical Gardens, Kew, relating to the science budget be reported to the House for publication on the internet.

**2. Science in emergencies**

*Ordered*, That the written evidence received from the Institute of Development Studies relating to science in emergencies be reported to the House for publication on the internet.

**3. Draft Investigatory Powers Bill: technology issues**

*Resolved*, That the Committee inquire into the *Draft Investigatory Powers Bill: technology issues*.

**4. Science in emergencies**

Professor George Griffin, Professor of Infectious Diseases and Medicine, St George's, University of London, and former Chair of the Scientific Advisory Committee on Dangerous Pathogens, Professor Melissa Leach, Director, Institute of Development Studies, Sussex, and Member of the Ebola Scientific Advisory Group for Emergencies, and Professor Tom Solomon, Director, NIHR Health Protection Research Unit in Emerging and Zoonotic Infections, University of Liverpool, gave oral evidence.

*Nicola Blackwood resumed the chair*

Dr Ripley Ballou, Vice President and Head of the GSK Vaccines Research & Development Center, Maryland, Professor Adrian Hill, Director, the Jenner Institute, University of Oxford, and Professor Trudie Lang, Director, Global Health Network, Nuffield Department of Medicine, University of Oxford, gave oral evidence.

Professor Chris Whitty, Professor of Public and International Health, London School of Hygiene and Tropical Medicine and former Chief Scientific Adviser, Department for International Development, and Dr Jeremy Farrar, Director, Wellcome Trust, gave oral evidence.

[Adjourned till Tuesday 27 October at 2.00pm.]

## **Tuesday 27 October 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman

### ***1. Declaration of Interests***

A Member disclosed her interests, pursuant to the resolution of the House of 13 July 1992. (See Appendix).

### ***2. Science in emergencies***

The Committee considered this matter.

### ***3. Big data dilemma***

Aisling Burnand MBE, Chief Executive Officer, Association of Medical Research Charities, Professor John Williams, Director, Health Informatics Unit, Royal College of Physicians, and Dame Fiona Caldicott, National Data Guardian for Health and Care, gave oral evidence.

George Windsor, Senior Policy Researcher, Creative and Digital Economy, Nesta, Sue Daley, Head of Big Data, Cloud and Mobile, Tech UK, Dr Paul Feldman, Chief Executive, Jisc, and Chirdeep Chhabra, Senior Manager, Data Programmes, Digital Catapult, gave oral evidence.

Richard Woolhouse, Chief Economist and Head of Research and Strategy, British Bankers' Association, James Meekings, Co-Founder and UK Managing Director, Funding Circle, and Imran Gulamhuseinwala, Partner, Ernst & Young, gave oral evidence.

[Adjourned till Tuesday 3 November at 2.00pm.]

**Tuesday 3 November 2015**

Members present:

Nicola Blackwood, in the Chair

Chris Green  
Dr Tania Mathias  
Carol Monaghan  
Graham Stringer

Derek Thomas  
Valerie Vaz  
Matt Warman

***1. Declaration of Interests***

A Member disclosed her interests, pursuant to the resolution of the House of 13 July 1992. (See Appendix).

***2. The science budget***

Draft Report (*The science budget*) proposed by the Chair, brought up and read.

*The draft report was agreed to; the Formal Minutes relating to the consideration of the Report are published in the First Report of the Committee, HC 340.*

***3. Strategy and working methods***

The Committee considered this matter.

[Adjourned till Tuesday 10 November at 2.00pm.]

**Tuesday 10 November 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Valerie Vaz  
Matt Warman

***1. Strategy and working methods***

The Committee considered this matter.

***2. Draft Investigatory Powers Bill: technology issues***

Matthew Hare, Chief Executive Officer, Gigaclear, John Shaw, Vice President, Product Management, Sophos, and James Blessing, Chair, Internet Services Providers' Association, gave oral evidence.

Professor Ross Anderson, Professor of Security Engineering, University of Cambridge, Professor Mike Jackson, formerly of Birmingham City Business School, Dr Joss Wright, Research Fellow, Oxford Internet Institute, and Professor Sir David Omand GCB, Visiting Professor, Department of War Studies, King's College London, gave oral evidence.

[Adjourned till Tuesday 17 November at 2.00pm.]

**Tuesday 17 November 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Derek Thomas  
Valerie Vaz  
Matt Warman

***1. Strategy and working methods***

The Committee considered this matter.

***2. Big data dilemma***

*Ordered*, That the written evidence received from Digital Catapult relating to the big data dilemma be reported to the House for publication on the internet.

Chris Combemale, Chief Executive Officer, Direct Marketing Association, Professor Jonathan Montgomery, Chair, Nuffield Council on Bioethics, and Renate Samson, Chief Executive, Big Brother Watch, gave oral evidence.

Christopher Graham, Information Commissioner, gave oral evidence.

[Adjourned till Tuesday 24 November at 2.00pm.]

*Thursday 19 November 2015*

*The Chair, Chris Green, Carol Monaghan, Derek Thomas and Valerie Vaz visited Oxford in connection with the Committee's inquiries into the Big data dilemma and Science in emergencies, in accordance with the Committee's decision of 16 September 2015.*

**Tuesday 24 November 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Chris Green  
Dr Tania Mathias

Graham Stringer  
Derek Thomas  
Matt Warman

***1. Strategy and working methods***

The Committee considered this matter.

***2. Investigatory Powers Bill: technology issues***

The Committee considered this matter.

***3. Science in emergencies***

*Ordered*, That the written evidence received from Professor Adrian Hill, The Jenner Institute, University of Oxford relating to Science in emergencies be reported to the House for publication on the internet.

***4. Science in emergencies***

Dr Edward Sykes, Senior Press Manager, Science Media Centre, Professor Paul Cosford, Director for Health Protection and Medical Director, Public Health England, Lily Makurah, Ebola Screening and Returning Workers Scheme Programme Manager, Public Health England and Dr Oliver Johnson OBE, Programme Director, King's Sierra Leone Partnership, gave oral evidence.

Professor Sir Mark Walport, Government Chief Scientific Adviser, Professor Dame Sally Davies, Chief Medical Officer, and Brigadier Timothy Hodgetts, Medical Director, Defence Medical Services, gave oral evidence.

