

**THE REVIEW OF  
EPSRC'S STRATEGIC ADVISORY ROUTES  
2013**

**FINAL REPORT**

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## **1 INTRODUCTION**

This review was commissioned directly by EPSRC Chairman, Dr Paul Golby.

When Dr Golby was appointed as EPSRC Chairman in April 2012 he spent the summer visiting universities and meeting researchers, including EPSRC's most vocal critics to understand better the concerns within the community. The strongest issues raised were that EPSRC was putting short-term impact ahead of academic excellence, that EPSRC, to achieve this, was micromanaging the research portfolio, and that it was not taking sufficient and appropriate advice from active researchers in the development of major projects and policy changes.

As a direct response Dr Golby committed to do more to involve and engage the community and to create opportunities for people to meet and discuss issues with members of EPSRC's Council, advisers and staff in order to improve communication and transparency.

In order to begin this process and identify where improvements might be made in the existing structures, he commissioned two independent reviews: one to look at both the EPSRC mechanisms and sources for obtaining strategic advice to help it develop effective policies and one to evaluate EPSRC's overall peer review processes. This report is the outcome of the first of these.

## **2 EXECUTIVE SUMMARY**

With the advent of the global knowledge based economy, the advancement of knowledge is playing a central role in national prosperity agendas. Nations worldwide have developed science and innovation strategies that include both inquiry and purpose driven research investments.

In this context, the EPSRC launched a new Strategic plan in 2010 and is going through a major change from a grant funding to a research sponsoring organisation. It is evident to the Panel that the terminology being used is not sufficiently explicit to communicate the consequential changes in behaviour of the Research Council and as a result these are not fully understood and, if they are understood, they are not agreed with by some in the research community that EPSRC supports. It is also clear from the Panel's work that such changes are requiring the Council to extend and stretch its capabilities for prioritizing the work that it will support.

While scientific excellence remains its first criterion for funding, consideration is now being given in parallel to creating a portfolio of investments that will also "deliver maximum impact for the health,

prosperity and sustainability of the UK"<sup>1</sup>. The implementation of the new shaping capability strategy, by its very nature, requires the EPSRC to integrate much more closely its advisory routes into a more focused management regime for the advisory processes involved. This applies particularly to the Strategic Advisory Teams (SATs), which are an essential element of successful policy formulation and implementation.

Advisory routes are the spine of the organisation. They are also the antennas into the wider research and user communities. The EPSRC has built an extensive array of mechanisms to seek strategic advice which are nevertheless constrained to some extent by the budget and internal resources available for administration. These resources have been impacted by budgetary cuts over recent years.

The Panel's task was to review and provide advice on EPSRC's strategic advisory routes. To do so, it used a number of avenues, including sending a survey to a broad group of organisations and key groups in the EPSRC community, interviewing stakeholders and reviewing background material as well as specific documentation it received or requested. A range of views were expressed. However, as is the nature and purpose of such reviews, aspects that were viewed as needing improvements naturally became the focus for discussion and attention and, therefore, of our Report.

Based on what it has learned, it is the Panel's view that the current advisory structure is inherently agile and capable of being very effective. However, there appears to be a widespread perception that, at least in some instances, the main advisory bodies, the SAN and the SATs, are not as well coupled to the Council's decision making processes as they might be, particularly in the context of the shaping agenda. Nor, from an external perspective, are they well understood or seen as working effectively. It is our view that the SAN and SATs structure will need adjustment if it is to operate and contribute in the most effective manner to EPSRC's transition from research funder to a more strategic and proactive sponsor.

In particular there is a need for a public document explaining the EPSRC advisory routes and their roles and responsibilities, including those aimed at reaching the wider communities – including for example the universities beyond those closest to EPSRC, the learned societies and the industry base – and identifying under what circumstances these wider communities will be consulted. There should also be clearer explanation of who decides what to consult about and whom to consult.

Visibility of Council's oversight of advisory routes and the associated risk assessment and management activities could usefully be strengthened.

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<sup>1</sup> EPSRC Strategic Plan 2010

[http://www.epsrc.ac.uk/SiteCollectionDocuments/Publications/corporate/EPSRC\\_strategic\\_plan\\_2010.pdf](http://www.epsrc.ac.uk/SiteCollectionDocuments/Publications/corporate/EPSRC_strategic_plan_2010.pdf)

An example here is the criticism from various communities around Shaping Capability which, although fed into the SATs and expressed in the Minutes of these, does not appear to these communities to have been listened to and fully assessed at Council level. Concerns were also raised about whether the data on which decisions were based (e.g. the classification of projects into shaping capability “bubbles” where there may be complex scientific overlaps and the project substance outside the expertise of SAT members and Theme Leaders) had been systematically scrutinised to assure the decision making.

