

2297

CONFIDENTIAL

# 10 DOWNING STREET

THIS FILE MUST NOT GO OUTSIDE 10 DOWNING ST

FILE TITLE:

SCIENCE, RESEARCH & DEVELOPMENT

SERIES

TRADE & INDUSTRY

PART:

15

PART BEGINS:

28 MARCH 2001

PART ENDS:

DOWNING ST  
4 May 2001

CAB ONE:

LABOUR ADMINISTRATION

*2nd box*

PREM 49/2297

CONFIDENTIAL

PART

CLOSED

DATE CLOSED	7 JUNE 2001
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Series : TRADE AND INDUSTRY

File Title : Science / Research & Development

Part : 15

Date	From	To	Subject	Class	Secret
28/03/2001	ONS		GDP expenditure on research and development	C	0
29/03/2001	PUS/DETR	ost	Code of practice for Scientific Advisory Committees : "nd round of pu	U	0
02/04/2001	MS/MAFF	CDL	Misc 6 meeting	C	0
06/04/2001	PUS/DTI	PPS	Huntingdon Life Sciences	U	0
17/04/2001	HMT	EA/PS	State of UK science	U	0
18/04/2001	ms/cabinet office	DPM	Genetic test results and the insurance industry	U	0
18/04/2001	PUS/DoH	DPM	Genetic test results and the insurance industry	C	0
26/04/2001	LP	SS/DoH	Human Reproductive Cloning	C	0
04/05/2001	EA/PS	PM	Science in government departments	C	0

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FREEDOM OF  
INFORMATION ACT 2000



1.05 (to see)  
2. file

**10 DOWNING STREET**

SV01

**PRIME MINISTER**

**SCIENCE IN GOVERNMENT  
DEPARTMENTS**

We asked David King to set down some thoughts on how to improve the use of science (and scientists) across Whitehall. His note contains some interesting ideas, including:

- greater use of short-term contracts, to bring in top scientists from academia;
- more external scrutiny of what departmental science budgets are spent on;
- central (rather than departmental) management of scientists;
- a single funding stream for science.

We will follow up with him on the detail of these proposals. **But are there any you are particularly attracted to?**

all of it is good & should be followed up.

SV  
4 May

**PRIME MINISTER**

**FROM: DAVID KING**

**SCIENCE IN GOVERNMENT DEPARTMENTS**

1. Your office asked me to let you have my first impressions and thoughts on ways of strengthening science and scientific advice in government departments.
2. The capabilities of science and technology have recently taken a giant step forward. For the past 100 years, attention had been focused on obtaining detailed descriptions and understanding of relatively simple phenomena. In recent times, through the availability of advances in instrumentation, in theory, and in computer power, similarly quantitative studies are being made of very complex phenomena, with remarkable predictive capabilities. There are many examples of this; I quote only the Human Genome project, global warming, and the recent successful modelling for optimising policy on the control of the GB foot and mouth epidemic. State-of-the-art science, technology and informatics therefore offers a remarkably powerful potential capability for advising on policy issues across the whole range of government.
3. My views on science in government departments have been particularly influenced by my observation of:
  - the important role played by outside scientific advice in tackling the foot and mouth epidemic;
  - the need for stronger scientific and technical input to DTI's policies and programmes as we look up to and beyond the next 10 years, particularly in the area of energy resource.
4. In their July 1999 report (the Nicholson report), the Council for Science and Technology said that they were not convinced that departments were really geared up to making the most of science and technology. The process of drawing up departmental science and innovation strategies has led to real improvements. But I

believe there is some way to go. Following the privatisation programmes of the 1980s and 1990s, many departments seem to be in the position of a company which has out-sourced its research and development operation, and no longer has the capacity in-house to identify opportunities from science and technology, or to commission research which is properly focused and of high quality. And the decentralisation of civil service management has left many of the remaining scientists in isolated pockets: there is no longer a scientific civil service and no parallel to the professional management for other professionals, such as economist statisticians and lawyers.

5. The picture is not uniform across government. MoD and Health have strong central research functions, led by top scientists brought in from outside on short term contracts (3-5 years). DETR, HSE and FSA seem to have managed to integrate science well into their policies and programmes. MAFF makes use of Research Council institutes and still has important in-house research establishments, though there are questions about how well they are funded and used.
6. I have some first ideas on ways forward, (which I have shared with your office). They include:
  - i) The need for external scrutiny, or peer review. A panel of 3 or 4 world-renowned scientists, with relevant expertise, chaired by the CSA, should review the programmes of each department, say every 3 years. Reports would cover the potential for scientific advice and research in each department and the quality and effectiveness in supporting departmental programmes. These reports would be published;
  - ii) Top level scientific input to Boards of all Departments, on the model of MoD and Health. External recruitment on short-term contracts brings people in with up-to-date hands-on experience of relevant developments in science and technology, and ensures that policy development benefits from scientific rigour;

iii) I would like to explore the scope for more central management of scientists across the civil service. If we can offer challenging careers, we shall have a better chance of getting and keeping the right people, and getting interchange with the best science. Linked to this, I would like to see more support for the professional independence of chief scientists and their teams. A more explicit head-of-profession role for the CSA might be appropriate here. The work for the numerate professions following the PIU report 'Adding it Up' might offer a model for the way forward;

iv) I would also like to explore the arguments for and against more centralised budgetary arrangements for science. The direct link between external assessment of performance and money has done a great deal to strengthen university science. I want to test whether a similar arrangement could bring benefits to the Civil Service, with research budgets allocated to departments, through the Office of Science and Technology, in the light of the findings of external review panels.

7. These are initial impressions. I know that some of them are shared by David Sainsbury, in the light of his nearly three years as Minister for Science. I need to test out this thinking with Permanent Secretaries and Chief Scientists across Whitehall. If you approve, I would plan to do so over the next few weeks. If at that point the ideas seem promising, we shall need to work them through properly. One way to do so would be through a cross-cutting review, as part of SR2002: I am writing to the Chief Secretary with some ideas.

I am copying this to Lord Sainsbury, to Sir Richard Wilson and to Permanent Secretaries in charge of Departments.

To: Sir Richard Wilson  
70 Whitehall

From: **Professor David King**  
**CSA - OST**

Tel: 271 2010

Fax: 271 2003

Ref: S10115

Date: 31 May 2001

**PROPOSAL FOR A CABINET OFFICE SCIENCE UNIT**

1. We have spoken about the scope for strengthening the Chief Scientific Adviser's role in the Centre, making a reality of the present symbolic 'room' in Cabinet Office as a base for the drive to improve science in government departments.
2. I set out some ideas for the way forward in my note of 4 May to the Prime Minister. These would build on work which has already been started by the Science in Government Directorate here in OST. But they go much further. I believe that, to make them happen, they need to be clearly driven from the centre, with backing from the Prime Minister, rather than from DTI.
3. So my proposal is that we should set up a small science unit, of, say, six people, in the Cabinet Office to support me in this work. The Unit's initial tasks might be to:
  - set up a rolling programme of peer review of science in Government departments and key agencies (the unit would support a series of teams of world class scientists, led by the CSA);
  - develop options for strengthening of scientific competences in government departments, including the option to reinstate a 'scientific civil service', with central professional support;
  - explore the pros and cons of a central budget for Government science, and make recommendations (possibly as an input to a cross-cutting review in SR2002);
  - develop a horizon-scanning function – ensuring that I can alert the Prime Minister to new issues as they arise - and be the first point of contact for No 10 on science and the issue it raises.
4. I would continue to be head of the Office of Science and Technology (OST) and would keep an office in the DTI. The Unit would need to work very closely with OST,



MANAGEMENT - IN CONFIDENCE

particularly the Science in Government Directorate, who would do much of the leg work to support it. Some common management would help to ensure that the unit and present staff pull together: I suggest that the Senior Director (G3) who supports me in OST should share her time between Cabinet Office and DTI on the same basis as I would – perhaps half and half at the start, though that should be reviewed, along with all other aspect of the Unit's performance, 18 months after it started operation.