Jane Ellison MP, Parliamentary Under Secretary of State for Public Health, Department of Health, and Campbell McCafferty, Director of Civil Contingencies Secretariat, Cabinet Office, gave oral evidence.

[Adjourned till Tuesday 1 December at 2.00pm.]



**Tuesday 1 December 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Valerie Vaz  
Matt Warman

**1. *The big data dilemma***

*Ordered*, That the following written evidence relating to the big data dilemma be reported to the House for publication on the internet:

Funding Circle  
Professor Lorna Woods, Professor of Internet Law, University of Exeter  
Open Data Institute

**2. *Investigatory Powers Bill: technology issues***

*Ordered*, That the following written evidence relating to Investigatory Powers Bill: technology issues be reported to the House for publication on the internet:

Ben Everard  
Mr John Phillips  
William Waites  
HUBS C.I.C.  
Medconfidential  
Software & Information Industry Association  
Andrews & Arnold Ltd  
Jisc  
The Information Commissioner's Office  
Universities and Colleges Information Systems Association  
Internet Infrastructure Coalition  
Mr Timothy Panton  
Electronic Frontier Foundation  
Narration Studio Ltd.  
Brass Horn Communications  
Adam Langley  
Alice Thompson  
Mr Giuseppe Sollazzo  
Graham Smith  
Exa Networks Limited

Dr Julian Huppert  
Home Office  
Philip Virgo  
Dr Richard Clayton  
Martin Kleppmann  
Open Rights Group  
The Institute for Human Rights and Business  
Prof Ross Anderson  
techUK  
Privacy International  
Andy Wootton  
Dr. Christopher Soghoian  
New America's Open Technology Institute  
OpenForum Europe  
Big Brother Watch  
Access Now  
Richard Cunningham  
IT-Political Association of Denmark  
Fellow Claudio Guarnieri  
Eric King  
Mozilla  
Stanley Shapiro  
NCC Group plc

### ***3. Digital Skills***

Resolved, That the Committee inquire into *Digital Skills*.

### ***4. European Commission 'Work Programme 2016'***

The Committee considered this matter.

### ***5. Science budget***

The Committee considered this matter.

### ***6. The big data dilemma***

Hetan Shah, Executive Director, Royal Statistical Society, Paul Maltby, Director of Data, Government Digital Service, and Gavin Starks, Chief Executive Officer, Open Data Institute, gave oral evidence.

Ed Vaizey MP, Minister of State for Culture and the Digital Economy, Department for Culture, Media and Sport and the Department for Business, Innovation and Skills, Baroness Shields, Parliamentary Under Secretary of State for Internet Safety and Security, Department for Culture,

Media and Sport, Rebecca Endean OBE, Director, Research Base, Department for Business, Innovation and Skills, and Peter Knight, Deputy Director, Research and Development Directorate, Department of Health, gave oral evidence.

[Adjourned till Tuesday 8 December at 2.00pm.]

## **Tuesday 8 December 2015**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Matt Warman

### ***1. The big data dilemma***

*Ordered*, That the following written evidence relating to the big data dilemma be reported to the House for publication on the internet:

Jen Persson  
techUK  
medConfidential

### ***2. Investigatory Powers Bill: technology issues***

*Ordered*, That the following written evidence relating to Investigatory Powers Bill: technology issues be reported to the House for publication on the internet:

James Harrison  
BT  
GreenNet  
Internet Services Providers' Association

### ***3. Evidence check: Smart meters***

*Ordered*, That the written evidence from the Government Office for Science relating to Smart meters be reported to the House for publication on the internet.

### ***4. Evidence check: Digital Government***

*Ordered*, That the written evidence from the Government Office for Science relating to Digital Government be reported to the House for publication on the internet.

**5. Evidence check: Innovation in, and accelerated access to, healthcare**

*Ordered,* That the written evidence from the Government Office for Science relating to Innovation in, and accelerated access to, healthcare be reported to the House for publication on the internet.

**6. Evidence check: Flexible working and facilitating working away from the office**

*Ordered,* That the written evidence from the Government Office for Science relating to Flexible working and facilitating working away from the office be reported to the House for publication on the internet.

**7. Future programme**

The Committee considered this matter.

**8. Investigatory Powers Bill: technology issues**

Mark Hughes, President, BT Security, and Antony Walker, Deputy Chief Executive Officer, techUK, gave oral evidence.

Professor Bernard Silverman, Chief Scientific Adviser, Home Office, Richard Alcock, Programme Director of the Communication Capabilities Directorate, Home Office, and Dr Robert Nowill, Cyber Security Challenge UK Chairman and Herne Hill Consulting, gave oral evidence.

[Adjourned till Tuesday 15 December at 2.00pm.]

**Tuesday 15 December 2015**

Members present:

Nicola Blackwood, in the Chair

Jim Dowd  
Chris Green  
Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Valerie Vaz  
Matt Warman

***1. Future Programme***

The Committee considered this matter.

*Resolved*, That the Committee inquire into The science budget and the Spending Review.

*Resolved*, That the Committee inquire into Satellites and space.

*Resolved*, That the Committee inquire into The impact of European regulation on UK science innovation.

***2. CERN, Geneva***

*Resolved*, That the Committee visit CERN, Geneva.

***3. Nurse Review of research councils***

Sir Paul Nurse gave oral evidence.

Professor Philip Nelson, Executive Group Chair, Research Councils UK, and David Sweeney, Director, Research, Education and Knowledge Exchange, Higher Education Funding Council for England, gave oral evidence.

[Adjourned till Tuesday 12 January at 2.00pm.]