In its strategy, EPSRC Council has taken the responsibility of shaping in some detail the landscape of research in the UK across Engineering and Physical Sciences. This is a very major undertaking, which requires in depth and current scientific expertise, including an understanding of how research is conducted most effectively in different ways in different domains. It also requires an awareness of investment strategies and their impact, and understanding of the needs of individual stakeholder communities in both academia and beyond. This therefore places greater demands on EPSRC’s staff than hitherto as broader relationships have to be built with a wider range of partners. The current, highly constrained administrative budget of EPSRC severely limits the extent to which such relationships can be built. This provides an even greater imperative for the strategic advisory structures to be suitably inclusive and to contain sufficient breadth and depth of expertise to produce the fully informed advice needed to support EPSRC in this challenging endeavour.

During the course of the review the Panel noted the high regard for EPSRC staff within the wider EPSRC community. It should also be emphasised that the Panel encountered considerable empathy for the position that EPSRC staff have found themselves in as a result of severe constraints placed on the administrative budgets.

Finally, the Panel would like to express its appreciation for the access afforded to them by the Research Council and for the open, frank and candid views expressed by its staff; the same applies to those who responded to the invitation to submit views and for those who were called for interview.

The Panel’s recommendations are classified under ‘Transparency’, ‘Consultation and Communication’, ‘Advice Structures and Processes’ and ‘Resources’. The same headings have been used under section 6 of this report “Summary of Views Presented to the Panel” so that the recommendations might be more easily cross-referenced to the views received by the Panel.

## **2.1 Transparency**

- 2.1.1 SAT and SAN members should be appointed by open and transparent processes with explicit criteria.
- 2.1.2 There should be a public document describing all of the EPSRC's strategic advisory routes and processes and explaining the respective roles and responsibilities of those involved.
- 2.1.3 Minutes of SAN and SAT meetings should be available on the EPSRC website. It is acknowledged that on occasion these would need to be redacted for the purposes of confidentiality.

## **2.2 Consultation and Communication**

- 2.2.1 In the case of major strategic deliberations/decisions, EPSRC's consultation and communication plans should be inclusive, involving two-way engagement both before and after decision making with the broader communities of researchers and institutions – universities, learned societies, industry, etc. Circumstances when this might not be possible should be communicated. This plan should form part of the public document mentioned earlier (see recommendation 2).
- 2.2.2 The circumstances under which agenda items at SAT and SAN meetings must be taken in confidence and not reported in the published minutes should be made clear.
- 2.2.3 To the extent possible, the EPSRC should feed back into the community which advice has been accepted and how and where it has been used. Reasons for setting advice aside should also be given.

## **2.3 Advice Structures and Processes**

- 2.3.1 All of the advisory routes should be operated within an integrated and focused management process.
- 2.3.2 The specific roles and responsibilities of SATs and SAN should be reviewed and clarified taking into account EPSRC's change from a funder to a sponsor organisation. The outcome of such a review should form part of the public document mentioned earlier (see recommendation 2).

- 2.3.3 SAN and the SATs should ensure that they have assembled the expertise needed to meet their roles and responsibilities.
- 2.3.4 Each SAT and each SAN Working Group should be chaired by a member of the relevant community. We believe it is good practice for a member of Council to continue to be on each SAN Working Group.
- 2.3.5 The ownership and leadership of the SAN and the structuring of its work programme should be more clearly established to align with the Council's requirement to seek advice in a planned and comprehensive manner to support all aspects of its principal decision making; the mechanism for this is for Council to determine.
- 2.3.6 SAN and SAT members should see in writing how their advice has been presented to Council and have the resulting Council decision fed back to them.
- 2.3.7 Council should determine how best to ensure it has 'sight lines' into the work of SAN and SATs.
- 2.3.8 All of the advisory routes should be subjected to periodic audit, including, in particular, the relevant risk assessments.

## **2.4 Resources**

- 2.4.1 Every effort should be made to ensure that EPSRC has the resources and skills development capacity needed to achieve the transformational change it has embarked on successfully.

## **3 MEMBERSHIP**

The membership of the panel was agreed jointly by the EPSRC Chair, EPSRC CEO and a sub-group of Council members.

The members of the Panel were:

Dr Suzanne Fortier, Past President NSERC, Canada (Chair);

Professor Helen Atkinson, Leicester University.

Professor Richard Brook, President AIRTO Ltd;



Sir David Wallace, Master, Churchill College Cambridge;

Secretary: Mr Peter Ferris, EPSRC

A profile for each member is attached at Annex 1.