5. I attach an outline organisation chart. I would want the Unit to include a mix of civil servants and of practising scientists, who might share their time between their research and the work of the unit.
6. I recognise that a number of issues remain to be explored, including the right home for the secretariat of Ministerial Groups – at present OST are joint secretaries, with the Economic and Domestic Secretariat, to the Ministerial Science Group and to MISC 6. But I thought I should share my initial ideas with you now.

**Professor David King**

**Cabinet Office Science Unit**  
Outline Organisation

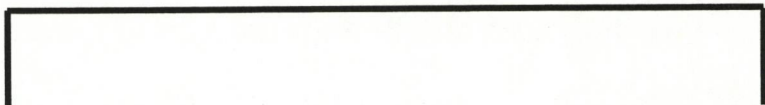
CSA



G3 (shared with DTI)



**Head of Unit**  
(SCS)

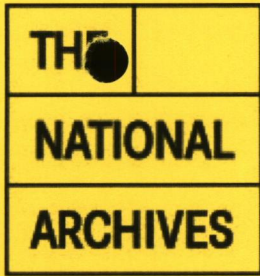


<b>Central Budgets Study/ Development of Competences</b>	<b>Peer Review</b> (Scientist on Secondment)
G7 + HEO	

<b>Horizon Scanning/ Current Issues</b> (Scientist on Secondment + G7)
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<b>Unit Support</b> SPS/EO Secretary AO
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DEPARTMENT/SERIES ..... <i>PREM 49</i> ..... PIECE/ITEM ..... <i>2297/1</i> ..... (one piece/item number)	Date and sign
Extract details:  <i>Letter dated 4 May 2001</i>	
CLOSED UNDER FOI EXEMPTION ..... <i>H0(2)</i> .....	<i>16/1/24</i> <i>Wayland.</i>
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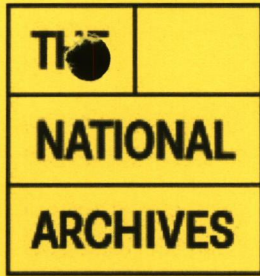
Enter the department and series,  
eg. HO 405, J 82.

Enter the piece and item references, .  
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DEPARTMENT/SERIES ..... <i>PREM 49</i> ..... PIECE/ITEM ..... <i>2294/1</i> ..... (one piece/item number)	Date and sign
Extract details:  <i>Letter and attachments dated  30 April 2001</i>	
CLOSED UNDER FOI EXEMPTION ..... <i>40(2)</i> .....	<i>16/1/2024</i> <i>Wayland</i>
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or Number not used.



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PRIVY COUNCIL OFFICE

The Rt Hon Margaret Beckett MP

2 CARLTON GARDENS LONDON SW1Y 5AA

1)

DW  
cc: SV  
PO  
KS.

26 April, 2001

Dear Alan,

#### HUMAN REPRODUCTIVE CLONING

I received a copy of Yvette Cooper's letter to John Prescott of 18 April, about your proposals to announce in your speech to the Institute of Human Genetics on 19 April a possible moratorium on the use of genetic tests by insurance companies.

I thought I had better write to place on record (to avoid a repetition in future) that I have considerable concerns, as Chair of LP committee, about the way that this issue has now emerged. My agreement to the proposals to trail legislation was given on the condition that the passage in your draft speech which stated that "the Government will legislate in the near future to explicitly ban human reproductive cloning in the UK" be amended to read "the Government has the firm intention to legislate to ban human reproductive cloning in the UK when Parliamentary time allows".

Unfortunately, not only do the changes I requested not seem to have been made, but similar references were widely reported in the media. One article went as far as to suggest that you had "instructed Parliamentary draftsmen to start work on a bill". I fully understand that such a cautionary approach to wording must often seem unnecessarily restrictive to colleagues. However it is in all our interests that it is maintained. Few things lay a Minister more readily open to criticism than promising a Bill s/he cannot then deliver because circumstances have changed.

Equally, we should all try to avoid saying too much about the drafting process. Credit gained if it is known that a Bill is being drafted is promptly lost when people start to pursue questions about what other Bills are not yet being drafted.

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In your own case, you have bid for a bill on Human Tissue and Organs for next Session, which is a potential vehicle for these measures. Cabinet has endorsed LP committee's recommendation that this bill should be in the 'B list' which is part of the pool of potential legislation. As you know, firm decisions are yet to be made. The programme pool itself will need to be reviewed in the light of the contents of the manifesto. Cabinet's decisions explicitly recognised that not all the Bills provisionally approved could possibly make it into the final programme.

For the avoidance of doubt I should therefore make it plain that LP's final recommendations – like Cabinet's final decisions – cannot be assumed and are unlikely to be influenced by any misunderstandings which may arise from the way your statement was reported.

I am copying this letter to the Prime Minister, the other Business Managers, and to Sir Richard Wilson and First Parliamentary Counsel.

*Reads*

*Farquhar*

MARGARET BECKETT

Rt Hon Alan Milburn MP  
Secretary of State for Health





Parliamentary Secretary  
Cabinet Office

CABINET OFFICE  
70 Whitehall, London SW1A 2AS  
Telephone: 020 7270 0652

E-mail: [gstringer@cabinet-office.x.gsi.gov.uk](mailto:gstringer@cabinet-office.x.gsi.gov.uk)

SU  
DN  
CC: PU  
✓

PP G-GS

G4262.

The Rt Hon John Prescott MP  
Deputy Prime Minister  
Department of the Environment, Transport and the Regions  
Eland House  
London  
SW1E 5DU

18 April 2001

Dear Deputy Prime Minister,

### GENETIC TEST RESULTS AND THE INSURANCE INDUSTRY

I have seen Yvette Cooper's letter to you of 18 April seeking colleagues' comments about proposals from Alan Milburn to announce (in a speech tomorrow) a possible moratorium on the use of genetic test results by insurance companies. I am content for Alan to make that announcement but not to go so far as to suggest that legislation is the preferred option if a satisfactory agreement with insurers cannot be obtained.

It seems sensible for Alan to recognise the importance of this issue in his major speech tomorrow on genetics and to indicate the Government's willingness to introduce a moratorium on the use of genetic tests by insurance companies. I am also content for any action to await the outcome of Human Genetics Commission's review and its recommendations.