**Tuesday 12 January 2016**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman

***1. Digital skills gap***

*Ordered*, That the following written evidence relating to Digital skills gap be reported to the House for publication on the internet:

BCS - The Chartered Institute for IT  
Terry Greer  
Wellcome Trust  
FDM Group  
Fujitsu  
Samsung  
Tinder Foundation  
BBC  
The Royal Society of Edinburgh  
Federation of Small Businesses  
Shropshire Council  
City of London Corporation  
The Royal Society  
STEMNET  
Tata Consultancy Services  
Chartered Institute of Library and Information Professionals  
Microsoft  
Research Councils UK  
Aviva plc  
Met Office  
CompTIA  
NCC Group plc  
Caroline Chisholm School  
City & Guilds  
Sky  
Dr Ansgar Koene  
Hewlett Packard Enterprise  
Remploy  
Sunderland Software City

Paullong.Net  
Philip Virgo  
BT  
Brian Sharland  
Mr Byron Calderwood  
The Tech Partnership  
techUK  
EMC  
University of Leicester  
Food Standards Agency  
Cifas  
Apps for Good  
The Publishers Association  
Nesta  
Ofcom  
Greater London Authority  
UK Forum for Computing Education  
Google  
Go ON UK  
Barclays Bank plc  
The Open University

## ***2. Draft Investigatory Powers Bill: technology issues***

*Ordered*, That the following written evidence relating to Draft Investigatory Powers Bill: technology issues be reported to the House for publication on the internet:

Home Office  
Dr Ansgar Koene

## ***3. Science in emergencies***

*Ordered*, That the following written evidence relating to Science in emergencies be reported to the House for publication on the internet:

Public Health England  
Ministry of Defence  
Department of Health

## ***4. The science budget and the Spending Review***

*Ordered*, That the correspondence between the Committee and the Secretary of State for Education regarding The science budget and the Spending Review be reported to the House for publication on the internet.

## **5. Forward programme**

The Committee considered this matter.

## **6. Digital skills gap**

Nick Williams, Consumer Digital Director, Lloyds Banking Group, Helen Milner, Chief Executive, Tinder Foundation, and Margaret Sambell, Director of Strategy, The Tech Partnership, gave oral evidence.

Dr Ellen Helsper, Director of Graduate Studies, Media and Communications Department, London School of Economics and Political Science, Charlotte Holloway, Head of Policy and Associate Director, techUK, and Steven Roberts, Strategic Transformation Director, Barclays plc, gave oral evidence.

[Adjourned till Wednesday 13 January at 10.30am.]

### **Wednesday 13 January 2016**

Members present:

Nicola Blackwood, in the Chair

Chris Green  
Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Matt Warman

### ***Science in emergencies: UK lessons from Ebola***

Draft Report (*Science in emergencies: UK lessons from Ebola*) proposed by the Chair, brought up and read.

*The draft report was agreed to; the Formal Minutes relating to the consideration of the Report are published in the Second Report of the Committee, HC 469.*

[Adjourned till Tuesday 19 January at 3.30pm.]



**Tuesday 19 January 2016**

Members present:

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green

Dr Tania Mathias  
Derek Thomas  
Valerie Vaz  
Matt Warman

**1. *Big data dilemma***

*Ordered*, That the written evidence received from the Department for Culture, Media & Sport relating to Big data dilemma be reported to the House for publication on the internet.

**2. *Digital skills gap***

*Ordered*, That the written evidence received from Communications Consumer Panel and the Advisory Committee on Older and Disabled People relating to Digital skills gap be reported to the House for publication on the internet.

**3. *The science budget***

Draft Special Report (*The science budget*), proposed by the Chair, brought up, read the first and second time, and agreed to.

The Government response to the First Report of Session 2015–16 was appended to the Report.

*Resolved*, That the Report be the Fourth Special Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

**4. *Draft Investigatory Powers Bill: technology issues***

*Draft Report (Draft Investigatory Powers Bill: technology issues) proposed by the Chair, brought up and read.*

*The draft report was agreed to; the Formal Minutes relating to the consideration of the Report are published in the Third Report of the Committee, HC 573.*

**5. *Science budget***

The Committee considered this matter.

**6. *The science budget and the Spending Review***

Rt Hon Sajid Javid MP, Secretary of State for Business, Innovation & Skills, and Gareth Davies, Director General, Business & Science, Department for Business, Innovation and Skills, gave oral evidence.

[Adjourned till Tuesday 26 January at 2.00pm.]

## **Tuesday 26 January 2016**

Members present:

Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas

*Resolved*, That, at this day's sitting, Graham Stringer take the Chair of the Committee.

### ***1. Digital skills gap***

*Ordered*, That the following written evidence relating to Digital skills gap be reported to the House for publication on the internet:

HP Inc UK Limited  
Department for Culture, Media and Sport  
Jen Persson  
Lloyds Banking Group

### ***2. Forward programme***

The Committee considered this matter.

### ***3. Digital skills gap***

Peter Gaynord, KS2 Teacher & Master Teacher in Computer Science, Histon and Impington Junior School, Andrew Seager, Head Teacher, Stratford School Academy, Desmond Deehan, Head Teacher, Townley Grammar School, and Sara McManus, Director of Vocational Curriculum, Carshalton College, gave oral evidence.

Simon Humphreys, National Coordinator, Computing at School, Amy Solder, Education Project Lead, Nesta, and Sheila Flavell, Chief Operating Officer, FDM Group, gave oral evidence.

[Adjourned till Tuesday 2 February at 2.00pm.]

**Tuesday 2 February 2016**

Members present:

Victoria Borwick  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer

*Resolved*, That, at this day's sitting, Graham Stringer take the Chair of the Committee.

**1. *Big data dilemma***

*Ordered*, That the written evidence received from Leaderboarded Ltd relating to the big data dilemma be reported to the House for publication on the internet.

