



House of Commons
Science and Technology
Committee

**The Work of Research
Councils UK**

Sixth Report of Session 2004–05

*Report, together with formal minutes, oral and
written evidence*

*Ordered by The House of Commons
to be printed 16 March 2005*

The Science and Technology Committee

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The current staff of the Committee are: Chris Shaw (Clerk); Emily Commander (Second Clerk); Alun Roberts (Committee Specialist); Hayaatun Sillem (Committee Specialist); Ana Ferreira (Committee Assistant); Robert Long (Senior Office Clerk); and Christine McGrane (Committee Secretary).

Contacts

All correspondence should be addressed to the Clerk of the Science and Technology Committee, Committee Office, 7 Millbank, London SW1P 3JA. The telephone number for general inquiries is: 020 7219 2793; the Committee's e-mail address is: scitechcom@parliament.uk

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Summary

This Report completes our scrutiny of the Research Councils, which we have carried out over the course of this Parliament.

We have found that the failure of OST to establish clear objectives for RCUK on its establishment in 2002 hampered its efforts to achieve a profile and a place in the policy-making framework that might have been expected. We welcome the reforms that have been made to the structure of RCUK in response to the OST's 2004 review of the organisation but we do not believe that they have gone far enough. The distinction between the roles of the Director General of the Research Councils (DGRC), on behalf of Government, and that of the Research Councils, which remain outside Government, has still not been clearly made. We have recommended a slight change in existing arrangements to make the distinction clearer. We have also criticised Government for being reluctant to allow Research Councils to express their views independently.

We have found that RCUK has performed a valuable service in promoting best practice across the Research Councils and the harmonisation of administrative procedures. However, we have not been persuaded that it is doing enough to exert influence on behalf of the Research Councils across Government. We have argued that the appointment of an independent, high profile figurehead for the organisation would be likely to increase its visibility and influence and that OST should review the existing position after a further two years.

In the longer term, we would like to see RCUK assuming complete independence in determining scientific priorities. Government should fund the science it needs directly rather than seeking to influence the Research Councils' priorities. We have argued for a system in which the value of R&D is firmly entrenched right across Government and the Research Councils are left to pursue long term scientific goals rather than those of the Government of the day. We believe that this would be a better model for the successful stewardship of the UK research base and the use of science by Government.

1 Introduction

1. Shortly after the Committee's establishment in the 2001 Parliament we identified as one of our core tasks scrutiny of the Research Councils. We set ourselves the target of scrutinising all seven by the end of the Parliament and we have now met this aim.¹ Our scrutiny would not be complete without a look at Research Councils UK (RCUK), the umbrella body established in 2002 to provide strategic focus and a single voice for all the Research Councils. As well as examining the effectiveness of RCUK itself, we aimed to follow-up on some of the themes that have emerged during our scrutiny of the individual Research Councils for which RCUK has some responsibility. We formed an initial view in our 2003 Office of Science and Technology (OST) Scrutiny Report that RCUK had been a "useful initiative" and looked forward to monitoring greater collaboration between Research Councils and the convergence of their administrative procedures.² This Report fulfils this intention.

2. We announced our inquiry on 15 November 2004. We received a comprehensive memorandum from RCUK setting out the steps it had taken towards implementing the recommendations we have made with cross-Council implications as well as commenting on our other specific areas of long-standing interest. Although we invited written evidence, and received five other submissions, we were aware that many of the organisations most likely to submit evidence had already participated in the OST's own review of RCUK, which took place during 2004 and resulted in the publication of the Ruffles Report in October that year.³ Whilst our own inquiry was somewhat wider than OST's review, we nonetheless sought to minimise duplication and workload by asking OST for the evidence gathered by the Ruffles Review team as part of its work. We are very grateful to OST for providing this material, which we have drawn upon in our own scrutiny.

3. We held one evidence session, on 2 February, with the Chair of the RCUK Executive Group, Professor Ian Diamond, and Helen Thorne, Head of the RCUK Secretariat. We are grateful to those who submitted written and oral evidence, but particularly to RCUK for its detailed written memorandum and prompt answers to follow-up questions.

1 A complete list is contained at pages 43-44 below.

2 Fourth Report of Session 2003-04, *The Office of Science and Technology: Scrutiny Report 2003*, HC 316, para 37

3 OST, *OST Review of Research Councils UK*, July 2004 [hereafter referred to as the "Ruffles Review"]

2 Background

Establishment

4. The establishment of RCUK followed directly from the 2001 Quinquennial Review of the Grant Awarding Research Councils (QQR). This review concluded that the Research Council system was working well; that there was real strength in diversity from having separate Councils; and that Councils had made good progress in working together in many areas. However, the QQR also identified the need to embed a culture of collective responsibility and collaboration within the Councils to enable them to increase their influence on national and international strategy and policy development. It also wanted them to work with their stakeholders in a more collegiate fashion. It recommended the establishment of RCUK as a means of achieving these outcomes.⁴ Specifically, it identified five aims for RCUK:

- i. Increase the collective visibility, leadership and policy influence of the Research Councils;
- ii. Provide a single focus for collective dialogue with stakeholders, especially universities, business, other major science funders and the EU;
- iii. Promote earlier, more active and inclusive involvement of the Research Councils in policy and strategic development and decision-making for the UK science base and international programmes;
- iv. Secure greater cohesiveness and collective working amongst the Councils and OST, where this is necessary or desirable to achieve scientific or strategic goals; and
- v. Secure greater harmonisation or commonality of operational and administrative functions where this is to the advantage of the stakeholder community or will improve the collective efficiency or effectiveness of the Councils.⁵

Mission and aims

5. Accordingly, RCUK was established in May 2002. It is a strategic partnership between the UK's seven Research Councils and the Arts and Humanities Research Board (AHRB), which is due to become a Research Council in April 2005. RCUK lists its mission and aims as follows:

- RCUK's mission is to optimise the ways that Research Councils work together to deliver their goals, to enhance the overall performance and impact of UK research, training and knowledge transfer and to be recognised by academia, business and government for excellence in research sponsorship.

4 OST, *Quinquennial Review of the Research Councils, 2001*; Ev 17

5 Ruffles Review, p 7

- The overall aim of RCUK is for the UK Research Councils to be recognised as the benchmark around the world in terms of the impact they have and the ways they work. RCUK will:
- increase the collective visibility, leadership and influence of the Research Councils for the benefit of the UK;
- lead in shaping the overall portfolio of research funded by the Research Councils to maximise the excellence and impact of UK research, and help to ensure that the UK gets the best value for money from its investment; and
- ensure joined up operations between the Research Councils to achieve its goals and improve services to the communities it sponsors and works with.⁶

New objectives for the 2004 Spending Review period are being developed in consultation with the Office of Science and Technology and will be published in the RCUK delivery plan later in 2005.

Organisation

6. The main strategic body of the organisation established in 2002 was the RCUK Strategy Group (RCUKSG). This comprised the seven Chief Executives of the Research Councils and was led by the Director General of the Research Councils (DGRC). This initial structure has now been altered, following the 2004 Ruffles Review, as is described in paragraph 17 below.

7. RCUK was established as a partnership rather than a legal entity in itself. The individual Research Council Chief Executives remain accountable to OST (and ultimately to Parliament), not to RCUK. It does not directly employ staff or administer public funds.⁷ It is supported by a secretariat that is deliberately kept small: the Chief Executives did not want a large new bureaucratic structure.⁸ Its initial staff complement of 2.5 posts has now expanded to fourteen, all drawn from, and hosted by, the Research Councils.⁹ These are divided into two groups:

- i. **The RCUK Secretariat:** this supports the work of the RCUK Executive Group, organises RCUK's public statements and responses and deals with its external relations policy. It is hosted by EPSRC, has nine staff and an annual expenditure in the region of £400,000.
- ii. **The RCUK Administration Strategy Programme Management Office:** this office is implementing a programme of administrative harmonisation across the councils.¹⁰ It is hosted by NERC, has five staff and has an annual budget of £2 million, half of which has been provided by OST. Otherwise, RCUK's activities are

6 Ev 17

7 Ev 18

8 Q 43 [Helen Thorne]

9 Ruffles Review evidence; not printed

10 See paras 74- 80 below.

funded by contributions from the Research Councils, weighted in line with their Science Budget allocations.¹¹

These two groups will be merged into a single unit on 1 April 2005.

Reviews

8. The RCUK Strategy Group agreed that a “light touch” review after the first year would show whether it was on course to deliver the objectives set out in the QQR and would inform its future work programme. This 2003 review concluded that RCUK had made a promising start and in many respects was on course to meet its objectives.¹² However, there was also recognition that the new arrangements required some adaptation and adjustment. There were some concerns expressed about the clarity of the organisation’s strategic goals and its ability to focus on them. There was also a need for the definitions of certain roles and responsibilities to be reviewed “urgently” and then explicitly set out. The thirteen recommendations made by the review suggest that there was considerable work to be done in establishing a clear role and effective working methods in RCUK.¹³ It also set out two measures by which RCUK could in future be judged: whether people regard its abolition as inconceivable; and whether stakeholders look to RCUK to provide collective views of the Research Councils. The 2003 review concluded that the first of these measures had been achieved but that it was too early to pass judgement on the second. The review was endorsed by RCUKSG in June 2003 and an implementation plan was agreed.

9. OST was required by the QQR to review RCUK more formally after two years. In January 2004 Mr Phil Ruffles, Director of Technology at Rolls-Royce plc, was invited to Chair a small *ad hoc* group of stakeholders to oversee and steer an independent consultant to conduct the Review. The Review conducted extensive consultations with key stakeholders and agreed a report in the summer of 2004. The Ruffles Review agreed that the abolition of RCUK was inconceivable, but that “significantly more progress has yet to be made to fully satisfy the second test” identified in the 2003 review (that stakeholders look automatically to RCUK for the collective voice of the Research Councils).¹⁴ It concluded that RCUK had made a “slow start” and made some quite critical observations about the role and impact of the organisation. In particular, it identified four areas that needed to be addressed:

- To clarify the role of RCUK, its chairmanship and its relationship to the individual Research Councils and to OST, within a clear framework of accountabilities;
- To make a clearer differentiation between RCUK’s strategic and operational roles in order to give focus to each;
- To ensure that RCUK is able to make a contribution to national science strategies and policy and to ensure that its own strategies take into account this wider scene; and

11 Ev 19

12 Ruffles Review, para 28

13 See Annex A for a full list of the recommendations.

14 Ruffles Review, p 3

- To make more progress in coordinating or standardising essential administrative systems and processes.¹⁵

In pursuit of these objectives, the Review recommended new organisational arrangements for RCUK, which we discuss in the next chapter.¹⁶ It also made other recommendations covering administrative co-ordination between the Research Councils and on performance management. The full list of recommendations is included at Annex B.

10. The Report was accepted by OST and RCUK and published with an implementation plan in September 2004. Transitional or shadow structures were put in place by the following month. The new organisational arrangements recommended in the report will be implemented in April 2005. The RCUK delivery plan will set out in full how the recommendations of the Ruffles Review and RCUK activities will be taken forward.¹⁷ This delivery plan was to be published at the end of March but has now been delayed until around May 2005.¹⁸

15 Ruffles Review, p 4

16 See Figure 1 and paras 17-18 below.

17 Ev 17

18 Ev 17; <http://www.rcuk.ac.uk/press/20050307allocations.asp>

3 Relationship with OST

Previous arrangements

11. The initial structure of RCUK, with the seven Chief Executives serving on a RCUK Strategy Group (RCUKSG) chaired by the DGRC, appeared to contribute substantially to the uncertainty about the organisation's role that was identified by the Ruffles Review, and by the OST 2003 Review before that. One of the key recommendations of the Ruffles Review was that greater clarity needed to be provided on the relationship of RCUK to the individual Research Councils and to OST. It was "unable to find evidence that clearly defined these relationships".¹⁹ It found that the Strategy Group focussed too much on detailed operational matters, at the expense of strategic issues. Consequently, the DGRC had been reluctant to become too involved so as to avoid being seen to be overly influencing the performance of the Research Councils. This in turn contributed to the lack of effective overall leadership of RCUK.²⁰

12. In his evidence to us Professor Diamond was not prepared to acknowledge any lack of clarity identified in the Ruffles Review and defended the initial organisational structure: "I think the starting position was the right way to start".²¹ He referred to the process of change as "natural evolution". He viewed it as "entirely right" that the DGRC chaired the Strategy Group, saying that he "gave a clear vision and worked with us on processes".²²

13. Professor Diamond's comments were not reflective of the views of the seven Research Council Chief Executives, as expressed to the Ruffles Review. These suggested that little progress had been made in addressing the call in the 2003 review for greater clarity of purpose and responsibilities. There was seen to be a need for RCUK to "articulate what it is trying to achieve" and questions remained as to whether the Research Councils were actually to move within Government. The comments reveal that there was seen to be a need for greater leadership of RCUK and direction from Ministers: the perceived ambiguous nature of the QQR meant that no-one "had much of a clue as to what was required".²³ There was not even a clear consensus on whether RCUK was inside or outside Government. The Ruffles Review reported concerns that the establishment of RCUK might be a step on the road to a single Research Council, and suggested that this was part of the reason for the "slow start" experienced before the partnership model was agreed. It specifically cited the "lack of clear objectives handed down by OST" as a contributory factor to the confusion within the Research Councils over the role of RCUK.²⁴

14. The apparent uncertainty over the role of RCUK was not helped by the absence of a mission statement on its establishment. It took the OST Review in 2003 to recommend that such a statement be produced. Although this was done, we note that the Ruffles Review

19 Ruffles Review, para 49

20 Ruffles Review, para 48

21 Qs 6, 17

22 Q 18

23 Ruffles Review papers; not printed.

24 Ruffles Review, para 46.

also called for a mission statement to be produced.²⁵ Another new set of objectives will now be produced and published alongside the RCUK delivery plan later in 2005.²⁶

15. The conclusions of the Ruffles Review are very much in line with our own observations on an introductory hearing that we held with the Director General of the Research Councils (DGRC) in May 2004, shortly after he took up the post. We commented on the “obvious need to clarify the nature of his job, as well as to establish who should speak on behalf of RCUK”.²⁷ In response, the Government accepted the need for further clarification, and said that this would be achieved through the implementation of the Ruffles Review recommendations.²⁸

16. The Ruffles Review performed a valuable service in identifying the structural difficulties faced by RCUK in defining and establishing a clear role for itself in collaboration with other important players. **We find it surprising that OST could establish a new organisation without giving it a clear mission or defining its place in the policy-making framework. Under these circumstances it is scarcely surprising that RCUK struggled to establish itself in its community and lacked a sense of direction and leadership. It is regrettable that the shortcomings identified in OST’s internal review in 2003 were not put right by the following year.**

New arrangements

17. The new organisational structure implements the recommendations of the Ruffles Review designed to provide a clear separation between strategic and operational matters. The new structures replace the former RCUK Strategy Group. They are summarised in Figure 1. The work of RCUK is now carried out by two separate groups:

- i. The **Executive Group (RCUKEG)**: this consists of the seven Research Council Chief Executive Officers (CEOs) and is chaired by one of them (currently Professor Diamond). The RCUKEG meets monthly. It considers detailed operational matters, but also priorities for RCUK and the commitment of resources to them, and the delivery of RCUK activities. It co-operates with key stakeholders from OST and elsewhere on a bilateral or multilateral basis as required.²⁹
- ii. The **Joint OST/RCUK Working Group for Strategy, or Joint Strategy Group (JSG)**: this consists of the Research Council CEOs and is chaired by the DGRC. The Government Chief Scientific Adviser and the Director-General Innovation at DTI also attend, along with other officials as necessary. The group is supported by OST officials “working closely” with those of RCUK. It meets quarterly and deals

25 Annex B, Recommendation 1.2.

26 As above.

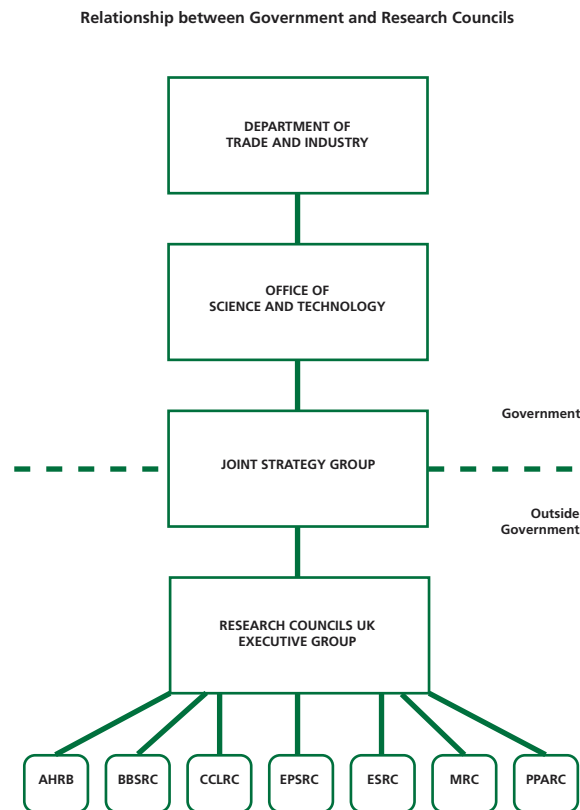
27 Ninth Report of the Committee, Session 2003-04, *Director General of the Research Councils: Introductory Hearing*, HC 577, para 6

28 Ninth Special Report of the Committee, Session 2003-04, *Government Response to the Committee’s Ninth Report, Session 2003-04, Director General of the Research Councils: Introductory Hearing*, HC 1059, p 2

29 Ev 18

with high-level strategic issues such as the allocation of the Science Budget. It is the forum through which RCUK provides advice to OST on strategic issues.³⁰

Figure 1



18. The separation of the operational from the strategic functions of RCUK is sensible. We noted in a previous Report that the present DGRC, Sir Keith O’Nions, sought not to get as involved in the detail of Research Council administration as his predecessor and was content to allow them the space to collaborate with each other without his intervention. We have already welcomed this approach, and we are pleased to see that it is reflected in the new RCUK structure.³¹ The distinction between the operational and the strategic might be a fine one, and it remains to be seen how this works out in practice, but it is right that the Research Councils are allowed to work this out without direction from the DGRC. However, **we are concerned that the new structural arrangements do not go far enough towards giving RCUK the clarity of mission and independence of purpose that it should have.**

Independence of RCUK

19. We note that one of the views from stakeholders made to the Ruffles Review expressed succinctly the reservations we set out in our short Report on our introductory hearing with the DGRC. It was summarised as: “Relative position of DGRC vis a vis the CSA [Chief

30 Q 21

31 HC (2003-04) 577, paras 4-6

Scientific Adviser] and Minister is an accident waiting to happen but never been so debilitating that anyone seen fit to fix it. Needs sorting”.³² OST and Research Councils have understandably played down the importance of such concerns but nonetheless point to the recent reforms as a response to this view. RCUK states in evidence that Research Councils believe that the new arrangements will be “helpful [in] making clear the separation of responsibilities between OST and the Research Councils”.³³ The Ruffles Review acknowledged that the previous arrangements, with the DGRC chairing the Strategy Group, could “pose conflicts of interest especially where a DGRC might find himself overly influencing both RCUK and the individual Councils’ performance and direction”.³⁴ The influence exercised by the DGRC over Research Council policy is critical to the funding of UK science. It is therefore important that the relationship between the DGRC and the Research Councils is properly articulated and understood.

20. The Research Councils are Non-Departmental Public Bodies (NDPBs) funded by the DTI via OST and, as such, are independent legal bodies outside of Government, accountable to Parliament. The RCUK evidence confirms that “RCUK sits outside of government, as do the individual Councils”.³⁵ The official position is that Government takes decisions on major international collaborations and determines what broad science areas are to be given priority. It determines the sums allocated to each Council. Research Councils are then free to allocate their funding but must ensure “strategic alignment” between their own strategies and Government’s strategic objectives for the Science Budget.³⁶ The understanding is that OST will fund the Research Councils as long as they spend money in such a way as to maintain the health of the science and engineering base (SEB), and that they will exploit the SEB to meet national economic and public service objectives.

21. The extent to which the Research Councils can determine their own priorities on the basis of the demands of user communities, and the extent to which they are required to pursue Government-directed priorities, is a question at the heart of science policy formulation. Formally, RCUK advises the OST on the allocation of the Science Budget between the Research Councils but decisions on the final allocations are taken by the DGRC, after detailed discussions with each Council.³⁷ The extent to which OST can direct the funding of Research Councils is still far from clear, even to those at the heart of the process. In response to a question about the role of DTI in how Research Councils could spend their funds in pursuit of their strategy on scientific publications, Lord Sainsbury was “not certain that, in giving the money, how closely we specify how it should be used.”³⁸ For its part, RCUK believes that it is the DGRC’s role to “represent the interests of the Research Councils individually and collectively, at the highest levels within Government”.³⁹ It is also, we would argue, his job to represent the interests of the wider UK research base, not just

32 Ruffles Review papers; not printed.

33 Ev 20

34 Ruffles Review, para 48

35 Ev 20

36 As above

37 Ev 51

38 HC (2004-05) 250-i, Q 28

39 Ev 20

the Research Councils. In addition, it is his role, as a Government official, to ensure that money is allocated in a way which meets Government's strategic objectives. The DGRC sees himself as both an advocate of Government strategy and a representative of the views of RCUK and the broader scientific community.⁴⁰ The tensions associated with this dual role are discussed in paragraphs 25-6 below.

22. There is an inherent incentive in the system for Research Councils to submit funding bids which reflect the priorities of the Government of the day more than the long-term science priorities identified by the research community as a whole. Of course, there should be strong synergy between these two agendas, but in cases of tension, there is a clear potential in the system for Government to alter, even unintentionally, the established priorities for funding identified by the science community. For example, it is difficult to believe that the Research Councils would have proposed the cross-Council programme on Rural Economy and Land Use in the 2002 Spending Review had this area not been a Government priority at the time. Of course, it could be argued that by adhering closely to Government priorities, the Research Councils have secured substantial increases in their funding in recent Spending Reviews.

23. In his evidence to us, Professor Diamond seemed oblivious to or unwilling to acknowledge any lack of clarity or potential conflict of interests, under the old or new arrangements. He told us that: "it has not been my experience that we have had direction of the research that we should fund".⁴¹ Professor Diamond explained that the DGRC had asked each Research Council to identify their priorities in their delivery plans, which include those priorities which have been established on a cross-Council basis through RCUK discussions. He assured us that there was a "real independence of spirit" in selecting the most crucial areas of science to progress and that the current Science Budget allocation process was "the most independent we have seen in sometime".⁴² It is too early to say how these new arrangements will operate in practice: as Professor Diamond says, the test will come in Spending Review 2006.⁴³

24. We are pleased to hear that RCUK is able to operate with some independence. We also see a case for enhancing this independence and for fully divorcing Government from the allocation of resources between the Research Councils and for cross-Council programmes. Such a split would force Government departments to take greater responsibility for funding the research they require to support policy rather than relying on DTI/OST to serve their needs via the Research Councils. We have welcomed the role that the Chief Scientific Adviser is playing in raising the performance of Government departments in their use of science and research to support their policies.⁴⁴ Taking this further, we would like to see a system in which the value of R&D is firmly entrenched right across Government and the Research Councils are left to pursue long term scientific goals rather than those of the Government of the day. **If RCUK can demonstrate that it can operate successfully in establishing cross-Council priorities in an independent manner, we see**

40 HC (2003-04) 577, para 7

41 Q 34

42 Qs 30, 46 [Professor Diamond]

43 Q 29

44 Third Report from the Committee, Session 2004-05, *Office of Science and Technology: Scrutiny Report 2004*, HC 8

no reason why it should not, in time, take full responsibility for the allocation of the funding awarded to the Research Councils as a whole by Government. If it is necessary to create RCUK as a legal entity in order to meet this aim, it should not be ruled out on the basis that it may be a lengthy process. We recommend that OST consider this model as a medium term aim.

Joint Strategy Group

25. The formal severing of Government from involvement in the allocation process would also help to resolve what we still regard as the uneasy position of the DGRC in the science policy-making arena. At present, he is obliged to represent the Research Councils at the highest levels of Government but also to offer Government his independent advice on the levels of funding that should be awarded to them. It seems invidious to ask him to bat for both sides. Nowhere is the difficulty of his position better illustrated than in his chairmanship of the Joint Strategy Group (JSG). As Figure 1 indicates, the DGRC is currently straddling the line dividing Government from the outside. The Government is being advised by a non-Government group that is chaired by a Government official. We find this arrangement bizarre. It is unusual, if not unique, for independent NDPBs accountable to Parliament to have their strategic planning overseen by a Government official. There is an obvious danger that comments and advice from individual Research Council Chief Executives might be constrained by the fact that the Chairman of the Group is responsible for determining that Research Council's budget.

26. Professor Diamond did not regard this situation as a problem. He described the arrangements as “entirely appropriate”. He told us that “Independent advice can be given to Keith O’Nions and he takes it in an independent way” and that “The Joint Strategy Group works in an effective way to be between the Government and Research Councils”.⁴⁵ After only one meeting of the Joint Strategy Group, it is too early to judge how this arrangement functions in practice. Even if it does work for the present, this may be more of a reflection of the personalities currently involved than of the robustness of the structure. We are reluctant to suggest immediate radical change to a structure which has only just been re-organised. Nonetheless, it is important, particularly in the light of the opacity of previous relationships between RCUK and Government, that clear signals are sent and the independence of the Research Councils is not unduly constrained. We suspect that this could be achieved relatively easily at a practical level, for example by allowing the Chairman of RCUKEG to also chair the JSG, for some if not all of its work, and by establishing clearly that strategic issues are considered by RCUKEG as well. **We recommend that the Joint Strategy Group ceases to be chaired exclusively by the Director General of the Research Councils.**

A voice of their own

27. Another example of the independence of the Research Councils being circumscribed by Government is in their ability to speak with genuine freedom on science policy matters in general. We are aware that in response to our own Reports there has been some disagreement between the Research Councils and OST over whether the former can issue

45 Qs 24-7

their own responses on issues of direct relevance to them. In general, we have found the co-ordination by RCUK of responses from Research Councils to our inquiries to be helpful, although we would not like to see individual Research Councils with an out-of-step viewpoint on a subject being encouraged to follow an RCUK line. Neither would we be content to see RCUK itself “encouraged” to accept an OST line. The wish to comment separately from OST was clearly evident in the views of the Research Council Chief Executive, as expressed to the Ruffles Review.⁴⁶

28. We have already reported on the lengths that the Government went to in ensuring that there was only one response to our Report on scientific publications in 2004.⁴⁷ The Research Councils, to whom many of our recommendations were directed, did not all share the view of Government expressed in the Government Response. They have since indicated that they are to set out their own policy, which is likely to be based on principles placing a high value on the public accessibility of publicly-funded research.⁴⁸ Lord Sainsbury told us that Research Councils were “totally independent” in their capacity to make policy on this front.⁴⁹ He added that, as Government funds the Councils, “inevitably there is some influence in terms of their performance and we have a responsibility to monitor performance. They are independent. They take that independence very seriously and, if we overstep the mark, they tell us to go away”.⁵⁰ OST confirmed that Research Councils were free to implement their policy, provided that it was funded from within their existing allocations.⁵¹ OST is well aware that, given Research Councils’ existing commitments and the levels of funding required to pursue any change of approach, the Research Councils would be unable to proceed properly without Government support. In view of their reliance on Government funding, there is an obvious and unhealthy difficulty for the Research Councils in arguing strongly against a reluctance by Government to support a policy which the Councils believe will be of benefit to the research community. In practice, Government responses to our recommendations contain replies from both departments and from Research Councils, depending on their subject, but the boundary is not always clear. For example, we suggested that the Economic and Social Research Council (ESRC) conduct periodic appraisals of the extent to which specific Government policies in areas within the ESRC’s remit were based on sound evidence. The rejection of this recommendation came from Government rather than the ESRC.

29. The Research Councils are aware of our view on the issue of independent replies. Professor Diamond confirmed that the ability of RCUK to submit independent responses was an issue “on which we are having discussions with the OST at the moment”.⁵² We do not see why discussions are necessary. As a partnership of independent NDPBs, there are no bars of convention or propriety of which we are aware that would prevent RCUK from submitting its own responses where it saw fit. There are many areas in which the collective

46 Ruffles Review papers; not printed.

47 Fourteenth Report from the Committee, Session 2003-04, *Responses to the Committee’s Tenth Report, Session 2003-04, Scientific Publications: Free for all?*, HC 1200

48 Ev 33

49 HC (2004-05) 250-i, Q 25

50 As above

51 Ev 51

52 Q 36

or individual views of the Research Councils may be at variance with those of the OST or other Government departments whilst remaining within the broad strategic direction of Government policy. They should be free to express them. **The Government's extreme sensitivity about separate responses from Research Councils is stifling the debate which is necessary for good policy-making. It has established RCUK outside of Government to give a loud collective voice to the Research Councils in science policy making. To deny it the opportunity to use its voice without Government approval is self-defeating and absurd. We recommend that the Government sets out its reasons for seeking to inhibit the Research Councils in this way. We further recommend that the Research Councils assert their independence by submitting, individually or collectively as appropriate, their own views without seeking Government approval, starting with the response to this Report.**

Leadership

30. Under the new arrangements the RCUK Executive Group (RCUKEG) is chaired by one of the existing Chief Executives of the Research Councils. That person is the spokesperson for the Research Councils on any issue on which it has a common view. The Chairman is elected by all the Chief Executives in a secret ballot each October. The one year term is renewable, but the post will not be filled on a rotational basis. To begin with, it was agreed that Professor Diamond would take on this role until the end of 2004, and this has since been extended to the end of 2005.⁵³

31. The Chairman of RCUKEG is not the leader of the Research Councils. The chairmanship does not confer on him any degree of seniority over the other Chief Executives.⁵⁴ These partnership arrangements put the Chairman in an unusual position. In addition to his role as Chief Executive of a Research Council he has to speak independently on behalf of them all, but has no authority to lead, or to drive forward an RCUK agenda. We have some concerns about the long-term viability of this partnership arrangement. First, there is a potential conflict of interest inherent in the double-hatted position of the Chairman. Arrangements are in place for the Chairman to step aside from the chair if this situation was to arise in a meeting, although Professor Diamond could not see such a situation occurring.⁵⁵ Nonetheless, there is a risk that it becomes a perceived or actual advantage for a Research Council to have the chairmanship of the RCUKEG. There is also a risk that, in spite of the assurance that the post will not be filled on a rotational basis, the day job as well as the abilities of the prospective chairman will be taken into account in the selection process.

32. More seriously, we are sceptical as to the ability of a Chairman with no real authority over the organisation to exercise leadership in a way that was lacking in its first two years. RCUK is dependent on the full co-operation of all its members to take forward any initiative. There is little incentive for any Research Council to support measures which might primarily be in the interests of the Research Councils as a whole, rather than just its own. An independent Chairman, without any ties to one Research Council, and with a

53 Qs 11-16

54 Q 7

55 Qs 8-9

more formal leadership role and commensurate powers, would seem a better option. The idea of an external Chairman, such as a former Research Council Chairmen [check], was considered by the Ruffles Review but rejected so as to avoid introducing a new person into science policy co-ordination.⁵⁶ Nonetheless, the inherent conflict of interest in the alternative arrangements was acknowledged.⁵⁷ We believe that a new, independent, high profile figure would be better placed to act as the unambiguous face of RCUK, to liaise with OST on its behalf and to ensure that RCUK delivers on its objectives. A three year term of office would be more appropriate to the development of the necessary links and public profile than the current one year term of the Chairman. The present arrangement may work well enough in the short term with current incumbents, but if RCUK is to develop the independence and powers that we have outlined above, such a figure would be especially important. **We recommend that the OST reconsiders the issue of the chairmanship of the RCUK Executive Group after a further two years.**

Visibility

33. A more high-profile chairmanship might serve to improve the visibility of RCUK, both within and outside the research community. We discuss later the performance of RCUK in influencing policy, but we note that evidence to the Ruffles Review pointed to RCUK's low visibility in the academic world. A potential reason cited was RCUK's concentration on administration rather than strategy.⁵⁸ One crude indicator of visibility is the number of hits on the RCUK website. We were provided with the figures below.

Table 1: Number of hits on the RCUK website

| | May-Dec 02 | Jan-June 03 | July-Dec 03 | Jan-June 04 | July-Dec 04 |
|------------------------|------------|-------------|-------------|-------------|-------------|
| Successful hits | 8,541 | 400,000 | 2,000,000 | 4,100,000 | 4,000,000 |
| Unique visitors | 2,699 | 10,137 | 41,396 | 61,074 | 59,557 |

Source: RCUK follow-up questions

Note: Unique visitors are determined by their IP address – so when users visit the site, their IP address is identified and only one visit is recorded, no matter how many pages they view. This provides a more descriptive indicator than the number of hits to a website, which counts every page view and downloaded, regardless of how many times this is done per visit.

The figures are consistent with the Ruffles Review verdict of a slow start but they demonstrate a rapid rise to 2004, when they seem to plateau. We have argued that the appointment of an independent chairman might help to give RCUK a higher profile. Although it might be interesting to see whether the appointment of a single Chairman will make any difference to the numbers using the RCUK website, it is in terms of political

56 Ruffles Review, para 57

57 Ruffles Review papers; not printed.

58 Ruffles review papers; not printed.

influence rather than website hits that the success of the role will be measured, albeit without the aid of simple metrics.