I have not seen the text of Alan's speech, but I would not be content if he were to go as far as to suggest that the Government will pursue a legislative approach if a satisfactory agreement with insurers cannot be obtained. Legislation is only one option and we need to agree the policy once all options, including the legislation, have been considered and we have seen a Regulatory Impact Assessment. I would therefore hope that Alan could make that clear in his speech by saying that the Government will have to consider other options, including a legislative approach, if a satisfactory agreement with insurers cannot be obtained.

I am copying this letter to the Prime Minister, members of HS Committee, Sir Richard Wilson and Robert Hill (No 10 Policy Unit).

Yours sincerely,

*Giona Waller*

PP GRAHAM STRINGER  
(Agreed by the Minister and  
signed in his absence)



From the Parliamentary Under Secretary of State



The Rt Hon John Prescott  
Deputy Prime Minister  
Department of the Environment, Transport and the Regions  
6<sup>th</sup> Floor  
Eland House  
Bessenden Place  
London SW1E 5DU

Richmond House  
79 Whitehall  
London  
SW1A 2NS  
Tel: 020 7210 3000

SU  
cc: DN of  
JH  
RH/PJ

Dear Deputy Prime Minister,

18 April 2001

### GENETIC TEST RESULTS AND THE INSURANCE INDUSTRY

**This letter is to inform HS colleagues about proposals from Alan Milburn to announce (in a speech tomorrow) a possible moratorium on the use of genetic test results by insurance companies. Agreement will be sought from insurers, but if this is not forthcoming a legislative route will be pursued. I have held extensive discussions with Melanie Johnson and Lord Sainsbury about this issue and am currently seeking their agreement to the precise text of the speech. I apologise for the terribly short deadline, but I would be very grateful for any comments by close today and will assume a nil return signifies that colleagues are content with these proposals.**

The Genetics and Insurance Committee is currently assessing the clinical and actuarial evidence for individual tests, making the insurance industry provide evidence to support the use of genetic tests in insurance risk assessment. Through this process the number of tests being used by the industry has been reduced from seven to three (Huntington's Disease, early onset Alzheimer's Disease and hereditary breast/ovarian cancer).

Experience in practice has shown that this process is insufficient to allay all the wider concerns raised by the use of genetic tests. Because of concerns about the potential for unfair discrimination in insurance, the Government last year asked the Human Genetics Commission (HGC) to look into the wider ethical issues around the use of genetic test results by insurers and to make recommendations. Their report and recommendations are expected in June 2001.

A partial moratorium on the use of positive genetic test results was recommended by the House of Commons Science and Technology Committee in their recent report on Genetics and Insurance published on 5 April.

Alan Milburn is making a major speech on 19 April on genetics. In this speech he proposes to recognise the importance of this issue and to indicate the Government's willingness to introduce a moratorium on the use of genetic tests results by insurance



companies. Any action will await the outcome of HGC's review and its recommendations.

An agreement with the insurance industry is likely to be sought for a wider voluntary moratorium, along the lines of their existing limited moratorium for life assurance up to £100,000 linked to the purchase of a house.

A legislative approach will be pursued if a satisfactory agreement with insurers cannot be obtained. The appropriate legislative route to achieve this will be explored.

I am copying this to the Prime Minister, members of HS Committee, Sir Richard Wilson and Robert Hill (No 10 Policy Unit).

*Yours sincerely,*

*Mary Agnew*  
(Assistant Private Secretary)

PP YVETTE COOPER  
(Approved by the Minister  
and signed in her absence)

SV  
cc JJM  
PJ



Treasury Chambers, Parliament Street, London, SW1P 3AG

**Simon Virley**  
**Private Secretary to the Prime Minister**  
**10 Downing Street**  
**London**  
**SW1A 2AA**

*Dear Simon,*

17<sup>th</sup> April 2001

**STATE OF UK SCIENCE**

The Financial Secretary has seen Professor King's report to the Prime Minister of 22 March on the state of UK science

The Financial Secretary thinks that the report is a useful round-up of the issues. Having led the SR2000 cross-cutting review many of Professor King's points strike a chord with the Treasury. The Financial Secretary was particularly interested in his remarks in paragraph 13 about research being done by and for Government departments and has the following comments.

The outcome of SR2000 made a start at getting the inputs right with a large increase in science spending - 7% real per annum increase in DTI's science budget and a 5.4% real per annum increase in combined DTI and DfEE spending on science.

The settlements for other civil departments with major science interests - DoH, DETR and MAFF (together with that part of its expenditure transferred to the Food Standards Agency) - were made in the clear expectation that departmental research spending would be held at least constant in real terms with an anticipated real terms rise by the third year of the SR2000 period (2003-04). Departments need to ensure that research is made the priority it should be in terms of allocation of funding.

However, as Professor King's remarks reflect, this is not just about the inputs. Departments need to focus on the outputs they get for the resources they commit to ensure maximum value for money for their science spend.

RightFAX

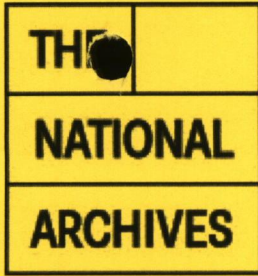


The Financial Secretary would also like to flag that Departments need to look beyond the SR2000 period and how their science needs and strategies fit alongside other funding priorities in the longer term

I am copying this letter to Mark Bowman and Lucy Makinson (HMT), Beccy Eggleton (DTI), Kevin Rennie (DfEE), Richard Abel (Cabinet Office) and Iain Morrow (OST)

yours sincerely  
*H. Watson*

**HELEN WATSON  
PRIVATE SECRETARY**



DEPARTMENT/SERIES ..... <i>PREM 49</i> ..... PIECE/ITEM ..... <i>2297/1</i> ..... (one piece/item number)	Date and sign
Extract details:  <i>Letter and attachments dated 7 April 2001</i>	
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Lord Sainsbury of Turville  
Parliamentary Under Secretary of State for Science



*Fide*

Jeremy Heywood  
Principal Private Secretary  
10 Downing Street  
London  
SW1A 2AA

**Department of Trade  
and Industry**  
1 Victoria Street  
London  
SW1H 0ET

Direct Line 020 7215 5624  
Direct Fax 020 7215 5410

Enquiries 020 7215 5000

E-mail Address  
mpst.sainsbury@dti.gsi.gov.uk

*6<sup>th</sup>* April 2001

*Dear Jeremy,*

#### **HUNTINGDON LIFE SCIENCES**

During a conversation with Geoffrey Norris earlier this week, Lord Sainsbury promised to prepare a note on the current position surrounding Huntingdon Life Science for the Prime Minister. Please find the note attached.

I am copying this letter and the note to Janet Grauberg (Department of Health), Hilary Jackson (Home Office), Bernadette Kelly (Department of Trade and Industry), Tom Scholar (HM Treasury), Richard Abel (Cabinet Office), Iain Morrow (Office of Science and Technology) and to Geoffrey Norris.