**2. *Digital skills gap***

*Ordered*, That the following written evidence relating to Digital skills gap be reported to the House for publication on the internet:

BCS - Chartered Institute for IT  
Mrs Lucy Cripps  
Mr Kevin Drumm

Mrs Kay Sawbridge  
Mr Aleks Lukic  
Mrs Maria Tilley

**3. *Satellites and space***

*Ordered*, That the following written evidence relating to Satellites and space be reported to the House for publication on the internet:

Dr Chris Lavers  
Rezatec Limited  
University of Leicester  
Vaeros Ltd  
Discover Space UK Ltd  
British Antarctic Survey  
Michael Johnson  
Pupils 2 Parliament  
ViaSat  
University of Oxford  
Surrey Satellite Technology Ltd  
STFC  
Satellite Applications Catapult  
Royal Astronomical Society  
Caithness Chamber of Commerce

Airbus Group UK  
National Centre for Earth Observation  
Dr Marcell Tessenyi  
Goonhilly Earth Station Ltd  
UKspace and techUK  
CPOM/COMET  
Met Office  
Europlanet  
Institution of Mechanical Engineers  
O3b Limited  
Avanti Communications  
National Oceanography Centre  
Royal Aeronautical Society  
Ordnance Survey  
Telespazio VEGA UK Ltd

ADS Group  
Machinists Inc.  
Mullard Space Science Laboratory  
OneWeb

Inmarsat  
Innovate UK  
British Standards Institution  
National Physical Laboratory

#### ***4. Forward programme***

*Resolved*, That the Committee inquire into the Zika Virus.

*Resolved*, That the Committee visit Google Garage and the National Graphene Institute, Manchester.

#### ***5. Work of the Chief Medical Officer***

Professor Dame Sally Davies, Chief Medical Officer, Department of Health, gave oral evidence.

[Adjourned till Tuesday 9 February at 2.00pm.]

### **Tuesday 9 February 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Valerie Vaz  
Matt Warman

#### ***1. Digital skills gap***

*Ordered*, That the following written evidence relating to Digital skills gap be reported to the House for publication on the internet:

Mr Daniel Phelan  
Mr Alex Melhuish

#### ***2. Satellites and space***

*Ordered*, That the following written evidence relating to Satellites and space be reported to the House for publication on the internet:

UK Space Agency (on behalf of the Department of Business, Innovation and Skills)  
Institute of Physics

### ***3. Forward programme***

The Committee considered this matter.

### ***4. Satellites and space***

Stuart Martin, Chief Executive Officer, Satellite Applications Catapult, Andy Green, President, UKspace, and Dr David Parker, Chief Executive, UK Space Agency, gave oral evidence.

Joanne Wheeler, Partner, Bird & Bird, Professor John Remedios, Director, National Centre for Earth Observation, and Dr Christopher Mutlow, Director, STFC-RAL Space, gave oral evidence.

[Adjourned till Wednesday 10 February at 10.00am.

## **Wednesday 10 February 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Valerie Vaz  
Matt Warman

### ***1. The big data dilemma***

Draft Report (*The big data dilemma*) proposed by the Chair, brought up and read.

*The draft report was agreed to; the Formal Minutes relating to the consideration of the Report are published in the Fourth Report of the Committee, HC 468.*

### ***2. Zika virus***

Dr Alain Kohl, MRC Programme Leader, University of Glasgow, Professor Dilys Morgan, Head, Gastrointestinal, Emerging and Zoonotic Infections Department, Public Health England, Graeme Tunbridge, Deputy Director, Emergency Preparedness, Resilience and Response, Department of Health, and Professor Peter Horby, Centre for Tropical Medicine and Global Health, University of Oxford, gave oral evidence.

[Adjourned till Tuesday 23 February at 2.00pm.

**Tuesday 23 February 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Dr Tania Mathias  
Carol Monaghan

Graham Stringer  
Derek Thomas  
Valerie Vaz  
Matt Warman

***1. Digital skills gap***

*Ordered*, That the following written evidence relating to Digital skills gap be reported to the House for publication on the internet:

Jane Broxton  
Harvy Tamber

***2. Satellites and space***

*Ordered*, That the written evidence received from Royal Academy of Engineering relating to Satellites and space be reported to the House for publication on the internet.

***3. Zika virus***

*Ordered*, That the Chair's letter to the Secretary of State for Health relating to the Zika virus be reported to the House for publication on the internet.

***4. Future programme***

The Committee considered this matter.

***5. Satellites and space***

Richard Peckham, Business Development Director, Airbus Group, Professor Martin Barstow, President, Royal Astronomical Society, and Ruy Pinto, Group Chief Operations Officer, Inmarsat, gave oral evidence.

Patrick Wood, Group Managing Director, Surrey Satellite Technology Limited, Ross Marshall, Head of Operations, Clyde Space, and Mark Thomas, Managing Director, Reaction Engines, gave oral evidence.

[Adjourned till Tuesday 8 March at 2.00pm.]

**Tuesday 8 March 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Matt Warman

***1. Digital skills gap***

*Ordered*, That the written evidence received from Mrs Roberts relating to Digital skills gap be reported to the House for publication on the internet.

***2. Satellites and space***

*Ordered*, That the following written evidence relating to Satellites and space be reported to the House for publication on the internet:

Michael Johnson

Reaction Engines

***3. Impact of EU Regulation and policy on the UK life sciences***

*Ordered*, That the following written evidence relating to Impact of EU Regulation and policy on the UK life sciences be reported to the House for publication on the internet:

Brightwake Ltd.  
Mr Christopher Roy-Toole  
Eli Lilly and Company  
Innogen Institute, University of Edinburgh  
Parkinson's UK  
Academy of Medical Sciences  
Association of British Healthcare Industries  
John Davison  
Institute of Biomedical Science  
Shelford Group Medical Directors'  
BIVDA  
Sense About Science  
Biosciences for Farming in Africa

RSPCA  
Science and Technology Studies Unit  
Professor Alex Faulkner  
The Royal Society  
Cell and Gene Therapy Catapult  
PHG Foundation  
Wellcome Trust  
Institute of Physics and Engineering in  
Medicine  
BioIndustry Association  
The Royal Society of Chemistry  
Julian Hitchcock

***4. Work of the Chief Medical Officer***

*Ordered*, That the written evidence received from Chief Medical Officer, Department of Health, relating to clinical trials and medicine licensing be reported to the House for publication on the internet.

#### **5. Zika virus**

*Ordered*, That the written evidence received from the Medical Research Council relating to the Zika virus be reported to the House for publication on the internet.

#### **6. The science budget**

*Ordered*, That the Chair's letter to the Chancellor of the Exchequer relating to the Science budget be reported to the House for publication on the internet.

#### **7. Digital Government: Evidence check**

*Ordered*, That the written evidence received relating to the Digital Government: Evidence check be reported to the House for publication on the internet.