4 Strategic role of RCUK

Role in Higher Education policy-making

34. In our scrutiny Reports on the individual Research Councils we have encouraged RCUK to develop and promote a common Research Council view on the implications of the Government's higher education policies. This stems largely from our view that individual Research Councils are not always effective in influencing policy on matters concerning their remit. We note that one of the criticisms that emerged in the Ruffles Review was that RCUK had punched below its weight in terms of exercising an influence on policy.⁵⁹ In our view, RCUK should be a key player in the development of policies designed to preserve and strengthen the research base in the UK. In its written evidence, RCUK states that it will continue to work through the Research Base Funders' Forum to influence debate, but acknowledges that there is a need to strengthen strategic and operational level dialogue with the Funding Councils.⁶⁰ This is starting to happen. The Chief Executive of HEFCE, Sir Howard Newby, will attend RCUK Executive Group twice a year and there will be reciprocal arrangements for the Research Councils' Chief Executives in respect of HEFCE board meetings.⁶¹ The two bodies are to meet to explore how "communications and interactions might be improved across the whole spectrum of their activities".⁶²

35. Given these statements, we were surprised that, in his oral evidence to us, Professor Diamond appeared entirely satisfied with the existing arrangements. He gave no indication that improvements in the relationship between both sides of the dual funding mechanism were being sought: "at the moment I think it is working pretty well".⁶³ We are pleased to see that this complacency seems not to be reflected by the reality of what is happening on the ground.

36. By its own admission, RCUK was less than successful in influencing the review of the Research Assessment Exercise (RAE). Its evidence reports that, whilst it was involved in the consultations, "there was some disappointment the Funding Councils appeared to have shied away from fundamental reform". It specifically highlights the "insufficient attention" given to the evaluation of cross-disciplinary research and the absence of the clarifications on the basis of funding awards necessary to reduce the scope for "game playing".⁶⁴ The more detailed guidance on assessment criteria published by HEFCE in January 2005 did go some way to meeting these concerns but RCUK states that "it remains to be seen" how further guidance, to be published in June, will address its outstanding concerns.⁶⁵ Professor Diamond was optimistic, believing that the "portents are good". He was "very, very happy", particularly about the assertion by HEFCE that in 2008 "they will be more like

59 Ruffles Review, para 66.

60 Ev 75

61 Ev 75; Q 55

62 Ev 75

63 Q 55

64 Ev 29

65 Ev 30

instructions”, although he hinted at some remaining concerns about the way in which interdisciplinary research will be handled.⁶⁶ **We recognise the need for an NDPB such as RCUK to respect departmental boundaries and lines of communication, but in an area which requires joined-up policy making we would expect RCUK to be a strong representative of the concerns of Research Councils, particularly over skills shortages. We have not yet been persuaded that RCUK is exercising much influence, or even that it is seriously seeking to do so.**

Skills shortages

37. We are currently conducting a major inquiry into strategic science provision, in which the role of the key players on this issue will be explored in more detail. We raised the issue briefly with Professor Diamond in the context of this inquiry in order to gain his impressions of the role RCUK has played on the health of disciplines during its first two years. This is an area in which the Research Councils have rightly taken an interest. Professor Diamond explained that it was for the Research Councils to identify emerging disciplines in order to support the health of the research base. They also had a role in working with the funding councils in order to ensure the long-term future of the more established disciplines.⁶⁷ Councils are already using Roberts Review additional funding to enhance postgraduate stipends and postdoctoral salaries in subjects, such as mathematics, that are experiencing recruitment difficulties. The effectiveness of this approach is being monitored by RCUK.⁶⁸

38. Asked about his assessment of the need for graduates in certain disciplines, Professor Diamond told us that it is “absolutely critical that we do take a view on how many basic chemistry undergraduates we need in this country, and that we are able to balance the key elements of demand and supply”.⁶⁹ We have encouraged Research Councils, notably EPSRC, to establish what a healthy research profile looks like and to adjust funding accordingly, but we have been disappointed by the response.⁷⁰ The problem is that existing statistics on projected future needs, such as the *Working Futures: National Report, 2003–04*, are based on a sectoral examination of the labour market which uses the wrong criteria to draw detailed conclusions on the health of disciplines. They are therefore of limited use to HEFCE and the Research Councils. Sector Skills Councils are beginning to do some useful work in this area, for example in highlighting the potential shortage of expertise in nuclear fission.

39. RCUK is seeking to join with others to provide better information. It has produced a summary of disciplines faced by shortages of researchers and is now in the process of identifying quantitative indicators to provide further insights into the health and composition of disciplines and sub-disciplines.⁷¹ The Research Base Funders’ Forum is

66 Q 56

67 Q 61

68 Ev 28

69 Q 61

70 Second Special Report of the Committee, Session 2003–04, *Government Response to the Committee’s Ninth Report, Session 2002–03, The Work of the Engineering and Physical Sciences Research Council*, HC 171, p 8

71 Ev 27–8

developing more general metrics on research excellence at an institutional level and examining the ability of the research base to sustain itself. It has found that the availability of relevant data is “somewhat sparse” and varies between the Research Council areas.⁷²

40. Individual Research Councils are taking some steps towards calibrating shortages. For example, in the case of chemistry, we heard that EPSRC is targeting physical-organic chemistry and the chemistry/chemical engineering interface through its Science and Innovation Awards. The delivery plans of individual Research Councils will address the health of disciplines, in consultation with RDAs, HEFCE and the Funders’ Forum. **We welcome the steps that RCUK is taking in the context of the Funders’ Forum to gather better statistics with which to inform decision-making on the sustainability of disciplines.** We will make further recommendations on this issue as part of our separate inquiry on strategic science provision.

41. RCUK sees as one of its functions the promotion of science careers in schools, including academic careers. We were pleased to hear that RCUK is working with organisations such as the Wellcome Trust to “explore issues around research career paths” with a particular focus on challenging some of the misconceptions among pupils, tutors and careers advisers about the nature of a career in research.⁷³ Unfortunately, not all impressions are misconceptions, and we have commented before on the deleterious effects of short term contracts on the attractiveness of careers in science.⁷⁴ This was seen by Professor Diamond as “something which we really need to get a grip on”.⁷⁵ **We recommend that RCUK specifically addresses the issue of short term contracts in its future work.** Research Councils are already engaged in outreach to school children as part of their science in society activities. RCUK co-sponsors with the Wellcome Trust a scheme to enable PhD students and post-doctoral researchers to work with students and teachers in secondary schools; it supports a national competition to stimulate school children to undertake mini-research projects; and an interactive schools science race during science week enjoys widespread participation by secondary schools.⁷⁶

42. We recognise that the Research Councils are taking steps to address skills shortages and promote science careers using the tools available to them. But we are not yet convinced that they are fully involved in decision-making in the Department for Education and Skills. For example, we would have expected the then Secretary of State for Education and Skills, Charles Clarke MP, to consult the Research Councils before writing in December 2004 to HEFCE seeking advice on how to protect identified higher education courses deemed to be of national strategic importance. However, the press notice announcing this measure referred to consultations “with cabinet colleagues”⁷⁷ and Professor Diamond confirmed that RCUK was not consulted.⁷⁸ Similarly, in spite of the need for RCUK to take a view on the right number of chemistry undergraduates required, Professor Diamond told us it had

72 Progress Report for Funders’ Fourm, 27 July 2004; not printed.

73 Ev 46

74 See, for example, Eighth Report of the Committee, Session 2001-02, *Short-Term Research Contracts in Science and Engineering*, HC 1046

75 Q 71

76 Ev 46

77 www.dfes.gov.uk/pns/DisplayPN.cgi?pn_id=2004_0209

78 Q 62

had no discussions with HEFCE over recent closures of science departments.⁷⁹ We note that it is HEFCE, rather than DfES, that is participating in the Funders' Forum project on the health of disciplines.⁸⁰ The activities of the Research Councils in addressing particular skills shortages and in stimulating students more generally to pursue science careers need to form part of an overall Government strategy. **We recommend that RCUK ensures that it is heavily involved in the preparation of the HEFCE response to the invitation to provide the Secretary of State for Education and Skills with advice on protecting courses of national strategic importance.**

Allocation of the DGRC's discretionary fund

43. The 2004 Spending Review announced a fund of £70 million over two years, to be allocated by the DGRC, in order to “enable Research Councils to respond more quickly and effectively to emerging priorities and opportunities”.⁸¹ The Ten Year Investment Framework elaborated that the fund would be used “where it is necessary to focus research effort, build national capacity (including infrastructure) or to seize opportunities from international partnership”.⁸² RCUK believes that the fund should be used for funding time-critical priority areas and initiatives aimed at underpinning the health of disciplines.⁸³ Professor Diamond did not indicate to us that RCUK had been involved in discussions on the allocation of this money. Instead, individual Research Councils had been in discussion with the DGRC about their priorities and the decision would be left to him.⁸⁴ The Government has indicated that it does not wish to limit the use of this fund to major projects and facilities but has given no indication as to the criteria that will be employed in determining its distribution.⁸⁵ It has said that the strategic goals which it will support “could include health of disciplines issues”.⁸⁶ **We find it surprising that RCUK and OST between them have not yet worked out how the DGRC's discretionary fund is to be allocated. We recommend that the Government draw upon the advice of RCUK and announce in the near future how this money is to be used.**

44. There is a case for this fund to be given to the Research Councils to allocate, particularly if it is to be used, at least in part, to support the health of disciplines. RCUK would be content to be able to play a more prominent role in the preservation of key disciplines. Its evidence states that it would welcome additional funding for supporting strategic capabilities at national level, although it says that “ensuring national coverage in key subject areas is mainly an issue for the Funding Councils and would need to be taken forward by the Funders Forum”.⁸⁷ Whilst we welcome the valuable work that the Funders'

79 Q 65

80 Supplementary memorandum from RCUK; not printed.

81 HM Treasury, *2004 Spending Review*, p 142

82 Fourth Special Report from the Committee, Session 2004-05, *Government support for Beagle 2: Responses to the Committee's Twelfth Report of Session 2003-04*, HC 301, p 3

83 Ev 28

84 Q 74

85 Fourth Special Report from the Committee, Session 2004-05, *Government support for Beagle 2: Responses to the Committee's Twelfth Report of Session 2003-04*, HC 301, Appendix 1, para 8

86 Fifth Special Report from the Committee, Session 2004-05, *The Work of the Economic and Social Research Council: Government's Response to the Committee's First Report of Session 2004-05*, HC 401, p 11

87 Ev 29

Forum is doing, we are not convinced that it has yet established a prominent enough position in the policy-making hierarchy for RCUK to rely too much upon it as a means through which to channel its influence.

45. We have previously recommended that RCUK co-ordinate the management of a new Strategic Capabilities Fund, which could be used to support national coverage of key subject shortage areas.⁸⁸ The Government rejected this recommendation on the grounds that it would create extra bureaucracy and would be more likely to attract weak, opportunistic bids. It thought that better results could be obtained by Research Councils working bilaterally with HEFCE and RDAs.⁸⁹ These are unconvincing arguments. They could equally be used against the DGRC's £70 million fund, which the Government was content to establish, or against any new fund established to address a particular weakness. In any event, such a fund need not be allocated on the basis of specific applications but could be awarded on a discretionary basis. We will monitor closely the effectiveness of the bilateral links between RCUK and others that are to be relied upon for time being.

Regional role

46. The policy of all the Research Councils is to fund the highest quality proposals they receive, regardless of institution or geographical location. However, Research Councils also have "a national remit and adopt a UK-wide strategic view on research capability".⁹⁰ We were keen to discover how this translates into a regional dimension of Research Council policy in practice. Helen Thorne from RCUK explained that individual Research Councils were represented on the Science and Industry Councils that have now been established by the RDAs and that there was further interaction via the Funders' Forum, the Technology Strategy Board and the Regional Innovation Science and Technology Group.⁹¹ A particular focus for this interaction has been the knowledge transfer agenda. Research Councils have always developed their own relationships with RDAs as they see fit. Professor Diamond argued that the added value that RCUK provided to this interaction was in ensuring that contacts with RDAs by one Research Council were shared across the board, as necessary.⁹² He said that "RCUK is providing the essential glue that enables interaction to take place".⁹³ In time, he believed that RCUK would provide a focal point for RDAs to make contact with Research Councils.⁹⁴

47. We have found in other inquiries that the scientific expertise available within RDAs was patchy. We are pleased to note that six Science and Industry Councils have now been established and that the Research Councils are represented on them. We believe that, if RCUK is to have a role in developing relations with RDAs, then it should be the recognised point of contact for RDAs, in line with Professor Diamond's expectations. Thus far, there

88 First Report of the Committee, Session 2004-05, *The Work of the Economic and Social Research Council*, HC 13, para 66

89 HC (2004-05) 401, p 11

90 Ev 29

91 Q 78 [Helen Thorne]

92 Q 79 [Professor Diamond]

93 Q 80

94 Q 80

has not been sufficient clarity in the role of the individual Research Councils and RCUK in developing these relations. This is one of the consequences of the failure to give RCUK a clear sense of mission at the outset. **We recommend that RCUK include clear objectives in its delivery plan for its relationship with RDAs. We will look closely at how these relations have developed the next time that we scrutinise RCUK.**

European dimension

European Research Council

48. RCUK has a role in representing the interests of the Research Councils on the international stage. Over the last two years we have been following closely the development of the proposal for a European Research Council (ERC), to allocate funding for research on a pan-European basis. In our Report on the UK and European science policy in 2003, we called for the Government to develop a firm position on the proposal, in consultation with the research community.⁹⁵ This position is still developing; Lord Sainsbury has indicated some opposition to placing industry-related research and basic research under the same funding umbrella.⁹⁶ It has not yet been agreed whether the funding for an ERC would come from the EU budget or out of the existing budget for the Framework Programmes, nor whether money would be allocated on a quality only basis, unaffected by geographical or political considerations.⁹⁷

49. The RCUK view on the ERC is refreshingly clear. Professor Diamond told us that “The European Research Council is a good thing if it gives new money”.⁹⁸ He outlined his preference for a blue skies response mode competition across Europe, with no requirement for international collaboration. He favoured basing allocations on scientific excellence rather than on the *juste retour* principle of the Framework Programmes and told us that he had been making this case to the European Commission.⁹⁹ If there is to be an ERC we would fully support this mode of operation. We share the concern of RCUK that any money allocated to the ERC might be taken from existing Research Council allocations. This would not be in the best interests of UK science. We trust that the Science Minister is making this case within Government on behalf of the Research Councils and we look forward to a more detailed statement of the UK position in the near future.

EU Framework Programmes and full economic costs

50. One of the detailed points that will need to be established in respect of the ERC is whether or not it will pay the full economic costs (FEC) of research, as opposed to only the direct costs that are paid under existing EU Framework Programme (FP) grants. Professor Diamond told us that the case was being made, but it seems unlikely to be successful, given the general lack of enthusiasm in Europe for funding the full economic costs for FP

95 Sixth Report of the Committee, Session 2002-03, *UK Science and Europe: Value for Money?*, HC 386

96 HC (2003-04) 135-iii, Q 87

97 The principle of *juste retour* is used for Framework Programme funding, under which grants are awarded in rough proportion to the level of contributions made by Member States.

98 Q 88

99 Q89

grants.¹⁰⁰ In its evidence RCUK acknowledges concerns about the impact of the change to the payment of full economic costs by UK Research Councils. Following a review of the sustainability of the research base, the Government is moving towards the payment of the full economic cost of research, rather than the proportion of the projects' indirect costs which the Research Councils meet at present. In order to pay a greater proportion of the full costs of research, Research Councils have been awarded a further £120 million a year from 2005-06, with another £80 million allocated in SR 2004 to cater for 2007-08 onwards. It was announced in January 2005 that Research Councils would be paying 80% of full economic costs from September 2005, with a target of moving towards 100% of the full economic costs being paid by the Research Councils by early in the next decade.¹⁰¹

51. UK participation in FP activities is one of the areas that might be adversely affected by the move to full economic costs. We have already recommended that Government makes funding available to meet the indirect costs of EU-funded research to maintain existing UK participation levels.¹⁰² Ministers have agreed that a number of measures will be identified in order to monitor the full effects of the introduction of FEC.¹⁰³ We heard that the results are due shortly but that the preliminary findings suggest that there will be no adverse effect on UK participation in FP activities.¹⁰⁴ **We welcome the work that Research Councils are doing to measure the impact of the move towards funding the full economic costs of research and look forward to the publication of the full findings of its monitoring exercise.**

Large facilities

52. One of RCUK's functions is advising OST on the Large Facilities Road Map, which sets out the priorities of the research community for investment in facilities and projects over the next 15 years. It relies principally on the Council for the Central Laboratory of the Research Councils (CCLRC) in providing this advice. The CCLRC, as the operator of a number of large scale facilities, is the provider of strategic advice to Government on large scale facilities, both in the UK and overseas. In our Report on the CCLRC we recommended that RCUK was the more natural provider of this strategic advisory advice, on behalf of all the Research Councils. The Government rejected this proposal, arguing that it was for individual Councils, including CCLRC, to provide advice, although it did accept our conclusion that CCLRC's strategic advisory body should be given a greater independent element.¹⁰⁵ The Large Facilities Road Map is due to be revised in 2005. RCUK has been asked to undertake a prioritisation exercise following this revision, to identify those projects which are likely to move into a capital construction phase and thus need further funding. This prioritisation will take place according to criteria agreed by RCUK

100 Q 102

101 Ev 27

102 HC (2004-05) 8, para 44

103 Ev 38

104 Q 103

105 Tenth Special Report from the Committee, *Government Response to the Committee's Eighth Report, Session 2003-04, The Work of the Council for the Central Laboratory of the Research Councils*, HC 1199

and OST and is likely to be complete by the end of 2005.¹⁰⁶ The DGRC will use this analysis to advise Ministers on future Spending Reviews.

53. There is also a Large Facilities Capital Fund. This is used to support large-scale, strategic infrastructure projects in UK universities and Research Council institutes which fall outside the funding remit, or capability, of any individual authority. Suitable projects are very expensive; have long lifetimes and multiple users, both nationally and internationally; and are interdisciplinary. It is usual for such projects to be funded from multiple sources, including Research Councils, other government departments, charities and international bodies. Recent projects that have received support from this fund include the ISIS second target station, a new marine research vessel and the Diamond synchrotron.¹⁰⁷ The fund is worth £95 million a year.¹⁰⁸ Allocations are made by OST, on the advice of the Research Councils, with Treasury approval required in certain circumstances. RCUK states that “Approval by DTI Ministers is required in most cases, and if the project is above the DTI’s delegated powers, or requires funding from beyond the current three-year Spending Review period, approval is also required from HM Treasury.”¹⁰⁹

54. Professor Diamond told us that RCUK had no role in co-ordinating applications by the Research Councils to this fund. We raised with him the potential bid by MRC to the fund in support of the move of its National Institute for Medical Research to a central London site. He told us “it is not for RCUK to second-guess those decisions; it is for the individual Councils to make those decisions as best they see fit.”¹¹⁰ We found it difficult to accept that RCUK had no role in respect of these bids, given that they normally are in support of projects already on the Large Facilities Road Map, on which RCUK does advise OST.¹¹¹ We were therefore pleased that Professor Diamond’s oral evidence was supplemented by additional written evidence. It said that “RCUKEG considers both the science case and business case. Where there is a request to draw upon the large facilities capital fund, it is the role of RCUKEG to recommend to OST whether funding should be made”.¹¹² We are pleased to see that RCUK does play a role in the allocation of the Large Facilities Capital Fund as well as advising on the development of the Large Facilities Road Map. Once RCUK has developed along the lines we have outlined earlier and assumed greater independence, we would like to see this fund being allocated exclusively by RCUK.

106 As above

107 Ev 48

108 OST, Science Budget Allocations announcement, 8 March 2005

109 Ev 48

110 Q 106

111 Ev 49

112 Ev 48

5 Joint working

Setting the strategy

55. In 2003 RCUK produced two documents setting out research priorities for Research Councils in the medium to long term, compiled on the basis of individual Councils' strategies. In written evidence, Save British Science (SBS) was very critical of these publications, arguing that they were “completely at odds with what RCUK should have been doing”. SBS argued that it has traditionally been for Research Councils themselves to take funding decisions on the basis of the needs of their user communities and regrets that decisions are now being “dictated by RCUK”.¹¹³ We do not see these documents as an attempt to dictate the direction of research, but more of an effort to collate and summarise the most exciting areas of research in each major discipline. It is still for each Research Council to determine their own strategy on the basis of consultations with their own research communities and other Research Councils.¹¹⁴

56. Witnesses from RCUK explained that the documents were partly a means of fulfilling its objective of providing leadership and a collective voice for the Councils, and that they should be viewed as an introduction to, or overview of, research in the UK for interested parties, which will be updated periodically. A visitor would be directed to the Research Council of relevant interest instead of having to look through the strategic plans of all the Councils.¹¹⁵ Whilst we recognize the desire of RCUK to raise its profile and provide a single voice for UK research, we are sceptical about the level of demand for such documents. We suspect that the majority of academics generally know very well which Research Council to contact about a particular field of research. The documents themselves are not specific enough to be of real academic value: they are more of a PR exercise or are designed to be read in the Treasury. **We recommend that RCUK considers carefully the demand for, and usefulness of, its strategy documents before producing any updated versions.**

Balance of funding

57. Achieving the most appropriate balance between directed and non-directed funding is a primary role of the Research Councils, working through RCUK with OST. A large proportion of the recent substantial increases in the Science Budget has been allocated to specific programmes of research. RCUK states in evidence that “if the UK is to be the most attractive location in the world for science and innovation it is essential that there is continuing sustained growth in basic responsive mode research funding”.¹¹⁶

58. In our Research Council scrutiny Reports, we have repeatedly expressed concerns that basic responsive mode research funding may suffer as a result of an increased emphasis on directed managed programmes or thematic research. In answer to our concerns, RCUK argued that there is no evidence that lower quality thematic proposals are being funded at

113 Ev 42

114 Q 54

115 Qs 50-53

116 Ev 21

the expense of responsive mode applications.¹¹⁷ Professor Diamond told us that while he had observed that in the 2000 and 2002 Spending Reviews any extra money was for earmarked cross-council programmes, the 2004 Spending Review was “the least directed” Spending Review that his fellow Chief Executives could remember.¹¹⁸ RCUK confirmed that it would be pressing for enhanced investment in basic research in Spending Review 2006.¹¹⁹ The new performance management framework, on which the 2006 Science Budget will be based, will not, we are told, jeopardize speculative research by its use of performance indicators.¹²⁰ Indeed, Professor Diamond told us that this would ensure proper evaluation of research.

59. Professor Diamond reported that there was now more of a move towards responsive mode funding.¹²¹ RCUK provided some evidence to support this assertion. For example, in the period 2000–01 to 2003–04 responsive mode grants awarded by BBSRC increased as a proportion of overall grant expenditure by 4.3%. However, the equivalent figure for ESRC was a 16% decrease. ESRC is “currently exploring the most cost effective way of increasing its responsive mode provision”.¹²² At NERC, the figures indicated a decrease of 8.0%—a reversal of the trend prior to 2001–02.¹²³ NERC states that it is committed to maintaining, not increasing, the existing proportion of its non-directed research funding. In contrast, MRC has reduced the proportion of funding devoted to strategic grants and now all its funding is in what can be defined as responsive mode. EPSRC increasingly uses “signposted” research areas, within which responsive mode applications are accepted.

60. We accept that there is no clearly definable distinction between directed and responsive modes but the use of different terminology and definitions by the different Research Councils makes analysis more difficult than it need be. Even broadly comparable figures do not seem to be provided by all Research Councils. However, the evidence that is available presents a mixed picture: there are encouraging signs, but it does not yet indicate a clear trend towards responsive mode right across the Research Councils. **We welcome the stronger stated emphasis by the Research Councils on increasing responsive mode funding for basic research. In order to demonstrate that the reality matches the rhetoric, we recommend that RCUK encourages all Research Councils to maintain comparable statistics which can clearly demonstrate changes in the balance of funding over time. In addition, any increase in the level of responsive mode funding needs to be supported by evidence that it is delivering outputs: we recommend that the new performance management framework is capable of providing such indicators.**

117 Ev 22

118 Q 32

119 Ev 22

120 Ev 21

121 Q 49

122 Ev 44

123 See Fifth Report of the Committee, Session 2002-03, *The Work of the Natural Environment Research Council*, HC 674, ev 10

Success rates and demand management

61. We have commented in our Reports on individual Research Councils on the variations in grant application success rates and the different approaches used to improve them. We have cited the attempts by EPSRC to manage demand by using university interface managers to visit Higher Education Institutes as a good model for other Councils to adopt. RCUK explained that although several Research Councils would like to improve their direct links with HEIs, this system was too expensive for them. A regular programme of university visits was used instead.¹²⁴ We do not believe that it would be too expensive for the Research Councils, between them, to fund a post dedicated primarily to university liaison. The expenditure would more than likely be recouped in a reduced administrative burden dealing with applications. Nonetheless, we recognize that a whole range of factors affect success rates, few of which are within the direct control of the Research Councils. What the Research Councils can do is to publish information on success rates that is as full as possible to inform their research communities. RCUK has agreed with our recommendations on this issue. Success rates at the institutional level will be published annually on Council and RCUK websites from 2005. RCUK is also proposing to write to university Vice-Chancellors to provide equivalent data at the department level.¹²⁵ We see no reason why these letters should not be made public: this information may help to influence the career choices of researchers and will help to provide a more up-to-date indication of departmental performance than the Research Assessment Exercise. **We welcome the steps RCUK and the Research Councils have taken to provide fuller information on grant application success rates. We recommend that RCUK discuss with universities the possibility of making public this information on a departmental level.**

The Treasury and performance management

62. Of more concern to us is the degree of direction of research provided by the Treasury. When asked about this department's influence on research strategy and its potential bias towards short term economic gains, the DGRC told us that the Treasury had accepted the need for a balance between risky and safer research, and that it appreciated the complexities of measuring performance and the long term nature of some research. Professor Diamond described the Treasury's interest as "a request to justify the way we put to use the public money we get" for the economic development of the country but also in support of quality of life.¹²⁶ This has been behind the development of a performance management system which will underpin future Spending Review allocations across the Research Councils. Professor Diamond spoke of an interactive process rather than an imposition.¹²⁷

63. In an informal briefing in December 2004, the DGRC assured us that the new system would impose minimal bureaucratic burdens, perhaps fewer than is currently the case. The measures are being developed with each Research Council and will reflect the different

124 Ev 22

125 Ev 22

126 Q 48

127 Q 48

indicators suited to different disciplines. The data will be published annually and will feed into the evaluation of progress against PSA targets as well as the targets of individual Research Councils and RCUK.¹²⁸ The delivery plans will replace the existing extremely detailed operating plans of the Research Councils which they have produced each year. **We have been encouraged by the evidence we have found of an enlightened and realistic view at the Treasury of the benefits and potential uncertainties involved in funding research, particularly basic research, and measuring outputs. We also welcome the attempt to establish in advance yardsticks for measuring performance as an improvement on the previous tendency towards the retrospective imposition of such measures. We look forward to examining the detail and operation of the performance management system in future inquiries. We recommend that the proposed outcome measures are validated in a peer reviewed manner to ensure that they do not distort the research strategy.**

Multidisciplinary research

64. The increasing recognition of the exciting scientific advances that might be made on the boundaries of traditional scientific disciplines and by multidisciplinary research has been reflected in the last two Spending Reviews. Cross-cutting directed programmes in areas such as energy, e-science and stem cells have encouraged multidisciplinary working and co-operation between the Research Councils. Even before the establishment of RCUK, Research Councils were already engaged in many activities promoting multidisciplinary approaches to research and training.¹²⁹ The formation of RCUK provided a new focus for these activities and a forum for the development of further multidisciplinary activities and Spending Review bids. RCUK regards this as one of its main achievements to date.¹³⁰

65. We explored the extent to which the scientific community was responding to the shift towards interdisciplinary and multidisciplinary research. The issue of peer review of such grant proposals is dealt within paragraphs 67–72 below. Professor Diamond spoke of a commitment to interdisciplinary research in the universities that he had not witnessed before and increasing evidence of an interdisciplinary research culture developing.¹³¹ Multidisciplinary research programmes, such as the Basic Technology Programme, have been heavily over-subscribed. Discipline-hopping awards have been introduced by some Councils, although not as widely as we have recommended.¹³² A number of interdisciplinary research centres have been established: examples include the Newcastle Institute for the Arts, Social Sciences and Humanities and the Imperial College Flowers Building, which houses multidisciplinary research centres. The Manchester Interdisciplinary Biocentre is due to open in July 2005. The Research Councils have also supported the development of virtual interdisciplinary research centres such as those in nanotechnology and bionanotechnology.¹³³

128 Ev 20

129 Ev 22

130 Ev 17

131 Q 85

132 Ev 24

133 Ev 47

66. There is limited evidence from some Research Councils of an increased proportion of funding awards being devoted to interdisciplinary programmes. For example, the BBSRC has increased expenditure on grants with principal investigators from non-bioscience departments from 12.7% to 13.4%. The number of awards made by ESRC to research projects funded jointly with a non-social science provider has increased from 105 in 2001–02 to 188 in 2003–04.¹³⁴ However, comprehensive data from all Research Councils does not exist. **We welcome the role RCUK has played in promoting multidisciplinary approaches to research and the commitment of the Research Councils to supporting new interdisciplinary research centres. We recommend that the delivery plans of RCUK and the individual Research Councils indicate how the commitment to multidisciplinary research will be maintained and monitored over the next Spending Review period.**

Peer review

67. Given the increasingly multidisciplinary emphasis of research and the pressure for administrative convergence, we would expect RCUK to play a leading role in driving forward the harmonisation of peer review processes. In our individual Research Council scrutiny reports we have commented favourably on the peer review colleges used by four of the Research Councils and supported further moves towards harmonisation. The Research Councils have defended their different peer review practices, which they say reflect their different missions and user communities.¹³⁵ RCUK rejected our recommendation for all councils to use peer review colleges, rather than different subject panels, on the grounds that a single system of peer review would be too inflexible: processes need to match the nature of different research communities. However, Research Councils have implemented a joint benchmarking procedure for peer review to establish some agreement on the high level stages of the process and to share best practice. We are not yet persuaded that such differences can be justified and look forward to returning to this issue in detail in a future inquiry.

68. The Committee has expressed concern in its scrutiny Reports about the ability of Research Councils to deal with research applications at the boundaries of disciplines. In spite of the efforts of individual Research Councils to tackle the problem, RCUK states that “it remains highly likely that the knowledge base of some parts of the peer review community will lag behind the scientific advances that catalyse ideas for multidisciplinary projects”.¹³⁶

69. Since the adoption of the current policy for handling multidisciplinary, cross-Council research proposals in 2000, Councils have sought to improve the process by the introduction of multidisciplinary peer review committees, provision of training for new peer reviewers and the establishment by some Councils of peer review colleges. RCUK states that “Councils have also gained substantial experience in establishing large-scale multidisciplinary programmes and funding joint multidisciplinary initiatives, and are sharing good practice through the peer review benchmarking project. The latter looks at

134 Ev 48

135 Ev 25

136 Ev 24

the handling of multidisciplinary proposals at each stage of the process including identification of proposals, assignment to the most appropriate peer review body, selection of reviewers, and decision making.”¹³⁷

70. In spite of these measures, differences in the peer review process are still identified as a potential weakness. The RCUK evidence states that “Councils do not believe that harmonisation of the [peer review] process would improve the position”.¹³⁸ A study conducted by one Research Council found that a single grading system would not necessarily allow comparisons to be made across different areas and would not serve a useful purpose.¹³⁹ BBSRC and ESRC plan to maintain their existing systems, which are supported by their user communities. The effectiveness of the Councils’ mechanisms for dealing with multidisciplinary proposals will be dealt with in the RCUK delivery plan. A formal review will take place a few months after the introduction of full economic costing in September 2005. This will look at the lessons learned from peer review benchmarking and the funding of multidisciplinary schemes and programmes, and from the training of peer reviewers. This type of evaluation of the effectiveness of different mechanisms will continue in the medium to longer term.¹⁴⁰

71. We welcome the steps that RCUK and the Research Councils have taken to review their peer review mechanisms in response to our recommendations. We accept that there may be reasons why complete harmonisation is not obtainable but we remain concerned at the extent to which multidisciplinary grant applications can be adequately catered for at present. We are pleased to see that RCUK is specifically addressing this issue in its delivery plan.

72. Another problem with the peer review system identified by RCUK was the “inherent conservatism of peer reviewers”.¹⁴¹ The impact of this conservatism on the funding decisions of Research Councils is a major interest to us. In a period in which Research Councils are increasingly being required to demonstrate value for money in their funding, a leaning towards the relatively safe areas of research would be understandable, but not necessarily desirable. The operation of the peer review system is a complex, far-reaching subject which lies outside the scope of this inquiry, but **we recommend that RCUK monitors any signs of an increasingly risk averse culture developing as part of Research Councils’ review process.**

Science in Society

73. In our inquiries into the individual Research Councils we have commented that the science in society activities of each Council would benefit from a more collective approach, in collaboration with Government departments and other research funders. In March 2004 RCUK accepted the need for a more collective approach and agreed to establish a cross-council science in society strategy. This strategy will be launched in May 2005. It will

137 Ev 49

138 Ev 25

139 Ev 25

140 Ev 23

141 Ev 25

involve informing the public of research developments; identifying public attitudes to the conduct of research; the promotion of science careers to young people and the encouragement of funded researchers to engage in the promotion of the relationship between science and society.¹⁴² RCUK is also establishing, in April 2005, a business unit to co-ordinate the engagement of Research Councils with other science funders in various schemes and initiatives promoting public dialogue.¹⁴³ Funding for some of these activities has been transferred from OST to RCUK.¹⁴⁴ We note that a joint OST/RCUK project establishing good practice in the evaluation of these science and society activities was due to be completed in autumn 2004. In addition, the Government told us in September 2004 that the DGRC will be establishing a forum of those engaged in science and society activities to ensure a coherent approach.¹⁴⁵ We still await the outcome of both of these initiatives. **We welcome the fact that RCUK has answered our call for a more collective approach to science in society activities and look forward to the announcement of the new strategy. We hope that other promised related activities will not be too far behind.**

Administration

74. Amongst the missions of RCUK is a commitment to ensure joined-up working between the Research Councils to deliver their goals. This aim is being implemented largely through the RCUK administration strategy. This is a process of administrative and policy convergence in order to reduce costs, to improve accessibility and to better facilitate cross-council engagement by stakeholders and exchanges of people and information between Research Councils. The key targets of this strategy were agreed by Chief Executives in December 2003 for at least the 2004 Spending Review period. It was agreed that the key measurable differences from 2003–04 would be as follows:

- External stakeholders will perceive the Research Councils as having an improved interface to the delivery of administrative services;
- External stakeholders will be able to interrogate research portfolios across all the Councils;
- A more integrated flow of information between the Councils and between the Councils and OST;
- Harmonised administrative terms and conditions for the majority of funding;
- A common framework for providing joint services and facilities to all Councils;
- A reduction in the number of different IT systems for grants, studentships, HR finance and office systems;
- Increased harmonisation of the terms and conditions of service for staff;

142 Ev 32

143 Ev 32

144 www.rcuk.ac.uk/meetings/041118report.asp

145 HC (2003-04) 1059, p 3

- Increased mobility of staff between the Research Councils and between them and OST; and
- An increase in the number of staff working in joint units.¹⁴⁶

75. A major part of the administration strategy is implemented through the Research Administration Programme. This is designed to deliver savings of around £30 million in total. Two specific targets have been agreed with the DGRC:

- The maintenance of administrative spend at 3.4% by 2008. (This compares to the existing target of 4%); and
- An increase in the proportion of HQ staff in joint services to 25% by March 2007.