*yours ever,  
Beccy Eggleton*

**BECCY EGGLETON**  
Private Secretary to Lord Sainsbury



**Current Position on Huntingdon Life Sciences (HLS): Note for the Prime Minister**

1. In the last two weeks, HLS has come under increased pressure from the activities of SHAC. The campaign against financial institutions has been stepped up, with demonstrations against HLS's market makers, Winterflood and Dresdener Kleinwort Wassener. (DrKW) and the leading brokers dealing in HLS shares, Charles Schwab and the Bank of New York.
2. These demonstrations have had some success; both Winterflood and Dresdener Kleinwort Benson, have deregistered HLS, which can no longer trade on the stock exchange automated quotes system. It is now trading on the automated trades system, which is intended for small companies on the Alternative Investment Market. Although this means that trading in shares is very low, the company remains a publicly-quoted company listed on the LSE.
3. On 30 March, British Biotech plc announced that it would not contract further research to HLS, following threats by SHAC to step up the campaign against them as a customer. British Biotech said that they were afraid a campaign would adversely affect their share price and possibly drive the company into liquidation. They were not, however, a major customer.
4. NatWest, HLS's current bankers, wish to close their corporate account. So far, HLS has been unable to find an alternative bank in the UK and is now working with DTI and the Bank of England on alternatives in the Channel Islands or Gibraltar.

**Government Support for HLS**

5. It is absolutely essential to support HLS. The company is the major contract research organisation in the UK and a world-leader. If it was allowed to fail, it would send an appalling message to pharmaceutical companies around the world, and adversely affect the amount of research by them in this country. The DTI, Ministers and the Bank of England have therefore been working with the company to help it in every way they can.
6. As a "last resort", DTI is exploring with the Bank of England the practicalities of providing basic banking services through a DTI account. If no other alternative can be found in the short-term, it would be possible to operate a receipts and payments account under the DTI umbrella, on a cost-recovery basis. This would enable HLS to continue trading if NatWest was to close its current account and a alternative had not been found.
7. The DTI, HMT and HO met on Monday (2 April) to discuss what Government can do to help market-makers resist being intimidated and harassed by animal rights campaigners. This would be of immediate help to HLS and have broader significance for the financial sector. Three actions were agreed:
  - Home Office and Treasury would seek a suitable, early opportunity for Ministers to explain to the City what steps were being taken to counter animal rights campaigners activities. Ministers should also impress upon financial institutions the wider implications of giving way to intimidation. The first approaches to the City should be as soon as possible after Easter.

- There should be high-level co-ordination of the Government's strategy on intimidation and harassment by animal rights campaigners. This could best be done through Cabinet Office.
- The Home Office would continue its dialogue with the Association of Chief Police Officers, National Public Order Intelligence Unit and Crown Prosecution Service on effective policing of demonstrations as a matter of urgency.

8. At the same time, the Home Secretary proposed a Ministerial Task Force on animal rights extremism in a letter to you. I am very enthusiastic about this proposal. Establishment of a Ministerial Task Force and co-ordination of strategy through the Cabinet Office would go some way to re-assuring financial institutions that the Government takes threats from animal rights campaigners seriously, giving the institutions confidence to resist intimidation.

9. Mike O'Brien has published a consultative document on Animal Rights Extremism. This provides useful information and the opportunity for companies affected by the actions of animal rights campaigners to comment to the Home Office.

10. I have today had a lengthy meeting with Andrew Baker, the Chairman of the Company, to assure him that the Government will give him all the help that they can, and to contact me directly at any time if he thinks there is anything else we can do.

DTI

6 April 2001

0207 238 6465



Ministry of Agriculture, Fisheries and Food,  
Nobel House, 17 Smith Square, London SW1P 3JR

DNJ  
cc SV  
L. PJ  
C

From the Minister of State (Lords)

The Rt Hon Dr Mo Mowlam MP  
Minister for the Cabinet Office  
Cabinet Office  
70 Whitehall  
London  
SW1A 2AS

2 April 2001

Dear Mo

**MISC 6: 20 MARCH 2001**

I am sorry that Foot and Mouth disease pressures prevented me from attending the MISC 6 meeting on 20 March. I did however read the papers for the meeting with interest and thought it might be helpful to record my views on them.

I found Yvette Cooper's paper on the human health applications of biotechnology a very helpful overview of the current and potential role of biotechnology in protecting and improving public health. I fully endorse the need to reaffirm its importance in this area and to stress this message publicly. I would welcome the opportunity to consider papers on the House of Lords Cloning Select Committee outcome, on human clinical genetics, and on xenotransplantation, as proposed in the paper. I also welcome the suggestions for future papers. Those on antibiotic resistance, public health benefits resulting from environmental biotechnology, and medicines from GM crops are of particular interest to MAFF. MAFF officials would be happy to work with DH officials on a paper on medicines from GM crops, to come to the committee in due course, if colleagues would find that useful.

I was also very interested to read David Sainsbury's paper on promoting competitiveness in the UK biotechnology industry. The paper paints an encouraging picture of the position for the biotech industry generally and reflects the considerable efforts that David and his officials have devoted to the industry, as well as highlighting the issues that need tackling further. Among these I noted in particular animal issues, which are of considerable concern to the scientific community, and public attitudes, where we have seen that the negative climate of opinion on food and crops in particular is already having an adverse effect on investment decisions. I therefore welcome the new initiatives David describes, and would support in particular anything we can do to follow up the recommendation of the Genome



0207 238 6465

Valley Steering Group on promoting a more considered and rational dialogue on biotechnology issues.

It was unfortunate that Michael Meacher's absence meant that discussion of his paper on liability had to be deferred. The question of liability in relation to genetically modified organisms is clearly an important one which will need to be addressed as swiftly as possible at EU level if we are to secure political support among EU partners for unblocking the GM approvals process. However, I did have a number of reservations about the specific proposal for a domestic regime that Michael put forward in his paper, which raises some important legal and policy issues. I think it would therefore be useful if officials could analyse the implications further before MISC 6 returns to the subject.

I am copying this to the Prime Minister, MISC 6 colleagues, Sir Richard Wilson, Sir John Krebs and Professor David King.

*Yours ever*  
*Helene*

THE RT. HON. THE BARONESS HAYMAN

FROM BOB AINSWORTH MP  
PARLIAMENTARY UNDER SECRETARY OF STATE



DEPARTMENT OF THE ENVIRONMENT  
TRANSPORT AND THE REGIONS

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OUR REF: RA/7599/01

*Dear Professor King,*

29 MAR 2001

**CODE OF PRACTICE FOR SCIENTIFIC ADVISORY COMMITTEES: SECOND ROUND OF PUBLIC CONSULTATION**

On 16 March you wrote Ministerial Science Group members seeking agreement to the launch of a second round of public consultations on a Code of Practice for Scientific Advisory committees.

I am aware that, over that last week, my officials have had discussions with OST on the draft Code and as a result a later version makes satisfactory reference to the 2000 Freedom of Information Act. Therefore, I am content that you can proceed with the consultation process.

DETR may wish to contribute to the exercise, in which case we will respond in accordance with published timetable.

I am copying this letter to the Prime Minister, members of the Ministerial Science Group and Sir Richard Wilson.

*Chris Smeade*  
*Bob Ainsworth*

**BOB AINSWORTH**



INVESTOR IN PEOPLE

**RESTRICTED - PERSONAL - STATISTICS**  
**UNTIL 9.30AM ON 30<sup>th</sup> MARCH 2001 AND THEREAFTER UNCLASSIFIED**

FROM: **Robert Hay**  
DATE: 28 March 2001  
TEL: GTN 1211 3063

**PS/Chancellor of the Exchequer**

c: See attached list

**GROSS DOMESTIC EXPENDITURE ON RESEARCH AND DEVELOPMENT (1999)**

1. Estimates of gross domestic expenditure on research and development for 1999 will be published at 9.30am Friday 30 March 2001. A near final draft of the First Release containing these estimates is attached.