#### **8. Flexible working and facilitating working away from the office: Evidence check**

*Ordered*, That the written evidence received relating to the Flexible working and facilitating working away from the office: Evidence check be reported to the House for publication on the internet.

#### **9. Smart meters: Evidence check**

*Ordered*, That the written evidence received relating to the Smart meters: Evidence check be reported to the House for publication on the internet.

#### **10. Future programme**

The Committee considered this matter.

#### **11. Digital skills gap**

Rachel Neaman, Chief Executive, Go ON UK, and James Thickett, Director of Market Developments, Ofcom, gave oral evidence.

Ed Vaizey MP, Minister of State for Culture and the Digital Economy, Department for Culture, Media and Sport and the Department for Business, Innovation and Skills, and Nick Gibb MP, Minister of State for Schools, Department for Education, gave oral evidence.

[Adjourned till Tuesday 15 March at 2.00pm.]



**Tuesday 15 March 2016**

Nicola Blackwood, in the Chair

Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Derek Thomas

***1. Impact of EU Regulation and policy on the UK life sciences***

*Ordered*, That the following written evidence relating to Impact of EU Regulation and policy on the UK life sciences be reported to the House for publication on the internet:

Association of Medical Research Charities  
The Royal Society of Edinburgh  
Research Councils UK (RCUK)  
Department for Business Innovation & Skills

***2. The science budget and spending review***

*Ordered*, That the written evidence received from Sajid Javid MP, Secretary of State for Business, Innovation and Skills, relating to The science budget and spending review be reported to the House for publication on the internet.

***3. Investigatory Powers Bill***

*Ordered*, That the Chair's letter to Theresa May MP, Home Secretary, relating to the Investigatory Powers Bill be reported to the House for publication on the internet.

***4. Anti-lobbying clause in government grant agreements***

*Ordered*, That the Chair's letter to Sajid Javid MP, Secretary of State for Business, Innovation and Skills, relating to the Anti-lobbying clause in government grant agreements be reported to the House for publication on the internet.

***5. Future programme***

*Resolved*, That the Committee inquire into Smart meters.

*Resolved*, That the Committee inquire into Graphene.

*Resolved*, That the Committee inquire into the Forensic Science Strategy.

*Resolved*, That the Committee visit LGC Forensics, Teddington.

## **6. Satellites and space**

Jo Johnson MP, Minister of State for Universities and Science, Department for Business, Innovation and Skills, and Dr David Parker, Chief Executive, UK Space Agency, gave oral evidence.

Professor Ian Boyd, Chief Scientific Adviser, Department for Environment, Food and Rural Affairs, Philip Marnick, Group Director (Spectrum), Ofcom, and Neil Ackroyd, Chief Operating Officer, Ordnance Survey, gave oral evidence.

[Adjourned till Tuesday 22 March at 2.00pm.]

## **Tuesday 22 March 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas

### **1. Digital skills gap**

*Ordered*, That the following written evidence relating to the Digital skills gap be reported to the House for publication on the internet:

Birkbeck, University of London  
The Centre for Innovation in Technological Education, Cambridge

### **2. Impact of EU regulation and policy on the UK life sciences**

*Ordered*, That the following written evidence relating to the Impact of EU regulation and policy on the UK life sciences be reported to the House for publication on the internet:

The Association of the British Pharmaceutical Industry  
Royal Society of Biology

### **3. Driverless cars: Evidence check**

*Ordered*, That, subject to the discretion of the Chair, any submission relating to Driverless cars received from the Government before the Committee's next meeting, shall be reported to the House for publication on the internet.

#### ***4. GM and Gene Editing: Evidence check***

*Ordered*, That the written evidence received relating to GM and Gene Editing: Evidence check be reported to the House for publication on the internet.

#### ***5. Smart cities: Evidence check***

*Ordered*, That the written evidence received relating to Smart cities: Evidence check be reported to the House for publication on the internet.

#### ***6. Future programme***

*Resolved*, That the Committee inquire into Robotics and artificial intelligence.

*Resolved*, That the Committee inquire into Regenerative medicine.

*Resolved*, That the Committee inquire into Science communication.

*Resolved*, That the Committee inquire into Science in emergencies: chemical, biological, radiological or nuclear incidents

#### ***7. Smart meters***

*The Committee considered this matter.*

#### ***8. Graphene***

*The Committee considered this matter.*

#### ***9. Impact of EU Regulation and policy on the UK life sciences***

Stuart Pritchard, EU Affairs Manager, Wellcome Trust, Dr Keith Ison and Professor Berne Ferry, representing the Shelford Group, gave oral evidence.

Dr Jacqueline Barry, Director of Regulatory Affairs, Cell and Gene Therapy Catapult, Paul Browning, Head of Regulatory Affairs, Brightwake Ltd, Darren Budd, Commercial Director - UK and Ireland, BASF, and Steve Bates, Chief Executive Officer, BioIndustry Association, gave oral evidence.

Professor Roger Lemon, representing the Academy of Medical Sciences, and Sir John Skehel, Vice-President and Biological Secretary, the Royal Society, gave oral evidence.

[Adjourned till Tuesday 12 April at 2.00pm.]

**Tuesday 12 April 2016**

Nicola Blackwood, in the Chair

Jim Dowd  
Chris Green  
Dr Tania Mathias

Graham Stringer  
Derek Thomas

***1. Digital skills gap***

*Ordered*, That the written evidence received from Mrs Kay Sawbridge relating to Digital skills gap be reported to the House for publication on the internet.

***2. Satellites and space***

*Ordered*, That the written evidence received from Innovate UK relating to Satellites and space be reported to the House for publication on the internet.

***3. Anti-lobbying clause in government grant agreements***

*Ordered*, That the letter from Sajid Javid MP, Secretary of State for Business, Innovation and Skills, relating to the Anti-lobbying clause in government grant agreements be reported to the House for publication on the internet.

***4. Evidence check***

The Committee considered this matter.

***5. Forensic Science Strategy***

Dr Tania Mathias declared a non-pecuniary interest in relation to the Committee's inquiry into the Forensic Science Strategy that LGC Forensics was located in her constituency.