As part of the Gershon Efficiency Programme and in line with other public bodies, the Research Councils are required to make 2.5% per year efficiency gains. The administrative savings are therefore being put towards this Gershon target, which, in monetary terms, amounts to some £170 million across the whole Research Councils budget by 2007–08.¹⁴⁷

76. The RCUK evidence describes a flexible approach, rather than forcing a one-size-fits-all policy, which might lead to a lowest common denominator solution. Thus, individual Councils determine their own levels of participation in joint activities and common schemes. Councils work together “where there is benefit to their academic communities, government and other stakeholders in doing so”.¹⁴⁸ For example, the Committee has recommended that all Councils should allow contract researchers to apply for grants but practice still varies from Council to Council. The scope for further harmonisation on eligibility for grant funding is being explored in 2005.¹⁴⁹

77. The problem with this *a la carte* approach to harmonisation is that there is plenty of scope for resistance and slowing of the process. The Ruffles Review was critical of the commitment to harmonisation in the Research Councils: there seemed to be a “lack of conviction” as to why established ways should be changed to meet goals other than those of their own Council.¹⁵⁰ There was a perception in some quarters that RCUK groups would increase bureaucracy and some scepticism about the benefits of convergence.¹⁵¹ The Ruffles Review team found that a spirit of team working did prevail at Chief Executive level, but was not convinced that it had “cascaded to a majority of Council staff”, noting that such changes in culture can take considerable time.¹⁵² In their comments to the Review, the Chief Executives noted the rather slow progress in many areas and the fragile nature of some of the voluntary agreements.¹⁵³ There was no-one in a position to ensure implementation across the Councils.¹⁵⁴ Professor Diamond confirmed that it was for Chief

146 Ev 24

147 Q 83

148 Ev 18

149 Ev 30

150 Ruffles Review, para 59

151 Ruffles Review papers; not printed.

152 Ruffles Review, para 59

153 Ruffles Review papers; not printed.

154 Ruffles Review, para 76

Executives as a whole to provide leadership and that the speed of progress was regularly reviewed. Following a recommendation of the Ruffles Review, RCUK is drawing up a plan for making more progress in coordinating and standardising administrative systems. This was to be agreed with the DGRC at the end of January 2005, but has now been delayed to May.¹⁵⁵

78. We have commented previously about the unnecessary use of different definitions and names for similar schemes throughout the Research Councils.¹⁵⁶ This can only impede efforts to promote the interdisciplinary working which is to become more prevalent. We note the agreement in March 2004 of a common set of research grant terms and conditions.¹⁵⁷ We hope that this will be one contribution towards moving from a culture that focuses upon the primacy of the individual Research Council to one which values the common goals of all the Councils working together. This culture needs to be clearly evident at the top of the Research Councils if it is to spread throughout the Councils and their research communities. **We conclude that RCUK is playing a useful role in promoting administrative convergence and much progress has been made. This should benefit cross-Council co-operation and the administration of joint schemes as well as realize significant financial savings. However, as we have indicated earlier, the current partnership model does not lend itself to dynamic action. It is particularly important that RCUK has mechanisms for monitoring the full consequences of the decisions that it and HEFCE take. We believe that the pace of change would be faster under the arrangements that we have outlined in chapter 3. In the meantime, the DGRC should monitor progress on a regular basis.**

Joint Electronic Submissions

79. The Research Administration Programme aims to deliver, by the end of 2007–08, “a common research administration system that enables processing of grants, studentships and fellowships from submission to completion”.¹⁵⁸ The main delivery mechanism for this is the Joint Electronic Submissions System (Je-S), which provides a common form for the electronic submission of grant applications across the Research Councils. The scheme was agreed in March 2002. It was implemented by four Councils by May 2003. Some 2,000 research proposals have been submitted by this means from the 90 organisations so far able to use the system.¹⁵⁹ Of the remaining Councils, AHRB and ESRC will be using the Je-S system from September 2005 and MRC will follow in 2006.

80. In evidence, Helen Thorne rejected the suggestion that some Councils had dragged their feet on implementation. Both ESRC and MRC already had electronic submission systems in place and wanted to be sure that the new system was not inferior to existing ones before coming on board. Indeed, it was agreed by RCUK that those Councils which had already made significant investments in their own electronic submission systems would only migrate to Je-S compliant systems when Je-S was sufficiently mature to be able

¹⁵⁵ Ev 36; <http://www.rcuk.ac.uk/press/>

¹⁵⁶ HC (2003-04) 316

¹⁵⁷ Ev 26

¹⁵⁸ Ev 26

¹⁵⁹ Ev 26

to provide their communities with the same level of functionality as their existing electronic systems.¹⁶⁰ Paper-based submissions will be ended in March 2005. This meets the Government's e-business target for the provision of electronic services. The Je-S system allows research organisations to monitor the progress of their applications on-line and to engage in on-line discussions about potential improvements to the system. **We commend RCUK's role in the implementation of the Je-S system, which will provide significant improvements for researchers in applying for grants and will make interdisciplinary applications more straightforward.**

6 Conclusion

81. RCUK was established largely in order to meet the need for a more collective approach amongst the Research Councils and to give them a stronger voice in science policy making. The implementation of this sensible intention was severely hampered by the governance structures it was saddled with. The failure of OST to resolve satisfactorily the relative roles of the DGRC and RCUK made it very difficult for the latter to exert the sort of influence that might have been expected at the outset. RCUK has added value to the Research Councils and fostered a more collegiate culture. It has provided a forum in which Research Councils can review best practice and work towards administrative harmonisation, which will benefit the research community as well as the taxpayer. But it has not been able to assert its presence in the development of policies with implications for the research base across Government.

82. If RCUK is to realise its potential, OST must be prepared to give it greater independence and the Research Councils need to have the confidence to assert themselves. The recent reorganisation should be an improvement but it does not go nearly far enough. We recognise that a step by step approach may be needed, and that there will no doubt be lessons to draw from the operation of the revised structure. However, in principle, we would like to see the Government take responsibility for using science in support of its strategic objectives via its own departmental budgets. Similarly, we would like to see the Research Councils pursuing the agendas of their research communities, in accordance with agreed performance measures, but not necessarily the preferences of the Government. We believe that this would be a better model for the successful stewardship of the UK research base and the use of science by Government.

Conclusions and recommendations

1. We find it surprising that OST could establish a new organisation without giving it a clear mission or defining its place in the policy-making framework. Under these circumstances it is scarcely surprising that RCUK struggled to establish itself in its community and lacked a sense of direction and leadership. It is regrettable that the shortcomings identified in OST's internal review in 2003 were not put right by the following year. (Paragraph 16)
2. we are concerned that the new structural arrangements do not go far enough towards giving RCUK the clarity of mission and independence of purpose that it should have. (Paragraph 18)
3. If RCUK can demonstrate that it can operate successfully in establishing cross-Council priorities in an independent manner, we see no reason why it should not, in time, take full responsibility for the allocation of the funding awarded to the Research Councils as a whole by Government. If it is necessary to create RCUK as a legal entity in order to meet this aim, it should not be ruled out on the basis that it may be a lengthy process. We recommend that OST consider this model as a medium term aim. (Paragraph 24)
4. We recommend that the Joint Strategy Group ceases to be chaired exclusively by the Director General of the Research Councils. (Paragraph 26)
5. The Government's extreme sensitivity about separate responses from Research Councils is stifling the debate which is necessary for good policy-making. It has established RCUK outside of Government to give a loud collective voice to the Research Councils in science policy making. To deny it the opportunity to use its voice without Government approval is self-defeating and absurd. We recommend that the Government sets out its reasons for seeking to inhibit the Research Councils in this way. We further recommend that the Research Councils assert their independence by submitting, individually or collectively as appropriate, their own views without seeking Government approval, starting with the response to this Report. (Paragraph 29)
6. We recommend that the OST reconsiders the issue of the chairmanship of the RCUK Executive Group after a further two years. (Paragraph 32)
7. We recognise the need for an NDPB such as RCUK to respect departmental boundaries and lines of communication, but in an area which requires joined-up policy making we would expect RCUK to be a strong representative of the concerns of Research Councils, particularly over skills shortages. We have not yet been persuaded that RCUK is exercising much influence, or even that it is seriously seeking to do so. (Paragraph 36)
8. We welcome the steps that RCUK is taking in the context of the Funders' Forum to gather better statistics with which to inform decision-making on the sustainability of disciplines. (Paragraph 40)

9. We recommend that RCUK specifically addresses the issue of short term contracts in its future work. (Paragraph 41)
10. We recommend that RCUK ensures that it is heavily involved in the preparation of the HEFCE response to the invitation to provide the Secretary of State for Education and Skills with advice on protecting courses of national strategic importance. (Paragraph 42)
11. We find it surprising that RCUK and OST between them have not yet worked out how the DGRC's discretionary fund is to be allocated. We recommend that the Government draw upon the advice of RCUK and announce in the near future how this money is to be used. (Paragraph 43)
12. We recommend that RCUK include clear objectives in its delivery plan for its relationship with RDAs. We will look closely at how these relations have developed the next time that we scrutinise RCUK. (Paragraph 47)
13. We welcome the work that Research Councils are doing to measure the impact of the move towards funding the full economic costs of research and look forward to the publication of the full findings of its monitoring exercise. (Paragraph 51)
14. We recommend that RCUK considers carefully the demand for, and usefulness of, its strategy documents before producing any updated versions. (Paragraph 56)
15. We welcome the stronger stated emphasis by the Research Councils on increasing responsive mode funding for basic research. In order to demonstrate that the reality matches the rhetoric, we recommend that RCUK encourages all Research Councils to maintain comparable statistics which can clearly demonstrate changes in the balance of funding over time. In addition, any increase in the level of responsive mode funding needs to be supported by evidence that it is delivering outputs: we recommend that the new performance management framework is capable of providing such indicators. (Paragraph 60)
16. We welcome the steps RCUK and the Research Councils have taken to provide fuller information on grant application success rates. We recommend that RCUK discuss with universities the possibility of making public this information on a departmental level. (Paragraph 61)
17. We have been encouraged by the evidence we have found of an enlightened and realistic view at the Treasury of the benefits and potential uncertainties involved in funding research, particularly basic research, and measuring outputs. We also welcome the attempt to establish in advance yardsticks for measuring performance as an improvement on the previous tendency towards the retrospective imposition of such measures. We look forward to examining the detail and operation of the performance management system in future inquiries. We recommend that the proposed outcome measures are validated in a peer reviewed manner to ensure that they do not distort the research strategy. (Paragraph 63)
18. We welcome the role RCUK has played in promoting multidisciplinary approaches to research and the commitment of the Research Councils to supporting new

interdisciplinary research centres. We recommend that the delivery plans of RCUK and the individual Research Councils indicate how the commitment to multidisciplinary research will be maintained and monitored over the next Spending Review period. (Paragraph 66)

19. We welcome the steps that RCUK and the Research Councils have taken to review their peer review mechanisms in response to our recommendations. We accept that there may be reasons why complete harmonisation is not obtainable but we remain concerned at the extent to which multidisciplinary grant applications can be adequately catered for at present. We are pleased to see that RCUK is specifically addressing this issue in its delivery plan. (Paragraph 71)
20. The impact of this conservatism on the funding decisions of Research Councils is a major interest to us. In a period in which Research Councils are increasingly being required to demonstrate value for money in their funding, a leaning towards the relatively safe areas of research would be understandable, but not necessarily desirable. The operation of the peer review system is a complex, far-reaching subject which lies outside the scope of this inquiry, but we recommend that RCUK monitors any signs of an increasingly risk averse culture developing as part of Research Councils' review process. (Paragraph 72)
21. We welcome the fact that RCUK has answered our call for a more collective approach to science in society activities and look forward to the announcement of the new strategy. We hope that other promised related activities will not be too far behind. (Paragraph 73)
22. We conclude that RCUK is playing a useful role in promoting administrative convergence and much progress has been made. This should benefit cross-Council co-operation and the administration of joint schemes as well as realize significant financial savings. However, as we have indicated earlier, the current partnership model does not lend itself to dynamic action. It is particularly important that RCUK has mechanisms for monitoring the full consequences of the decisions that it and HEFCE take. We believe that the pace of change would be faster under the arrangements that we have outlined in chapter 3. In the meantime, the DGRC should monitor progress on a regular basis. (Paragraph 78)
23. We commend RCUK's role in the implementation of the Je-S system, which will provide significant improvements for researchers in applying for grants and will make interdisciplinary applications more straightforward. (Paragraph 80)

ANNEX A: Recommendations of the 2003 Research Councils UK Review

1. A succinct and clear mission / vision statement for RCUK should be produced.
2. The RCUKSG should be explicit about the strategic goals, rationale and targets for the administration strategy/programme and for each of its projects.
3. There should be an explicit recognition of the mode the RCUKSG is in for each topic, together with a clear understanding of how feedback will be provided.
4. Definitions of roles and responsibilities should be reviewed urgently and any changes set out explicitly in the MSFM¹⁶¹ for each Council.
5. The RCUKSG should focus more on strategic issues.
6. In setting its priorities, the RCUKSG should take resource implications more fully into account.
7. The RCUKSG should delegate projects such as the administrative strategy, and strengthen the administrative programme board with an external element.
8. The RCUKSG should implement a communication I culture change programme aimed at producing genuine collective behaviour in the ROs, such that working together is the accepted norm.
9. A map of cross-council groups should be constructed and used in rationalising the number of such bodies. This should result in a coherent structure of cross council groups whose business is arranged to ensure effective coordination with the work of RCUKSG. The RCUKSG should review this periodically.
10. RCUK secretariat resources should be increased to enable it to coordinate and facilitate policy work and to take load from working groups.
11. Performance indicators and scrutiny arrangements should be developed for all joint projects such as those for the single portal.
12. In keeping with standard practice, investment appraisals for all major programmes should include statements as to their evaluation.
13. The RCUKSG should give priority to benchmarking to provide input to SR 2004 and to the 2004 scrutiny.

161 The Management Statement and Financial Memorandum.

ANNEX B: OST 2004 Review of Research Councils UK: Recommendations and Implementation Plan

Recommendation 1

1.1 RCUK plays a valuable role. It should comprise the Chief Executives of the individual Research Councils and the dedicated support staff. It should be chaired by one of the Chief Executives.

Implementation:

The new RCUKEG will be chaired by a Research Council Chief Executive, All Chief Executives will be responsible for securing collective agreement to, and ownership of, RCUK priorities and objectives and monitoring RCUK performance. The Chair will act as the primary spokesperson on behalf of RCUK. Professor Ian Diamond will chair RCUKEG until the end of 2004.

1.2 The role of RCUK and the accountabilities of its chair should be clearly defined and agreed by the individual Research Councils. A mission statement should also be produced. These should be consistent with the aims set out in the QQR.

Implementation:

The current RCUK Mission Statement and aims were agreed by the Councils and OST in December 2003 following extensive consultation and debate. New objectives for RCUK will need to be discussed and agreed with OST as part of the development of an RCUK Delivery Plan. RCUK anticipates a draft will be completed by January 2005 with the final version agreed by end of March 2005.

1.3 Leadership of RCUK will be provided through its Chair and by the Council Chief Executives working together as a group - now referred to as the RCUK Executive Group. The Chair should be appointed annually by peer selection; it could be renewable but should not be by rotation.

Implementation:

Leadership of the partnership will be provided collectively by the Research Councils' Chief Executives working together through the new RCUK Executive Group (RCUKEG). The Group will be supported by the RCUK Secretariat.

1.4 This group should meet monthly to address issues consistent with its role and absorb the activities previously carried out by HORCs.

Implementation:

RCUKEG will meet monthly from October 2004. Terms of Reference will be agreed shortly.

Recommendation 2

In order that RCUK can perform to its full potential, cross-Council team work is essential. RCUK should therefore implement a programme aimed to improve collaboration and communications across the Councils.

Implementation:

The current RCUK Mission Statement and aims were agreed by the Councils and OST in December 2003. New objectives for RCUK will need to be discussed and agreed with OST as part of the development of an RCUK Delivery Plan

Recommendation 3

After due consultation with stakeholders and in agreement with Council Chairs, RCUK should be set clear measurable objectives by OST. These should relate to both strategic and operational matters and be included in the personal objectives set for the Chief Executives and their staff. DGRC should review progress against these objectives on a regular basis.

Implementation:

OST will set clear measurable objectives for RCUK and regularly review them. The Performance Management System will be setting out the objectives that OST requires from the Research Councils.

Recommendation 4

A new “Strategy Group for RCUK” should be formed to assist RCUK in the development of strategy for research and science in the context of the wider Government science and innovation policy. This same forum would also be one of the means whereby RCUK can provide advice to Government from its own knowledge of its user community.

The Group would be chaired by DGRC, would include Chief Executives and would normally meet on a quarterly basis. In order to inform and be informed on the wider Government perspective its membership might also include as standing members or by invitation, the CSA to the Prime Minister, DG Innovation, Chief Executives of the Funding Councils and others as required by the agenda. Support for this group should be provided by OST’s Director for the SEB working closely with support staff from RCUK.

Implementation:

A new joint strategy group entitled “Joint OST/RCUK Working Group for Strategy” hereafter known as the Joint Strategy Group (JSG) was formally established on 1 October, and held its first ‘shadow’ meeting on 23 September.

Joint Strategy Group (JSG): Proposed Terms of reference

To assist RCUK in the development of strategy for research and science in the context of the wider Government science and innovation policy.

The forum will provide a means whereby RCUK can provide advice to Government from its own knowledge of its user community.

To discuss allocations to Research Councils and the delivery of Science Budget objectives.

The Group will be chaired by the DGRC, and the standing members will be research council Chief Executives, the CSA and the DG Innovation Group. To enable it to inform and be informed of the wider Government perspective, others such as senior Departmental and RCUK officials may be invited as required by the agenda.

Meetings will take place on a quarterly basis.

Recommendation 5

A plan for making more progress in coordinating or standardising appropriate administrative systems and processes should be defined and agreed with DGRC by the end of 2004 at the latest. Consideration should be given to using external help in formulating this plan, which should conform to the Gateway process and therefore be the subject of independent peer review. Those responsible for the delivery of this plan should be given the full authority and support of the RCUK Executive Group.

Implementation:

RCUK will develop and agree with DGRC a plan for making further progress in coordinating or standardising appropriate administrative systems for agreement by end of December 2004.

Recommendation 6

RCUK should have dedicated personnel and other resources sufficient to support its strategic role, enable it to coordinate and facilitate policy work, provide support to RCUK working groups and provide effective communications internally and to its external stakeholders.

Implementation:

RCUKEG will assess the resources by December 2004, once they know the decisions on all the other recommendations and will put the resources in place by April 2005.

Recommendation 7

Once defined, RCUK's role, its responsibilities, relationships and ways of working should be communicated effectively such that both its internal and external stakeholders are clear as to its purpose.

Implementation:

RCUK will provide a policy statement of its role and responsibilities to be communicated to its internal and external stakeholders.

Formal minutes

Wednesday 16 March 2005

Members present:

Dr Ian Gibson, in the Chair

Dr Evan Harris
Dr Brian Iddon
Mr Robert Key

Mr Tony McWalter
Dr Desmond Turner

The Committee deliberated.

Draft Report (The Work of Research Councils UK), proposed by the Chairman, brought up and read.

Ordered, That the Chairman's draft Report be read a second time, paragraph by paragraph.

Paragraphs 1 to 82 read and agreed to.

Resolved, That the Report be the Sixth Report of the Committee to the House.

Ordered, That the Chairman do make the Report to the House.

[Adjourned till Wednesday 23 March at nine o'clock.]

Witnesses

Wednesday 2 February 2005

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Professor Ian Diamond, Chair, Research Councils UK Executive Group and
Ms Helen Thorne, Head of Secretariat, Research Councils UK

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Oral evidence

Taken before the Science and Technology Committee

on Wednesday 2 February 2005

Members present:

Dr Ian Gibson, in the Chair

Dr Evan Harris
Dr Brian Iddon

Mr Robert Key
Dr Desmond Turner

Witnesses: **Professor Ian Diamond**, Chairman, RCUK Executive Group and **Ms Helen Thorne**, Head of Secretariat, Research Councils UK

Q1 Chairman: Can I welcome you here, Professor Diamond and Ms Thorne. I think you have both been here before. Have you been before, Ms Thorne?

Ms Thorne: Not to give evidence before, no.

Q2 Chairman: You are welcome and thank you very much for coming. You are the last of the research councils to receive our scrutiny and we welcome that. We put you in place because we knew you were evolving and that things were happening, so we are looking for some fireworks from you today really. Let me ask the first question. Why have a lead spokesman for RCUK? Do you think it has helped your visibility? We have only had five people write to us about you. I think you are a secret, unknown organisation, and I wonder if a lead person has made any difference whatsoever. I know you are reasonably new to the job, because you will remember we first questioned the Director-General who was somewhat compromised by his position. How has your appointment made any difference whatsoever to RCUK as an organisation?

Professor Diamond: I am not quite sure what your question is there.

Q3 Chairman: Let me try again.

Professor Diamond: Are you asking me a question as to what difference I have made in the time that I personally have been the leader of the Executive Group? I stress in so doing I am not in any way elevated above my fellow chief executives, and were you to ask RCUK for a response on whole set of issues you would get the appropriate chief executive. I am simply here as the chair.

Q4 Chairman: You just keep the chair warm, in other words?

Professor Diamond: I do not just keep the chair warm!

Q5 Chairman: You were sitting around when they could not get anybody else? Is that what happened?

Professor Diamond: If you would like me to give you the full election process, I can. There are two potential questions you did ask. One is, what difference has it made having a chair, and the second

is, is RCUK a visible organisation. I guess my question to you is, which one of those questions were you asking?

Q6 Chairman: Tell me first of all how having a chair has made the organisation more visible than invisible?

Professor Diamond: Let us be absolutely honest. I have been the chair since the autumn of last year and what that does is enable us to have a focal point who can comment broadly on issues which cut across research councils, and when Helen needs someone to speak on a particular issue or when you, helpfully, write to us for advice or on an issue, then I am able, if appropriate, to respond to you, or if you write on a particular topic then the chief executive does. The whole idea of having a chair is not in some way to, "Let's have a spokesperson", instead what we are trying to do is to move the RCUK into having some governance and to be able therefore properly as a set of research councils to have ownership of the actions which we are working on together. I think that works very well. If your question had been, how is the new structure of RCUK helping to improve things, I would say I think we have now evolved in the right way. I think the starting position was the right way to start, we have evolved in the right way into what I believe is the optimal position for the UK at the moment in terms of its research council structure.

Q7 Chairman: We will come back to that because people will ask you about the detail of how it has changed and in what areas it has helped British science. I am still interested in the chair business, you have said research councils have an autonomy, as it were, on what they do, so you are not an executive in any way, you do not have any authority over them, you do not speak for them?

Professor Diamond: I speak for the research councils on any subject which you might ask where we have a common view. We do have common views. We meet as a group of chief executives monthly, but I should say we are in contact much more often than that to ensure there is a common voice for the research councils when appropriate, but at the same time individual research councils where appropriate too are able to have the independence to speak for

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themselves. That to me is the optimal strategy and one I think which is going to work beautifully for this country in the future.

Q8 Chairman: Do you feel compromised in any way? You are two chairs, in a way. You also speak for the ESRC, which is part of the RCUK. Do you feel compromised in any situations? Have you had to remove yourself from the chair or get a substitute in? How does it work?

Professor Diamond: I am elected by my fellow chief executives. What we have agreed is that if there is something which comes up in our discussions which would compromise ESRC then I would step down from the chair and somebody else would take the chair. That is entirely appropriate. Up to this time we have not had such a situation. I have to be honest, I have never stepped down from the chair for any item of business, because the things we discuss tend to be overall strategy for research councils, tend to be the way in which we are harmonising our administrative functions, and tend to be, if you like, our interaction with other people. For example, at our last meeting we had very helpful meetings with Graham Spittle, who is the chair of the new Technology Strategy Board, and with Keith Peters, who is the co-chair of the Council for Science and Technology. At the previous meeting we welcomed the new president of the European Science Foundation.

Q9 Chairman: Why do we not have an independent chair so you are not put in that compromising position once the going gets rough?

Professor Diamond: I do not find myself compromised.

Q10 Chairman: Not yet.

Professor Diamond: Frankly, I do not see a situation where one is going to be compromised in such a way that if I were to have to, for some reason, remove myself from the chair and somebody else took the chair, it would not be the most appropriate way of working. I am absolutely clear in my mind that the best way of this working is to use RCUK precisely, as our strapline says, as research councils together in research, and RCUK to be a group of research councils working together for the good of this country.

Q11 Chairman: Your appointment is only an annual appointment. Should it be a three-year appointment?

Professor Diamond: I believe an annual appointment is the right length of time, particularly in the context of chief executive appointment times. Of course one of the beauties is that my successor will be another chief executive who will have been part of the process.

Q12 Chairman: Will it be Buggins' turn?

Professor Diamond: Absolutely not. That is why we have an election and that is why the way it will work is for the most appropriate person to take the role.

Q13 Chairman: And that is decided by the Committee?

Professor Diamond: Absolutely right.

Q14 Chairman: There has not been any competition presumably yet?

Professor Diamond: It would be pretty difficult to have a competition thus far.

Q15 Chairman: Is it hands in the air stuff?

Professor Diamond: Absolutely not.

Q16 Chairman: It is a secret ballot?

Professor Diamond: It is a secret ballot. People who are interested put their names forward to the electoral officer, who is the senior chief executive. The choice of senior chief executive is because he or she will likely not be a candidate because he or she is likely to be towards the end of their role. That person then announces those who are standing and there will be a secret ballot held in October every year.

Chairman: Enough of this, let's move on.

Q17 Dr Turner: Professor Diamond, I trust you will not take this personally because it is not meant to be so, but there does seem to be a certain lack of clarity about what the RCUK is, what its remit is, what it actually does. The Ruffles Review refers to a lack of clear objectives. Do you actually have a clear mission statement? Can you state clearly and briefly exactly what your role is and what RCUK has done so far to make a difference?

Professor Diamond: I think our role as a set of research councils is very clearly set out in the objectives which have been given to you in the submission. We are operating as a group of research councils together in research to maximise the way in which interdisciplinary and cross-council research can take place, to give one voice where appropriate for the research councils in lobbying with particular organisations, and to maximise the spend of the public pound by minimising the amount of money that is spent on administration so, where appropriate, harmonising our administrative services. I will pass over to Helen and just ask her if she would like to highlight one or two of the things which have been real successes which show how RCUK has made a difference.

Ms Thorne: Thank you. I think Ian is right, we have made significant progress against all of the original objectives which were set for Research Councils UK. I think the work we have done facilitating and enabling multi-disciplinary research has been particularly important. I would single out the work we have done together to put collective submissions together to make the best case for the science budget through the Spending Review process, and also our *A Vision for Research* which was an invaluable input to the 10 year investment framework. As the Ruffles Review says, we have made a real difference influencing policy both in the UK and in Europe. The Ruffles Review mentions the work we have done on influencing the direction of Framework Programme 7 and the establishment of the European Research Council. We have made it easier for our

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stakeholders to work collectively with the research councils. The Ruffles Review cites the work we have done with the CBI and Regional Development Agencies. Finally, the joint electronic submission system we have put in place has been hugely welcomed by the academic community, both researchers and university administrators, in making their life easier in reducing the academic burden when applying for research grants.

Chairman: We will come back to some of those things.

Q18 Dr Turner: How much has your life as RCUK changed since the appointment of Sir Keith O’Nions and his adoption of a less hands-on and controlling approach than the previous DGRC’s? What I am getting at is, I guess, what is the actual distinction between the DGRC’s role and RCUK’s role? Clearly there must be some overlap. Is the DGRC becoming redundant? Are you becoming a self-governing group of research councils? What is left for the DGRC if he takes a hands-off approach?

Professor Diamond: Frankly, I think Keith O’Nions is doing a very good job and I think there is a clear role for him. What we have is a natural evolution, if you like, of a child into an adult, so when the RCUK was originally set up it was entirely right the DGRC chaired and set the thing and gave a clear vision and worked with us on processes. As one grows up, it is time in some ways to cut the umbilical cord and we now have the situation where the RCUK does work together on the administrative functions, and it is entirely right that that has ownership within the research councils. Keith O’Nions’ role now is to work with us, and he does work with us and leads us on strategy and on the allocation of budgets and on making the case and lobbying for the research councils and for research at other levels of government and in higher areas. So they are two extremely positive and distinct roles. I have to say that you need not think, and I hope you do not think, that Keith O’Nions somehow sits down the road in Victoria Street and gives us a ring once a year to check things are okay. We have a very, very close and good relationship with OST. I meet with Keith once a month, and we have a Joint Strategy Group every quarter when all chief executives are there. As I have said, and I am going to say it again, we get the maximum benefit for UK science where ownership and operational activities are able to take place where they should take place—amongst the research councils—where the strategy is then discussed with OST. There is a huge amount for Keith O’Nions to do and I know he does it very well.

Q19 Dr Turner: I would like to ask you about the Joint Strategy Group, which is another new grouping which has emerged. How does the decision-making process work between DGRC, the Joint Strategy Group and yourselves, in the strategic direction of, say, the division of resources between the research councils? What messages do you give to the research councils in seeking to advance primarily

Government objectives like tackling climate change or third world poverty? Where do the relationships sit? Who is calling the shots?

Professor Diamond: In exactly the same way on most of the decisions as they did in the past in many ways. Keith O’Nions clearly is in charge of deciding where the budget is spent.

Q20 Dr Turner: Does he do this heeding your advice from RCUK?

Professor Diamond: Absolutely right. I have to say the process we are in at the moment—and we do not know what the results are—is an extremely positive process whereby there have been discussions across the research councils, so Keith knows the sorts of things which are cross-council activities. Each council has put in a draft delivery plan and has had some bilateral meetings with Keith, and Keith will decide what the overall budgets are and that seems to us to be fair and appropriate. The discussion on overall strategy has come in discussions with him, but at the end of the day research councils are fully involved in a process of highlighting where there are real opportunities for this country in cross-council activities. When the delivery plans are announced, I hope you will see some really exciting interdisciplinary and cross-council activities.

Q21 Dr Harris: The Joint Strategy Group provides independent advice from outside Government, from the research councils to Government, as I understand it on strategic issues.

Professor Diamond: That is right.

Dr Harris: How appropriate is it for that group therefore to be chaired by a Government official? We, as a Select Committee, give advice to Government and no one could describe our Chairman as a member of the Government—

Q22 Chairman: Yet!

Professor Diamond: It is only a matter of time!

Dr Harris: It would make it very difficult.

Chairman: I am trying so hard!

Q23 Dr Harris: Can you see the point I am making? How can you give advice to Government from a group chaired by a Government official?

Professor Diamond: We are a group of NDPBs and Keith O’Nions takes advice from us across the entire piece, and it is entirely appropriate.

Q24 Dr Harris: But the Government takes advice from the Strategy Group of which Keith O’Nions is a member, so he is not taking the advice, he is co-ordinating the creation and giving of that advice to Government, which he is. So it does not seem to me from his point of view, and indeed from your point of view, the most ideal arrangement for true, independent advice.

Professor Diamond: I think we are going to have to agree to differ there because it does seem to me to work extremely effectively. Independent advice can be given to Keith O’Nions and he takes it in an independent way. You would have to speak to him about how he then delivers it.

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Q25 Dr Harris: We may well be disagreeing but I would like you to rebut the concern I am raising. To say he takes it in an independent way seems to be a little vague. Would you concede there is an argument for the advice-giving body not to be chaired by the person to whom it is giving advice?

Professor Diamond: The Joint Strategy Group is a joint strategy group which works between the Office of Science and Technology, which has if you like control of a large amount of public money for the delivery of science, and the research councils, which are NDPBs which have the responsibility and mission to deliver this for the economic benefit and quality of life of the UK. That seems to me to be entirely appropriate. The Joint Strategy Group works in an effective way to be between the Government and the research councils. I am not clear, without trying to put the question back to you but I know I am putting the question back to you, what the advantage would be of what you are proposing, other than to take the OST effectively out of the equation, and that does not seem to me to be a very sensible move at all. At the end of the day, what we have is a very effective model for having appropriate discussions. I should say, where appropriate, other bodies are brought in—Dave King comes sometimes, Howard Newby comes sometimes, David Hughes, Director of Innovation, comes sometimes—so there is an entire, appropriate group of people having a very sensible discussion.

Q26 Dr Harris: You are saying it is effective and appropriate, but saying does not make it so, one has to demonstrate it.

Professor Diamond: Given there has only been one meeting so far, it is difficult for me. I would love to give you some concrete examples.