#### **4 TERMS OF REFERENCE**

The visiting Panel was asked to undertake an independent review of how EPSRC obtains and utilizes strategic advice, looking at both the mechanisms and sources for obtaining such advice and how this influences strategic decision-making.

The visiting Panel was responsible for defining the precise scope and approach of the review.

The full terms of reference for the Panel are attached at Annex 2.

#### **5 METHODOLOGY**

The Panel met from 14<sup>th</sup> to 17<sup>th</sup> May 2013. The first day was spent at EPSRC's Offices in Swindon where the Panel met with EPSRC's Executive Leadership Team and Theme Leaders.

On 15<sup>th</sup> and 16<sup>th</sup> May the Panel convened in London where it conducted face to face meetings. On the final day the Panel met with Professor David Delpy and Dr Lesley Thompson in London to review some of the main points raised during the panel's consultation and to seek clarification, where needed. In a closed session, the Panel met with EPSRC Chairman, Dr Paul Golby. The Panel met privately in the formulation of its report and recommendations.

Before the Panel convened in the UK they had participated in three telephone conference calls including a discussion with the Chief Executive regarding the Panel's terms of reference. Dr Paul Golby had also spoken privately with the Panel Chair. Some Panel members participated in the EPSRC SAT Conference 2013 held on 18 and 19 March.

During the course of the review the Panel had access to all EPSRC staff. It could also ask for any information or documentation it deemed necessary.

Prior to meeting, the Panel was provided with general briefing material on the EPSRC and specific material on the advisory structures and how these related to the Executive and Council.

The Panel subsequently asked for chronological summaries setting out the advisory processes associated with some of the recent key policy changes. These also referenced recorded deliberations and outcomes of decisions. The areas examined were:

- Shaping Capability
- Demand Management
- Studentship Resourcing

In order to understand how SAN work-streams are commissioned and conducted the Panel received a short case study of a recent SAN activity that focused on how EPSRC might maximize and enhance the value that the EPSRC research and postgraduate training portfolio is delivering for the UK. Finally, at its own request, the Panel received a paper which described the key deliberations and decision points that led to the introduction of framework and strategic university relationships.

A key aim of the review was to draw views from EPSRC's wider community. Time and resource limitations meant that the Panel was unable to consult with each and every member of the EPSRC community. It did, however, reach out to a broad group of organisations and key groups who represented a significant proportion of the EPSRC stakeholder community. A full list of those invited to submit their views is attached at Annex 3. Those approached were asked to complete and return a questionnaire; a blank version is attached at Annex 4. A total of 289 invitations were sent out and the Panel received a total of 89 responses which represents a response rate of ~30%. All responses were seen by the Panel prior to meeting in May.

The Panel also made arrangement for telephone and face to face consultations. A total of 27 interviews (with 31 people) were conducted. All of these meetings were conducted under Chatham House Rules to encourage openness and the sharing of information. As such these discussions are unattributed. The breakdowns of the groups represented were as follows:

9 Past and current Council members

7 EPSRC Advisers (SAN & SAT members)

11 Others\*

18 EPSRC staff

\* The "other" category includes representatives from campaign groups, learned societies and professional institutions, HEI representative groups and EPSRC researchers.

## **6 SUMMARY OF THE VIEWS PRESENTED TO THE PANEL**

This section aims to provide a summary of the prevailing views and perceptions presented to the Panel either written or verbally.

While some of the information and comments received exceeded the scope of the Panel's review, they provided valuable context, which aided the Panel in its deliberations.

The range of views submitted varied between the different constituencies consulted. However, as is the nature and purpose of such reviews, aspects that were viewed as needing improvement naturally became the focus for discussion and attention. Not surprisingly a good deal of the inputs centred on recent EPSRC decisions and policy changes. These conversations were useful in pointing to potential areas for improvements.

The following summarises:

- a The output from discussions with EPSRC staff;
- b A contribution from the wider EPSRC stakeholder community.

## **7 EPSRC Staff**

When the Panel visited Swindon and spoke to EPSRC staff it heard about the rationale for current strategic advisory structures and how they are intended to work. A diagram which sets out the relationship between Council, the Executive and the advisory bodies is included at Annex 5. Much of what the Panel heard reflected a set of overall principles which guide the nature and manner in which EPSRC elicits strategic advice.

These are:

- Obtaining strategic advice is an essential activity so that EPSRC can adequately fulfil its duties in an effective and timely way;
- That the advice obtained must be of an appropriate type - that is, it must be strategic, but with an element of translation between strategy and operation;
- That the process must not be perceived to be self-serving, and conflicts of interest must be managed;
- That the advice should be seen as coming from appropriate experts;
- That the process must be able to distinguish between signals and noise;
- That the process must be responsive and flexible;

- That the process must be capable of providing an appropriate environment for testing new ideas (eg with appropriate confidentiality, and a willingness to explore options without judgement).