*Resolved*, That the Committee visit LGC Forensics, Teddington, on 9 June 2016.

*Ordered*, That the following written evidence relating to the Forensic Science Strategy be reported to the House for publication on the internet:

Linked Forensic Consultants  
Dr Gillian Tully  
Chair of the Home Office National DNA  
Database Ethics Group  
Criminal Cases Review Commission  
Mr Angus Marshall

United Kingdom Accreditation Service  
Royal Statistical Society  
ArroGen Forensics  
Keith Borer Consultants  
Triple A Forensics Ltd  
Mr David Royle

ROAR Forensics  
Peter Merrill  
Estatom Systems Ltd  
Professor Martin Evison  
Royal Society of Chemistry  
Prospect

University of Dundee  
Principal Forensic Services Limited  
Forensic Science Northern Ireland  
Knowledge Transfer Network  
Research Councils UK  
Forensic Access

Dr Anya Hunt, Chief Executive, Chartered Society of Forensic Sciences, and Dr Gillian Tully, Forensic Science Regulator, gave oral evidence.

Tom Nelson, Director of Forensic Services, Scottish Police Authority (representing the Association of Forensic Science Providers), Chief Constable Debbie Simpson, National Police Chiefs Council lead for Forensics, Gary Pugh, Director of Forensic Services, Metropolitan Police Service, and Dr Mark Pearse, Commercial Director, Government Services, LGC Forensics, gave oral evidence.

Mary Calam, Director General of Crime and Policing Group, and Stephen Webb, Director of Law Enforcement Programmes, Home Office, gave oral evidence.

[Adjourned till Tuesday 19 April at 2.00pm.]

## **Tuesday 19 April 2016**

Nicola Blackwood, in the Chair

Jim Dowd  
Chris Green

Dr Tania Mathias  
Derek Thomas

### ***1. Forensic Science Strategy***

*Ordered*, That the following written evidence relating to the Forensic Science Strategy be reported to the House for publication on the internet:

Mr Tiernan Coyle  
Linked Forensic Consultants Ltd

British Standards Institution

### ***2. Graphene***

*Ordered*, That the following written evidence relating to Graphene be reported to the House for publication on the internet:

Manchester Graphene Technologies Ltd

Inclusive Designs Ltd

Tim Harper  
National Physical Laboratory  
Centre for Process Innovation  
British Standards Institution  
Department of Engineering, University of  
Cambridge

Dr Nigel Salter  
The University of Manchester  
Research Councils  
Innovate UK

### ***3. Science in emergencies: UK lessons from Ebola***

The Committee considered this matter.

### ***4. Robotics and artificial intelligence***

*Resolved*, That the Committee visit Google Deepmind, London.

### ***5. Anti-lobbying clause in government grant agreements***

The Committee considered this matter.

### ***6. Impact of EU regulation on the UK life sciences***

*Ordered*, That the following written evidence relating to Impact of EU regulation on the UK life sciences be reported to the House for publication on the internet:

Brightwake Ltd.  
Mr James Love

Emma Greenwood, Head of Policy Development, Cancer Research UK, gave oral evidence.

Dr Ian Hudson, Chief Executive, Jonathan Mogford, Director of Policy, and John Wilkinson, Director of Devices, Medicines and Healthcare products Regulatory Agency, gave oral evidence.

George Freeman MP, Parliamentary Under-Secretary of State for Life Sciences, Department for Business, Innovation and Skills and Department of Health, gave oral evidence.

[Adjourned till Tuesday 26 April at 2.00pm.]

**Tuesday 26 April 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd  
Chris Green

Dr Tania Mathias  
Carol Monaghan  
Graham Stringer  
Derek Thomas

**1. Digital skills gap**

*Ordered*, That the written evidence received from Leanne Forbes relating to Digital skills gap be reported to the House for publication on the internet.

**2. Forensic Science Strategy**

The Committee considered this matter.

*Ordered*, That the written evidence received from Peter Sommer relating to Forensic Science Strategy be reported to the House for publication on the internet.

**3. Smart meters**

*Ordered*, That the following written evidence relating to Smart meters be reported to the House for publication on the internet:

Dr Kevin Burchell  
Nick Hunn  
Alex Henney  
Isaac Jamieson  
Mr Alex Henney  
Centre for Sustainable Energy  
Mr Andrew Shaw  
British Energy Efficiency Federation  
Ulster University  
Foundation for Information Policy Research  
Electricity Efficiency  
Dr Kevin Burchell  
Association for Environment Conscious Building  
Maple Tree Energy Management Ltd  
Glasgow Caledonian University  
BEAMA  
Smart Energy GB

National Energy Action  
All-Party Parliamentary Carbon Monoxide Group  
Dr Sarah Darby  
Citizens Advice  
Utilita Energy Ltd  
Durham University  
Pilot Systems  
Institute of Directors  
Smart DCC Limited  
Northern Powergrid  
Department for Energy and Climate Change  
British Gas  
Secure Meters Group  
Hugh Smeaton  
Federation of Small Businesses  
Academy of Engineering  
Ofgem

#### **4. *The big data dilemma***

Draft Special Report (*The big data dilemma: Government Response to the Committee's Fourth Report of Session 2015-16*), proposed by the Chair, brought up, read the first and second time, and agreed to.

The Government response to the Fourth Report of Session 2015–16 was appended to the Report.

*Resolved*, That the Report be the Fifth Special Report of the Committee to the House.

*Ordered*, That the Chair make the Report to the House.

#### **5. *Zika virus***

*Ordered*, That the correspondence from the Secretary of State for Health regarding the Zika virus be reported to the House for publication on the internet.

#### **6. *European Scrutiny Committee: Commission Communication on the transfer of the data of EU citizens to the US***

The Committee considered this matter.

#### **6. *Graphene***

*Ordered*, That the following written evidence relating to Graphene be reported to the House for publication on the internet:

Institute of Physics  
The Graphene Council

Graham Stringer declared a non-pecuniary interest in relation to the Committee's inquiry into Graphene that he was a member of the Advisory Board, Department of Chemistry, University of Manchester.