Q27 Dr Harris: The point I am making, to answer your question, which I will do with another question since that is the purpose of this session, is that advice is often felt to be better if it is both independent and seen to be independent and we should try for that, should we not? The conflict of interest I am going to give you an example of—because I have some at least empirical reasons for why I think the model is flawed—is that you have just said in answer to one of my colleagues that the DGRC and his team decide how the money is allocated to research councils. If the funding of my body was dependent on a chairman of a body I was seeking to advise, I would be under pressure, or could be seen to be under pressure, not to be too critical of the stance the body he represents takes, because in an hour's time he is going to sit down and decide how much extra money my body gets. Would you argue that is a potential conflict or could be seen as a conflict?

Professor Diamond: I am fully prepared to accept your point; completely happy to accept that point. However, I would have to disagree on the grounds that as research councils we all have our chances and we all absolutely stick to them, and that independence of advice is critical to all of us, and without it we would give up. I think that is what the

Government would expect, that is what we would expect, and that is what we would do, and I do not think that presents us with a problem.

Q28 Dr Turner: Through the Strategic Committee Group you are giving the Government scientific advice, but the Government also has a Chief Scientific Adviser who advises the Government fairly and squarely on scientific issues. How do they relate? Are you in competition with Dave or do you collaborate?

Professor Diamond: Anything but. Let me make it very clear: can I take a step backwards and say the Joint Strategy Group is rather more than a group which simply gives independent scientific advice to the Government. It is about the overall strategy for research councils, and that includes things like the policy on Europe, the policy on large infrastructure, the policy on interdisciplinary activities and all sorts of issues. It is agreed, and I cannot remember if it is in the submission but it is certainly written in our terms of reference for the Strategy Group, that where appropriate Dave King will attend. Of the RCUK executive group, what we have agreed is that Dave King will attend on two or three occasions a year, just come anyway, and we will sit down and discuss items of mutual interest. We also meet twice a year with Keith Peters or we go to the Council of Science and Technology. There is joined-upness.

Q29 Chairman: If I can help this debate, I think we are going to have to find out with an example how the money is allocated through this system and how it gets to the people who matter and so on, and where your group plays a part in that. Do you just sit around and be a good talking shop about it, or do you say, "This is rubbish, we want to change"? Can you do that? Have you got that independence of spirit and clout to actually do it, because you were set up to be the overall organisation which directed research in this country really along the right lines, or at least that is what I thought you were.

Professor Diamond: I feel we have the clout and the independence of spirit and the independence of mind. I will be absolutely honest, the real test will come in SR 2006 because we will have been working then for nine months or a year in this process. But we have the independence of spirit, the independence of clout and the ability—

Q30 Chairman: Is this not ironic in the sense we have a 10 year innovation plan—an exciting Government initiative, we are all happy with it—and yet you are still playing around getting involved?

Professor Diamond: We are scarcely playing around. You will have seen the huge amount of RCUK input in the 10 year framework. You are asking me about the priorities, and the 10 year framework set a framework. For example, there were six exemplars of cross-disciplinary activity in there—they were not priorities, they were exemplars. Four of them came directly from the RCUK input of exemplars which would be important. What Keith O'Nions has asked research councils to do now, and what RCUK has discussed in our groups and meetings, is to come

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forward for each research council with a set of draft delivery plans, bids if you like for money, and has asked us very clearly to identify what our priorities are in there. In so doing, we set ourselves challenges that we must have cross-council activity, and I can assure you that in the drafting of these there has been an enormous amount of discussion across the councils, an enormous amount of discussion in the Research Directors Group where the discussions really are focused, about cross-council activity and cross-council priorities, so a reading across these delivery plans shows the joined-upness you would expect. In so doing, I have to assure you there is a real independence of spirit of what are the critical areas for UK science to take forward, and alongside that two other key areas. Firstly, not a wish list, "Wouldn't it be nice if we could do this", but what are the critical areas for UK science where we have a comparative advantage. Secondly, where do we need to act in terms of health of disciplines to be able to ensure that we have the human resources to move forward. Thirdly, where do we need infrastructure. The other thing which has been asked for is not just a delivery plan for the three years of this Spending Review but for the entire 10 year process and I think that is important.

Q31 Dr Harris: I may have to go shortly and I apologise if that is the case. I do not want to get into the issue of directional or non-directional funding or indeed different disciplines but can I ask this simple question. The RCUK must surely recognise that although there has been an increase in science funding, the increases to individual research councils have not been that great because so much has been held at the centre, for good reason or bad reason, I do not want to get necessarily into that, but I certainly deal with a lot of disappointed applicants who find their chance of succeeding with an application to an individual research council is dropping because the number of applications which are successful is falling. Is it the job of RCUK to explain that phenomenon to the scientific community, to disappointed researchers out there, or do you think there is a role for RCUK to say, "Wait a minute, is it right that so much funding is being allocated by the centre, effectively by the OST, directly and not by these independent research councils"?

Professor Diamond: Can I respond very quickly because I know you may have to go. Firstly, the role of RCUK or the role of research councils goes in two directions. Sadly, I have to say, I suspect there is never going to be enough money available to fund the brilliant research this country is privileged enough to have. I would love to be able to say that we are able as research councils to fund all the world-class research we have the opportunity to do. Given that is not the case, there will always be failures and it is our job to explain why and to explain how. On the second point, you are saying an enormous amount of money is coming in a directed way. I have to say, in Spending Reviews 2000 and 2002, my observation, because I was not part of them, is that while research councils had baselines any extra

money was for cross-council activities allocated by the Office of Science & Technology in discussion with the research councils.

Q32 Chairman: We will come into that in more detail.

Professor Diamond: The point I wanted to make is in 2004, as I have been highlighting previously, where we have simply been asked for our priorities, my colleagues in my own Research Council are saying that this is the least directed Spending Review that they can remember.

Q33 Mr Key: Professor Diamond, where does your first loyalty lie? Is it to the Economic Social Research Council or Research Councils UK?

Professor Diamond: My answer to that, Robert, would be absolutely equal. My loyalty lies to the productivity and the contribution that the UK science base can make to the economic development and quality of life of this country and beyond, and in so doing I believe we have some of the world's greatest social scientists and they have to have the opportunity to take forward their social science; and we have some of the greatest scientists. RCUK operates as a group of Research Councils led by a group of chief executives and they all have exactly the same mission that I do, and within that we disagree sometimes, we agree sometimes, but we all live by the same mission. So if you ask me which one do I have the most loyalty to my answer simply is my loyalty is to the science base.

Q34 Mr Key: The trouble is that you do not decide, do you, on which direction UK scientific research is going? That decision is taken very firmly, we are told, by the DTI Secretary of State, by the Cabinet; they decide the priorities of British research. The process by which you are trying to advise government, because they have said in their paper published in November that the process is that government departments advise the Cabinet and the Cabinet decides what research is done, I put it to you that that is not in the interest of the sort of blue skies research in particular for which you rightly claim Britain has a leading role in the world.

Professor Diamond: Can I be absolutely honest, Robert, and say that it has not been my experience that we have had direction of the research that we should fund. Can I simply say that? Indeed, the overall thrust as we move forward in this Spending Review has been to argue certainly from the Economic and Social Research Council for an increase in response mode, which is your blue skies, and I am hearing that as a common theme. That says to me that what we are saying is that the great scientists that we have, must have the opportunity to take forward the opportunities that they have. Now, there are examples of areas where it is entirely right that if we really wish to maximise the benefit for this country we have to say that we are going to invest a significant amount of money in that. I would like to give you one example, Robert—e-Science. E-Science in 2000 was something that most of us probably had not heard of. Now you will know that E science is an

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area in which the United Kingdom not only is the partner in choice but in some areas leads the world in an area of science that is going to be critical over the next few years, and we have done that by a decision made to firstly put a lot of money into it, secondly to give it leadership, and thirdly, within that overall portfolio, to allow the great scientists to move forward. That is the right way to go.

Q35 Mr Key: If you are as independent as you claim why is it that we still observe a long- running dispute between RCUK, the Research Councils and the Office of Science and Technology about provision of submissions and responses to, for example, this very Committee? When we have seen an example last year that a Research Council wanted to say something to us and were told that they could not by the OST, representing the government. I do not believe you are independent.

Chairman: Could you spell out that issue a little more, Robert?

Mr Key: Would you like to, Chair?

Chairman: Was it pollution? I cannot remember. Was it the science and publication issue?

Q36 Mr Key: That is right, it was the publications issue.

Professor Diamond: You have highlighted an area on which we are having discussions with the OST at the moment about whether or not RCUK will be able to make submissions and will be able to respond to you. I know your view entirely clearly put is that RCUK should be able to, or Research Councils in general should be able to make independent submissions to government, and we have taken that, since you made that statement, and we are discussing that with the Office of Science and Technology and I am really unable at this time to say what the response is; but it is certainly an issue which we are taking forward.

Q37 Mr Key: I am very pleased to hear that. Can I just confirm that RCUK is a non-legal entity, you cannot directly employ staff, you cannot enter into contractual agreements, you cannot administer public funds, you only have a staff of nine and your annual budget is about £400,000; is that right?

Professor Diamond: I think you got one statistic wrong there, but I am going to ask Helen to confirm. I think everything else is right.

Q38 Mr Key: I hope it is right because it is from your own submission to the Committee.

Professor Diamond: I thought it actually said 14 staff.

Ms Thorne: It does say 14.

Q39 Mr Key: It says nine in paragraph 22 in the penultimate line on page 5. Never mind, that is a tiny detail, let us not bother with that.

Chairman: It is nine plus or minus five!

Q40 Mr Key: Nine plus or minus five—a ballpark figure there. But it is a serious issue. You do not have any administrative clout for a start. You cannot do the job very well if you have that minimalist administrative core.

Professor Diamond: I will be absolutely frank. You can only do the job well if there is commitment across the Research Councils to do that.

Q41 Mr Key: Can you be independent though?

Professor Diamond: Absolutely right you can.

Q42 Mr Key: You can? If you can be independent how is it that the RCUK Administration Strategy Programme Management Office has a staff of five and an annual budget of £2 million, as opposed to your core budget of £400,000, and a million of that comes straight from the government, from the Office of Science and Technology?

Professor Diamond: Helen will answer that. Nine plus five equals 14.

Q43 Chairman: She is the only woman in the country that knows the facts! Come on, Helen!

Professor Diamond: I am happy too, but I just feel I have been hogging the ball for too long, so I will pass it back.

Ms Thorne: To answer your question about us being a small team, we were very deliberately set up that way. I think the Chief Executives were very sensible in that they said they did not want a large, centralised bureaucracy for RCUK. So the job of my team and the Programme Management Office is to do all that we can to help the Research Councils work together. We are not there to do that work but we are there to help them in any way that we can. So our budget is necessarily small and what we fund is workshops, meetings, events and publications. The Administration Strategy Programme is different. There was a very clear recommendation in the Quinquennial Review that the Research Councils needed to do more to harmonise and convert their administrative functions and services. There was also a recommendation from the Quinquennial Review that some additional funding should be made available from the Office of Science and Technology to help that along, and that is what the additional £1 million is, for the Administration Programme, and it is provided solely on the basis that it matches funds that the Research Councils put in themselves from their own administrative budgets.

Q44 Mr Key: I am still struggling with what you are for and how independent you are because you have just described a situation where half your budget for this particular strategy programme comes straight from the main paymaster, the government; the government decides in the end on what your science research strategy is going to be and it sounds to me as if you have excluded from this process all the other partners in UK science research. There is no voice here for any industrial science research, private

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sector research, the whole of the university sector does not get a look in to the formulation of research policy, according to this, because it is always going to be decided in the end by the government.

Professor Diamond: Can I respond very quickly to your point about the £1 million? A decision was made—rightly in my view, and I am hugely supportive—that there was a real long-term advantage to the efficient strategy of the Research Councils to have some harmonisation of the administration. The administration programme is part of RCUK. My experience—and I do not know whether it is yours, Robert—is that if you wish to bring things together you have initially to spend some money to do that; you do not start saving money overnight, and you have to spend some money to set up the computer systems and so that is why you need a budget.

Q45 Mr Key: Okay, but let us get to the big idea.

Professor Diamond: So let us get to the big picture, which is, okay, where does industry come in, where do the Funding Councils come in, where do our stakeholders come in? I have already said to you that we meet with Dave King, we meet with Keith Peters, we also meet with Howard Newby to be in touch with the Funding Councils; we have met the Technology Strategy Board. I met last year with the CBI. It is absolutely critical for RCUK to have a real engagement with our stakeholders, and Helen, I am sure, will now give you a few more examples of the sort of things we are doing to make sure that when we bring on board something from Research Councils then there is consultation with stakeholders. I think you must also remember the massive amount that goes on in individual Councils.

Q46 Mr Key: Before Helen does that, can I just say that I really do want to look at the big picture here because I am not convinced that science is being best served by this very inward looking structure, and I put it to you that British science would be much better served if we had an American style National Science Foundation, which was a truly independent partnership, federally funded, but you took the government out of it and the scientists and the end users decided where the priorities should be.

Professor Diamond: Frankly, I think we have the best of both worlds here because we have the effective regular communication which enables the proper lobbying to take place and the proper advice to take place, whilst at the same time ensuring the independence of decision making—which I can assure you is there within the Research Councils—about how the money is spent. I will reiterate what I said five minutes ago; that the current management of the current allocation process is the most independent we have seen in some time.

Ms Thorne: Would you like me to elaborate on the interactions?

Q47 Mr Key: Yes, but *piccolo* because my colleagues have lots of questions.

Ms Thorne: Okay. I think really to echo very much what Ian has said, in that the individual Research Councils quite rightly and properly have very strong bilateral relationships with their academic communities and with a whole range of stakeholders, with users, with industry, with the Regional Development Agencies, for example. The whole idea about Research Councils UK is that we look to where we can add value by working with those bodies on a collective basis, and our focus has very much therefore been to work with other funders particularly. So working with the Funding Councils, for example, and the charities; we work through the Research Base Funders Forum, which was set up at the end of 2003. And also to work where the sorts of people where it is valuable for them to have a collective view of what the Research Councils are doing and the Research Councils' priorities, so very much, as Ian has said, the CBI and the Regional Development Agencies.

Dr Iddon: Ian, do you feel that the hands of the Treasury are on your shoulders, pressing you to deliver more economic returns for the increasing investment in the Ten-Year Strategy?

Q48 Chairman: More around your throat, I should say?

Professor Diamond: On my throat? No, no, no. I will be absolutely clear, Brian, what I do feel is that there is a request to justify the way we put to use the public money we get. Not, I stress, only for the economic development of this country, but also for quality of life. I do feel a real thrust for quality of life as well as economic performance and economic development. But, yes, we have been asked to start to develop performance management systems across the Councils and we will have one for RCUK as well. I actually do not have a problem with that and I do not have a problem with it because I think it is right and proper to justify how we are spending the public pound. The other reason I do not have a problem with it is that it has not been something that has been imposed on us so much as it has been something that we are having an interaction with about how that would be done, and I am very relaxed and comfortable about the indicators that are being used and will be used over the next few years, to really justify how we are helping the UK to take forward science for the benefit of the economic development and quality of life in this country.

Q49 Dr Iddon: As you know, we have had nearly all the Research Councils in front of us and have written reports on them and we have found that there are considerable differences in the way that they operate—and perhaps that is right and proper, I do not know—but one of the significant things that sticks out in my memory is that there are big differences in the way that people manage research in terms of responsive mode funding and managed mode funding. The MRC, for example, has lots of research institutes so there is quite a lot of centrally managed money going into the institutes. The EPSRC seems to do more responsive management. Bearing in mind the question I have just asked you,

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are we not moving in the direction of more centrally managed mode research rather than responsive mode research?

Professor Diamond: No, I think what I am hearing very much, Brian, is much more move towards responsive mode research but joined with that a valuation of how well that goes. So that we are able to have some reasonable indicators of the success over time of our research both in terms of its interaction, its benefit in quality of life in economic terms; in other words the economic outputs as well as the academic outputs and academic approach. So I actually feel that we are moving much more towards responsive mode at the moment.

Q50 Dr Iddon: You say that British science has been rather critical of you. You have published two “glossies” as they call them, a Vision for Research and a Synthesis of Strategies on Medium and Long-Term Research Strategies, but the individual Research Councils publish glossies on strategies as well. Why do you see it as your role to produce strategy documents when the individual Research Councils are already doing that?

Ms Thorne: I think it is helpful to think back to why Research Councils UK was set up in the first place. There was a very clear direction that we need to do more to influence policy and we should be providing collective leadership and a collective voice for the Councils, and also making it easier for people to come and talk with us. So, for example, if you had a group of academics or funders from overseas and they are coming to visit the UK, it is very difficult and time consuming for them to sit down with eight different Research Councils and plough through eight different strategies. So the whole idea of producing the Synthesis was to be able to give them, as an entry document, as it is, to say that this is collectively what we are doing, these are where we think some of the exciting challenges and opportunities are, and then to build on that and to find out where they are particularly interested and then to be able to fix up for them to talk to the individual Council or Councils that best fit their needs. So it is making it easier for people to come and work with us.

Q51 Dr Iddon: So, Helen, is what you are saying that you are taking over the role of producing these glossies away from the individual Research Councils because there is advice from those individual Research Councils, or is this two-tier research strategy document going to continue?

Ms Thorne: I think the idea always was in producing the Synthesis, the Strategies and the Vision that they would be very much living documents, that we would regularly update them. We are certainly not about taking over individual Councils’ research strategies; those are quite rightly the responsibility of the individual Councils themselves.

Q52 Dr Iddon: But what is the big difference between the individual research strategy documents and your research strategy documents? Why do we need two layers of documents?

Ms Thorne: It is really to make it easier for people to come and talk to us so that they have one place to focus on at the start of their discussions rather than having to go around and talk to eight different organisations and plough through eight different documents. So it is about presenting the information in a way that makes it easier for people to engage.

Q53 Dr Iddon: Would you not save an enormous amount of money for the eight Research Councils by letting RCUK doing it rather than two layers of doing it? I cannot see the reason why you do it and the eight individual Research Councils are doing it?

Professor Diamond: I see a benefit, Brian, if I may? The last thing on earth most people like to be presented with is a 300-page PhD thesis of things to read to find out what is going on, and if you were a large industry, “Our industry covers across the place, how do we interact with the research councils?” you may think, “Our management processes work with EPSRC so I am reading EPSRC’s document,” but if you did that you may only get to one Council and actually what you would like is the short, snappy, this is an overview of what Research Councils UK are doing, and this is where Research Councils are really making a difference for the UK, and that would enable you to dip in and say, “Right, what I really need to do is to talk to this person in the EPSRC and this person in the ESRC and they will be able to help me,” and that is a really nice thing to be able to do, not only for an individual who might want to work with us but generally to showcase and press for the other side’s case. As Helen said, the Synthesis of Strategies has to be a living document; it has to be updated because if we believe we know the answer to science I think we give up. So we will be updating this and putting this forward over time. But I think it is right that we say, “This is what is going on in the Councils at the moment across the piece and you may now wish to delve down to find out in more detail about some of these particular issues.”

Q54 Dr Iddon: It is still the job of the individual Research Councils to determine their strategies in consultation with their own research communities, is that the fact?

Professor Diamond: It is exactly the case that it is still the Research Councils’ job to develop their own strategies. However, in so doing they will not only consult with their own research communities, which they will do, but they will consult with the other Research Councils and thereby they will consult with everybody else’s research community because some of the really exciting and important developments for UK science over the next few years have to come in across the Councils.

Q55 Dr Turner: Would you like to see any changes in the relationship between yourselves as the Research Councils and HEFCE? Are you satisfied with the work they do now or would you like to see them improved?

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Professor Diamond: I think they work pretty well. At the moment we have very good relationships with the Funding Councils, more broadly. Howard Newby will regularly be attending, as I say, our executive groups and an RCUK person, one of our Chief Executives will be attending HEFCE Board a couple of times a year to make sure that we link together. On specific areas, for example the Health of Disciplines and for example the Research Assessment Exercise, on Health and Disciplines we are working closely with the Funding Councils and on the Research Assessment Exercise we are involved in the work that is going on at the moment as observers and our role is being discussed and moving forward. So I think they are very good relationships and I think that there is a real need for both sides of the dual funding system and at the moment I think it is working pretty well.

Q56 Dr Turner: You have already referred to the Research Assessment Exercise and one of major criticisms of the Research Assessment Exercise that many people, including yourselves, have made is its inability to deal properly with multi-disciplinary research. RCUK and the Research Councils have a strong interest in multi-disciplinary research; do you feel that HFCE has listened sufficiently to you in incorporating your views in its treatment of inter-disciplinary research of the next RAE?

Professor Diamond: Thus far the portents are good, I would have to say. The critical statement in the guidelines as they stand at the moment is that *a priori* no piece of output will be deemed better than any other piece of output. That says very, very clearly that inter-disciplinary research, as well as applied research, as well as research from related professional practice, as well as performance or whatever, will be treated *a priori* as the same. The second thing that I would say to you, which is why the portents are good at the moment, is that two senior members of HFCE have openly said in recent meetings that in 2008 the guidelines are more like instructions. Because I do feel that if we look backwards to 2001 the guidelines were not bad, but there were questions about the way in which the guidelines were used, uniformly, I would submit, across different Panels. At the moment I am very, very happy with the guidelines and with the statement that the guidelines will be taken very, very seriously and taken forward. RCUK will be providing observers to all of the large Panels and those observers will be attending the meetings that are upcoming, and I am meeting, together with Stephane Goldstein from RCUK, with Ed Hughes, the RAE project manager next Wednesday to discuss the role of the observers and I will be reporting back to RCUK Executive Group at our next meeting. I also wrote to Howard Newby in December and met with Howard and received a very helpful response from him, which at the moment makes me very comfortable with where we are. Having said that, I must be honest, there has to be seen to be action in the guidelines to ensure that

inter-disciplinary research is properly dealt with, and there are some very critical points in there about how that happens.

Q57 Dr Turner: One of the critical points that you can point to theoretically, given the nature and impact of the Research Exercise on chemistry departments, for instance, is that if you have a group of departments sharing a multi-disciplinary project and one of them is unfortunate enough to have ended up with only a four star rating and it is threatened with closure, clearly this could threaten the whole integrity of the project. Do you feel able to intervene in that sort of situation?

Professor Diamond: I do not think it is the Research Council's role to intervene in a university activity or a university's autonomous decision. Certainly it would be the role of a Research Council to have a very clear wish that any research projects that it is funding are able to go forward smoothly and to ensure that there was short and medium term provision for all the facilities and staff that were required for that research project, and we have that provision regardless of whether there is a closure, if people just move between institutions.

Q58 Dr Turner: You would clearly not have direct control over such a situation, I grant you that, but this is presumably an area where your inter-relationship with HEFCE could be crucially important, and does HEFCE respond to concerns such as that, if they have arisen? They probably have not arisen yet but they always could do.

Professor Diamond: I will be absolutely frank, they have not arisen and were there to be major concerns then certainly I would hope that our very good relationships with the Funding Councils would enable those discussions to take place. To turn to something that I think is critical, which is some emerging disciplines and, if you like, some established disciplines in ensuring their future, then I would have to report that there are some really, really positive consultations and discussions going on. You will know about the EPSRC Funding Council's scheme in some areas, such as statistics; and there are others that we point to in our submission where there are ongoing discussions with AHRB, ESRC, BBSRC and the Funding Councils. I stress not the Funding Councils on one project but across, and that is a real thrust of the way we are moving forward. And at the most recent meeting of the Research Funders Forum I presented a paper on behalf of a sub-group on Health of Disciplines, which was a paper which was jointly put together by the Research Councils and the Funding Councils and on which some very helpful comments were made. It was about Health of Disciplines and about areas where we really needed to work in order to be able to establish emerging disciplines and protect established disciplines, and that will be finally presented at the next meeting.

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Q59 Dr Turner: We will watch this space.

Professor Diamond: Desmond, I do hope you will watch this space really positively because I think there are a number of very critical things that have to happen, and I very much hope that we will see some really exciting announcements in the near future about the way forward to ensure the health of some of those areas, for example those that were included in Charles Clarke's letter to David Young.

Q60 Dr Iddon: I just want to pursue this line. Ian, whose job is it to identify Higher Education skill shortages in certain disciplines in this country? Is it RCUK's job, is it HEFCE's job, or are there too many players involved? Whose job is it to do that?

Professor Diamond: I think it is exactly where we have been thus far, Brian, and that is it is essential that there is joined-up-ness and I think it is essential that we distinguish between emerging disciplines and established disciplines. Where there is an emerging discipline that we actually need to take forward in this country to ensure the health of the research base, that is the Research Councils' job. However, it is also the Research Councils' job to work with the Funding Councils to ensure that the long-term future of some of the more established disciplines is taken forward. One of the reasons why it is a mix of the two is because of course the Research Councils fund an awful lot of PhD students and that is where the youth team is coming from. We absolutely must be ensuring that in the funding of PhDs we are able to establish some priorities where necessary. Equally with the early career fellowships, it will be necessary to establish some of the priorities that we are seeing, for example, in the exciting schemes between EPSRC and HEFCE, which are already being announced and you will see some of which are established, and through some of the work, for example, a lot of scholarships which RCUK has been doing. So there is a role for both and the only way it is successfully going to work is if there is a really close conversation and strategy in these areas, and that is what I can assure you is taking place.

Q61 Dr Iddon: Are you happy that subjects like forensic science are breeding like mice in universities at the moment and that that is attracting the students in science? They are doing a good job in that sense, but the problem is that the basic science departments are closing—Des mentioned chemistry a moment ago—and you might like to know—and I am sure you do know—that we are doing an investigation into forensic science at the moment and the forensic scientists and those responsible for managing it say that they would prefer basic chemistry rather than graduates in forensic science.

Professor Diamond: That is a discussion that we will observe with great interest and also looking forward, I hope, to joining you again for a discussion on strategic subjects in the future, and there it is going to be absolutely critical that we do take a view on how many basic chemistry undergraduates we need in this country, and that we are able to balance the key elements of demand and supply. To be

absolutely frank, we need to move one step further back in the supply chain, sometimes, and to make it clear that a chemistry undergraduate degree is just the most exciting thing that 14 and 15 year olds interested in science want to do. So I think there is a real clear role for us not only to concentrate on what is going on in the university sector, but to move back. We are very clear on that as RCUK, that one of our roles will be to look into the schools to make a research career something that our young people aged 14 or 15 think is a really exciting thing, rather than permanently having to ask their parents who do this what they do and when are they going to get a real job?

Q62 Dr Iddon: You mentioned Charles Clarke's letter outlining subjects of concern. Who did he consult before he sent out that letter? Did he consult RCUK, for example?

Professor Diamond: I am not sure that he did consult us on that particular letter, although we have been in many, many discussions, both with the DfES and the Funding Councils about strategic subjects and I am very pleased, for example, that the list of subjects is not only Charles Clarke's letter.

Q63 Chairman: Do you think the letter was a political manoeuvre to buy off the crisis that was developing in the closure of departments, which is of concern to many people?

Professor Diamond: I have no evidence.

Q64 Chairman: You could conceive of it as a political gesture.

Professor Diamond: Ian, I have no evidence to agree or disagree with that whatsoever.

Q65 Dr Iddon: Do you welcome HEFCE's new power to halt, at least temporarily, departmental closures, particularly on a regional basis and have you had any influence or discussions with HEFCE on that topic?

Professor Diamond: I think it is too early to say that we have had any discussions about that. I am sure it will be an issue that will come up when we formally meet with Howard Newby. Again, it is a much more complex issue than simply the research base, which is and must be our primary interest, and we have to think much more broadly about demand and supply.

Q66 Dr Iddon: Are you worried about the potential for erosion of the science base related to the Ten-Year Strategy that the government is putting quite a lot of money into?

Professor Diamond: I think it is important not just for the erosion of the science base but for the erosion of the academic base in this country that we make an academic career extremely exciting to our young people. I believe that in our lifetimes an academic career has stopped being the goal that it was when Ian probably thought that all his Christmases had come together when he got his first lectureship or for me when I got my first lectureship. Now, we have to re-establish that, and that, I think—

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Q67 Chairman: Where has it gone then, Ian?

Professor Diamond: Where has it gone?

Q68 Chairman: What went wrong?

Professor Diamond: Firstly my view very strongly is that there was a general reduction in the status and value given not only to academics in this country but also the schoolteachers.

Q69 Chairman: So what are you doing to put it right then?

Professor Diamond: I think what we must do is to lobby and to work extremely hard to ensure that an academic career is attractive. That includes both economic input and at the bottom—

Q70 Chairman: You mean pay them decent salaries?

Professor Diamond: I absolutely agree, and at the bottom you know that we are trying very hard to do that by lobbying and giving major increases in postgraduate research stipends and in priority subjects where there are market forces—

Q71 Chairman: What about short-term contracts?

Professor Diamond: I think short-term contracts are something which we really have to get a grip on. We have the Concordat, which is currently the subject of the current Roberts' Review. Julia Goodfellow—

Q72 Chairman: That man is reviewing, if it moves he reviews it.

Professor Diamond: It is great! Did you see he has gone global?

Q73 Chairman: Yes, I know that now; he is touring the world to advise on education systems of every country.

Professor Diamond: That is because the Roberts' Committees are excellent, they come out with great work and the Research Careers Committee, of which Julia Goodfellow is the RCUK representative, I am sure will work in that way, and Helen will be attending the next meeting.

Chairman: Do not go global Helen, just get it sorted out here!

Q74 Dr Iddon: A £70 million strategic fund has been made available. Has RCUK had any discussions with the DGRC about where that money can be applied? It is my view that perhaps most of it will go into the healthcare disciplines.

Professor Diamond: I do not have any evidence of that whatsoever, Brian. I am conscious that every Research Council has had a very helpful set of discussions with Keith O'Nions about their priorities and that the allocation of that money is what Keith O'Nions is, I am sure, with his team currently spending every waking hour thinking of how to maximise the benefit to the overall science base of so doing.

Q75 Mr Key: Could I come back to this question of where you are trying to get to in all of this? I do not think you have had this document, but the Office of Science and Technology RCUK Review of 2004 of

which the Ruffles' Review was based, says under the heading of Objectives and Purpose, "No one following the publication of the Quinquennial Review had much of a clue as to what was required. Was it all a euphemism for a single Research Council? Were the Research Councils to move within the government rather than remaining independent and outside? This would seem to be critical. It took a year to come to terms with what was a highly qualified, ambiguous QQR Report, hence the slow progress. Need to be clear on demarcation between strategy and executive. It is not executive, it is a portal." And on visibility it says, "Visibility is not as high as it should be. Not too good. RCUK has little visibility in the academic world where it is seen as a compromise between merging the Councils and keeping their independence." I do not doubt your personal commitment to all of this but has the government not got it all wrong in expecting you to fulfil a mission which has been so fiercely criticised?

Professor Diamond: I think it is fair to say that if you set something up you do not expect it to have visibility overnight, and I think it was entirely right that there were reviews after one year and reviews after two years, but I think you then have to look at the visibility over time. I am sure that Helen might have some statistics which would perhaps tell you where we are today, rather than that document.

Q76 Chairman: I would like to add to that, Helen. What is your reason for being? Who are you, where are you going and what is your objective? If you disappeared tomorrow who would care? Not you personally!

Ms Thorne: Not me personally, no, that is fine! I actually think that we have had a really important role. The Quinquennial Review did acknowledge that Research Councils were working together beforehand, but I think what RCUK has really done is given that visibility—and I do mean internally and externally; I think it has given real focus to help the Councils work together; and I think it has accelerated the process, albeit acknowledging, as Ian says, it does take time when you set things up. Inevitably it is a bit more time consuming and resource intensive when you are trying to do things as a group of eight organisations rather than people doing it individually. But I think once you have put that energy and that effort in and developed the common working procedures and processes you have built trust between the different organisation and the individuals, and I think that is when you really can start delivering. And I think certainly in the months since the report has been published we have continued to forge ahead and I think the signs are very positive, and I think we are going into this year with a real confidence that we are going to start delivering much more on our objectives.

Professor Diamond: Could we just give you the statistics? Just look at the hits on the website. Helen, can you remind us?

Ms Thorne: At the start of 2003, when we had not been around very long, we were getting about 1,000 hits a day on the RCUK website, which is not very

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many. The stats for the last quarter are 22,000 a day; we are getting over four million hits on our website every quarter now. So somebody knows we are out there.

Q77 Mr Key: How many unique visits is that, because that is the statistic that actually matters?

Ms Thorne: I do not have that figure at my fingertips, but it is pretty impressive. Plus at the moment I think we do recognise that what the Roberts' Review said was right and that perhaps we do not have as much external visibility as we would like. Right now we are reviewing our external relations strategy, we are doing a perceptions audit and the initial responses to that are very encouraging.

Q78 Mr Key: Could I ask you now about your regional strategy because you do have one, you have engagement with the Regional Development Agencies network and I am a bit bothered about this. What is the extent of your engagement here because we have heard in previous inquiries that the RDAs really do not have the expertise to interface with the scientific community and yet they have been given a role, for example, in nanotechnology. What is the extent of your relationship with the RDAs and with the regional agenda?

Ms Thorne: In terms of our engagement with RDAs we have been working with them since RCUK was set up. It was one of the priority groups of organisations that chief executives felt that we needed to go out and work with, and we do work with them through a whole range of different bodies, through the Research-based Funders Forum, through the Technology Strategy Board and through the Regional Innovation Science and Technology Group. Also, Research Councils are represented on six of the Science and Industry Councils that have been set up so far. So, we have a whole range of different networks and it is a whole web of interactions, really, both expertise and operational.

Professor Diamond: What RCUK does is to ensure the joined-up-ness of that.

Q79 Chairman: Have you talked to Regional Development Agencies at all? Do you know what they are? They have a lot of scientific money for nanotechnology, for example.

Ms Thorne: Yes.

Professor Diamond: Exactly. We do all the time talk with RDAs. Where it would be inappropriate would be simply to say that we have an RCUK person who dashes around between each RDA. So what our strategy is, as with many other things, is to ensure that there is a Research Council person on particular RDAs and that that person has, if you like, a brief not only to speak to their own Research Council but to make sure that there is contact elsewhere, and from my own Research Council we have been contacted recently by other Research Councils saying, "Look, I am on this particular RDA and we really do need some social science input here," and that comes in.