2. The key points of interest are:

- In 1999 gross domestic expenditure on R&D was £16.7bn. This represented an increase of 7% in cash terms on 1998. In real terms, expenditure increased by 4%.
- Within the total, R&D expenditure for civil purposes increased by 9% in cash terms. Expenditure for defence purposes remained at a similar level to 1998.
- In 1999 expenditure on R&D increase to 1.84% of gross domestic product. This represents a slight rise in comparison to the previous year.
- In 1999 Government funded 28% of all R&D in the UK (24% of civil R&D and 55% of defence R&D).

3. **THE CIRCULATION OF THIS ADVANCE INFORMATION IS ON A STRICTLY PERSONAL AND CONFIDENTIAL BASIS AND IT SHOULD BE SEEN ONLY BY THOSE WITH A GENUINE NEED TO KNOW. THE CHANCELLOR OF THE EXCHEQUER HAS ASKED THAT THIS BE RE-EMPHASISED SINCE HE CONSIDERS IT VITAL FOR PUBLIC CONFIDENCE THAT STATISTICS ARE NOT LEAKED IN ADVANCE OF PUBLICATION.**

*Robert Hay*

**Robert Hay**  
Statistician  
Prices and Business Group  
Room D.256, Newport

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Dr M Pepper &  
Mr R Hay &  
Mrs Caron Walker

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# First Release

**Coverage**  
United Kingdom  
**Theme**  
Commerce, Energy and  
Industry

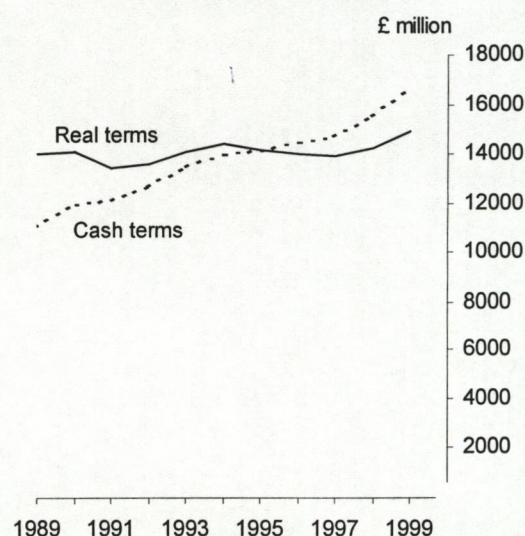
## Gross domestic expenditure on research and development 1999

In 1999 the UK's gross domestic expenditure on research and development (R&D) was £16.7 billion. This represented an increase, in cash terms, of seven per cent from the level recorded in 1998.

In real terms gross domestic expenditure on R&D increased by four per cent between 1998 and 1999.

In 1999, expenditure on R&D was 1.84 per cent of gross domestic product. This represents a slight rise in comparison to the previous year.

Gross domestic expenditure on R&D 1989 to 1999



Gross expenditure on R&D in the UK (£million)

	In cash terms	In real terms	Cash terms % of GDP
1986	8623	13155	2.21
1987	9221	13356	2.14
1988	10035	13614	2.09
1989	11069	14008	2.11
1990	11991	14075	2.12
1991	12131	13415	2.05
1992	12689	13589	2.07
1993	13541	14127	2.09
1994	14046	14450	2.04
1995	14172	14172	1.96
1996	14470	14019	1.88
1997	14781	13925	1.81
1998	15582	14273	1.81
1999	16664	14912	1.84

Note: Real terms is calculated at 1995 prices using GDP deflator.

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Internet  
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Next publication date  
To be announced



## **Gross domestic expenditure on research and development in the UK (tables 1, 2 and 3)**

The estimate of the UK's gross domestic expenditure on R&D in 1999 was £16.7 billion compared to £15.6 billion in 1998. R&D expenditure for civil purposes at £14.4 billion in 1999 was nine per cent higher in cash terms than for 1998. R&D expenditure for defence purposes, at £2.2 billion, remained at a similar level to 1998. As a percentage of GDP, defence expenditure on R&D has decreased from 0.27 per cent to 0.25 per cent. Civil R&D expenditure as a proportion of GDP has increased from 1.54 per cent to 1.60 per cent.

### **Performers of R&D in the UK (table 2)**

The sectors of the economy carrying out this R&D in 1999 were (in cash terms):

Business enterprises: £11.3 billion, ten per cent higher than in 1998.

Government (including research councils): £1.8 billion, fourteen per cent lower than 1998.

Higher education: £3.3 billion compared with £3.0 billion in 1998.

Private non-profit: £0.2 billion, similar to 1998.

### **Funding of R&D in the UK (tables 4 and 5)**

In 1999 Government funded 28 per cent of all R&D performed in the UK (24 per cent of civil R&D and 55 per cent of defence R&D). This compares with 31% in 1998.

Business enterprise funded 49 per cent of all R&D, a rise of two per cent compared with the previous year.



## BACKGROUND NOTES

1. This First Release presents estimates of gross domestic expenditure on research and development in the UK (GERD) in 1999.
2. More detailed figures will be published later in the year by the DTI's Office of Science and Technology (OST) in the *Science, Engineering and Technology Statistics 2001 (SET Statistics 2001)*<sup>1</sup>, and in ONS's *Economic Trends*<sup>2</sup>. Detailed tabulations for Business Enterprise R&D were published in January 2001 in *Business Monitor MA14*<sup>3</sup>. International comparisons are published by the Organisation of Economic Co-operation and Development (OECD)<sup>4</sup>.

## Sources

3. Two annual surveys of R&D are conducted by ONS. One is addressed to all government departments and covers R&D performed in or funded by the Central Government sector. (See the classification of sectors below). Detailed results, including figures for individual departments, will be available from the ONS on request after they have appeared in the OST's *SET Statistics 2001*. They will also be available on DTI's website at <http://www.dti.gov.uk/ost/setstats>. This publication has detailed analyses of the net expenditure of government departments (i.e. which includes government expenditure on R&D performed outside central government, less any receipts for work performed within central government).
4. The other annual survey is addressed to businesses performing R&D. The 1999 survey results were first published in an ONS First Release on 17 November 2000<sup>5</sup>.
5. The government funding totals in tables 4 and 5 differ from tables showing departmental breakdowns of net expenditure in OST's *SET Statistics 2001*. Tables 4 and 5 use information on government funded R&D from the survey of Business Enterprise R&D. The *SET Statistics 2001* use the survey of government funded R&D. The differences are due chiefly to the way each survey records the R&D content of Ministry of Defence contracts.

## Definition of R&D

6. The definitions used here are based on those internationally agreed through the OECD; they are set out in the *Frascati Manual*<sup>6</sup>.
7. The guiding line to distinguish R&D activity is the presence of an appreciable element of innovation. If the activity follows an established pattern it is excluded; if it departs from routine and breaks new ground it is included. For example: activities such as routine testing, market research, patent applications, trial production runs, and artistic design work, are excluded. Overheads are included. VAT is excluded.