Tim Harper, Tim Harper Graphene Investment and Consulting, Dr Erik Cox, Director, Inclusive Designs Ltd, Ray Gibbs, Chief Executive Officer, Haydale Graphene Industries Plc, Harry Swan, Managing Director, Thomas Swan and Company Ltd, and Dr Liam Britnell, UK Manager, BGT Materials Ltd, gave oral evidence.

Sir André Geim, Regius Professor, University of Manchester, and Research Professor, Royal Society, and Professor Luke Georghiou, Vice-President for Research and Innovation, University of Manchester, gave oral evidence.

[Adjourned till Tuesday 3 May at 2.00pm.]



**Tuesday 3 May 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Jim Dowd  
Chris Green  
Dr Tania Mathias

Carol Monaghan  
Graham Stringer  
Derek Thomas  
Matt Warman

### **1. Graphene**

*Ordered*, That the following written evidence relating to Graphene be reported to the House for publication on the internet:

Xefro Club  
Department for Business, Innovation and Skills

### **2. Impact of EU regulation on the UK life sciences**

*Ordered*, That the written evidence received from Wellcome Trust Sanger Institute relating to Impact of EU regulation on the UK life sciences be reported to the House for publication on the internet.

### **3. Robotics and artificial intelligence**

*Resolved*, That the Committee visit Microsoft Research, Cambridge.

*Ordered*, That the following written evidence relating to Robotics and artificial intelligence be reported to the House for publication on the internet:

Cambridge University Science Policy Exchange	D&TforD&T Manufacturing Technology Centre
Peter Morgan	Deloitte
Andrew Brereton	Professor Tony Prescott
Population Matters	Joint response from AAI and UKCRC
Informed.AI	UCL Knowledge Lab
Dr Thrishantha Nanayakkara	The Involve Foundation
Edge Foundation	ABB
Dr Toby Walsh	The Robotics & Autonomous Systems Special Interest Group
Dr J. Robert Michael	Hereward College
Transport Systems Catapult	Article 36
Dr Will Slocombe	Pupils 2 Parliament
Department of Automatic Control & Systems Engineering, The University of Sheffield	Professor Huw Price EPSRC UK-RAS Network

Research Councils UK  
Nesta  
Nutmeg Saving and Investment Ltd  
Rocket Fuel  
The Law Society  
Braintree Ltd  
Ordnance Survey  
Northern Robotics Network  
RACE, UK Atomic Energy Authority  
Royal Academy of Engineering  
Professor Rose  
Transpolitica  
Simon Beard  
Microsoft

Future Advocacy  
AZTIX  
Autonomous Intelligent Systems Partnership  
Global Priorities Project  
Future of Humanity Institute, Centre for the  
Study of Existential Risk, Global Priorities  
Project, Future of Life Institute  
Professor Sandor M Veres  
EMLSRI  
Dr Andrew Stewart  
Mr Geoff Pegman  
Innovate UK  
BioCentre

#### ***4. Science communication***

*The Committee considered this matter.*

*Ordered,* That the following written evidence relating to Science communication be reported to the House for publication on the internet:

Dr Sam Illingworth  
Professor Michael Merrifield  
AlphaGalileo Ltd  
Kenneth Monjero  
Spindle Fibre Films  
Mr Roderick Pond  
Aberdeen Science Centre  
Professor Louise  
BIG  
Media Woman  
Jerome Davies  
Science Communication Unit, Imperial  
College London  
Nik Sultana  
Academy of Medical Sciences  
International Centre for Life  
National Schools' Observatory  
Field Studies Council  
The Royal Institution  
British Pharmacological Society  
Royal Astronomical Society  
Dr Len Fisher  
Cambridge Science  
The Eden Project

Jodrell Bank Discovery Centre, The  
University of Manchester  
UCL, Department of Science and  
Technology Studies  
Science Museum Group  
Joint submission from AsSIST-UK; Science  
in Public; Public Communication of Science  
and Technology Network  
Catalyst Science Discovery Centre and  
Museum  
National Institutes of  
GM Freeze  
Alice Roberts  
The Royal Society  
Association of the British Pharmaceutical  
Industry  
The Royal Society of Edinburgh  
Professor Robert Evans  
University of Southampton  
Microbiology Society  
Professor Andy Miah  
The University of Oxford  
Dynamic Earth  
Research Councils UK

EngineeringUK  
At-Bristol Science Centre  
Dr Simon Singh & Professor Richard Wiseman  
Glasgow Science Centre  
Dundee Science Centre  
Plymouth Marine Laboratory  
Professor Martin Bauer  
The University of Aberdeen  
Met Office  
Dr David Bhella  
People's Knowledge  
Nuffield Council on Bioethics  
National Nuclear Laboratory  
Grantham Research Institute on Climate Change and the Environment, LSE  
National Forum for Public Engagement in STEM  
National Coordinating Centre for Public Engagement  
The British Academy  
The McPin Foundation

The Gatsby Charitable Foundation  
Ricardo Energy & Environment  
Alzheimer's Research UK  
Cardiff University  
Royal Statistical Society  
Kathryn Ingham  
Science Media Centre  
Imperial College London  
Pupils 2 Parliament  
Royal Society of Biology  
Science made simple  
Techniquist  
Wellcome Trust  
W5  
Dr Jane Gregory  
Explorer Dome  
Dr Kris De Meyer  
Department for Business, Innovation & Skills  
Agricultural Biotechnology Council  
British Science Association

### ***5. Government grant conditions and lobbying***

*Ordered*, That the correspondence to the Secretary of State for Business, Innovation and Skills regarding Government grant conditions and lobbying be reported to the House for publication on the internet.

### ***6. Smart meters***

Nick Hunn, Chief Technology Officer, WiFore Consulting Ltd, Pam Conway, Head of Smart Strategy, British Gas, and Dr Sarah Darby, Environmental Change Institute, University of Oxford, gave oral evidence.

Lord Bourne of Aberystwyth, Parliamentary Under-Secretary of State, for Climate Change, Department of Energy and Climate Change, Daron Walker, Senior Responsible Owner, Smart Metering Implementation Plan, Department of Energy and Climate Change, and Sacha Deshmukh, Chief Executive, Smart Energy GB, gave oral evidence.