Q80 Mr Key: So why does RCUK need to be involved at all because what you have described is a direct relationship between an individual Research Council and an individual RDA?

Professor Diamond: Let us remember, RCUK is a relatively smooth coordinating organisation and what RCUK is doing is providing the essential glue that enables that interaction to take place, and over time will, I believe, give a focal point for RDAs to come in, and I think they are knowing that increasingly over time.

Q81 Dr Iddon: One role that the Committee would probably welcome that RCUK can achieve is administrative convergence. There are of course millions of pounds worth of savings in this, and I just refer to something mentioned earlier, the Joint electronic-Submissions Programme. We understand that when that is in place it could save £30 million, that single programme, which is illustrative of the fact I have just stated. However, when you look at the way that the Research Councils are behaving it does not seem as dinky-dory as you led us to believe in your earlier statement because four Research Councils had Je-S in place by May 2003. I suppose the question is, why are the others dragging their feet, particularly the MRC, who seem to have found their own electronic-Submissions Programme and seem very reluctant to come in with the Joint Submissions Programme.

Ms Thorne: The Research Councils engage in the administration, harmonisation and convergent programme on the basis of a consensus and that means that they participate when there is real benefit to their users, academic community and stakeholders for doing so. I do not see that any of the Research Councils have particularly dragged their heels in joining the Je-S project. MRC, as you pointed out, already had an electronic system and they wanted to make sure that the Je-S project was able to deliver the sort of things that they are already able to deliver to their community electronically, and to make sure that it is already doing all of that before they come on board. So I think the timescale is perfectly reasonable on that basis.

Professor Diamond: And just to make it very clear. You say four are a part of Je-S by 2004. Two more, for example ESRC, already had an electronic system and so the agreement was that Je-S would get up and running, the ESRC would move in. So, that by the end of this summer we will have six of the seven Councils running in the Je-S system. So it really is a harmonised system.

Q82 Dr Iddon: Do you have a big stick? Can you force the pace of administrative convergence including Je-S, or any other that you are trying to achieve?

Professor Diamond: The Chief Executives as a whole have that stick. It is up to the Chief Executives' group to provide leadership and to say that this is going to happen. That is what has happened on Je-S, it has happened on ISIT Convergence, and we regularly review not only what we are doing but the speed at which things are moving forward. I have to

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be absolutely honest, that is one of the things that having the independent governance of moving RCUK to us has really been able to get us because we are there making decisions ourselves and taking it forward and having to be seen externally to deliver against a set of objectives and it is working very well.

Q83 Dr Iddon: We have a figure of £30 million for the savings on the Research Submission Convergence. Is there a total figure for saving in administrative convergence across the eight Research Councils?

Ms Thorne: I think it is useful at this point to refer to our Gershon Efficiency Programme. The Research Councils are required to make 2.5% year on year efficiency gains, as other public bodies are. So what we do is we are doing is wrapping up our savings on administration as part of our Gershon delivery plan. What we actually have to do is we have a target of saving £170 million across the whole of the Research Council Science budget by 2007–08, and I can talk some more about that if you like.

Q84 Dr Iddon: Is not the answer to have one Research Council and is that not the fear of the eight Research Councils at the moment, that you are moving along that pathway?

Professor Diamond: I do not get up in the morning and march into Polaris House like a scared rabbit, worrying if I will come out part of one Research Council. I walk into Polaris House every morning believing that we have the optimal strategy in the world for what we are trying to deliver. We are not trying to do this in fear of becoming one Research Council; we are trying to do it because, quite frankly, Brian, it is in the best interests of UK science that all Research Councils collaborate together. But it is also, I would submit, in the best interests of UK science that we have individual Research Councils with real strength in individual areas able properly to engage with their communities and to speak for their communities, but part of that a commitment to work together for the benefit of the UK.

Q85 Dr Iddon: Are you already seeing in the work that you are doing, Ian, an increase in inter-disciplinary research?

Professor Diamond: I am seeing a commitment in universities to doing inter-disciplinary research that I have not seen in my lifetime. I am also hearing from my colleagues within Polaris House, who have been there for much longer than I have personally, that people now think inter-disciplinary in a way that they would not previously have done, and I could give you two or three examples of areas or projects where people are talking to each other and saying, “Look, this is a good area, could we not get together across the Councils and see if there is some activity here that is of benefit?” Just to give you some examples, recently I have been in a number of universities—and I can point to Newcastle, York and Sheffield as three—where new buildings are going up which are there specifically to encourage and to enable inter-disciplinary research of the sort that I believe—and I am sure you believe, Brian—is critical if we are going to take forward some of the

science base. So the universities are making a commitment and the Research Councils are doing everything they can to support that.

Q86 Dr Iddon: I agree with that, but there is great excitement about a £32 million building on the former UMIST site. I have been to talk to people about that, I think it is very welcome. Is this drive towards inter-disciplinary research one of the real reasons that you have been put in place and driving this agenda forward?

Professor Diamond: I think there is a multitude of reasons. I think it is a good idea for the UK to have a focal point on discussions, for example, with Europe where, if you like, there is one Europe Research Council, a focal point for those discussions and for people such as for business and industry to have this one place initially to talk to. I think it is a really good need for the inter-disciplinary research that we have talked to, as well as understanding. And let us be clear, much of the inter-disciplinary research requires new developments in disciplinary research and that cross-Council activity enables people to know what is going on, in basic chemistry, for example, that may have a real impact on medicine, so that that is a really important thing. Finally, as Helen has been pointing out, there are very good reasons for administering of convergence where appropriate, and that is why I think on all three of those levels the existence of RCUK is an absolutely good thing.

Q87 Chairman: It seems to me from just listening to your enthusiasm and so on for what is happening and what you intend to do, you will need a lot more people to do it. Would you agree with that, Helen?

Ms Thorne: I actually do not think that the central team needs to be very large. I think the real way that you get all of the sorts of exciting things that Ian was talking about is by buy-in of the hearts and minds from everybody who works in the Research Councils themselves, and that is really what we are trying to do, and you do not need a central bureaucracy to do that.

Q88 Chairman: Let us look at Europe because Ian has mentioned that. For example, a way to make sure that you keep within the budget is to top slice the budget over here and put it into the research work by the Council, whatever is set up in Europe. Is that a threat? You would not need new staff to do that, it is just sending a cheque over the water or down the Eurostar.

Professor Diamond: I think the RCUK position on Europe is very simple. The European Research Council is a good thing if it gives new money.

Q89 Chairman: Do you beg for that, borrow or do you talk to Keith O’Nions and others about it?

Professor Diamond: We have been part of a lobbying exercise and you will be aware that Chris Patten has recently been asked to lead the development of that, and I wrote to Chris Patten last week and suggested an early meeting between him and a group of

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Research Council chief executives to discuss the development of the European Research Council and we will be lobbying along those lines.

Q90 Chairman: Who have you talked to about this enterprise in Europe? Who have you tried to induce, any other people who might be enthusiastic about it?

Professor Diamond: About the European—

Q91 Chairman: Not in Europe but in Britain—Ministers for example.

Professor Diamond: Ian Halliday and John O'Reilly lead for us on Europe and they have talked to a large number of people, of course including David Sainsbury, but throughout government and the RCUK input has, I know, been received very seriously. Helen, do you want to say anything?

Ms Thorne: I do not think I need to add anything.

Q92 Chairman: But you do support a European Research Council?

Professor Diamond: We support the development of a European Research Council, yes.

Q93 Chairman: How would you see them allocating the money?

Professor Diamond: That is a very, very, very good question and that is something that I think really does need some—

Q94 Chairman: How would you like to see it? Let us be adventurous. What would you say to your Research Councils when they came in front of you? What would you put forward, do you think?

Professor Diamond: To the European Research Council? I think what you need, personally, is—I am trying to think of a word that is not European super league—a blue sky response mode competition for great science across Europe, which can be from one laboratory or one team or can be cross-team. I think there may be a case—and probably will be a case—for a distinction between areas to ensure that it is possible (a) to do a peer review in a coherent way, and (b) to make decisions. Decisions in response mode are always difficult.

Q95 Chairman: Do you not think those decisions would become political? The poor Greeks will get nothing and the French will get everything and we will just get enough to keep us moaning and groaning?

Professor Diamond: I think *juste retour* is not a strategy that would be acceptable in a truly European Research Council aimed at scientific excellence. If we are interested in developing research in different areas of Europe then we need to take that as a real necessity, and that is a different question. My view of a European Research Council is that it should be a competition for scientific excellence for the benefit of European science.

Q96 Chairman: Is that something then that you are going to drive or is the point of me saying do you talk to Ministers—

Professor Diamond: That is the RCUK position and that which Ian Halliday and John O'Reilly are leading on.

Q97 Chairman: But does it get through to the politicians, do you know?

Professor Diamond: I am conscious that, as you know, Ian Halliday and John O'Reilly are extremely good advocates and I am conscious that they have talked all the way through.

Q98 Chairman: But Ian Halliday is going shortly.

Professor Diamond: Ian Halliday is going shortly and that is why we have a succession planning and that is why John O'Reilly currently is jointly leading with them.

Q99 Dr Turner: Let us go to the vexed question of economic costs of research. Can you assure us that implementation of full economic costs, or at least 80% of full economic costs, will not adversely affect the volume of research? Would it be at the expense of the number of projects that could be funded by the Research Councils?

Professor Diamond: The government has provided the money, new money to ensure that the current volume can be maintained.

Q100 Dr Turner: Is it enough?

Professor Diamond: Yes.

Q101 Dr Turner: You are quite confident?

Professor Diamond: No problem. Now, let me make it clear that there are some potential actions in the research community which could impact on that and which is part of the extremely positive dialogue that has been taking place between the Research Councils and the Higher Education sector. One, full economic costing, absolutely rightly, will include principal investigators' time. The modelling that we have done thus far has been dependent on principle investigators who currently put in the amount of time they intend spending on a project, in future putting in the same, broadly, amount of time. If suddenly everybody who is saying, "I spent 40% of my time on this project," says "I spent 80% on it," then of course the costs of current grants will increase and there is no increased money for that volume. It is for the universities and the Research Councils jointly to monitor that and we will be so doing. Secondly, if we see an inflation in, if you like, the amount being done by principal investigators instead of junior investigators then I think it is right that we take a view because, again, the costs will increase for the same amount of money, and that is over and above the modelling that has been done to ensure the extra. So there is, I am absolutely clear in my mind, a risk, but it is a risk that we are going into entirely with open eyes, we have been talking to the universities about it, and which we will be monitoring and publishing statistics on over time.

Q102 Dr Turner: Do you think that granting full economic costs or a percentage thereof will help institutions in participating in European

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framework programmes where clearly the European framework grants do not cover the full economic costs either?

Professor Diamond: I think that is a discussion that clearly needs to be had with those managing the European grants, and I know it is a discussion—and which Helen may wish to expand upon—which is being had to lobby for European Research Council money to pay something like full economic costs.

Q103 Dr Turner: Do you want to add to that?

Ms Thorne: Only to say that, I think as we said in our submission, what we are doing at the moment, we are looking at what the impact is likely to be and the joint project that we are running through our research office in Brussels and in the Universities in the UK, working with a number of universities in England, Scotland, Wales and Northern Ireland, who are currently leading or managing or coordinating framework programme activities to try to see what the impact would be. The findings are due shortly but the preliminary findings suggest that the move to full economic cost in the UK will not have an adverse impact.

Q104 Dr Iddon: This is probably the last line of questioning, Ian. What role will your organisation play in the development of Large-Scale Facilities? After all, this is such a strategic area covering more than one Research Council?

Professor Diamond: Critically important, Brian; they are absolutely critically important. There is a large-scale infrastructure roadmap which was put together by the previous incarnation of the RCUK strategy group, which was the result of extremely detailed and extremely, I felt, productive discussions about where we had to prioritise and what we could prioritise on because we could not do everything. And I know that it is a priority going forward that we revise that roadmap and that we look at the priorities for large-scale infrastructure funding, and I know that Keith O’Nions has asked all Research Councils to think about the infrastructure that will be required going forward. It is absolutely critical because these are big decisions that will require prioritisation across Research Councils; it is entirely critical that RCUK plays a role in that and indeed is able to make difficult decisions with OST that will be required to be made.

Q105 Dr Iddon: Are you involved in the ITER discussions, the fusion project?

Professor Diamond: We are involved in all those discussions, yes.

Q106 Dr Iddon: Could I now finally turn to the Large Facilities Fund? Are you also involved in individual Research Councils making bids to the Large Facilities Fund? For example, would you be expected to be involved in the MRC’s decision to give up the Mill Hill site and move into Central London?

Professor Diamond: You may recall the letter I wrote to you on that subject on behalf of RCUK, and that is that where individual Councils make proper

decisions then it is not for RCUK to second-guess those decisions; it is for the individual Councils to make those decisions as best they see fit.

Q107 Dr Iddon: But after the decision to move into Central London they would have to bid to the Large Facilities Fund to fund that move. Would you be involved in that?

Professor Diamond: Anything that came to the Large Facilities roadmap and decisions thereby, RCUK clearly has to be able to take a view of the priorities for the scarce resource that exists, and that goes across Research Councils, and that is what RCUK properly did in consultation, in a discussion with the OST who make a final decision.

Q108 Chairman: I will finish with you Ian, because I started the whole proceedings off. This for me is like beating the English at Wembley, you have achieved something. I feel that you are the last Research Council that we have scrutinised. Gosh, it has been hard work but it has been really illuminating and interesting. Does it make any difference to people like you in your job that we do this kind of scrutiny? Does it help, does it help formulate policy, even to the extent you say, “Rubbish!” How do you look upon it? I know that we can be annoying and so on; on the other hand, are some of our ideas positive and used by the Research Councils, and in that in recognising your general coordinating role there?

Professor Diamond: Let me be absolutely frank. Your scrutiny, in my view, and our view, is an incredibly important part of the public process. We believe that it is critical that you do this, and I am going to give you my heartfelt thanks for the incredibly positive and incredibly professional way that you go about doing it. The work of your team, led by Chris, is incredibly helpful to us. The brief that you get—and I have said this to gazillions of people over the last two years since the first time I met with you and I had my initial meeting—is, I just think, second to none because you are really able to get to the heart of the matter, and in so doing we take it very seriously—and I think you have seen the effort that went into delivering not only this scrutiny but for all the individual Research Councils—

Q109 Chairman: You did not get rehearsed by some lobbying PR group, did you, like some other friends of ours! You do not have to answer that question! You can tell me later on!

Professor Diamond: I will also tell you what the full economic cost is of preparing for a scrutiny. I know this sounds terribly, terribly sycophantic but, at the end of the day, yes, this is a really good exercise. I know all the Research Councils look at the reports that come out and take them incredibly seriously, but it is not just looking at the reports, it is the preparation for them that enables you really properly sometimes to just take a step backwards from what you are trying to achieve and say, “Okay, what are we trying to achieve?” And that can help you formulate policy. I am a huge believer in what

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you are trying to achieve, but it only works—and here comes the serious creep—if you are prepared to take it as seriously as you do.

Q110 Chairman: You bet we do!

Professor Diamond: Then you get the great benefit of beating the English at Wembley!

Q111 Chairman: Are we a pain, Helen, from your point of view, of having to organise and get the facts together, or is it helpful to you?

Ms Thorne: I think it has been tremendously helpful actually, and, to be honest, we have been scrutinised so many times since we have been set up that getting the information together has not been that difficult. What has been incredibly useful for us is to actually go through the individual scrutiny reports of the individual Councils and actually pull out all the cross council-cutting themes, not just those things which arise from the recommendations, but there are clearly common themes that run through the work of this Committee, and I think we found that tremendously helpful. That is not just me and my team but I think the Research Councils as a whole.

Q112 Chairman: So would you welcome it again after the next election, which is not far away now, as everybody knows—it is the best-kept secret, I guess

in Britain. Maybe not, we always try to find bigger secrets. Helen, Ian, do you think we should carry on with as a Committee?

Ms Thorne: I think so, yes.

Professor Diamond: I think it is a very useful exercise.

Q113 Chairman: That is very helpful. Any ideas how we might do it better?

Professor Diamond: The only thing I did want to say is that you are incredibly welcome, all of you, to come down any time to RCUK, come to an executive briefing to talk to us all, just to let yourself know on the ground what is really happening. We are always happy to come up and have a chat up here, of course, but just come down and meet with us, and meet an executive group and find out what is going on so that you get the feel of the vibrancy and collegiality that is going on, as well as having to listen to me go on about it in a forum such as this.

Chairman: All I know is that the many people out there who are doing the hard work on the ground and trying to get grants welcome the chance to see how it all happens or does not happen as the case may be. Thank you very much for adding to this and finalising the last of the Research Councils for us. Thank you very much indeed.

Professor Diamond: It has been our pleasure.

Written evidence

APPENDIX 1

Memorandum from Research Councils UK

INTRODUCTION AND CONTEXT

RCUK mission and objectives

1. Research Councils UK (RCUK) is a strategic partnership between the UK's seven Research Councils and the Arts and Humanities Research Board (AHRB).
2. RCUK's mission is to optimise the ways that Research Councils work together to deliver their goals, to enhance the overall performance and impact of UK research, training and knowledge transfer and to be recognised by academia, business and government for excellence in research sponsorship.
3. The overall aim of RCUK is for the UK Research Councils to be recognised as the benchmark around the world in terms of the impact they have and the ways they work. RCUK will:
 - increase the collective visibility, leadership and influence of the Research Councils for the benefit of the UK;
 - lead in shaping the overall portfolio of research funded by the Research Councils to maximise the excellence and impact of UK research, and help to ensure that the UK gets the best value for money from its investment;
 - ensure joined up operations between the Research Councils to achieve its goals and improve services to the communities it sponsors and works with.
4. New objectives for the SR2004 period are being developed in consultation with the Office of Science and Technology (OST) and will be published in the RCUK delivery plan, by March 2005.

RCUK background

5. The 2001 Quinquennial Review of the Grant Awarding Research Councils (QQR) concluded that the Research Council system was working well, that there was real strength in diversity from having separate Councils and that Councils had made good progress in working together in many areas. The QQR also identified the need to embed a culture of collective responsibility and collaboration within the Councils to enable them to increase their influence on national and international strategy and policy development, to work with their stakeholders more in a collegiate fashion and to "apply the principles of public service delivery" in all of their services. The creation of the RCUK partnership was recommended as the primary vehicle for achieving these outcomes.
6. RCUK was launched by Patricia Hewitt MP, Secretary of State for Trade and Industry, on 1 May 2002. As recommended in the QQR, an RCUK Strategy Group (RCUKSG), comprising the Chief Executives and the Director General of Research Councils (DGRC), was established to lead the RCUK partnership.
7. An independent interim review of RCUK was published in 2003. A second independent review was undertaken by OST the following year, with the report being published in October 2004. The recommendations of the review and progress in implementing them are set out in Annex A. In summary, good progress has been made on implementation on all fronts, and it is anticipated that all recommendations will have been addressed by 31 March 2005.

RCUK achievements

8. Since its creation RCUK has made good progress against all of its aims, and as cited in the 2004 review this activity has "had a major beneficial impact upon the contribution of the Research Councils to the UK's world class research base." RCUK's main achievements have included:
 - responding to the changing nature of research and the research environment by facilitating collaborative and multidisciplinary approaches to government spending reviews and support for research, training and knowledge transfer;
 - producing the joint Research Council vision for research—a key document for stimulating engagement with and between research funders and providers, promoting multi-disciplinarity and shaping the ten year science and innovation investment framework;
 - enabling Research Councils to collectively influence and contribute to debate on research policy in the UK and Europe eg RCUK submissions to Select Committee inquiries and working with the European Commission on the proposed European Research Council;

- making it easier for other funders and stakeholders to work with the Research Councils eg the Regional Development Agencies and CBI;
- focusing convergence activities on the needs of the academic community through the research administration programme—including introducing a standardised electronic framework for submitting grant proposals, and common terms and conditions for research grants.

9. Full details of the work of RCUK and its achievements have been supplied to the Committee as the “RCUK Achievement Report 1 May 2002–31 March 2004” and in the “OST Review of Research Councils UK July 2004”. The Committee have also received copies of the submission RCUK made to the Council for Science and Technology on Research Councils support for multidisciplinary research.

Leadership of RCUK

10. The RCUK partnership is lead by the Research Council chief executives, who collectively own, drive and monitor the strategic and operational activities that deliver the RCUK mission. A new RCUK business model was implemented from 1 October 2004 as a result of the 2004 review, with the establishment of the RCUK Executive Group (RCUKEG) to provide the forum through which the individual Research Council chief executives work together. RCUKEG meets monthly and will:

- develop the objectives for the RCUK partnership and secure their endorsement by OST;
- agree the delivery plan and priorities for the RCUK partnership;
- ensure that appropriate resources are committed to RCUK priorities;
- ensure that information about RCUK is communicated effectively to Research Council staff and to external stakeholders; and
- monitor the delivery of RCUK activities.

11. Membership of RCUKEG comprises the chief executives of the Research Councils. The current chair is Professor Ian Diamond. Senior representatives from OST, DTI, the Funding Councils and other key stakeholders work with RCUK through RCUKEG and via bilateral and cooperative arrangements as appropriate.

12. To enable RCUK to work with OST to discuss high-level strategic issues and provide advice to DGRC (eg on the development of the new performance management framework for the Science Budget and the allocations process) OST has established the Joint OST/RCUK Working Group for Strategy or Joint Strategy Group (JSG). This group is chaired by the DGRC and meets quarterly.

13. RCUKEG and JSG replace the original Research Councils UK Strategy Group (RCUKSG), which led RCUK activities between May 2002 and July 2004. This new model provides a clear separation between Research Councils’ and government responsibilities.

RCUK mode of operation

14. RCUK is not legal entity and its existence does not alter the governance of individual Research Councils or the accountability of their chief executives, who remain directly and personally accountable for the guardianship of public funds. These accountabilities are not exercised through RCUK. However, it should be noted that in terms of delivering joint Council projects and programmes under the RCUK banner the NAO has confirmed that the principle of collective responsibility and accountability by chief executives of separate organisations is acceptable and indicated that this is not an uncommon arrangement within the public sector.

15. As recommended by the QQR the charters of the individual Research Councils were amended in July 2003 to specify that:

“Without prejudice to the fulfilment of the objects for which the Council is established and incorporated, in pursuing its objects, the Council shall use its best endeavours to identify and pursue opportunities for mutually beneficial joint working with any one or more of the other Research Councils.”

16. Under the RCUK umbrella Councils work together in a mode of consensual cooperation, that is to say Councils proactively seek to work together where there is benefit to their academic communities, government and other stakeholders in doing so. This approach enables each Council to determine its own level of participation in joint activities and secure the benefits of closer collaboration with other Councils whilst remaining flexible and responsive to the needs of their own subject communities. This model recognises that one size does not fit all and facilitates harmonisation of policies and services, by speeding convergence on a bilateral or trilateral basis, rather than trying to force all Councils to converge simultaneously on what might be a lowest common denominator solution. Externally, this model enables Research Councils to present policies and information coherently, but allows for different views and opinions to be expressed by different Councils.

17. Although RCUK is a non-executive partnership, it adopts current good practice of all public bodies. This includes compliance with codes of practice and legislation on risk management, freedom of information, data protection and a proactive approach to publishing information about RCUK's activities, services, policies and performance.

RCUK priorities and work programme

18. Following publication of the QQR and establishment of RCUK, activity initially focused on the identification and agreement of the priorities for RCUK's first year of operation and the development and implementation of robust processes and policies for supporting the then RCUK Strategy Group and its work programme. The RCUK workplan was devised as a rolling programme of activities drawn from the QQR recommendations. In December 2002 a new strategic framework was implemented to place RCUK activities within the context of the operating plans of the Research Councils and OST. RCUK workplans and activities have continued to be reviewed annually in addition to regular monitoring of the implementation of QQR recommendations and the reviews of RCUK in 2003 and 2004. This will be superseded by the RCUK delivery plan (paragraph 32) which will be published at the end of March 2005.

RCUK organisation and funding

19. As a partnership between Research Councils, RCUK comprises all Research Council employees involved in joint activities. In addition to the RCUKEG, RCUK activities are pursued via an organised network of cross-Council units and support groups and time limited project teams. Key RCUK projects and activities are usually led or overseen by one of the chief executives. This ensures ownership of the activity on behalf of RCUKEG, identifies a spokesperson for RCUK, and ensures that projects are managed so as to deliver the expected outcomes on time and within resources. RCUK also exploits the expertise and existing networks of chief executives to ensure that RCUK messages are effectively promoted via external boards and committees.

20. In addition to drawing on the resources and experience of staff across all of the Councils to deliver RCUK activities, 14 staff are employed in the RCUK office to work full-time supporting and facilitating RCUK projects. The RCUK office currently comprises of two teams with distinct responsibilities; the RCUK Secretariat the RCUK Administration Strategy Programme Management Office (AS PMO).

21. As a non-legal entity, RCUK cannot directly employ staff, enter into contractual agreements or administer public funds. Individuals employed to work full-time on RCUK activities are therefore hosted within individual Research Councils. Staff are part of the management structure of their host Council and RCUK budgets are administered via the host Council's financial systems. RCUK activities are funded by the individual Councils with contributions calculated annually on a pro rata basis in accordance with the Science Budget allocation to each Council.

22. The RCUK Secretariat supports and facilitates the work of RCUKEG and its externally focused sub-groups and project teams. It acts as the first point of contact for OST and external organisations, manages and delivers the RCUK external relations programme and coordinates Research Council inputs into briefings, speeches, Parliamentary Questions, inquiries and consultations. The RCUK secretariat is hosted by EPSRC. It has a staff of nine and an annual expenditure in the region of £400k.

23. The RCUK Administration Strategy Programme Management Office is responsible for developing and facilitating the delivery of a programme of harmonisation and convergence across the Research Councils administrative services, including the Gershon efficiency programme. It supports the RCUK Operational Management Group as well as providing project management services for a number of cross-Council administrative projects. The Administration Strategy Programme Management Office is hosted by NERC. It has a staff of five and an annual budget of £2 million, the majority of which is used to deliver the administration strategy programme. Of this budget, £1 million per annum for the period 2003–04 to 2005–06 has been provided by OST to meet the costs of administrative harmonisation and convergence. This was provided subject to equivalent funds being invested by the Research Councils, giving a total annual budget of £2 million.

24. These groups will be merged into a single unit from 1 April 2005.

Chronology (key dates in the development of RCUK)

| | |
|--|---------------|
| QQR report published | November 2001 |
| RCUK secretariat established | April 2002 |
| RCUK Strategy Group established | April 2002 |
| RCUK launched | May 2002 |
| RCUK administration strategy programme management office established | April 2003 |
| Research Council charters amended | July 2003 |

| | |
|---|---------------|
| Interim review of RCUK published | July 2003 |
| RCUK vision for research published | December 2003 |
| New model of RCUKSG support groups established and RCUK secretariat fully resourced | February 2004 |
| OST review of RCUK published | October 2004 |
| New RCUK business model and RCUK Executive Group established | October 2004 |

RELATIONSHIP BETWEEN DGRC, OST AND RCUK

25. The policy framework for the Research Councils is determined by government, which sets broad priorities across several areas of activity. Within this framework, and in keeping with the Haldane Principle, Research Councils are responsible for day to day decisions on the research funding. This means that government decides, for example, whether to participate in certain international collaborations, whether some broad areas of science or activities should be given priority, and how much money should go to each Council. It also means that government has no involvement in deciding which people or which particular research projects are to be funded. Within this, the Councils are free—and are expected—to set their own policies.

26. The governance arrangements for the Research Councils reflect the revised Cabinet Office guidance on the management of NDPBs, which include an emphasis on the cascade of objectives from the DTI (Councils must ensure “strategic alignment” between their strategies and spending plans with government policy and strategic objectives for Science Budget, and this must be reflected in their delivery plans), quarterly progress reports to DTI to monitor delivery, and an enhanced role for Research Council Chairs in monitoring performance.

27. As stated in paragraph 21 RCUK is not legal entity and its existence does not alter the governance of individual Research Councils. As a partnership between Research Councils, RCUK sits outside of government as do the individual Councils. Research Councils believe that the new RCUK business model implemented as a result of the 2004 Review is helpful making clear the separation of responsibilities between OST and the Research Councils.

28. The new RCUK business model reflects the confidence that OST has in the ability of the Research Councils to work together and collaborate effectively, and the desire expressed by the DGRC to stand back from the day to day operation of the Research Councils. In addition to taking responsibility for advising the Secretary of State on the allocation of the £3 billion Science Budget, RCUK believes that DGRC’s role is to represent the interests of the Research Councils individually and collectively, at the highest levels within Government.

ISSUES RAISED IN THE SCRUTINY REPORTS OF INDIVIDUAL RESEARCH COUNCILS AND OTHER CROSS-CUTTING ISSUES

Research Council and RCUK delivery plan and SR2004 allocations process

29. Following the publication of the ten year science and innovation investment framework and the announcement of the Science Budget for the SR2004 period in July 2004, OST and the Research Councils have been working together on the allocation of funding, forward planning of investments and objective setting for the next three years and beyond. In line with the revised Cabinet Office guidance on the management of NDPBs, objectives for the Science Budget will cascade from the DTI to individual Research Councils and RCUK. There are a number of strands to this work, set out below.

Performance management framework

30. The 10 year investment framework set out proposals for the development of a comprehensive, integrated and efficient performance management system for the Science Budget. This will translate the overall strategic priorities for the Science Budget into objectives for the Research Councils and other delivery agents through the use of scorecards. The framework will inform the balance of investment across the Science Budget and determine the SR2004 allocations. As well as acting as a performance management tool for OST and Research Councils, it will be used to illustrate more widely how the UK is gaining benefits from its increased investment in science and innovation.

31. Over the last few months the Research Councils and OST have been working closely together through RCUK to develop this new framework which is based around two key outputs: a healthy science and engineering base; and better exploitation of research outputs. Data will be collected and published annually at PSA, Science Budget, RCUK and individual Research Council levels. This reporting will inform policy development in the public sector and provide the basis for continuing dialogue with business, the research base and other funders and stakeholders about the impact of collective investment in UK research and

innovation. RCUK is committed to ensuring that the performance management system is not be overly bureaucratic or reliant on simplistic indicators, and does not in any way jeopardise speculative or adventurous research.

Research Council and RCUK delivery plans

32. OST has asked individual Research Councils and RCUK to produce delivery plans by end of March 2005. Each Council's delivery plan will be based on a thorough review of priorities and will include the detail of investment and funding priorities for the SR2004 period as well as forward commitments, restructuring and programmes planned over the next two or three Spending Reviews ie to cover the whole period of the 10 year investment framework. The plans will include a small number of key objectives and milestones, against which progress will be monitored on a quarterly basis. These delivery plans will be published and will replace existing operating plans. As with individual Council plans, work on the RCUK delivery plan is on-going with a deadline of end of March 2004. It is anticipated that RCUK's objectives for the SR2004 period will address:

- helping to make the best case for the Science Budget in SR2006 and beyond;
- continuing to support multidisciplinary/interdisciplinary research;
- contributing to the development of the UK strategy for international engagement in R&D;
- contributing to negotiations on FP7, FP8, ERC;
- revising the large facilities roadmap and prioritisation of projects;
- improving coordination of research careers and diversity issues;
- improving coordination of science in society activities;
- monitoring the impact of the implementation of the new funding regime and move to FEC;
- delivering the RCUK Gershon efficiency project; and
- making further progress in administrative harmonisation and convergence; focusing on minimising the bureaucratic load on researchers.

Allocations process

33. The allocations process in SR2004 and in future spending rounds will be driven by the performance management system (progress against agreed targets) to inform the balance of investment across the Science Budget. Research Councils have prepared draft delivery plans and baseline performance data, which are being considered by the DGRC who is responsible for advising the Secretary of State on allocation of the Research Councils and other publicly supported bodies. Following two rounds of bilateral meetings between DGRC and Research Council Chief Executives it is anticipated that the Science Budget allocations will be announced in March 2005.

Prioritisation of research funding—the balance between directed and non-directed research

34. The Committee has stated in its scrutiny reports of individual Research Councils that it recognises that there is a tension between top down directed funding, specifically between investing in large cross-Council programmes (or those with a policy emphasis), versus responsive mode funding. The Committee has expressed concerns about the rigour of the processes used to award thematic funding and the volume of funding for thematic research.

35. As set out in the 10 year investment framework, the UK needs to invest in research across the whole spectrum of basic, curiosity driven research to strategic and applied research that is directly targeted at specific social and economic issues and goals. However, if the UK is to be the most attractive location in the world for science and innovation it is essential that there is continuing sustained growth in basic responsive mode research funding.

36. Achieving an appropriate balance between directed and non-directed research is a primary role of the Research Councils working with the OST. In a dynamic research base research goals and priorities must and will change in response to new knowledge, new technologies and new strategic economic and social needs. Working with OST through the Spending Review process, the Councils continually review and balance their funding between directed and non-directed research, as well as between research, training, infrastructure and knowledge transfer whilst ensuring the strength of the research base in all key disciplines.

37. Under SR2000 and SR2002 ringfenced funds were allocated to establish large cross-Council programmes in response to major multidisciplinary challenges in priority areas such as e-science, energy and stem cells. These timely investments were seen as necessary to help stimulate UK and international interest and to help build and grow new multidisciplinary communities. As covered in individual Research Council scrutiny sessions, Councils have continued to increase their investments in responsive mode funding over the same period. In addition, a number of the major cross-cutting programmes are delivered in such a way as to include some investment in basic research under the programme umbrella. With the emphasis in

SR2004 on investment to put research in HEIs on a more sustainable footing, RCUK will be arguing for enhanced investment in basic research in SR2006 to ensure that the UK research base can deliver the aspirations in the government's 10 year investment framework.

38. The Research Councils only support proposals of the highest scientific quality, whatever the funding mode, and believe that there is no evidence to suggest that lower quality thematic proposals are being funded at the expense of responsive mode applications. All Councils use the same rigorous peer review mechanisms, quality standards and the same pool of reviewers to assess both directed and responsive mode proposals, although directed proposals are assessed on strategic relevance and correspondence with programme objectives in addition to scientific excellence. In both funding modes, Councils are unable to support all proposals of international quality due to insufficient funds.