## Defence R&D

8. Defence includes all R&D programmes undertaken primarily for defence reasons regardless of their content or whether they have secondary civil applications. It includes nuclear and space R&D undertaken for defence purposes. It does not include civil R&D financed by the Ministry of Defence, for instance on meteorology or telecommunications. It includes defence R&D commissioned by overseas clients.



### Classification of sectors

9. The OECD terminology is used. "Government" corresponds to the "General Government" sector of the UK National Accounts and includes Local as well as Central Government. "Business enterprise" corresponds to the "Corporate" sector and includes public corporations and research associations as well as commercial and industrial companies. "Private non-profit" corresponds to the "Personal" sector of the National Accounts, except that higher education institutions are excluded and put into a separate OECD sector ("Higher Education"). "Abroad" corresponds to the "Overseas" sector.

### Gross domestic expenditure on research and development (GERD)

10. GERD is the measure most commonly used for international comparisons. It covers all R&D performed in the country concerned irrespective of who pays for it. So, UK GERD covers all R&D in the UK including that funded from abroad; but it excludes R&D performed abroad even if funded from the UK. The four components of GERD relate to R&D performed in the four sectors of the economy.
- a. **Government R&D** is based on the returns of intramural R&D in the government survey with the addition of ONS estimates for two other components: R&D performed by local authorities and some R&D within Central Government R&D not available from the survey. From 1996 UK NHS figures have been obtained from the Department of Health and the Scottish Office on the basis of the Culyer Directive which since 1995 confirmed the extent of R&D spending in the NHS. For years 1991 to 1995 inclusive, estimates for NHS R&D are based on simple proportions of the total NHS budget; no estimate is included for 1990 and earlier years.
  - b. **Business enterprise R&D** is derived from the results of the ONS's business R&D survey.
  - c. **Higher Education R&D** is estimated by the Higher Education Funding Councils for England, Scotland, Wales and the Department for Education in Northern Ireland.
  - d. **Private non-profit R&D** is estimated on the basis of ONS's 1996 Private Non Profit Survey (PNP).
11. In addition to being analysed by sector of performance, GERD may be analysed by sector of funding. The R&D performed by any one sector of the economy can be funded by any of the other sectors or by the performing sector itself.
12. For the purposes of estimating GERD the standard internationally recommended practice of the OECD is to use information from those performing R&D when this is available. These estimates are considered more reliable than those from surveys of R&D funders. This is why, in the UK GERD table, the estimate of business enterprise R&D funded by Government is from the business enterprise survey rather than the Government R&D survey.
13. The figures for R&D performed by Government and business enterprises may be considered more robust than the other GERD components, since they are based on well-established surveys.



14. The sample for the R&D business survey was doubled in 1999 to four thousand businesses.

#### Real terms

15. Figures given in "real terms" are calculated using the GDP deflator at market prices; 1995=100.

#### Revisions

16. 1997 and 1998 data from the Business Survey have been revised where necessary to take account of company misreporting. There have also been some small changes due to misclassification and updated population information.

#### Rounding of figures

17. There may be discrepancies between totals and the sum of their independently rounded components.

#### General

18. For information on available aggregated data on Gross Domestic Expenditure on Research and Development and ONS' Data Analysis Service, please contact Jane Morgan on 01633 813109; (e-mail [jane.morgan@ons.gov.uk](mailto:jane.morgan@ons.gov.uk)).
19. Details of the National Statistics policy governing the release of new data are available from the press office. Also available is a list of the names of those given pre-publication access to the contents of this release.
20. **National Statistics** are produced to high professional standards set out in the National Statistics Code of Practice. They undergo regular quality assurance reviews to ensure that they meet customer needs. They are produced free from any political interference. © **Crown copyright 2001.**

#### References

1. 1998-99 outturn government R&D expenditure figures were in OST's *SET Statistics 2000*, HMSO, London; 1999-00 figures will be published in *SET Statistics 2001*, publication date to be announced.
2. 1998 UK R&D figures were in *Economic Trends*, August 2000. 1999 figures will be published in the August 2001 edition of *Economic Trends*.
3. 1999 Business Enterprise R&D was published in *Business Monitor MA14* in January 2001. Available from ONS Direct, Tel: 01633 812078. ISSN 1463 6115
4. *Main Science and Technology Indicators 2000*, OECD, Paris. ISSN 1011-792X
5. First Release *Business Enterprise Research and Development 1999*, National Statistics - [www.statistics.gov.uk](http://www.statistics.gov.uk)
6. Proposed Standard Practice for Surveys of Research and Experimental Development, '*Frascati Manual*', OECD, Paris. ISBN 92-64-14202-9

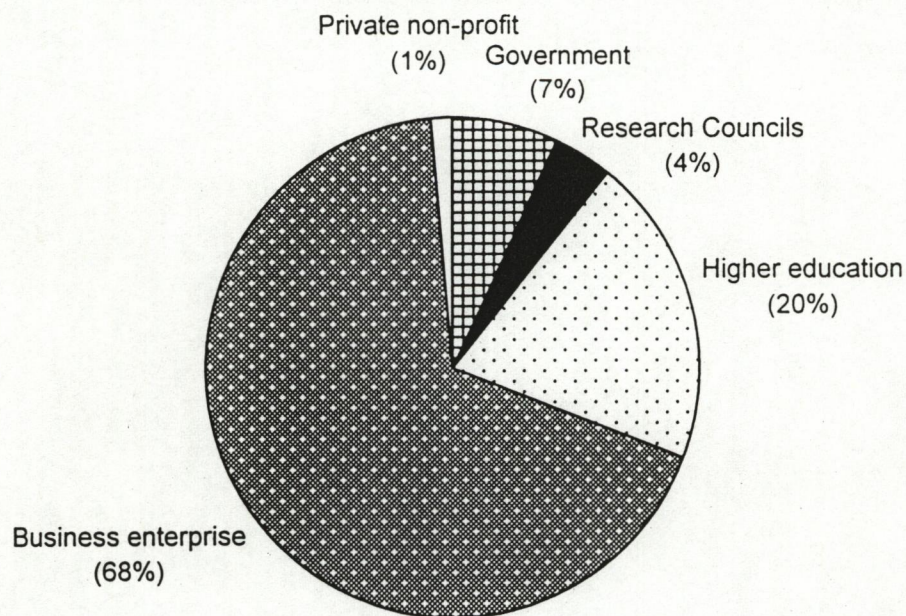
# 1

## R&D PERFORMED IN THE UK IN EACH SECTOR ACCORDING TO SOURCE OF FINANCE, 1999

Sector providing the funds	Sector carrying out the work					£million	
	Government	Research Councils	Higher education	Business enterprise	Private non-profit	Total	Abroad
Government	766	76	273	1 152	31	2 299	167
Research Councils	17	424	743	5	10	1 199	109
Higher Education Funding Councils	-	-	1 157	-	-	1 157	-
Higher education	-	6	136	-	2	143	-
Business enterprise	329	48	242	7 574	42	8 235	-
Private non-profit	15	32	525	1	128	701	-
Abroad	39	36	265	2 570	20	2 930	-
<b>TOTAL</b>	<b>1 166</b>	<b>622</b>	<b>3 341</b>	<b>11 302</b>	<b>233</b>	<b>16 664</b>	<b>-</b>
of which:							
Civil	692	618	3 278	9 626	232	14 447	-
Defence	474	5	62	1 675	-	2 216	-