[Adjourned till Tuesday 10 May at 2.00pm.]

**Tuesday 10 May 2016**

Nicola Blackwood, in the Chair

Victoria Borwick  
Stella Creasy  
Jim Dowd

Carol Monaghan  
Graham Stringer  
Matt Warman

***1. Graphene***

*Ordered*, That the written evidence received from Tim Harper relating to Graphene be reported to the House for publication on the internet.

***2. Robotics and artificial intelligence***

*Ordered*, That the following written evidence relating to Robotics and artificial intelligence be reported to the House for publication on the internet:

Google DeepMind  
techUK  
Professor David Lane  
Lloyd's Register Foundation  
Department for Business, Innovation and Skills  
Royal Society

***3. Science communication***

*Ordered*, That the following written evidence relating to Science communication be reported to the House for publication on the internet:

Institute of Physics  
Genomics England  
Botanic Gardens Conservation International  
UK Association for Science and Discovery Centres  
Society for Applied Microbiology  
Royal Society of Chemistry  
Royal Academy of Engineering  
Professor Mark Lorch  
Sense about Science

***4. Regenerative medicine***

The Committee considered this matter.

### ***5. Forensic Science Strategy***

*Resolved*, That the Committee visit the Metropolitan Police forensic laboratory, London.

### ***6. Science and innovation landscape reviews***

*Ordered*, That the correspondence to the Secretary of State for Business, Innovation and Skills regarding the science and innovation landscape be reported to the House for publication on the internet.

### ***7. Future programme***

The Committee considered this matter.

### ***8. Science communication***

Professor Duncan Wingham, Chief Executive, Natural Environment Research Council, Julia Maddock, Associate Director of Communications & Engagement, Natural Environment Research Council, and Professor James Wilsdon, Director of Impact and Engagement, Faculty of Social Sciences, University of Sheffield, gave oral evidence.

[Adjourned till Tuesday 24 May at 2.00pm.]



## DECLARATIONS OF INTERESTS

### *14 July 2015: declaration of Members' interests*

#### **Nicola Blackwood MP**

Sponsorships: Countywide Developments Ltd, Solihull; Clare Freeman; Mr George Robinson; United & Cecil Club, High Holborn, London.

#### **Victoria Borwick MP**

Remunerated employment, office, profession, etc: Member of the Greater London Assembly [until September 2015]; Councillor, Royal Borough of Kensington and Chelsea [until March 2016].

Land and Property: London home provides facilities for a swimming school.

Directorships: Poore and Second Poore Ltd, holding companies limited by guarantee.

Husband, Lord Borwick, a member of the House of Lords, with interests declared in the Lords Register of Interests, comprising Federated Investments LLP, Bicester Lane Ltd, Countryside Properties (Bicester) Ltd, Federated Management Ltd, Federated Trust Corporation Limited, Love Lane Investments Ltd, Mayfield Market Towns Ltd, Poore Limited, Second Poore Limited, and Hansa Trust plc (property investment, housing development and investment businesses); Farmland in Bellshill, Scotland; GATEway Project Advisory Group, City & West End Properties Ltd, City Monument Management Ltd, City Monument Properties Ltd, Music Software Ltd; Board of Science Museum, Foundation British Lung Foundation, Ewing Foundation for deaf children, The Federated Foundation, and Royal Brompton and Harefield Charity.

#### **Jim Dowd MP**

Family members employed and paid from parliamentary expenses: nephew, Fred Sollitt Dowd, as a Parliamentary Assistant.

Family members engaged in lobbying the public sector on behalf of a third party or client: partner, Janet Anderson, employed by Pearson Anderson Communications Ltd as a consultant.

#### **Chris Green MP**

Sponsorships: Henry Davis.

#### **Liz McInnes MP**

Sponsorships: Unite the Union, London; RMT, London.

#### **Tania Mathias MP**

Remunerated employment, office, profession, etc: Councillor, London Borough of Richmond upon Thames until June 2015.

NHS doctor, member of the General Medical Council, member of the British Medical Association, member of Medical Defence Union.

Sponsorships: Anthony Solway; Robin Birley; Mark White.

Land and property: Studio flat in Oxford.

Shareholdings: Oak Circle Ltd, real estate management company.

**Graham Stringer MP**

Employment and earnings: payments from ComRes, London, for Parliamentary Panel Survey opinion surveys; payments from YouGov, London, for online surveys; payments from Ipsos MORI, London, for parliamentary panel surveys.

Family members employed and paid from parliamentary expenses: step-daughter, Eleanor Carr, as Parliamentary Assistant.

**Derek Thomas MP**

Sponsorships: Bernard Lewis; United and Cecil Club, Windsor; Robert Dorrien Smith.

Overseas visits: Israel and Palestine 29 June – 2 July 2014, funded by Conservative Friends of Israel.

Land and property: Joint share of 4 flats in Cornwall.

Sole Trader, Derek Thomas Building Services, not currently trading.

**Matt Warman MP**

Remunerated employment, office, profession, etc: Head of Technology, Telegraph Media Group, before elected in May 2015.

Sponsorships: JCB Research, Rocester, Staffs.

***15 July 2015: declaration of Members' interests***

**Carol Monaghan MP**

Remunerated employment, office, profession, etc: Physics teacher, Renfrewshire Council, until April 2015.

**Daniel Zeichner MP**

Sponsorships: UNISON, London; CWU, Wimbledon; David Cleevely; Ross Cleevely; Carol Atack; Baroness Janet Cohen; UNITE, London.

Shareholdings: Pettitts Ltd, management for shared freehold flats at which resident.

***27 October 2015: declaration of Members' interests***

**Stella Creasy MP**

Employment and earnings: Payment from the Royal Shakespeare Company, Stratford-upon-Avon for a speaking engagement, donated to local initiative.

Sponsorships: Fran Perrin

***3 November 2015: declaration of Members' interests***

**Valerie Vaz MP**

Employment and earnings: payment from ITV Services Limited, Trafford, for one-off television



appearance on Christmas University Challenge programme.

Solicitor (not practising).

Husband paid as Office Manager from parliamentary expenses.