Relationship with Higher Education Institutions and demand management

39. The Committee has recommended that Research Councils should exert a greater influence over the number of applications they receive by developing stronger links with HEIs, for example by implementing a network of university interface managers along the lines of the EPSRC model. It has also been suggested that Councils should look at variations in their grant application success rates to see whether lessons can be learned and convergence achieved in success rates.

40. To foster stronger links with HEIs and address issues of demand management several Councils would like to increase their level of interaction with HEIs, but none plan to adopt the university interface manager model, largely for cost reasons. For the smaller Councils in particular, a regular programme of HEI visits is a more affordable solution. Programme officers from the Research Councils regularly visit HEIs to discuss strategy developments and initiatives and aim to give academics and university administrators a realistic picture of the standards required and level of competition for research funding.

41. All Research Councils receive more high quality proposals than they are able to fund and all implement some form of demand management to help reduce the time spent assessing lower quality applications with no realistic chance of funding. For example, BBSRC is encouraging university departments to start screening applications prior to submission, CCLRC and MRC operate a two stage application process, and EPSRC, MRC, NERC, AHRB and ESRC use a sift or triage process to weed out low quality applications prior to peer review. With a more tightly defined academic community, PPARC has encouraged universities to consolidate funding into rolling programmes, reducing grant applications from these groups.

42. Success rates cannot readily be compared between Councils, and convergence between rates would not be expected. Success rates are determined primarily by the availability of Council funds relative size and capability of the academic communities served by each Council, but other factors are also important. For example, the availability of funding from other sources such as charities and the EU affects the demand and thus success rate in different areas.

43. The Committee recommended that all Councils should publish data on their grant success rates. RCUK agreed in December 2004 proposals for publishing the grant application success rates of individual HEIs. Success rates at the institutional level will be published annually on Council and RCUK websites, with effect from June 2005 for the financial year 2004–05. RCUK is also proposing to write annually to university Vice-Chancellors, to provide equivalent success rate data at the departmental level. It is hoped that this will help with demand management.

Promoting interdisciplinarity (removing barriers within Research councils)

44. The Committee recognises that Councils have gone some way to removing barriers to multidisciplinary research, but has said that Councils should improve their processes for handling applications for multidisciplinary research. On the specific issue of peer review, the Committee recommended that peer reviewers should be trained and familiarised with assessing interdisciplinary proposals so that innovative and risky proposals are given due consideration.

45. Research Councils believe that strengthening the UK's multidisciplinary capability requires changes in institutional structures, in funding and training mechanisms, and most importantly to the cultural environment in which research is carried out. These are not challenges for the Research Councils alone—all partners in the research base need to be aware of the barriers to setting up and undertaking multidisciplinary research and to recognise their role in overcoming these. The Research Councils have both individually and collectively sought to foster multidisciplinary approaches to research, training and knowledge transfer for many years, by for example:

- working with researchers and users to identify key strategic challenges and problems and using top-down mechanisms to publicise, promote, or direct funding to multidisciplinary areas;
- listening to individual researchers' views on the factors that influence their own aims, collaborations, and career paths, and reflecting these in policies and communications work;

- establishing or participating in formal Funders Forums;
- using Research Council Institutes, or university research centres, to bring researchers together with clear multi-disciplinary goals, and long-term support, to help new ways of working develop;
- addressing any barriers to novel multidisciplinary approaches that peer review processes or grant schemes may produce;
- smoothing the path for funding and assessing multidisciplinary proposals that cut across Research Council boundaries; and
- promoting multidisciplinary as a goal in international organisations—such as in decisions on EU Framework objectives.

46. The creation of RCUK added impetus to this activity by:

- providing Research Councils with a recognised forum in which to exchange information on research priorities and develop ideas about multidisciplinary activities;
- enabling the development and promulgation of joined-up strategies such as the RCUK Synthesis of Strategies and Vision for Research;
- facilitating an open, and collective approach to the development of multidisciplinary proposals for Spending Reviews; and
- promoting best practice on the management and evaluation of multidisciplinary research.

47. At an operational level, Councils regularly scrutinise and update their policies and procedures to ensure that there are no inadvertent organisational or policy barriers impeding the assessment and evaluation of multidisciplinary research proposals. In the last two years, the focus on harmonisation and convergence of appropriate administration functions has accelerated this process. Key developments include:

- In 2000, Research Councils agreed and published a joint statement on the peer review of research proposals at the interface of Councils' remits. As well as general statements of principle, this encouraged potential applicants to discuss multidisciplinary applications with Councils before submission, guaranteed that all Councils with a substantial interest in a proposal would be consulted in helping to assess the proposal, recognised the need for flexibility in peer review, and stated that the assessment process would be agreed between Councils to avoid double jeopardy;
- Programme Officers in the different Councils interact regularly to ensure that responsive mode applications do not "fall between the cracks". This means in practice regular dialogue between office staff, consequent discussion with applicants, mutual openness to RCUK partners peer review systems, and flexibility on financial arrangements;
- Councils have jointly developed a benchmarking process to support the continuous improvement and sharing of good practice within the Research Councils peer review processes. A rolling programme of assessment is being implemented;
- Implementation of the Councils Joint Electronic Submission system (JeS) has made it easier for those wishing to apply for funding for multidisciplinary research grants. For example:
 - JeS enables those developing proposals to share them securely with others within their own HEI or with potential collaborators in other HEIs or industry. It also enables Councils to simply exchange proposals for assessment;
 - Councils have agreed a set of common, core research grant terms and conditions;
 - further developments under the overarching Councils Research Administration Programme will look at the improvement of peer review related activities, which will include Council-wide electronic refereeing and a reviewer database, which will improve access to appropriate experts with multidisciplinary experience.

48. In the medium to longer term, Councils will benefit from evaluating the effectiveness of a range of different mechanisms for supporting and managing multidisciplinary research. Through RCUK, the Councils are continuing to share good practice on evaluation, for example organising cross-Council workshops on the evaluation of cross-Council programmes.

49. Effective peer review of proposals in innovative or emerging areas that cross disciplines continues to present a challenge for the Research Councils and other grant awarding bodies, both in the UK and internationally. In some cases, earmarked funding for specific activities can help to address conservatism in the peer review process, but the goal is to ensure that all Councils—and other funders—operate high quality peer review systems capable of assessing complex multidisciplinary proposals in a fair and transparent way.

50. Research Councils have individually and collectively tackled concerns from their communities about lack of risk taking in peer review, narrow perspectives on academic discipline, failure to evaluate added value and double jeopardy in co-funded proposals. Examples of actions taken to address this include:

- managing multidisciplinary peer review through multidisciplinary peer review committees in areas such as Engineering and Biological Systems and Biomolecular Sciences (BBSRC);

- replacing discipline based peer review committees with colleges of reviewers (EPSRC, ESRC and NERC); and
- investing time and effort in “educating” their reviewers in the assessment of multidisciplinary proposals to ensure that the benefits of joint working are recognised and assessed.

51. Despite these advances, it remains highly likely that the knowledge base of some parts of the peer review community will lag behind the scientific advances that catalyse ideas for multidisciplinary projects. Councils recognise that continual effort is needed to ensure that their reviewers adopt best practice when assessing multidisciplinary proposals. In addition, there is a need for further exploration of the options for harmonisation and/or increased flexibility of peer review processes between the Research Councils and other sponsors of research. In its new delivery plan RCUK is committed to reviewing the effectiveness of Councils’ processes for handling multidisciplinary research proposals, in particular those which straddle Council boundaries. This will take place after the implementation of full economic costing in September 2005. Councils will also be sharing information and good practice on training peer reviewers to assess interdisciplinary and risky proposals.

52. The Committee asked RCUK to comment on the scope for all Councils supporting discipline hopping awards. At the present time BBSRC, EPSRC and MRC fund a specific schemes at the life sciences interface (one for institutions and one for individuals), and EPSRC also funds awards at the key multidisciplinary interfaces within the physical sciences, for example at the chemistry-chemical engineering interface and the mathematics-computer science interface. The other Councils have no plans to establish specific awards, but as outlined in RCUK’s submission to the Council for Science and Technology, all are providing a range of support mechanisms to foster multidisciplinary approaches to research, training and knowledge transfer.

53. The Committee recommended that where Councils call for applications in specific areas, they should make it clear how the topic relates to remit of the Council or Councils in question, and also give details of any other relevant initiatives which they or the other Councils support. Several Councils adopt this approach and all selectively refer to other funding provision to a greater or lesser degree and all Councils exchange ideas about forthcoming funding initiatives to maximise opportunities for co-funding and collaboration.

RCUK ADMINISTRATION STRATEGY

54. RCUK has developed an administration strategy which is aimed at delivering benefits primarily to universities, the research community and other stakeholders, as well as delivering internal efficiencies in HQ operations. Chief Executives agreed the aims and objectives of the administration strategy in December 2003. It was agreed that the key measurable differences from 2003–04 will be:

- External stakeholders will perceive the Research Councils has having an improved interface to the delivery of administrative services.
- External stakeholders will be able to interrogate research portfolios across all the Councils.
- A more integrated flow of information between the Councils and between the Councils and OST.
- Harmonised administrative terms and conditions for the majority of funding.
- A common framework for providing joint services and facilities to all Councils.
- A reduction in the number of different IT systems for grants, studentships, HR finance and office systems.
- Increased harmonisation of the terms and conditions of service for staff.
- Increased mobility of staff between the Research Councils and between them and OST.
- An increase in the number of staff working in joint units.

55. In addition, two RCUK targets have been agreed with DGRC. These are to:

- maintain administrative spend within 3.4% by 2008; and
- increase the proportion of HQ staff in joint services to 25% by March 2007.

56. As with other RCUK activities, each Research Council determines its own level of participation in harmonisation and convergence activities. All Councils are in agreement that cost effectiveness, combined with the Gershon agenda are key considerations when deciding on engagement in harmonisation projects. Progress is set out in the “RCUK Achievement Report 1 May 2002–31 March 2004”.

HARMONISATION ACTIVITIES—PEER REVIEW

57. The Committee has stated in its scrutiny sessions of individual Research Councils that whilst different academic communities have contrasting requirements, Councils should do more to harmonise their grant awarding strategies. In particular the Committee has indicated there should further uniformity of working

practices, especially in relation to research grant administration policies and procedures. Specific ideas which the Committee has said should be adopted are:

- a standardised system of grading research grant applications across all Councils;
- a common system of modest incentives for peer reviewers (subject to an EPSRC evaluation of its own scheme);
- the peer review college system should replace boards and committees; and
- standard terminology, forms and application processes.

58. Research Councils believe that peer review is not a single process, but set of processes necessary to deal with the different mechanisms for supporting research eg support for basic research, support for strategic research, or the need to encourage adventurous or multidisciplinary research. The peer review process also needs to be sensitive to the different needs, beliefs and cultures that existing the academic community has, for example, between psychologists and nuclear physicists. Although Councils are now moving to a single application form it does not follow that the processes used to assess that application should be common across all areas and types of research. Councils believe that a single process would be inflexible and would not enable the best research to be supported.

59. There are, however, opportunities for sharing good practice and Councils have implemented a joint benchmarking procedure of their peer review processes. At the heart of the Benchmarking scheme is a generalised, high level description of the stages in the peer review process. This model is recognised by all Councils. The model allows Councils to compare the operation of their processes against a set of attributes for each of the stages. These attributes have been derived from the Government's principles of public service. Where aspects fall short of these standards, Councils share best practice by comparing one Council's system with another's.

60. The issue of harmonisation has also been considered and it has been concluded that "Processes should support the pursuit of the organisational mission and embody the public service principles, in particular openness and transparency, demonstrable fairness and the commitment to innovation and continuous development. The benchmark should be sensitive to the fact that the Research Councils have different missions which are reflected in their peer review processes. The process should enable rather than constrain through the provision of choice and ease of access." In short, the Councils recognised that their processes needed to match their respective missions and the nature of their communities.

61. The Councils recognise that there are issues in the support of multidisciplinary research. As far as peer review processes are concerned the Councils do not believe that harmonisation of the process would improve the position. The existence of common forms or common processes is unlikely to alter this as the difficulty is overcoming the inherent conservatism of peer reviewers.

62. Peer reviewers grade grant applications to generate a rank ordered list to enable decisions to be made on which applications should be funded. All Councils use different systems but the scoring assigned by referees or panel members can only ever be subjective. A study by one Council also shows that there is no absolute standard. A reproducibility study was set up using two panels in the same discipline. Each was provided with the same material (both applications and briefing) and the same scoring method. They ended up with similar results but applied the scoring system in different ways. On this basis Councils believe that a common grading system would not allow comparisons to be made across different areas within one Council or across Councils, and would not serve a useful purpose.

63. EPSRC set up its referees' incentive scheme in 2001 on a trial basis. This recognises and rewards the role played by academic referees in the peer review process by making an annual payment to their institutions based on the usefulness of review reports and their timeliness. EPSRC evaluated this scheme in 2004, which revealed statistically significant rise in the number of useable review reports, and has decided to continue using this incentive system. In addition, NERC has put in place an honorarium scheme for members of its peer review college members, and PPARC pays reviewers to attend its panel meetings. Other Research Councils have previously examined incentive schemes and have concluded that providing incentives to referees departments could be attractive. Following the review of the EPSRC scheme several Councils have agreed to look again at this model, but it is likely that the smaller Councils in particular, will find the costs involved prohibitive.

64. Four Councils operate a peer review college system; AHRB, EPSRC, ESRC and NERC; and CCLRC uses the EPSRC college to select the referees for its facilities development programme grants. As BBSRC explained during their own scrutiny session, the majority of the bioscience community supports its current committee model as does its Council, and they have no plans to move to a different system. Given the range of diversity of its research portfolio, ESRC likewise wishes to continue to draw on the broadest possible range of reviewers in the UK and overseas and has no plans to use a college system, although it does operate this model for the assessment of small responsive mode grants. MRC has set up a college of experts affiliated to its research boards and PPARC will continue to use its committee and panel system. The PPARC programme is of a long-term nature, both in terms of planning and in the length of commitments once made. Consequently, it is important that its peer review system has a strong collective memory of both previous decisions and the political and international framework in which they were made. The interplay between different parts of the programme is also close, with many decisions being

interdependent, and an overall view of the whole programme by peer review is advantageous. Maintaining standing committees with appropriate annual renewal of membership (and bringing in experts as additional reviewers where necessary) provides this expertise in a more coherent manner than is likely with the use of a large college.

The Research Administration Programme: Research administration harmonisation and implementation of dual support reform

65. In the run up to the 2001 Quinquennial Review and thereafter, significant effort has been devoted to the harmonisation and modernisation of the Research Councils' core business with universities in relation to the processes supporting the funding of research. Key achievements during the period include:

- *March 2002*: Following broad consultation with the research community, agreement of a (Joint electronic Submission) framework of standardised interface, processes, data requirements and definitions to support research administration.
- *May 2003*: Successful implementation of the Joint electronic Submission (Je-S) system, conforming to the Je-S framework requirements; currently in place for four Councils.
- *July 2003*: Agreement of a longer term strategy and governance arrangements to take the RCUK goals of administrative convergence forward in the form of the RCUK Research Administration Programme.
- *March 2004*: Agreement of a common set of research grant terms and conditions (see <http://www.pparc.ac.uk/jes/GrantsHarm.asp>).
- *April 2004*: Initiation of a project to implement the Dual Support Reforms, as part of the Research Administration Programme.
- *August 2004*: Following consultation with Vice Chancellors, announcement of the ending of paper based submission in March 2005.

66. The strategy of the RCUK Research Administration Programme, to which all Councils and AHRB formally committed in 2003, reflects the wider RCUK goals of administrative convergence. The current programme portfolio consists of around 20 projects, prioritised for delivery on the basis of external stakeholder benefit, and is scheduled to be fully delivered by the end of 2007–08. By this point, the Councils will have in place a common research administration system that enables processing of grants, studentships and fellowships from submission to completion.

67. The vehicle for delivering the programme of activity is the Je-S system. Over 2,000 research proposals have been received since June 2003, and over 90 organisations are able to use Je-S. The Councils are on track to complete the registration of remaining research organisations by the deadline for ending paper based submission in March 2005. The Je-S system currently supports submission of research proposals, fellowships and expenditure statements and offers a service whereby research organisations can check the status of their grant portfolio online, helping to improve management of current awards. It also includes an on-line discussion forum through which Councils consult with organisations and users on possible developments of the system. Users may also use this mechanism to raise issues, although they tend to contact the well-received Je-S Helpdesk directly.

68. The Je-S services that will be delivered as a result of Research Administration Projects by 2007–08 include:

- Revisions to existing services to accommodate the introduction and monitoring of full economic costing by September 2005.
- On-line submission of research proposals, fellowships and studentships to all Research Councils; AHRB and ESRC will be enabled to use Je-S from September 2005 with MRC to follow in 2006.
- On-line support for the peer review process; from October 2005, peer reviewers and final report assessors will be able to complete and submit reviews using a common process and Research Council staff will have a cross-Council database of referees to enable better management of peer reviewer selection.
- On-line support for harmonised pre- and post-award processes (by 2007); including a process for providing feedback on the outcome of applications and a mechanism to request grant extensions.
- On-line customisable services, based on user preference and role.

69. The Research Councils are anticipating a range of business benefits to follow from the Research Administration Programme both internally and to the research organisation stakeholders. Potential financial savings have been estimated at around £30 million. Within this total, the savings arising from the single procurements of systems (rather than separate procurements for each Council) can be estimated with more certainty than those arising from efficiency savings within research organisations. For example, the joint development of the Je-S system will save the Councils around £6 million in capital costs with commensurate savings in support costs; a single procurement of a next generation “back office” system

should save the Councils £3 million and £1 million pa in capital and support costs respectively. Through greater convergence and harmonisations of Councils' processes and data requirements, both these procurements should enable research organisations to realise significant efficiency savings.

Implementation of dual support reform

70. Following a consultation exercise on the sustainability of university research the government announced that new procedures for Research Council and AHRB grants will come into effect from September 2005. The Research Councils and AHRB will pay 80% of the FEC of research and 100% of the full cost of equipment above £50,000. The Government has provided an additional £120 million a year from 2005/06 and an additional £80 million a year from 2007–08 in order to make sure the current volume of Research Council supported research in HEIs is maintained on a sustainable basis. In line with the aspirations in the ten year investment framework, Research Councils expect to move towards full sustainability and the payment of 100% of FEC early in the next decade but this will require further increases in the Science Budget beyond 2007–08 if the current volume of research activity is to be maintained.

71. The Research Councils are continuing to work towards ensuring the efficient implementation of the new funding system. However, concerns have been expressed by Ministers, Vice Chancellors and other senior research managers that the move to funding of projects on a FEC basis could perturb the current balance of Research Council funding of research in HEIs in a range of ways. It has therefore been agreed at Ministerial level that a small number of measures will be identified to enable these effects to be monitored and reported to inform decision making. Research Councils have therefore agreed to collect and report data on a consistent and regular basis as set out in Annex B.

72. The UK has pressed the European Commission about a move to FEC for future Framework Programmes, but the Committee understands that this is unlikely to be successful. RCUK is invited to comment on the likely impact on future UK participation in Framework Programmes. RCUK is aware of concerns being raised within the UK research community regarding the potential impact of the introduction of the TRAC methodology, which will allow identification of the full economic cost (FEC) of research, on EU-funded research activities. Whilst it is not currently possible to provide evidence on the impact that the move to FEC could have on UK participation in FP7 and beyond, the Research Councils, through UKRO, are carrying out work that should provide a clearer picture of the situation. Details are given at Annex C.

Relationship with DfES

73. On two occasions the Committee expressed concern that the academic research environment is being determined by DfES higher education policy and it has recommended that RCUK should produce and promote a common Council view on the potential implications of the government's higher education policies.

74. RCUK held discussions with OST and DfES on the Higher Education White Paper and was formally involved in the government consultation. The establishment of the Research Base Funders Forum in September 2003 provides an environment where both sides of the dual support system and the other main funders of "public good" research can consider their collective impact on the sustainability, health and outputs of the UK research base. This includes the overall size of the research base and the correct balance between subjects to meet the needs of stakeholders. RCUK will therefore continue to work largely through this medium.

75. In addition, following the disbanding of the Science and Engineering Base Coordinating Committee in 2004, RCUK and the Funding Councils believe that there is a need to strengthen both strategic and operational level dialogue between the two groups of organisations, not least to share emerging ideas on major policies and procedures at an early stage of development. To this end, Sir Howard Newby will attend the RCUK Executive Group twice a year and a reciprocal arrangement will be put in place to enable the chair of the RCUKEG to attend the HEFCE Research Board. Both groups of organisations have undertaken to regularly exchange draft papers on emerging priorities and policies. In addition, RCUK and the Funding Councils are meeting in early February to explore how communications and interactions might be improved across the whole spectrum of their activities.

Health of disciplines and skills shortages

76. Concerns about the sustainability of the UK research base and about research provision have grown over recent years. The issues are wide ranging, and include rebuilding and maintaining the physical and scientific environment for conducting research (buildings, major equipment and facilities), the attractiveness or not of careers in research, maintaining international standards of excellence across the entire research base, and the funding structures and mechanisms for supporting research.

77. There is a need for all interested parties, including Research Councils, Funding Councils and the universities, to work in partnership to ensure that research capacity across the science base is maintained. This issue is being specifically addressed through the Research Base Funders Forum, who are initially focusing on the short term problems around health of disciplines and are developing of a set of metrics to

help DfES, the Funding Councils, OST and Research Councils create and implement evidence based policy on intervention in subjects giving cause for concern. RCUK produced a summary of areas where there is a concern over the future supply of researchers and health of disciplines, together with information on grade profile and demographic analysis. This analysis reveals that the question of what constitutes a healthy research base cannot be answered simply: the answer is discipline dependent and not solely a function of numbers of staff or trends in student numbers. For example, there is universal agreement that the decline in numbers of full-time staff in the physical sciences is of concern. However, there is also concern over the development, retention and recruitment of world class researchers in business and management, despite an overall increase in numbers of staff in these disciplines. Also, overall upward trends may mask shortages in key sub-disciplines, for example the biosciences appear healthy overall, but this masks gaps in whole animal physiology and some aspects of health services research.

78. Work is now underway to identify a small number of simple quantitative indicators, based on readily available information (Research Council and HESA data) providing insights into any changes in the breadth of the research community and its changing composition. Research Councils also see the value in producing reports, drawing on quantitative and qualitative information such as the proportion of permanent academic staff associated with a particular discipline and their age distribution, numbers of postdoctoral researchers and research students, level and number of sources of research income, demand for research funding and trends in outputs such as publications. This will help highlight emerging and potential threats at the discipline and sub-discipline level. The project should be completed early in 2005. Subsequently the Funders Forum will develop more general metrics on research excellence (outcomes) at institution level (eg a long-term project starting January 2005).

79. RCUK agrees that a multi-Council approach is needed to address skill shortages in key cross-cutting areas and to grow the population of researchers who possess first rate specialist, analytical and transferable skills to enable them to work in multi-disciplinary teams and outside of their discipline area. However, all Councils have an interest in monitoring the health of the research disciplines within their own remits to understand the ability of the research base to renew itself, and all wish to ensure that any cross-Council interventions are sufficiently flexible to enable Councils to take account of the particular needs and characteristics of individual subject areas and disciplines.

80. At the present time, in addition to the work outlined above, the Councils are deploying the additional funding to implement the recommendations of the Roberts Review to provide enhanced postgraduate stipends and postdoctoral salaries in areas of research where there are recruitment issues such as statistics and mathematics. Roberts funding for skills and career development is also being used to increase the level and awareness of transferable and careers skills by researchers. Monitoring and reporting will enable RCUK to build a cross-Council picture of the impact of these investments in due course.

81. Furthermore, all of the Councils already share information and develop joint policy and funding initiatives with each other. There is currently considerable joint activity between the Research and Funding Councils in this area. For example first, EPSRC, in partnership with HEFCE and SHEFC, is taking the first steps towards building capacity through the investment of £10 million in its new science and innovation awards. The purpose of these awards is to secure strategically important research areas that are missing or "at risk" in the UK. Many of these subjects have relevance for the broader research base, for example, in the life and environmental sciences, or in providing the fundamental knowledge that is exploited in astronomy, particle physics and the development and provision of large-scale facilities needed to keep UK research at the international leading edge. They are also essential for future developments in business and public services. Secondly, AHRB, ESRC and HEFCE are developing an initiative which will fund strategic subject centres and training in area-based language studies. A major aim of this initiative will be to develop a cadre of researchers able to work at the highest level on for example the economics of nations such as China and Japan while at the same time being able to speak these languages fluently. Thirdly, initial discussions have been held between BBSRC and HEFCE on areas such as whole animal physiology and between ESRC and HEFCE on quantitative social science.

82. It is also clear that the RAE has a very significant role in driving research behaviour and HEI strategic management of research. The RAE should help create a healthy research environment which supports and promotes high quality research. To facilitate this, universities need to understand as far as possible, what the implications of the exercise will be for future research funding.

Strategic capabilities funding

83. The Committee has asked RCUK to set out its views on how the £70 million DGRC's strategic funding announced in the ten year investment framework should be deployed to "ensure the health of disciplines", and also whether RCUK should manage a national strategic capabilities fund as recommended in the ESRC scrutiny report.

84. RCUK welcomes the £70 million strategic funding announced in SR2004 and each Council has included its priorities for ensuring the health of disciplines within their remits in their delivery plans. RCUK believes that this funding should be used to fund time critical priority activities from these Research Council delivery plans, both new and emerging priorities and initiatives aimed at underpinning the health of disciplines.

85. Research Councils would also welcome the allocation of additional resources to support the development of such strategic capabilities, recognising that there are skills issues that could usefully be addressed through RCUK. However, ensuring national coverage in key subject areas is mainly an issue for the Funding Councils and would need to be taken forward by the Funders Forum. RCUK has worked with the Funding Councils to prepare a report for the Funders Forum which highlights both whole disciplines and sub-disciplines in urgent need of investment if a strong research base is to be ensured. Both the Funding Councils and the Research Councils have expressed a wish to take forward this agenda jointly when the remaining allocations are made.

Maintenance of regional strength in core disciplines

86. The Research Councils have a national remit and adopt a UK-wide strategic view on research capability. All Councils' policy is to fund the highest rated proposals they receive, regardless of institution or geographical location. The Research Councils strategic priorities for engagement with the RDAs are knowledge transfer (including continuity of funding to bridge the development gap and articulation of industry needs), training (including articulation of regional needs and involvement of companies in postgraduate training) and large facilities. At an operational level there is extensive interaction between the Councils and RDAs, particularly with those Councils with institutes. Councils and RDAs are working in partnership on a range of regional initiatives, collaborations and facilities, as well as promoting entrepreneurship and knowledge transfer from the research base.

Research Assessment Exercise (RAE)

87. RCUK was fully engaged in the consultation process through which the Funding Councils set the parameters for managing the 2008 RAE. Sir Gareth Roberts and HEFCE officials discussed this with Research Council chief executives, and RCUK provided substantial inputs into formal consultation process. When the Funding Councils published their initial views on the 2008 RAE, in February 2004, RCUK expressed its satisfaction that a number of its views had been taken into consideration:

- setting up of a system of panels and sub-panels to run the assessment, with fewer units of assessment main panels than in previous exercises;
- inclusion of users and international members on the panels;
- introduction of a quality profile and decision to move away from the originally-proposed three star system to a four star system;
- RAEs to take place at six-yearly intervals;
- recognition of the issue of collaboration across institutions, notably the decision to allow joint submissions between two or more institutions;
- recognition of excellence in applied and practice-based research; and
- moving towards the use of quantitative indicators appropriate to each discipline.

88. However, on the basis of communication with the Funding Councils during 2003, RCUK had anticipated that the 2008 RAE would incorporate significant innovations in relation to previous exercises. Consequently, there was some disappointment that the Funding Councils appeared to have shied away from fundamental reform, notably concerning:

- the decision not to allow institutions to choose between assessment routes and thereby to cast aside the idea of introducing a three-track assessment process; this missed an opportunity to streamline the process and make the effort involved more proportional to the financial allocations involved;
- failure to endorse the broadening of the RAE through the development and consideration of institution-level strategies as part of the assessment process—such broadening would have been an opportunity to create a bridge between the Funding Bodies' retrospective approach to research funding and the Research Councils' prospective approach;
- lack of clarity about how funds are to be allocated between institutions and subjects, in an effort to reduce the potential for "game-playing" and avoid creating perverse incentives;
- apparently insufficient consideration of the challenges posed by the evaluation of cross-disciplinary research;
- failure to set up each panel with a moderator (separate from panel chairs) to ensure consistency of practice across the sub-panels.

89. In April 2004 the Funding Councils set out their views on the proposed RAE panel configuration and recruitment. RCUK again underlined its concern about multidisciplinaryity, and whether the proposed panel configuration would adequately meet the challenge of evaluating inter-panel research. In the event, these concerns do appear to have been taken on board: the Funding Councils' more detailed guidance on units of assessment and panel recruitment (published July 2004) recognised, more explicitly than before, the need

for mechanisms to address the requirements of multidisciplinary—notably through the appointment on sub-panels of specialist advisers with cross-disciplinary expertise. The July guidance incorporated further information reflecting sensitivity to Research Council views:

- recognition of the importance of treating applied and practice-based research on an equal footing as basic research, with appropriate expertise on the sub-panels;
- commitment not to discriminate against joint submissions from different departments or institutions; and
- reconfigured panel structure, modifying what was proposed in April 2004 and taking account of views expressed by Research Councils, notably EPSRC, ESRC and MRC

90. Research Councils have put forward nominations for chairs, members and other positions on the sub-panels, and for Research Council observers on the main RAE panels, as well as requesting an opportunity to contribute to the development of the detailed panel guidance on assessing multi-disciplinary and collaborative research. In January 2005, the Funding Councils published detailed, practical guidance for panels and sub-panels on the development on their assessment criteria and working methods. This underlined the importance attached to addressing the needs of multidisciplinary research, by adapting the criteria used by the sub-panels in order to facilitate the emergence of new sub-disciplines. The guidance allows for research environment to be built in as a factor of assessment alongside research outputs; this will provide the sub-panels with at least some opportunity to consider strategic issues such as objectives and activities over the next five years, and research infrastructure. There will be more detailed guidance during the summer of 2005 on the submission of such information—it remains to be seen how this might address the concerns expressed by the Research Councils on the consideration of institution-level strategies and assessment of practice based and collaborative research.

Postgraduate training and research careers

91. In its scrutiny of individual Research Councils the Committee has recommended that all Councils should allow contract researchers to apply for research grants. RCUK recognises the need for flexibility in allowing contract researchers a degree of access to Research Council grant funding. Exact practices vary, but systems are now in place so that contract researchers are eligible to apply for funding where they make a significant contribution to the formulation and development of an application/project, as co-applicant or named individual on the application form (BBSRC, ESRC, EPSRC, NERC, PPARC). In some cases, Councils have gone further. PPARC allows certain senior postdoctoral researchers to apply for grants in their own right, and AHRB allows contract researchers to apply for its grants as long as their contract covers the whole of the relevant grant period. Harmonisation of policies on eligibility for grant funding is an area that will be explored further in 2005.

92. The Committee has previously stated that doctoral training accounts (DTAs) have been well received by the academic community and should be extended to all Councils. DTAs were introduced by EPSRC in 2001 and have subsequently been adopted by MRC, with BBSRC planning to introduce their own DTAs widely from 2005 following a successful pilot. The terms and conditions of the EPSRC and MRC grants are identical facilitating joint funding and collection of student data for these Councils uses a joint electronic model through the JeS portal (BBSRC are currently considering whether to participate in this system).

93. The DTA model shifts responsibility and discretion in decisions on postgraduate training from the Research Councils towards the universities. The EPSRC/MRC approach can be characterised as devolving a high degree of discretion coupled to monitoring of outcomes and patterns of distribution—both Councils use an algorithm to determine the distribution of funds between institutions, although it should be noted that the BBSRC DTA model is based on a competitive approach reflecting the quality of the training environment in individual departments. Most of the other Councils have consulted their academic communities on the viability of DTAs, and on balance they have decided not to adopt DTAs at the current time. This enables these Councils to maintain a greater level of control over the distribution of studentship funds between research disciplines in order to ensure the health and quality of training in those disciplines. The picture is not static and the Councils continue to work together and to share good practice.

94. The Committee recommended that RCUK should work with the DTI to develop mechanisms to enable all Councils to provide maintenance grants to non-UK nationals. This is a high priority issue for the Research Councils, but discussions are currently on hold pending the outcome of a case in the European Court of Justice on which a final ruling is expected in early 2005. The expectation is that discussion will then be resumed between DTI/OST/Research Councils and DfES, who control the legislative side of this matter.

Other stakeholder engagement issues

95. RCUK chose to define its public consultation on potential SR2004 priorities broadly in view of advice received at the time about likely SR2004 outcomes, in order to avoid raising unrealistic expectations about potential new research activities. Although the public consultation did not yield a large number of useful responses, RCUK did undertake more detailed discussions with the CBI and RDAs producing valuable and useful feedback. In addition, the rapid and unpredictable way in which research evolves means that it is

neither feasible nor desirable to be overly prescriptive in defining priorities for future research. Both individually and collectively the Councils will continue to listen and respond to the opinions of academia, business, government, other funders and the public to develop and articulate clear and coherent strategies and priorities for investment.

96. In its scrutiny of EPSRC, the Committee suggested that all Councils might adopt the EPSRC model of having a Technical Opportunities Panel and a User Panel to identify new research areas and provide stakeholder input on key issues. Every Research Council has its own structure of high-level advisory groups and boards that fulfil equivalent roles to EPSRC's TOP and UP. The number, structure, membership and operation of these bodies reflect the nature of each Council's academic and user communities. All Councils also regularly review their advisory structures to ensure that they are fit for purpose. For example, PPARC reviewed in advisory panel structure in 2001 and 2003. This confirmed that its current arrangements are effective, but measures are being taken to strengthen the mechanisms for obtaining advice on long-term strategic priorities. NERC reviewed its advisory bodies in 2001 and set up its Science and Innovation Strategy Board as a result. This board includes both academics and users and advises the Council on research priorities as well providing stakeholder advice. MRC also revised its Board and strategy committee structure in 2004, including its advisory group on public involvement.