Source: National Statistics

**FIGURE 1**  
Sector carrying out the work, 1999



## 2 EXPENDITURE ON RESEARCH AND DEVELOPMENT IN THE UK BY SECTOR OF PERFORMANCE: 1988 TO 1999

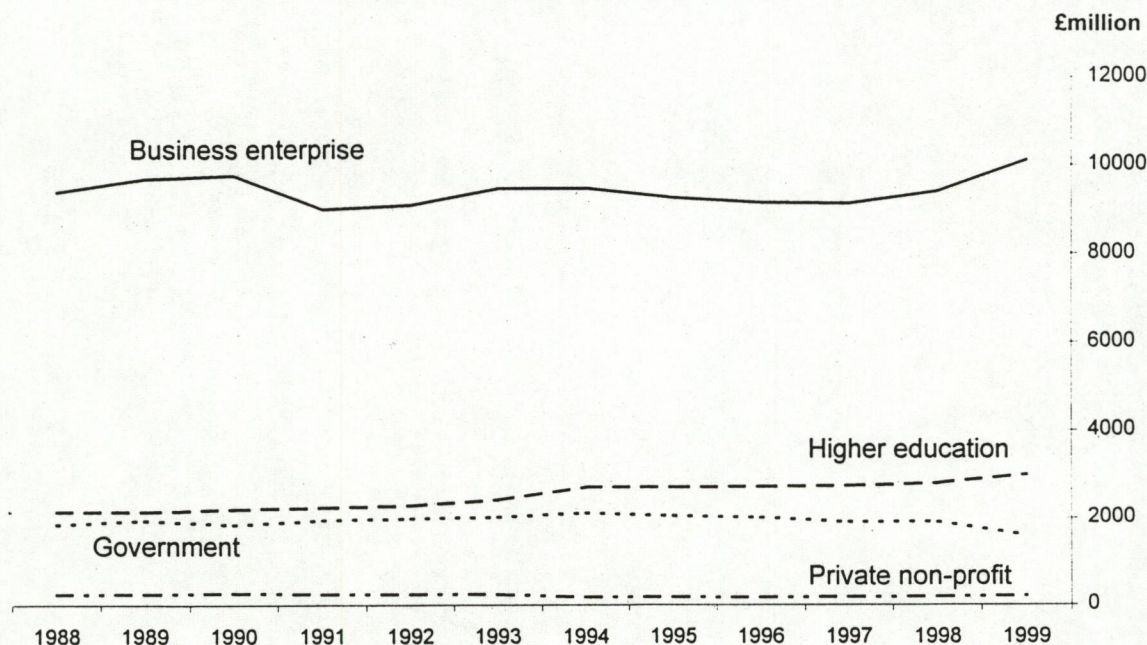
£million

		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Sector carrying out the work</b>													
In cash terms													
<b>TOTAL</b>	<b>GLBA</b>	10 035	11 068	11 991	12 131	12 689	13 541	14 046	14 172	14 470	14 781	15 582	16 664
Government	<b>GLBK</b>	1 360	1 534	1 566	1 757	1 846	1 928	2 051	1 462	1 495	1 427	1 487	1 166
Research Councils	<b>DMRS</b>	-	-	-	-	-	-	-	581	575	590	591	622
Business enterprise	<b>GLBL</b>	6 922	7 650	8 318	8 135	8 489	9 069	9 204	9 254	9 431	9 680	10 261	11 302
Higher education	<b>GLBM</b>	1 575	1 689	1 873	2 020	2 129	2 312	2 623	2 696	2 792	2 893	3 040	3 341
Private non-profit	<b>GLBN</b>	179	196	234	219	224	232	168	177	177	190	203	233
As % of GDP	<b>GLBH</b>	2.09	2.11	2.12	2.05	2.07	2.09	2.04	1.96	1.88	1.81	1.81	1.84

		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Sector carrying out the work</b>													
In real terms(1995 prices)													
<b>TOTAL</b>	<b>GLBD</b>	13 614	14 008	14 075	13 415	13 589	14 127	14 450	14 172	14 019	13 925	14 273	14 912
Government	<b>GLBW</b>	1 845	1 942	1 839	1 943	1 977	2 012	2 110	1 462	1 448	1 344	1 362	1 044
Research Councils	<b>DMSU</b>	-	-	-	-	-	-	-	581	557	556	542	557
Business Enterprise	<b>GLBX</b>	9 391	9 681	9 763	8 996	9 091	9 461	9 468	9 254	9 137	9 120	9 399	10 114
Higher Education	<b>GLBY</b>	2 137	2 137	2 198	2 234	2 280	2 412	2 698	2 696	2 705	2 726	2 785	2 989
Private non-profit	<b>GLBZ</b>	242	248	275	243	240	242	173	177	172	179	186	208

Source: National Statistics

**FIGURE 2**  
Sector carrying out the work (in real terms)



# 3

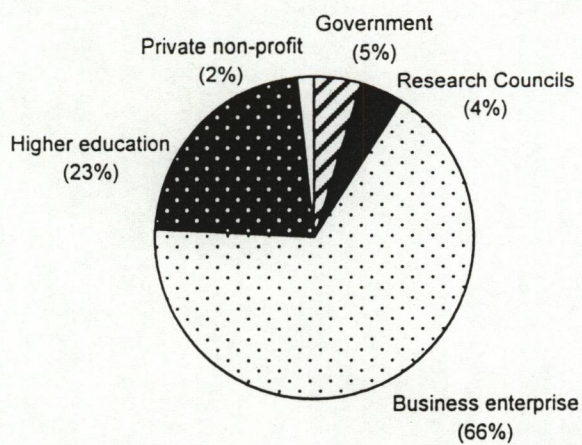
## EXPENDITURE ON CIVIL AND DEFENCE R&D PERFORMED IN THE UK BY SECTOR OF PERFORMANCE: 1994 TO 1999 IN CASH TERMS

£million

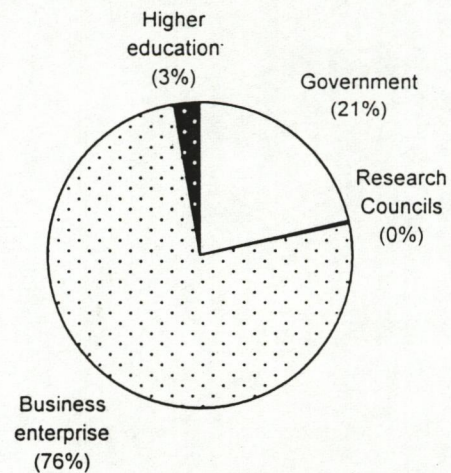
		Civil						Defence						
		1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	
<b>Sector carrying out the work</b>														
<b>TOTAL</b>	<b>GLBB</b>	11 906	12 039	12 318	12 563	13 236	14 447	<b>GLBC</b>	2 140	2 133	2 152	2 218	2 346	2 216
Government	<b>GLBO</b>	1 403	789	768	722	742	692	<b>GLBS</b>	648	673	727	705	746	474
Research Councils	<b>DMSC</b>	-	574	570	582	585	618	<b>DMSM</b>	-	8	5	8	7	5
Business enterprise	<b>GLBP</b>	7 771	7 863	8 071	8 237	8 727	9 626	<b>GLBT</b>	1 433	1 391	1 360	1 443	1 533	1 675
Higher education	<b>GLBQ</b>	2 573	2 635	2 732	2 832	2 980	3 278	<b>GLBU</b>	50	61	60	61	60	62
Private non-profit	<b>GLBR</b>	159	177	177	190	203	232	<b>GLBV</b>	9	-	-	-	-	-
As % of GDP	<b>GLBI</b>	1.73	1.66	1.60	1.54	1.54	1.60	<b>GLBJ</b>	0.31	0.29	0.28	0.27	0.27	0.25