97. The Committee has recommended that Councils should do more to employ electronic means for engaging with their communities, particularly enabling researchers and administrators to enter into debate with the Councils and to stimulate discussion on key issues. All of the Councils employ electronic means for engaging with the academic and user communities. Examples include:

- PPARC used a web based consultation when reviewing its advisory structure and makes extensive use of email news groups to disseminate information and encourage feedback.
- CCLRC plans to use an on-line consultation process in development of the neutron strategy.
- ESRC is already experimenting with an online discussion forum for ESRC administrators and is developing an online information centre, ESRC Society Today, which will disseminate research outcomes to a broad audience, but will also provide facilities for online discussion. The discussion forums will be used, for example, to enhance engagement of researchers and administrators with the ESRC.
- NERC has used web-based consultations widely and effectively in its recent training review, and for its future science priorities in 2003 and intends to do so in its blue skies review. NERC also has a web site dedicated to its peer review college members and recently launched an online "pinboard" to enable anyone to submit ideas on any aspect of NERC science.
- MRC has used web-based consultations for a number of issues including NIMR, the Human Tissue Bill and open access publishing.

98. In addition, RCUK will be launching its new website at the end of January 2005. In addition to providing information about RCUK and major multi-Council research programmes and funding schemes, the new site will provide a series of simple gateways and links to common information across each of the Councils individual websites.

Knowledge transfer

99. In its scrutiny reports of individual Research Councils the Committee has recommended that Councils should fund more knowledge transfer (KT) activities on a cross-Council basis. In particular, the Committee recommended that the proof of concept fund should be expanded to create a single funding pot across all Councils.

100. Research Councils are increasingly supporting more KT activities on cross-Council work, where it is feasible and appropriate to do so. Schemes common to some or all Councils include CASE studentships, Knowledge Transfer Partnerships, the Business Plan Competition and Follow on Fund, whilst Councils are currently discussing plans to establish a cross-Council academic-user staff interchange scheme. The considered view of RCUK is that the current mechanism of support for the Follow on Fund works effectively, with common application dates, forms and assessment criteria, but with final funding decisions made by individual Councils.

Science in society

101. The Committee has stated on several occasions that a more collective and coherent approach is needed to Research Council science in society activities. In particular, members have recommended that:

- RCUK needs to consider what role the Councils should play in the science and society arena vis a vis other funders and providers.
- A harmonised engagement strategy and a more collective approach to delivery is needed to raise the impact of the Councils in this area, and make best use of limited funding.
- a more collaborative and coordinated approach with the Royal Society, learned societies, Government Departments and others will deliver more effective public engagement.

102. Following a debate at RCUKSG in March 2004, Councils agreed the need for a more collective approach to science and society activities and agreed to develop a cross-Council science in society strategy which will set out the unique role of the Councils in this area, set clear aims and objectives, map current spend and activities, outline plans for joint working, and explicitly join up with the work of OST. The aims of this strategy are to:

- Account for Research Councils investment in research by keeping the public informed through channels such as the media about developments, achievements and impacts that flow from research.
- Sustain public confidence in the Research Councils' independent approach to research.
- Foster debate that will enable public contribution to Councils' policies and research strategies.
- Identify public attitudes and views that should be considered in the conduct of research and in the use of its outputs by business and policymakers.
- Engage young people with contemporary research so that more pursue science studies beyond 16 and follow R&D careers; and that more are able to act as informed citizens.
- Encourage, support and reward researchers funded by the Councils to engage with the public and to participate in activities that benefit the relationship between science and society.
- Create opportunities for greater integration and strengthen Research Councils work with other bodies involved in science in society activities.

103. It is hoped that the RCUK science in society strategy will be launched in May 2005.

104. In addition, the Councils have agreed to establish a small RCUK business unit to bring together existing Research Council activities in the science and society area that could be managed and delivered more effectively on a collective basis. This will include coordinating engagement with other key players such as the BA, SETNET and DfES, running multi-Council activities such as the Researchers in Residence scheme, BA CREST scheme, schools science race, Councils' support for Nuffield bursaries etc, and coordinating relevant cross-Council exhibitions, events and public dialogue activities. The new unit will be launched on 1 April 2005.

Evaluation of activities

105. In it scrutiny of individual Research Councils the Committee recommended that there should be a standard and extensive set of performance indicators applied to and reported on by all Research Councils. A key QQR recommendation was that RCUK develop a new framework for evaluating the performance of Research Councils. This project was undertaken during 2002, approved by RCUKSG in November 2002 and implemented in 2003. The resulting system embraced a "pannier" of indicators, programme evaluations, surveys and case studies using quantitative output indicators, placing emphasis on outcomes and impacts through the use of specific evaluations and studies. However, the ten year investment framework announced that OST would be developing of a comprehensive, integrated and efficient performance management system for the Science Budget, including the Research Councils. This supersedes the current performance management system developed by the Councils. Full details are at paragraph 30.

106. The Committee has recommended that all Councils should implement a rolling programme of international reviews of disciplines to ensure that the UK retains strength in all research areas. All Councils recognise the need for international benchmarking of research. Some (eg EPSRC and PPARC) have a rolling programme of international discipline reviews or are about to embark on such a programme (eg ESRC). In the case of others (eg BBSRC and MRC) field reviews are commissioned as appropriate especially when reviews of entire disciplines such as biology or medicine would be too broad to provide useful input to developing future policy and strategy. These reviews are conducted in such a way to enable the UK research activity to be set in an international context, whether through international representation on the review panel or through the presentation of data about the scale and scope of UK activity in relation to the wider international research effort. Reviews may focus largely on international peer review opinion or may also be informed by more quantitative information, including bibliometrics.

107. The Committee has also expressed more general concerns that Councils are not doing enough to assess the long-term impact of their funding investments. All Research Councils monitor and publish details of scientific achievements, with examples being included in the annual reports to parliament. Often these achievements reflect investments over a long term. Some Councils eg NERC operate an annual achievements panel which also picks up on the longer-term impact of investments. Opportunities may also arise to highlight selected areas of research (such as the impact of research on health over the 50 years following the description of the double helix, MRC).

108. In addition, all Councils undertake a variety of evaluation activities, appropriate to the nature of their different scientific programmes, encompassing the outcomes of responsive mode funding as well as strategic initiatives and programmes. The focus of many evaluation activities is on understanding the immediate outputs and short- to medium-term outcomes such as providing input to decision-making. Different evaluation approaches are required to develop a more systematic understanding of the longer-term economic impacts of research and its impact on quality of life as well as the influence of research on public

policy. New approaches and methodologies are being developed by Councils and others, in addition to the use of case studies, to address the complexities arising from the multiplicity of research funders and the extended periods over which impacts can be observed. For example, ESRC are developing new approaches to bibliometrics and non-academic impact that should enable longer-term impact to be tracked more effectively.

109. The Committee has commented on several occasions that Councils need to develop and adopt more sophisticated indicators to measure knowledge transfer, particularly the extent to which Council funded research is being commercialised. In the last 12 months Research Councils have undertaken a comprehensive programme of work to develop baseline metrics to better understand current levels of knowledge transfer activity. Councils have each produced plans to increase their rate of knowledge transfer and interactions with business in response to the DTI Innovation Report, and these plans include targets against which the Research Councils performance will be assessed in the coming years. The targets will also form the basis of a set of new metrics which will be incorporated into the “better exploitation” section of the Science Budget performance management framework (paragraph 30). During 2005 Councils will also agree metrics and milestones with OST by which progress can be demonstrated over the SR2004 period and beyond.

110. In the interim, Research Councils are continuing to monitor the performance of their KT and innovation schemes, often as part of normal reporting mechanisms (eg in relation to CASE and Industrial CASE studentships) such as project final reports or annual performance submissions. Full evaluations can be costly. Two of the largest national KT schemes that Councils sponsor, LINK and TCS (now called Knowledge Transfer Partnerships), have had major evaluations in the past five years and were both shown to be extremely effective in helping to transfer knowledge between the academic and user communities.

111. The intellectual property that arises from Council-supported research in universities resides with the grant-holding university. Universities submit annual information to HEFCE through the higher education-business interaction survey (HE-BI), which includes commercialisation, though the information cannot be traced back to individual research grants. In addition, researchers provide commercialisation information directly to Councils via annual research output submissions and/or research grant final reports. However, this does not cover all commercialisation activity, as there is often a significant timelag between research being undertaken and the outcomes of the research being commercialised.

Extent to which councils support research which is mainly for non-UK Benefit

112. Each Research Council’s charter states that the Council may pursue its objects in the UK or elsewhere. RCUK believes that it is not feasible to try to identify research funded from the Science Budget which is of “non-UK benefit” since all research supported by the Councils will bring some benefit to the UK, if only indirectly. For example, the fact that a disease is not common in the UK does not mean it is not a UK problem, as infectious diseases do not respect international borders. Malaria is a good example where a significant number of cases appear in the UK each year as a result of people traveling abroad. Another example might be Asian bird flu—development of vaccine in the UK could result in a substantial economic return if this could be sold or licensed in Asia.

113. In addition, the benefits of supporting research undertaken in the international arena are usually based on a unique opportunity. This may include access to unique facilities, datasets or specimens or the opportunity to study specific communities. In addition in the social sciences and humanities, international comparisons are essential to understand how the UK is faring. It is also Government policy to reduce poverty in developing countries and research has a vital role to play in this.

Open access

114. In recent months, RCUK has been developing a policy framework on the dissemination of and access to UK research outputs, which includes consideration of open access publication. This is now being refined following significant consultation within the Research Councils and with key stakeholders such as the librarian community, publishers, JISC (Joint Information Systems Committee), academic groups with an interest in e-print repositories, the British Library, HEFCE and Government. RCUK anticipates that the policy framework will be approved later in 2005.

115. The draft policy, as it currently stands, is based on the premise that research outputs, including publications, are an integral part of the research process and that they raise challenges that are common to all Research Councils. The document is likely to set out four fundamental principles:

- Ideas and knowledge derived from publicly-funded research must be made available and accessible for public use, interrogation and scrutiny as widely, rapidly and effectively as practicable;
- Effective mechanisms must be in place to ensure that published research outputs are subject to rigorous quality assurance, through peer review;
- Models and mechanisms for access to research results must be both efficient and cost-effective in the use of public funds;
- Outputs from current and future research must be preserved and remain accessible not only for the next few years but for future generations.

Cooperation with AHRB/C

116. The transition of the Arts and Humanities Research Board (AHRB) to the Arts and Humanities Research Council (AHRC) is not only extending a system of funding to the arts and humanities, it is re-configuring the landscape of research supported by the Research Councils. The involvement of the AHRB in the activities of RCUK is enabling it to establish links with the other Research Councils and thereby to promote collaborations between arts and humanities researchers and colleagues working in other subject areas. The arts and humanities integrate with other subject areas throughout the research landscape, both in areas where there is a common thematic focus—such as law, history and linguistics—and those where the application of technologies and techniques is of mutual interest, as in archaeology and many of the disciplines underpinning the creative industries. The result is an enriching of knowledge, understanding and creativity through the identification of new problems and possibilities, and new ways of investigating them.

117. AHRB has participated in RCUK since its establishment and has already developed a considerable range of research collaborations with the other Research Councils. With the ESRC, the AHRB is co-funding the Cultures of Consumption programme, which is studying changing patterns of consumption in a global context. Last year, it launched the joint AHRB/EPSRC Designing for the 21st Century programme, which aims to address the challenges of modern design by developing new collaborations across the arts and the physical sciences. On a smaller scale, the AHRB is co-funding with the NERC an analytical facility for archaeologists and it has launched, with input from the MRC, a seminar series on the relationship between the Arts, Humanities and Medicine. AHRB has also agreed to join the other Councils in funding the UK Research Office in Brussels.

118. The perspectives of the arts and humanities are embedded in the RCUK Vision for Research. This incorporates a number of research areas where the approaches and concerns of the arts and humanities will be central, notably those relating to human culture, identities, languages and beliefs, and others where the arts and humanities will make an important and novel contribution, for example in understanding the human brain, the environment and technological change. The AHRB's contribution to the e-publishing debate has also ensured that the distinctive publishing practices in the arts and humanities have been reflected in the RCUK's position.

119. Collaborations of this kind will be sustained and enhanced during the initial years of the AHRC. With the ESRC, the AHRC plans to support a major programme that will investigate how Identities and Cultures are constructed, modified and developed, and to establish a network of Centres that will sustain language-based research in important, but declining areas. The AHRC's involvement in the cross-Council e-Science programme will extend the application of grid technologies, exploring new ways of processing, integrating, storing and accessing the distributed texts, images and sounds with which arts and humanities researchers work. Building upon the AHRB's support for the development activities of the UK Grad programme, the Researchers in Residence scheme and the RCUK Academic Fellowships, and membership of the RCUK postgraduate training group, the AHRC will also provide funding to ensure that postgraduate and post-doctoral researchers in the arts and humanities benefit from the generic skills training jointly-funded by the Research Councils.

120. AHRB is participating in significant elements of the programme of harmonisation and convergence of administrative and support services within the RCUK Administration Strategy. These include the Research Administration Programme (RAP) where AHRB will be implementing JeS for applications for research funding with effect from September 2005, which will coincide with the introduction of the FEC regime. AHRB has been actively involved in the development of options for convergence in the HR and finance areas, information services and electronic records management. AHRB has also transferred responsibility for provision of recruitment services to the Joint Recruitment Unit, based at Swindon, thereby allowing its very small HR team to focus on more strategic issues. The feasibility of contracting-out payroll services to another Research Council is currently being explored.

121. Participation in joint or converged administrative services makes sense for AHRB in many areas—particularly where a broader or enhanced range of services can be provided than would be possible in a relatively small organisation of the size of AHRB. AHRB will continue to consider opportunities for involvement in projects and programmes falling within the Administration Strategy as they arise over the forthcoming period as AHRC is established.

January 2005

Annex A**IMPLEMENTING THE RECOMMENDATIONS FROM THE 2004 REVIEW OF RCUK**

1. The OST 2004 review of RCUK was published in October 2004. The report identified four issues to be addressed:

- To clarify the role of RCUK, its [RCUKSG] chairmanship, and its relationship to the individual Research Councils and OST, within a clear framework of accountabilities.

- To make a clearer differentiation between RCUK's strategic and operational roles in order to give focus to each.
- To ensure that RCUK is able to make a contribution to national science strategies and policy and to ensure that its own strategies take into account this wider scene.
- To make more progress in coordinating or standardising essential administrative systems and processes.

2. The report made seven recommendations for taking these issues forward. RCUK made a formal response to OST in September 2004, together with an implementation plan, which was subsequently approved by the Science Minister. Considerable progress has already been made in implementation and it is anticipated that all actions will have been completed by 31 March 2005. Progress against the specific review recommendations is as set out below.

RECOMMENDATION 1

1.1 *[RCUK] should comprise the Chief Executives . . . and the dedicated support staff. It should be chaired by one of the Chief Executives.*

1.2 *The role of RCUK and the accountabilities of its chair should be clearly defined and agreed by the individual Research Councils. A mission statement should also be produced. These should be consistent with the aims set out in the QQR.*

1.3 *Leadership of RCUK will be provided by its chair and by the Councils' Chief Executives working together as a group—the RCUK Executive Group. The chair should be appointed annually by peer selection; it could be renewable but should not be by rotation.*

1.4 *This group should meet monthly to address issues consistent with its role and absorb the activities previously carried out by HORCs.*

3. In the response to OST, Research Councils reiterated that RCUK is a strategic partnership between the seven Research Councils and AHRB. It comprises all Research Council employees involved in joint activities. The RCUK mission statement was agreed and published in December 2003.

4. The new RCUK Executive Group was established in September 2004 to lead the RCUK partnership. The group has clear terms of reference and Councils have agreed the specific responsibilities of the chair as well as the responsibilities of chief executives representing RCUK on external bodies or leading on RCUK projects. RCUKEG is chaired by one of the Chief Executives (Professor Ian Diamond for 2004-05) and meets monthly. It has taken on many of the responsibilities from the former RCUK Strategy Group and the informal gathering of chief executives known as the Heads of the Research Councils (HORCs) group.

RECOMMENDATION 2

2.1 *RCUK should implement a programme aimed to improve collaboration and communications across the Councils.*

5. The establishment of RCUK has provided many new opportunities for bringing people together from across the Councils to work on a wide range of joint projects and activities. This has encouraged greater trust and mutual understanding and strengthened pre-existing collaboration between the Councils. The issue of collaboration has been discussed by the RCUK Operational Management Group (OMG), who have commissioned the development of an internal communications strategy and implementation programme as part of plan for making more progress on administrative harmonisation (recommendation 5).

RECOMMENDATION 3

3.1 *After due consideration with stakeholders and in agreement with Council Chairs, RCUK should be set clear measurable objectives by OST. These should relate to both strategic and operational matters and be included in the personal objectives set for the Chief Executives and their staff. DGRC should review progress against these objectives on a regular basis.*

6. The RCUK mission statement, and the helpful clarification provided by the Review Report, makes it clear that RCUK is a partnership between, and owned by, the Research Councils. On this basis, the development and agreement of objectives for RCUK is being taken forward a joint activity between the Chief Executives and Chairs of the Research Councils and OST, involving iteration with stakeholders where appropriate.

7. New objectives for RCUK for the SR2004 period are being developed in parallel with the development and agreement of objectives for the individual Research Councils, and will be published in the RCUK delivery plan in March 2005. The arrangements and timetable for monitoring performance will also be aligned with those for individual Councils. In addition, RCUK responsibilities will be included in the personal objectives of Research Council chief executives and will be cascaded to their staff as appropriate.

RECOMMENDATION 4

4.1 *A new "Strategy Group for RCUK" should be formed to assist RCUK in the development of strategy for research and science in the context of the wider Government science and innovation policy. This same forum would also be one of the means whereby RCUK can provide advice to Government from its own knowledge of its user community.*

4.2 *The Group would be chaired by DGRC, would include Chief Executives and would normally meet on a quarterly basis. In order to inform and be informed on the wider Government perspective its membership might also include as standing members or by invitation, the CSA to the Prime Minister, DG Innovation, Chief Executives of the Funding Councils and others as required by the agenda. Support for this group should be provided by OST's Director for the SEB working closely with support staff from RCUK.*

8. The Joint OST/RCUK Working Group for Strategy or Joint Strategy Group (JSG) has been established. This group is chaired by the DGRC and provides a means through which the chief executives of the Research Councils and AHRB can meet with OST to discuss high-level strategic issues and in which RCUK can provide advice to DGRC. The CSA to the Prime Minister, DG Innovation etc will be invited to attend as required. In addition, DGRC meets monthly with the chair of RCUKEG.

RECOMMENDATION 5

5.1 *A plan for making more progress in coordinating or standardising appropriate administrative systems and processes should be defined and agreed with DGRC by the end of 2004 at the latest. Consideration should be given to using external help in formulating this plan, which should conform to the Gateway process and therefore be the subject of independent peer review.*

5.2 *Those responsible for the delivery of this plan should be given the full authority and support of the RCUK Executive Group.*

9. Chief executives have tasked the RCUK OMG with responsibility for the strategic direction of the RCUK Administration Strategy and overseeing resource commitment, communication with staff and with monitoring its implementation. There have been extensive discussions during autumn 2004 to clarify the aspirations and objectives of administrative harmonisation, closely linked to the Gershon efficiency project to deliver the efficiency savings required from Research Councils. A plan for making more progress in coordinating or standardising appropriate administrative systems is in development and should be completed by end of January 2005. This will include elements of recommendations 2, 6 and 7.

RECOMMENDATION 6

6.1 *RCUK should have dedicated personnel and other resources sufficient to support its strategic role, enable it to coordinate and facilitate policy work, provide support to RCUK working groups and provide effective communications internally and to its external stakeholders.*

10. The dedicated resources needed to deliver RCUK activities will depend on the scope of its new objectives, the priorities in the RCUK delivery plan (including work arising from the new plan on administrative harmonisation) and the timescales agreed for delivery. Once decisions have been taken on the implementation of the other Review recommendations, RCUKEG will assess the resource implications. This will include reviewing the network of RCUKEG cross-Council support groups, their governance arrangements and terms of reference, agreeing the resource commitment required from individual Councils and reviewing the staffing and resources of the RCUK Secretariat and Programme Management Office using value for money criteria. This assessment will be completed by March 2005, with agreed resources in place by 1 April. Following discussions about the management of the Administration Programme it has already been agreed to merge the main RCUK support groups into a single RCUK Secretariat (paragraph 24 of the main evidence paper).

RECOMMENDATION 7

7.1 *Once defined, RCUK's role, its responsibilities, relationships and ways of working should be communicated effectively such that both its internal and external stakeholders are clear to its purpose.*

11. The new business model was announced by OST in mid-October. RCUK put out a press release and the RCUK website was revised and updated accordingly. Professor Diamond subsequently gave interviews to Research Fortnight and THES. Presentational material about RCUK used by the Research Councils in engaging with external stakeholders has also been revised. Internally, a note from Chief Executives was circulated to all Research Council staff, who were provided directly with, or with access to, the Review report and implementation plan.

12. As a result of the review, RCUK is undertaking a review of its external relations strategy to ensure that resources being invested by Councils both individually and collectively are delivering the desired outcomes. This includes in a Parliamentary perceptions audit. This review is being lead by Professor Julia

Goodfellow and will report to RCUKEG by March 2005. RCUK is also undertaking a major re-development and expansion of the RCUK website to improve the services it provides to external stakeholders. The new site will go live in early 2005. A project to explore the expansion of internal web services is also underway.

13. Internal communications issues feature in several recommendations. Decisions on key recommendations, such as 1 and 3, need to be taken before this issue can be addressed. It is anticipated that internal communication issues will be taken forward in the context of recommendations 2, 5 and 6 and reflected in the administration plan to be agreed with DGRC by end of January 2005.

Annex B

ARRANGEMENTS FOR MONITORING THE IMPACT OF THE MOVE TO THE FEC FUNDING REGIME

ACADEMIC TIME AND COST

1. Under FEC the costs of academic time will be included by HEIs in their costings and will be included in the Research Council's calculation of grant value. For the first time Research Councils will be seen to be contributing towards the cost of academics on a routine basis. This could lead to both increases in academic time declared on grants of existing types, as well as potentially new types of proposal where the bulk of costs are academic time and associated indirect costs. Research Councils collected baseline data in 2004, based on the estimates provided by academics on the time that they will be spending on a research project and will be carrying out analysis of these data during the period to July 2005. Research Councils will then assess academic time on successful grant applications to see whether there is any variation in the time being estimated on projects. This information will be compared on a regular (six monthly) basis with the pre-FEC baseline, at individual Council and RCUK level.

2. HMT has agreed that Councils might pay up to 100% of an individual's salary but they should not be paying more than 100% of an individual academic's salary. Individual Councils will therefore monitor data on total time of individual academics working on research grants. This might also be tested during a dipstick visit by asking Councils to list the most active academics at the institution and then doing a sample check. This will need to be handled carefully; for example an academic with a current grant may make a number of new proposals to carry the work forward, working on the assumption that not all proposals will succeed. Research Councils will therefore, in general, apply the check at point of announcement, rather than point of application. Even then, if there is only a minor overlap/overpayment (eg for 1–2 months) this might be acceptable, particularly if this would allow continuity of funding for an RA.

VOLUME OF RESEARCH FUNDED

3. OST and RCUK are clear that the volume of research supported by the Research Councils in HEIs should neither increase nor decrease as a result of the move to FEC. There is a concern in HEIs that Councils could use the additional funds to grow volume. It is important to measure volume so as to provide reassurance to the sector and OST. "Volume" has not been precisely defined; monitoring Research Assistants (RA) full time equivalents (FTEs) would not in itself be sufficient, as Research Councils might fund grants for "academic time only" at the expense of RA grants (one change as a result of the move to FEC might be for Councils to receive proposals largely based on academic time only). Volume, as defined as "FTEs of RAs plus academics" is also not adequate, as academic time will cost more than RA time. Composite measures are therefore required. It has therefore been agreed that Councils will monitor the proportion of grant applications which include requests for RAs. They will also monitor the FTEs of academics, RAs, technicians, project students and other staff funded on grants (ie five separate counts), and the associated costs. The data should be collected as a six-monthly time series, for each Council and collectively as RCUK. In addition, initially for one year, starting from January 2005, each Council will monitor on a monthly basis the percentage of announced FEC based grants in which there is a difference of more than $\pm 5\%$ between requested value and awarded value. Similar data on academic costs alone will also be provided.

APPLICATION NUMBERS

4. Another concern is that the move to FEC might increase numbers of applications received by Councils. For managed programmes this issue can be addressed by closer specification of the call. In responsive mode, however, there is no such constraint on demand, although it should be noted that proposal numbers can vary due to a range of factors, the effects of which might be difficult to distinguish. Research Councils will therefore collect numbers of research applications on a quarterly basis (for Councils with no closing dates) or by round (for Councils with closing dates). Data will be reported for individual Councils, with managed and responsive mode applications shown separately. Councils will also measure success rates for proposals (by number and by value of grants) on a quarterly basis (for Councils with no closing dates) or by round (for Councils with closing dates). Data will be presented for individual Councils, with managed and responsive mode applications shown separately.

BASELINES

5. In order to see any effects of the change to FEC, it will be important to compare to pre-FEC situations wherever possible. Therefore, in addition to the initial survey carried out in 2003, all Councils have amended their data requirements for academic time from October 2004. This will enable two periods of baseline data to be collected, October 2004–31 January 2005 and 1 February 2005–31 July 2005. The latter is a true six-month period which ends with the point at which pre-FEC grants cease to be accepted; the initial period will help to reveal any teething problems.

Annex C

IMPACT OF FULL ECONOMIC COSTING ON UK PARTICIPATION IN EU FUNDED RESEARCH

1. RCUK, through UKRO is currently addressing four issues around the impact on FEC on UK participation in EU funded research. These are covered in more detail below.

WHETHER OR NOT THE ABILITY TO IDENTIFY THE FEC OF ACTIVITIES WILL NECESSITATE A CHANGE IN COST REIMBURSEMENT MODEL FROM THE FRAMEWORK PROGRAMME (IMPACT ON FP6)

2. RCUK is aware that there is concern about the impact of FEC both on projects currently funded through FP6 and on projects that will be funded in the remaining two years of the programme. Specifically:

- All contractors are contractually obliged to use the appropriate cost reimbursement model;
- At present, the majority of UK academic community uses the additional cost model since they are not in the position to identify the direct and indirect costs of their project activities;
- The additional cost model allows the reimbursement of 100% of marginal costs;
- The TRAC system to identify the FEC will allow both direct and indirect costs to be identified, and could mean that the academic community will in the future will be obliged to use the full cost reimbursement model;
- Under the full cost reimbursement model, a proportion of total costs are reimbursed; and
- The academic community is concerned that they may be forced to move to the full cost reimbursement model before they are ready to do so.

3. The Research Councils, through UKRO, have consulted with the Commission on this issue and have been assured that:

- For contracts that are already underway, organisations will not be required to change cost reimbursement model for the duration of those contracts;
- Where organisations can provide assurance that it is still not possible to identify the direct and indirect costs at project level, future projects will still have access to the additional cost reimbursement model; and
- Where organisations have fully implemented TRAC and can identify the direct and indirect costs at project level, they should cost and charge future projects according to the rules of the full cost reimbursement model.

WHETHER ORGANISATIONS ARE LIKELY TO RECEIVE A GREATER OR LESSER LEVEL OF FUNDING FROM FRAMEWORK ACTIVITIES DUE TO A CHANGE IN REIMBURSEMENT MODEL (IMPACT ON FP6)

4. RCUK is aware that there is a perception that organisations could receive significantly less funding overall should they change to using the full cost reimbursement model. This is highlighted through speculation in recent publications that this will result in decreased participation in the Framework Programme in the future.

- The Research Councils, through UKRO, and in conjunction with the Joint Costing and Pricing Strategy Group (JCPSG) and Universities UK (UUK), are conducting a small number of case studies to test this hypothesis;
- Case studies are being carried out in six universities—a range of large and small institutions across all four countries of the UK—acting as co-ordinator or lead in different types of FP6 project/instrument;
- Preliminary results suggest that reimbursement rates under both additional and full cost models are broadly equivalent when costed accordingly; and
- The full results of the case studies are expected by March 2005.

5. RCUK, through UKRO and in conjunction with UUK, will be holding an event to inform the academic community of the case study outcomes, and to consider whether institutions are likely to suffer any impact in the move to the full cost reimbursement model.

6. It should also be noted that CCLRC already uses the full cost reimbursement model when applying for Framework Programme funding, and has examined whether or not there has been any financial disadvantage as a result. CCLRC's work has shown that there is as little as 1–2% different between the models, however it should not be assumed that what is true for CCLRC might be true for other institutions or other areas of research.

WHETHER OR NOT IT IS POSSIBLE FOR ORGANISATIONS TO OBTAIN 100% OF FEC FOR FRAMEWORK ACTIVITIES (FP6, FP7 AND BEYOND)

7. RCUK is aware that the current focus of the academic community on the additional cost reimbursement model means that the community is not fully aware of opportunities for having 100% of costs reimbursed for some activities under the full cost model.

- In the current Framework Programme (FP6), organisations using the full cost reimbursement model can be reimbursed up to 100% of eligible costs for a number of activities;
- Eligible costs using the full cost reimbursement model could be significantly higher than under the additional cost model, where only marginal costs are eligible;
- Where projects are more reliant on these activities, organisations may be financially better off than at present;
- It is likely that these instruments will exist in FP7.

8. RCUK, through UKRO and NCP activities, ensure that universities are aware of those activities where a greater level of costs might be reimbursed.

WHETHER OR NOT IT IS POSSIBLE FOR THE EU TO INCREASE ITS REIMBURSEMENT RATES TOWARDS 100% OF FEC (FP7 AND BEYOND)

9. In the 10 year investment framework, and in the UK position paper on FP7, the UK government proposed that universities and other academic partners should, in future Framework Programmes, be reimbursed 100% of the FEC of their activities, particularly in the context of a European Research Council (ERC).

- Issues relating to increased rates of reimbursement might mean a renegotiation of the State-Aid Framework for R&D. It is understood that the Framework is currently under review;
- If there is no real change to the State-Aid Framework, the only likely opportunity to allow reimbursement of FEC is ERC, since such basic research could not be assumed to have any marketable output.

10. RCUK supports the position of attempting to increase the reimbursement rate for the Framework activities carried out by the academic community.

APPENDIX 2

Memorandum from Office of Science and Technology

EXECUTIVE SUMMARY

Research Councils UK was established in May 2002 to enable the Research Councils to increase and improve collective and collaborative activities. A light touch review after one year concluded that it had made a promising start with some very positive achievements and an action plan for the future. As required OST critically reviewed RCUK at its two-year point and the report was published in September 2004. An implementation plan of the review recommendations is in place to reflect the growing maturity of RCUK. Copies of the report and the implementation plan were sent to the Committee at the time. OST considers the new arrangements to be a more efficient way of working and welcomes the clarification of the roles of OST and RCUK. This clearer definition of roles and responsibilities is coherent with the introduction of the new Performance Management System as required by the 10-year Framework.

1. *History and background to RCUK*

The 2001 Quinquennial Review of the Research Councils recommended a number of changes aimed at creating an enabling environment in which the Research Councils could operate collectively and respond flexibly to changing circumstances. Two key recommendations were that:

A Research Councils UK Strategy Group (RCUKSG) should be set up by the Research Councils and OST in order to enhance the collective leadership and influence of the Research Councils and encourage cross-Council collaboration both at strategic and operational levels and;

OST should review critically RCUKSG's record of achievements in 2 years' time.

2. *Operation of RCUK*

From May 2002 the Research Councils UK operated as all the Councils working together. The RCUK Strategy group comprised the Chief Executives of all the Research Councils and chaired by the Director General Research Councils (DGRC).

RCUK aimed specifically:

- to increase the collective visibility, leadership and influence of the Research Councils for the benefit of the UK;
- to provide a framework within which the overall portfolio of research supported by the research councils can be shaped to maximise the excellence and impact of UK research, and help to ensure that the UK gets the best value for money from its investment;
- to ensure joined up operations between the Research Councils wherever that is appropriate to achieve its goals and to improve services to the communities it sponsors and works with.

A work plan set out the work to be achieved by the RCUKSG and activities to be undertaken collectively by the Councils under the RCUK brand.

The input from RCUK has had a positive impact on decision-making eg on Large Facilities. Councils worked together in RCUK to produce the updated Large Facilities Road Map in June 2003, setting out the Councils' collective 15-year long-term view of large science facilities needed for UK researchers. In addition, between September 2003 and February 2004, RCUK prioritised the projects seeking funding from the centrally held Large Facilities Capital Fund and recommended that eight projects be earmarked for specific levels of funding profiled over several years. This involved discussion between Councils and compromise on all sides about when projects would start and how much central funding would be allocated to each, in order to match the aspirations with the projected available budget. The Minister for Science and HM Treasury accepted RCUK's recommendations in March 2004

RCUKSG met monthly under the Chairmanship of the DGRC. The agendas covered items relating to the three aims and regular review of the QQR implementation plan. The terms of reference and work plan can be viewed on the RCUK website at www.rcuk.ac.uk OST had membership on the group.

3. *Informal Review of RCUK*

The RCUKSG agreed that a light touch review after the first year would show whether it was on course to deliver the objectives and inform the future work programme. The review concluded that RCUK had made a promising start and recognised that the objectives of RCUK had evolved since the QQR. Some concerns were expressed about the clarity of rationales, roles and responsibilities in a number of areas. RCUKSG endorsed the view in June 2003 and agreed an implementation plan.

4. *OST Review of RCUK 2004*

OST was required by the QQR to critically review RCUK after two years. In January 2004 Mr Phil Ruffles was invited to Chair a small ad hoc group of stakeholders to oversee and steer an independent contracted consultant. The operation and background papers to the review will be presented separately to the Committee.

The review group met five times between March and June and presented its report to Ministers in July. There were four main issues that were identified:

1. To clarify the role of RCUK, its chairmanship and its relationship to the individual Research Councils and to OST, within a clear framework of accountabilities;
2. To make a clearer differentiation between RCUK's strategic and operational roles in order to give focus to each;
3. To ensure that RCUK is able to make a contribution to national science strategies and policy and to ensure that its own strategies take into account this wider scene;

-
4. To make more progress in coordinating or standardising essential administrative systems and processes.

There were seven recommendations to address the above issues. OST and RCUK accepted the report and recommendations with a few minor adjustments that were reflected in the implementation plan eg the name of the Group. OST welcomed the clarification of the relationship between the DGRC and all the Research Councils.

5. *Implementation of Ruffles Review*

An implementation plan was agreed in September and published alongside the report on the OST website at www.ost.gov.uk

The new arrangements for operation of RCUK are due to come into force from April 2005 with transitional arrangements from October 2004. RCUK Executive Group meets monthly chaired by a Chief Executive chosen by its members (this is currently Professor Ian Diamond) to discuss operational matters. The OST/RCUK Joint Strategy Group meets quarterly chaired by DGRC to discuss strategic issues such as the Spending Review Process, Performance Management System, implementation of Full Economic Costs and the Capital Investment Fund. The CSA, DG Innovation and representatives from the Funding Bodies will attend JSG by invitation.

January 2005

APPENDIX 3

Memorandum from Professor Peter Grindrod

I am a former member of the EPSRC Council; and I am, in general, a strong supporter of Cross Council Initiatives—and am pleased to see a new model emerging under the new DGRC (or new title), where the DGRC is more hands off yet the RCs have to sort themselves out together.

Cross Council initiatives need to have some mechanism for ongoing monitoring and review. Within the EPSRC, all spending on programmes/activities is reviewed by TOP and UP (I was chair of the industry USER Panel). They go into the programmes/initiatives at a much more detailed level than Council members see, and review/advise depending on how content they are.

But in the past—even for EPSRC led cross council initiatives—we were just informed, rather than able to review, progress, since EPSRC does not own these initiatives, even if it is the lead Council.

Independently, at my own expense, I once tried to review Bioinformatics spending across councils for myself as an interested non-player (see the enclosed pdf) (not printed).

So how will future RCUK cross-council initiatives be monitored and advised by external folk like TOP or UP in the future?

January 2005

APPENDIX 4

Memorandum from the Save British Science Society

1. Save British Science is pleased to submit this evidence in advance of the Committee's scrutiny session on RCUK. SBS is a voluntary organisation campaigning for the health of science and technology throughout UK society, and is supported by over 1,500 individual members, and some 70 institutional members, including universities, learned societies, venture capitalists, financiers, industrial companies and publishers.

2. Although SBS believes strongly in the need for the Research Councils to work together where appropriate, we were never convinced that there should have been a need for the creation of RCUK. Its formation had the appearance of being a reaction to the perception that the Government needed to “do something” in response to the last quinquennial review of the Research Councils. This impression was somewhat strengthened when the former Director General of the Research Councils said in his speech at the launch of RCUK that all it needed as a new logo and a new website.

3. Nevertheless, we accept that cross-Council collaboration was not as strong as it could have been and that, in a world where interdisciplinary science is increasingly important, partnerships between Councils are a more crucial part of the research funding landscape than they have ever been. For this reason, we have not openly criticised the formation of RCUK, in the hope that whatever the costs, it would begin to address this challenge.

4. We believe that it may be too soon to judge effectively whether RCUK is in fact helping the Research Councils to work together, but we believe that the costs of at least some of its activities are not fully justified.

5. In 1997, just 2% of the Science Vote was administered centrally by the Office of Science and Technology rather than by the individual Research Councils. Now, some 23% of the budget is decided centrally. The effect of this rapidly increasing central spending is that, while the Science Vote as a whole has increased by 68% in real terms, the individual Research Councils have not seen similar increases.¹

6. The Engineering and Physical Science Research Council has seen an increase of just 6% in its budget over the same time. Like all the Research Councils, it has also been given extra responsibilities, with the overall effect that the percentage of physics grant applications that have been successful has fallen from 48% in 2000 to 29% today. This decline is not due to increasing demand, because the number of applications has fallen by 20% over the same timeframe.²

7. With scientific research appearing to suffer cuts while the Government is unquestionably investing very large and increasing sums of taxpayers' money in science, any new costs, such as those associated with RCUK, must be rigorously justified.

8. RCUK probably makes up a very small proportion of the centrally administered funds (the bulk of which are presumably infrastructure funding awarded under the Science Research Investment Fund), but in a situation where funding will always be tight, all costs must be justified. SBS believes that, in at least some cases, that is not currently possible.

9. For example, towards the end of 2003, RCUK produced two glossy brochures entitled *A Vision for Research* and *A Synthesis of Strategies*. These documents were completely at odds with what RCUK should have been doing.

10. The culmination of the two documents was a list of research questions that that "the Research Councils will be working to solve in the next few years". The list includes questions ranging from "What is gravitation?" to "What does it mean to be a citizen of the expanding European Community [sic]?"

11. It is absurd to propose that officials in Swindon can dictate that where Newton and Einstein reached the barrier of their genius, the Research Councils will nevertheless "solve" the question "What is gravity?" within the next few years. Whatever theoretical and experimental breakthroughs are taking place at the moment, it remains an extraordinary claim. And while it may be desirable to understand the effects of increasing the size of the European Union, if it is important for public policy, the question should be addressed by the relevant ministry (presumably the Foreign Office, which unfortunately has no research budget at all).

12. No doubt it could be argued that the list of questions came from the Research Community itself. But it was only constructed because RCUK decided that, for the first time in history, the Research Councils would predetermine the specific questions for which researchers in the science base would be granted funding.

13. The Haldane Principle is breaking down. In the case of the Research Councils, it is supposed to mean that the individual Councils, with their own Royal Charters, make funding decisions based on the needs and priorities of the research community. Now questions are being dictated by RCUK, a body that until recently was presided over by a central official.

14. SBS applauds the decision of the current Director General of the Research Councils not to chair the strategy committee of RCUK. We hope he is signalling an intention to restore some measure of the Councils' independence. That the Government perceived a need for RCUK in the first place was a sign of how far attitudes have changed to the independence of the science community.

15. In addition to the need for coordination of scientific work, the Research Councils could usefully coordinate more of their administration. For example, as SBS understands the situation, each Research Council has its own central functions, such as personnel departments, press offices etc. Financial savings could no doubt be made by sharing resources in these areas. A central coordinating body that achieved this would free up funds for science, making the Research Councils even more efficient than they undoubtedly are already.

16. It is not our intention to be unremittingly negative and to give the impression that we believe RCUK's work is all a waste of time and money. However, we do believe that there is much more to be done if its expenditure is to be fully justified to the scientific community, to the taxpayer, and of course to Parliament.

January, 2005

¹ Forward Look 2003: Government funded science, engineering and technology, DTI, 2003.

² *Physics World*, November 2004, pp.9–10.

APPENDIX 5
Memorandum from Dr Ian Carter, Director of Research, University of Liverpool

1. In response to the request for evidence for this session, I would wish to make a few comments. My comments are derived from my position at Liverpool (and until recently at Glasgow), where I am responsible for research grants and contracts, and from my experience of sitting on Research Council project boards for the implementation of Je-S (the electronic grant application mechanism), Dual Support Reform, and the Research Administration Programme.

2. My experience over recent years of interacting with the Councils, individually and collectively, has been that they are now more able and willing to take a joint view, from both a scientific and an administrative view. The history of Je-S and its predecessors illustrates this.

3. There is now more co-ordination, and better understanding, across Councils, as well as there being a greater willingness to interact with academic institutions and their administrative staff, rather than only with the academic community. This has paid dividends, in terms of improved policies and processes, to the benefit of all involved.

4. Having recognised the improvements, it is also important to note that there is room for further improvement. Using Je-S as the example, ESRC and AHRB are only due to join the mechanism during 2005, and MRC at some point in 2006 or later. This timescale is somewhat disappointing. There will be challenges in terms of forward planning of research programmes, and in the review of studentship support, for example, as the approaches and mechanisms vary significantly across the Councils.

5. Conversely, the Dual Support Reform has provided a focus to enable a number of changes to policies and processes, to provide greater commonality, and most of the Council staff involved have taken this opportunity fully on board. The changes involved in Dual Support Reform and Full Economic Costing more broadly do challenge the ways in which the Councils operate, in much the same way that they challenge universities, and this culture change should not be overlooked.

6. I am less well placed to comment on the role of RCUK itself in these processes, but I would observe the necessity of an agency external to the individual Councils to effect and initiate some of these broader changes. I have noted resource strain within the Councils, because of additional Administration Programme-related activities. In some cases, this seems to have detracted from the individual change programmes that the Administration Programme itself is trying to achieve.

February 2005

APPENDIX 6
Supplementary evidence from Research Councils UK

RESPONSE TO THE SUPPLEMENTARY QUESTIONS FROM THE HOUSE OF COMMONS SCIENCE AND TECHNOLOGY SELECT COMMITTEE—RCUK SCRUTINY FEBRUARY 2005

1. *It would be helpful to have more statistical information to support the view that there is a move towards responsive mode research.*

1.1 The distinction between responsive and directed modes of research funding is not always clear-cut. As stated in the RCUK evidence, directed or strategic programmes in broad areas of research often include a responsive element. With this proviso, Councils have provided information on their current responsive mode investments. In addition, although the level of funding for the SR2004 period will not be known until the Science Budget allocations are announced it is expected that responsive mode funding will be a priority for the majority of Councils.

AHRB

1.2 Until 2003, all of AHRB's grant funding was in responsive mode. AHRB is currently developing new strategic schemes for the planning period 2004–09, in areas that may not be adequately addressed solely by responsive mode grants. The latter will continue to represent the larger part of AHRB's funding, but the strategic funding initiatives will represent a growing proportion of investment during the course of the planning period.

BBSRC

1.3 The overall balance between funding modes (£199 million in 2000–04) is:

| | 2000–01 | 2001–02 | 2002–03 | 2003–04 |
|---|---------|---------|---------|---------|
| Responsive mode grants (mainly to universities) | 46.5% | 47.0% | 48.0% | 48.5% |
| Core strategic grants to BBSRC's eight sponsored institutes | 34.5% | 34.0% | 31.0% | 31.5% |
| Managed research initiatives in areas of strategic importance | 19.0% | 19.0% | 21.0% | 20.0% |

Source: BBSRC Annual Reports

EPSRC

1.4 For EPSRC support for research via the responsive mode remains a priority. EPSRC engages in signposting ie issuing guidance on what grant proposals would be well received to help steer applications in certain directions. The balance between the types of research grant awarded in 2003–04 is as follows:

| 2003–04 | |
|---------------------------|-------------|
| Total value of grants: | |
| Responsive mode | 45% (£171m) |
| Targeted mode | 55% (£206m) |
| Number of grants awarded: | |
| Responsive mode | 65% |
| Targeted mode: | 32% |

ESRC

1.5 ESRC's directed research consists mostly of its Programmes, Centres and Resources. Its responsive mode schemes are made up of its Grants and Fellowships. However, the definition of responsive mode is tighter than in other Councils: arguably, some of the ESRC's directed programmes (eg the cognitive science programme, run in conjunction with BBSRC, EPSRC and MRC) are akin to a responsive mode scheme which is steered. The table below provides the overall balance of the research budget (£67 million in 2003–04, excluding postgraduate training).

| | 2000–01 | 2001–02 | 2002–03 | 2003–04 |
|--|---------|---------|---------|---------|
| Responsive mode | 32.0% | 29.5% | 29.5% | 27.0% |
| Directed | 57.0% | 63.5% | 60.0% | 58.0% |
| Infrastructure, equipment and facilities | 11.0% | 7.0% | 10.5% | 15.0% |

Source: ESRC Annual Reports

1.6 ESRC expenditure in responsive mode is starting to rise, with an anticipated increase from £18 million in 2003–04 (the 27% referred to above) to £23 million in the coming year. ESRC is currently exploring the most effective way of increasing its responsive mode provision.

MRC

1.7 Following the reorganisation of its grant schemes last year, all of the MRC's grant support is now in responsive mode. Prior to this, a proportion of grants were designated as strategic, ie supporting work which makes a specific contribution to implementing the aims of MRC's scientific strategy. The table below shows the trend in strategic grant investment over the last few years, based on the life value of the grants awarded in each of these years. The data excludes career development awards and investigator led programmes in MRC institutes and units.

| | 2000–01 | 2001–02 | 2002–03 | 2003–04 |
|--|---------|---------|---------|---------|
| Strategic grants as a proportion of all grants | 28.0% | 15.0% | 8.0% | 17.5% |

Source: MRC Annual Reports

 NERC

1.8 NERC is committed to maintaining a proportion of its investments in research that is not aligned to any identified priorities. Receipt of proposals from applicants who define the research questions will continue to be the primary route for identifying and selecting new and emerging research opportunities. Council has agreed to increase its investment in blue skies (non-thematic) research over the period 2003–04 to 2005–06 with an aspiration to fund all alpha 4 proposals. Progress towards this aspiration is being monitored. The table below indicates the recent trend in the balance between blue skies and directed grants.

| | 2000–01 | 2001–02 | 2002–03 | 2003–04 |
|------------|---------|---------|---------|---------|
| Blue skies | 66.0% | 69.5% | 64.0% | 60.5% |
| Directed | 34.0% | 30.5% | 36.0% | 39.5% |

Source: NERC Annual Reports

PPARC

1.9 PPARC invests in facilities and infrastructure (for instance, telescopes, instruments for spacecraft, and colliders), all of which is funded in responsive mode.

2. *The Committee has asked for a copy of the paper put together by the Research Councils and Funding Councils on health of disciplines.*

2.1 A copy of this paper, together with annexes is attached separately (not printed).

3. *The Committee has asked for further information on the work being done to ascertain the number of chemistry graduates needed in the UK, including any estimates made.*

3.1 The health of the UK research base depends on the continuing supply of individuals at each level within the research community. Erosion of this skills base in the UK is of particular concern to the Research Councils. As set out in our written evidence to the RCUK scrutiny and in our submission to the inquiry on “Strategic science provision in English universities” RCUK believes that a multi-Council approach is needed to address skill shortages in key cross-cutting areas and to grow the population of researchers who possess first rate specialist, analytical and transferable skills to enable them to work in multi-disciplinary teams and outside of their discipline area.

3.2 In addition, all Councils have an interest in monitoring the health of the research disciplines within their own remits to understand the ability of the research base to renew itself, and all wish to ensure that any cross-Council interventions are sufficiently flexible to enable Councils to take account of the particular needs and characteristics of individual subject areas and disciplines. RCUK has produced a summary of areas where there is a concern over the future supply of researchers and health of disciplines, together with information on grade profile and demographic analysis (see response to Q2). There is no simple answer: discipline dependent and not solely a function of numbers of staff or trends in student numbers.

3.3 On the specific issue of chemistry, the view from the Royal Society of Chemistry is that “there is no hard data to show that a clear demand from industry for chemists exists and hence whether the fall in student numbers studying chemistry is a problem”.³ Nor do detailed statistical analyses on labour force projections,⁴ commissioned by the Government, suggest any shortfalls in chemistry.

3.4 EPSRC is targeting physical-organic chemistry and the chemistry/chemical engineering interface through its Science and Innovation Awards. Outside of these areas, it has no immediate concerns for the supply of chemists. The same is not necessarily true in other areas where there does appear to be a real prospect of shortfalls in supply. EPSRC will continue to monitor the health of all disciplines within engineering and the physical sciences through the business planning process and the cycle of international reviews and through the Science and Innovation Awards and deployment of postgraduate training funds it will act to try to address threats as they are identified.

4. *What role does RCUK play in seeking to attract school children to a research career?*

4.1 The Councils work together through RCUK, and closely with teachers and other education specialists, to support a number of activities aimed specifically at school children and young people, with a view to promoting research as an exciting and relevant career option. These include:

³ RSC Education Secretary quoted in *Research Fortnight*, 15/09/2004.

⁴ *Projections of Occupations and Qualifications* (2001), a report to the Department for Education and Skills by the Institute for Employment Research and Cambridge Econometrics.

- The Researchers in Residence scheme: Sponsored by RCUK and the Wellcome Trust, this initiative enables PhD students and post-doctoral researchers to spend time in secondary school science departments working alongside teachers and pupils. To date some 3,000 researchers have taken part and evaluation shows that both young people and researchers found the experience very positive.
- The BA CREST (creativity in science, engineering and technology) Scheme: This is a UK-wide science project scheme for schools. The scheme encourages young people to explore science and technology by undertaking mini research projects, which are eligible for a national competition. Following regional events there is an annual final, and winners of the national event represent the UK at international schools science competitions. In 2002, over 22,000 youngsters received awards.
- The On-Line Schools Science Race 2005. RCUK is supporting this event during Science Week. Pupils compete against the clock and other schools to answer science-related questions via an interactive website. The organisers produce a league chart of schools and host a prize ceremony. All 6,000 secondary schools in the UK have been sent details of the event—in 2003 1,000 schools took part.
- Liaison with the Association for Science Education (ASE) and participation in their AGM.

4.2 These activities will be managed, delivered and evaluated by the new RCUK science in society unit, which is being established from 1 April 2005.

4.3 RCUK is also working with other organisations such as the Wellcome Trust through the Funders' Forum Research Careers Committee (RCC) to explore issues around research career paths. As well as developing material for postgraduates and postdoctoral researchers on potential career paths, the group is looking at developing a booklet for schools, aimed at pupils, tutors and careers advisers, to challenge misconceptions about what working in research means. It is planned that this will include real life case studies and information to help school children make informed choices about their future study options.

4.4 In addition, individual Councils support a range of complementary and targeted activities for young people. These are topic-led and are designed to supplement other activities. These include: linking Research Council funded researchers with their local schools; enabling students to visit laboratories; updating teachers on new research; and providing materials that enhance classroom science by incorporating contemporary research themes and findings, including the societal implications of research. Also many of the Councils' and RCUK's broader science and society activities aimed at engaging the general public also contribute towards enthusing young people about science and research.

5. *It would be helpful to have any further statistical information about usage of the RCUK website.*

5.1 Information on usage of the RCUK website (<http://www.rcuk.ac.uk>) is as follows:

| | <i>May–Dec 2002</i> | <i>Jan–June 2003</i> | <i>July–Dec 2003</i> | <i>Jan–June 2004</i> | <i>July–Dec 2004</i> |
|-----------------|---------------------|----------------------|----------------------|----------------------|----------------------|
| Successful hits | 8,541 | 400,000 | 2,000,000 | 4,100,000 | 4,000,000 |
| Unique visitors | 2,699 | 10,137 | 41,396 | 61,074 | 59,557 |

Note: Unique visitors are determined by their IP address—so when users visit the site, their IP address is identified and only one visit is recorded, no matter how many pages they view. This provides a more descriptive indicator than the number of hits to a website, which counts every page view and downloaded, regardless of how many times this is done per visit.

6. *The Committee has requested further information and statistical evidence to underpin the assertion that universities are showing greater commitment to interdisciplinary research.*

6.1 There are a number of ways of showing the universities greater commitment to interdisciplinary research. One broad measure of this commitment is the demand for the multidisciplinary funding made available by Research Councils for cross-cutting programmes and initiatives under SR2000 and SR2002. In response to this growth in opportunities, all of these programmes and schemes continue to be heavily over-subscribed by university applicants. The Basic Technology Programme, for instance, illustrates the significant extent to which such multidisciplinary programmes have attracted the interest the research community. The programme aims to establish a UK technology research capability that will impact on

major challenges in science. It was allocated £41 million and £60 million from SR2000 and SR2002 respectively. To date, the programme has issued five calls for project proposals and three calls for feasibility studies and consortia formation networks. The table below illustrates the outcome of these calls.⁵

| | <i>Number of outline proposals received</i> | <i>Number of proposals funded</i> |
|--|---|-----------------------------------|
| Projects | 654 | 33 |
| Feasibility studies and consortia formation networks | 80 | 19 |

6.2 The 33 funded projects are managed by multidisciplinary research consortia in 41 universities. Data on demand for other multidisciplinary programmes and initiatives could also be provided if required.

INTERDISCIPLINARY CENTRES AND INTERDISCIPLINARY RESEARCH COLLABORATIONS (IRCS)

6.3 The following are examples of the range of new interdisciplinary research centres being established by HEIs:

- In 2001 Imperial College opened the Flowers Building to house multidisciplinary research centres. It can accommodate 240 academic staff, postgraduates and post-docs working mainly in molecular microbiology, structural biology, infections and genetic therapies.
- Manchester Interdisciplinary Biocentre (MIB): due to be completed in July 2005, this is a new type of university research institute that will enable the academic community to explore key areas of interdisciplinary bioscience at the highest level. The MIB will be distinctive in the way that it will combine systems biology, quantitative molecular bioscience and technology development.
- Newcastle Institute for the Arts, Social Sciences and Humanities (NIASSH): this new centre at the University of Newcastle provides a project-driven hub serving as a framework and networking facility for multidisciplinary research, aimed at a broad community where opportunities for multidisciplinary have often been restricted.
- Humanities Research Institute: based at the University of Sheffield, the HRI is one of the UK's leading centres for humanities computing, and has been a pioneer in interdisciplinary and team-based research in the humanities. The projects in the HRI, drawn from a wide range of humanities disciplines, use innovative techniques for handling digital text, images and multi-media to explore issues in humanities research which cannot be readily investigated by other means.

6.4 In addition, Research Council sponsored IRCS aim to foster multidisciplinary teams of researchers to develop major projects in diverse areas. A few examples are set out below:

- The IRC in Nanotechnology is funded by EPSRC, BBSRC, MRC and the MoD as a collaboration between the University of Cambridge, University College London and the University of Bristol.
- The IRC in Bionanotechnology is a collaboration funded by three Research Councils (EPSRC, BBSRC and MRC), and brings together scientists from the universities of Oxford, York, Glasgow, Cambridge, Nottingham, Southampton and the National Institute for Medical Research.
- The IRC "From Medical Images and Signals to Clinical Information" is a collaboration between the University Oxford, Manchester University, King's College, London, and University College, London and is supported by EPSRC and MRC.

6.5 In addition, several Research Councils analyse their grant data for information on the demand for multidisciplinary research funding. Examples are given below:

AHRB

| | <i>2001–02</i> | <i>2002–03</i> | <i>2003–04</i> |
|--|----------------|----------------|----------------|
| Inter-panel research awards: | | | |
| Amount awarded (£m) | 3.99 | 4.17 | 5.63 |
| % total amount awarded | 16% | 15% | 16% |
| No. awards | 66 | 62 | 71 |
| % awards | 11% | 10% | 11% |
| Spend on joint RC & inter-agency programmes (£m) | Nil | 0.19 | 0.95 |

⁵ The information relates to the first four of the five calls for project proposals, and the first two of the three calls for feasibility studies and consortia formation networks. The deadlines for the two most recent calls have only just passed, and figures on applications are not yet available.

| BBSRC | | | |
|---|---------|---------|---------|
| | 2001–02 | 2002–03 | 2003–04 |
| Expenditure on grants with principal investigators in non-bioscience departments working on bio-related projects: | 12.7% | 12.8% | 13.4% |

| ESRC | | | |
|---|---------|---------|---------|
| | 2001–02 | 2002–03 | 2003–04 |
| Within the ESRC domain, awards involving more than one social science discipline: | | | |
| No. awards: | (1) | (1) | 527 |
| Expenditure (£m): | (1) | (1) | 16 |
| Research with another RC, or non-social science funder: | | | |
| No. awards: | 105 | 140 | 188 |
| Income (£m): | 7.8 | 10.3 | 11.3 |

⁽¹⁾ Data were not collected

7. *It would be helpful to have any further details available on the preliminary findings of the study on the impact of FEC on applications for Framework Programme funding.*

7.1 The Research Councils, through UKRO, are carrying out a series of case studies with UK universities to examine the impact of the move to FEC on participation and involvement in activities funded under Framework Programme 6 and potential involvement in FP7. These case studies are currently in progress and only the preliminary raw data from the first few of these studies is available at the present time. The intention is to fully analyse the data and present this at a meeting with the UK university community, hosted by Universities UK in London on 18 March. As soon as the final results from the case studies are available, RCUK will send a copy of to the Committee. RCUK can also send all Committee members a copy of a report from the final analysis of the case studies which is expected to be available in early summer 2005. The report will also be available in sufficient time to inform the UK input in to the negotiations on the Rules for Participation for FP7.

8. *Does RCUK have any role in the submission of bids to the large facilities fund, how much is available under that fund and what criteria govern its application?*

8.1 The Large Facilities Capital Fund is used to support large-scale, strategic infrastructure projects in UK universities and Research Council institutes. The sorts of projects which the fund supports are those which for a number of different reasons fall outside the funding remit, or capability, of any individual authority. Such projects are typically large and very expensive; have long useful lifetimes ie 10–20 years; have multiple users both nationally and internationally; are interdisciplinary; offer unique capabilities within the UK, or more widely; and are potentially jointly funded or suitable subjects for international collaboration. It is usual for such projects to be funded from multiple sources including Research Councils, other government departments, charities and international bodies as well as the large facilities capital fund. Projects receiving capital from this fund in recent years have included the ISIS second target station and a new research vessel, as well as the Diamond synchrotron.

8.2 The Large Facilities Capital Fund budget following SR2002 (including the budget for the Diamond synchrotron) was approximately £100 million in 2003–04, £120 million in 2004–05 and £100 million in 2005–06. The level of funding for the SR2004 period will not be known until the Science Budget allocations are announced.

8.3 The submission of bids for capital funding is managed by the Research Councils on behalf of the academic community. In order to receive funding a project must first be subject to an independent scientific review. It then proceeds via the OGC Gateway process to a full business plan review (Gateway 1). Each project has a lead Research Council, with the chief executive or senior director taking on the SRO role. RCUKEG considers both the science case and business case. Where there is a request to draw upon the Large Facilities Capital Fund, it is the role of RCUKEG to recommend to OST whether funding should be made. Approval by DTI Ministers is required in most cases, and if the project is above the DTI's delegated powers, or requires funding from beyond the current three-year Spending Review period, approval is also required from HM Treasury. Once work on a project has commenced it remains the responsibility of whichever Chief Executive is the accounting officer to keep RCUKEG up to date on developments.

8.4 Further details about the evaluation of large facility projects via the gateway process can be found at: <http://www.ost.gov.uk/research/funding/lfroadmap/chap5.htm>

8.5 In reality, projects for which capital funding will be sought, are first identified and included in the UK's large facilities roadmap. Last published in June 2003, the roadmap enables RCUK and OST to maintain a comprehensive picture of potential large facilities and equipment projects in which the UK might be engaged over the medium to long term. This tool enables RCUK and OST to take strategic decisions as to the best way to maintain access for researchers to world class facilities and also to manage and fund UK investments in priority projects.

8.6 The roadmap will be next updated by RCUK in summer 2005. Each Research Council is responsible for consulting widely with its academic and user communities to bring forward potential projects for inclusion in the roadmap. The current criteria for inclusion are listed below although

- Where there could be an international dimension to the proposed facility and therefore opportunity to share costs and develop relationships to benefit the UK science programme;
- Where the facility supports the requirements of research communities of more than one Research Council;
- Where the capital investment is greater than the sum of £25 million, when it represents a significant element of an individual Research Council's budget line.

8.7 However, inclusion of a project on the roadmap does not guarantee funding from either Research Councils or OST via the large facilities capital fund. Inevitably, there are more potential large facilities projects than available public funding. For this reason, in 2003, OST asked RCUK to undertake an exercise to prioritise which projects on the roadmap might move into a capital construction phase, and hence potentially draw upon the large facilities capital fund and/or require significant investment from Research Council funds. The outcome was published in March 2004 (<http://www.ost.gov.uk/research/funding/lfroadmap/chap5.htm>).

8.8 Following the revision of the large facilities roadmap later in 2005, the prioritisation exercise will be repeated. The criteria for prioritisation have been agreed between OST and RCUK and are set out at Annex B. RCUK will provide advice to OST on the priorities for funding in the current and next spending review period up to approximately five years ahead, (where project plans can be expected to be reasonably well advanced), and prioritise more tentatively projects that may start in the mid-term (five to 10 years ahead) or far term (more than 10 years). The exercise will, so far as is possible, also identify the total project costs, including capital and resource. DGRC will take into account anticipated project costs and availability of funding in making recommendations to Ministers. OST is expected publish the results of this prioritisation exercise by the end of 2005.

9. *What further details can be provided at this stage on the need for and nature of work designed to address the conservatism of the peer review system, and the way in which the peer review processes deal with multidisciplinary research?*

9.1 In 2004 RCUK produced an assessment of Research Councils promotion and support for multidisciplinary research for the Council for Science and Technology (CST). On the basis of this assessment and a meeting with chief executives, CST stated that they were confident that Research Councils are taking this issue seriously and addressing it effectively.

9.2 However, Councils recognise the need to regularly scrutinise and update policies and procedures in order to share good practice, ensure that there are no inadvertent organisational or policy barriers impeding the assessment of multidisciplinary research proposals, and tackle latent conservatism in the peer review process.

9.3 The current policy for handling multidisciplinary research proposals which cut across the remits of more than one Council was developed and published in 2000. Subsequently, Councils have implemented a number of changes in policies and procedures which impact on their peer review process. These include Joint Electronic Submission, the introduction of peer review colleges and multidisciplinary peer review committees, training for new peer reviewers, incentives for researchers etc. Councils have also gained substantial experience in establishing large-scale multidisciplinary programmes and funding joint multidisciplinary initiatives, and are sharing good practice through the peer review benchmarking project. The latter looks at the handling of multidisciplinary proposals at each stage of the process including identification of proposals, assignment to the most appropriate peer review body, selection of reviewers, and decision making.

9.4 RCUK has decided that it would be timely to review the effectiveness of existing policies and procedures for handling and assessing multidisciplinary research proposals after the implementation of the full economic cost funding model in September 2005, probably in early 2006. This will include looking at the lessons learned from peer review benchmarking and funding multidisciplinary schemes and programmes, and from the training of peer reviewers. This review will be a specific objective in the RCUK delivery plan.

10. *What were the initial targets set for the participation by all Councils in the JeS system and what was the involvement of the DGRC in setting them?*

10.1 The first phase of the JeS system was developed to provide a harmonised electronic submission system for the four Research Councils (BBSRC, EPSRC, NERC & PPARC) who did not at that time have facilities to enable their communities to submit applications for funding electronically. Associated with this was the need for all Councils to meet the Government's e-business target of having electronic service delivery facilities in place by 2005. This has now been met.

10.2 JeS subsequently expanded into the Research Administration Programme, part of the RCUK administration strategy, which aims to deliver a common research administration system (enabling the electronic processing of grants, fellowships and studentships from submission to completion) for all Research Councils by 2007–08. It was agreed by RCUK that those Councils which had already made significant investments in their own electronic submission systems would migrate to JeS compliant systems at some point in the future when JeS was sufficiently mature to be able to provide their communities with the same level of functionality as their existing electronic systems. To this end AHRB and ESRC will be enabled to use JeS from September 2005 with MRC to follow in 2006.

10.3 This project has been managed and run by Research Councils working together as RCUK. DGRC has not been involved in target setting.

February 2005

Annex A

CRITERIA FOR PRIORITISING LARGE FACILITIES PROJECTS

Large facility projects should normally address each of these criteria, although their relevance and relative importance will vary according to the nature and phase of development of each project. RCUK will draw on these accordingly in developing its proposed prioritisation of projects.

1. Scientific excellence and importance of the research delivered from the facility, importance of the facility in delivering the science, and overall match with the international standing of UK science.

2. Strength of the potential user group in the UK (including the opportunity for training and capacity building), and its breadth across subject areas and RCs.

3. Project's fit to the RCUK's and wider Government or national science strategy, including its impact on or contribution to other international collaborations.

4. Technical feasibility, and why the chosen technical solution is the best option.

5. Overall financial scale, including the whole-life, ie capital, operating, further development, and decommissioning costs of the facility, and how far the investment represents a significant element of the relevant RC's capital and resource budget lines.

6. Timescale of the project, timeliness of the investment, and impact on the UK of delay.

7. Extent to which the project would meet other regional, national and international needs, interest and possible leverage from other potential funders, and governance arrangements and other mechanisms to enable such participation.

8. Project and operational management arrangements, covering both construction and key aspects of the operation (eg data) and management of the facility once constructed.

9. Contribution to or from the UK's technology and industry base, and opportunities for exploitation.

10. Contribution to public confidence and engagement in science, during both construction and operation.

11. Suitable site, and environmental impact.

Some additional criteria, largely derivatives of those listed above, apply particularly—but not exclusively—to the issue of hosting European or international-scale facilities:

12. The priority other countries attach to the project and their standing in that area of science.

13. Cost of participating in, but not hosting the facility.

14. Whether seeking to host the project would impinge on negotiations relating to other international collaboration.

15. Additional benefits of hosting an international facility, and how far these outweigh the premium typically paid by the host country.

APPENDIX 7

Memorandum from Office of Science and Technology

Qu: The Science Minister undertook to provide a note on the extent to which the OST has an influence in the way Research Councils spend their money, with particular reference to their policy on access to scientific publications.

A: The Science Budget is allocated to Research Councils after detailed discussions between them and the DGRC. In such discussions Research Councils set out their priorities, and allocations are made in the light of these. Each Research Council's Delivery Plan will set out how the Council will deliver its objectives against its allocation, and progress is monitored as part of the new performance management system.

The Government's policy is to facilitate a level playing field for the future of scientific publications, which will enable authors who wish to publish in author-pays journals to do so. After consultation with its stakeholders RCUK has submitted to Government its position on the dissemination of and access to UK research outputs, and they are free to fund the implementation of this from within their allocations.