Source: National Statistics

**FIGURE 3**  
Sector carrying out the work, 1999



**Civil (£14.4 billion)**



**Defence (£2.2 billion)**



# 4 EXPENDITURE ON RESEARCH AND DEVELOPMENT IN THE UK BY SECTOR OF FUNDING: 1988 TO 1999

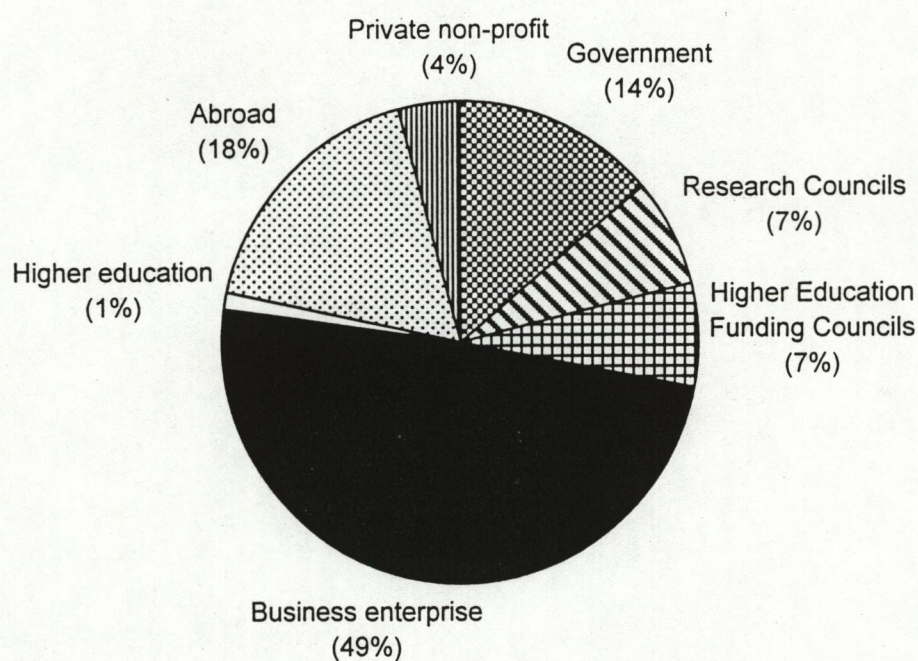
£million

		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Sector funding R&amp;D in the UK</b>													
In cash terms													
<b>TOTAL</b>	<b>GLBA</b>	10 035	11 068	11 991	12 131	12 689	13 541	14 046	14 172	14 470	14 781	15 582	16 664
Government	<b>GLCA</b>	3 553	3 913	4 123	4 131	4 239	4 400	4 657	2 611	2 494	2 422	2 619	2 299
Research Councils	<b>DMSR</b>	-	-	-	-	-	-	-	1 078	1 092	1 135	1 128	1 199
Higher Education Funding Councils	<b>DMSB</b>	-	-	-	-	-	-	-	1 018	1 028	1 033	1 085	1 157
Business enterprise	<b>GLCB</b>	5 193	5 631	5 986	6 054	6 461	6 974	7 025	6 796	6 846	7 344	7 382	8 235
Higher education	<b>GLCC</b>	78	82	86	92	99	103	116	119	120	123	130	143
Abroad	<b>GLCE</b>	944	1 139	1 433	1 458	1 455	1 613	1 753	2 039	2 345	2 147	2 617	2 930
Private non-profit	<b>GLCD</b>	267	303	365	397	435	451	495	511	546	578	621	701

		1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999
<b>Sector funding R&amp;D in the UK</b>													
In real terms(1995 prices)													
<b>TOTAL</b>	<b>GLBD</b>	13 614	14 008	14 075	13 415	13 589	14 127	14 450	14 172	14 019	13 925	14 273	14 912
Government	<b>GLCP</b>	4 820	4 952	4 839	4 568	4 539	4 590	4 791	2 611	2 416	2 282	2 399	2 057
Research Councils	<b>DMSV</b>	-	-	-	-	-	-	-	1 078	1 058	1 069	1 033	1 073
Higher Education Funding Councils	<b>DMSW</b>	-	-	-	-	-	-	-	1 018	1 001	973	994	1 035
Business enterprise	<b>GLCQ</b>	7 054	7 126	7 026	6 695	6 919	7 275	7 227	6 796	6 632	6 919	6 762	7 369
Higher education	<b>GLCR</b>	106	104	101	101	106	107	119	119	117	116	119	128
Abroad	<b>GLCT</b>	1 281	1 442	1 681	1 612	1 558	1 683	1 804	2 039	2 272	2 022	2 397	2 622
Private non-profit	<b>GLCS</b>	363	384	429	439	466	471	509	511	529	545	569	627

Source: National Statistics

**FIGURE 4**  
**Sector providing the funds, 1999**



# EXPENDITURE ON CIVIL AND DEFENCE R&D PERFORMED IN THE UK BY SECTOR OF FUNDING: 1994 to 1999

IN CASH TERMS

£million

		Civil						Defence						
		1994	1995	1996	1997	1998	1999	1994	1995	1996	1997	1998	1999	
<b>Sector funding R&amp;D in the UK</b>														
<b>TOTAL</b>	<b>GLBB</b>	11 906	12 039	12 318	12 563	13 236	14 447	<b>GLBC</b>	2 140	2 133	2 152	2 218	2 346	2 216
Government	<b>GLCF</b>	3 347	1 225	1 101	1 039	1 132	1 078	<b>GLCK</b>	1 310	1 386	1 393	1 382	1 487	1 221
Research Councils	<b>DMSX</b>	-	1 078	1 092	1 134	1 128	1 199	<b>GLCM</b>	-	-	-	-	-	-
Higher Education Funding Councils	<b>DMSY</b>	-	1 018	1 027	1 033	1 085	1 157	<b>DMSZ</b>	-	-	-	-	-	-
Business enterprise	<b>GLCG</b>	6 554	6 405	6 410	6 855	6 934	7 747	<b>GLCL</b>	471	391	436	489	448	488
Higher education	<b>GLCH</b>	116	119	120	123	130	143	<b>GLCN</b>	-	-	-	-	-	-
Abroad	<b>GLCJ</b>	1 396	1 683	2 021	1 800	2 206	2 423	<b>GLCO</b>	358	356	323	346	411	507
Private non-profit	<b>GLCI</b>	493	511	546	578	621	701	<b>GLCN</b>	2	-	-	-	-	-

Source: National Statistics

**FIGURE 5**  
**Sector funding R&D in the UK, 1999**