The Panel also heard considerable background and contextual information.

It was apparent to the Panel from these discussions that EPSRC staff are highly committed to the health of science and engineering research in the UK and its contributions to the wellbeing of the country and that they are working under severe resource constraints to deliver high quality services to the research community.

## **8 Wider EPSRC Stakeholder Community**

For convenience, the comments are categorised under four main headings 'Transparency', 'Consultation and Communication', 'Advice Structures and Processes' and 'Resources'. The same headings are used in grouping the Panel's recommendations.

### **8.1 Transparency**

The response to the questionnaires and the interviews conducted by the Panel highlighted a common concern about the transparency of the processes to appoint advisers and the visibility of how "bottom up" advice is used in strategy formulation.

Whilst a description of the criteria and appointment process for SAN membership is available on the EPSRC web pages there appears to be a lack of understanding about the selection process amongst the wider community. Most concerns centred on the processes and selection criteria for SAT members. Indeed some SAT members themselves declared that they were not fully aware of how they had been identified and appointed. The EPSRC web site offers no insight into how the SAT appointment processes work although some guidelines do exist for internal purposes. While the EPSRC does issue invitations to nominate potential members for both the SAN and some of the SATs, this is not sufficiently visible, leading to both suspicion that the organisation might be choosing those closest to them and questions about the depth and breadth of the expertise on the various advisory bodies.

Several commented that it was not evident or transparent how the results of the advisory and consultation processes were taken into account by EPSRC when formulating strategic priorities. Some members of the current advisory structures declared that it was not apparent how their advice had been used to arrive at a decision at the Council level. Shaping

Capability was most often cited in this context. The same was also true for those individuals and organisations outside of EPSRC who had been involved in consultation processes. Many were perplexed about how their input had been taken into account and complained that the subsequent feedback was unsatisfactory. It became apparent to the Panel that there was a wide spread perception of “opaqueness” of the decision-making processes and uncertainty regarding the level of influence the EPSRC community and the SATs, in particular, have had on major decisions recently.

## **8.2 Consultation and Communication**

As described earlier, the nature of the relationship between the advisory and decision-making processes is not considered by some to be sufficiently transparent or clearly described. In addition there were also concerns expressed about the consultation process that feeds into these. In particular the use of framework and strategic universities and the apparent predominance of advisers drawn from them are viewed with concern and suspicion amongst those outside of this perceived “inner circle”.

The Panel noted that, in the context of demand management, project studentships and Shaping Capability, the consultation/engagement process proved to be an area of particular contention. Some of those consulted felt that these engagement processes were limited, lacked clarity and promoted confusion about the true nature of the engagement. They also reflected that the nature of the engagement was more of a briefing than a consultation which suggested to them that the decision had already been reached. This confusion was most evident by the Institute of Physics’ decision to issue a press release specifically countering EPSRC’s claim that it had been “consulted” on the matter of the shaping capability policy.

It was felt by many of those consulted that the advisory processes were not sufficiently inclusive, adding to the perception that the decision making process was increasingly top down and lacking opportunity for the academic community and the wider HEI base to provide input. It was stressed that for consultation to be meaningful it had to be inclusive, drawing upon as wide a breadth and depth of views as possible. There was a belief in some research communities that this was not the case. For Shaping Capability and also project studentships, certain research communities felt that the apparent failure to take account of the evidence presented by recent international reviews was perplexing and that there was little clarity or feedback about the criteria for decisions. More generally it was perceived that within the advisory structures and particularly the SATs there was insufficient international and cross disciplinary expertise exacerbating concerns that some areas were not appropriately represented and

therefore fell through the gaps. The area of mathematical physics was cited as an example.

Some of those involved with the advisory bodies commented that the nature of their engagement did not engender a sense of ownership or responsibility for decisions and observed that their role involved commenting on a set of limited options for implementing a policy under a blanket of confidentiality rather than advising on the “bottom up” development of policy. Some also questioned whether SATs meeting only two or three times a year was conducive to meaningful engagement.

The extent and adequacy of the community engagement and the scale of the communication associated with some of the more recent controversial decisions received considerable comments. Many expressed surprise that given the obvious risks EPSRC had not put in place sufficient consultation and communication mechanisms, failing to recognize the disquiet that these changes would cause. For those in the areas most impacted by these decisions, it was felt that the communications had failed to convey clearly the relationship between the advice received from consultations and the resulting decision.

The reduced visibility of EPSRC staff and general interaction with the research community as a result of budgetary pressures were regretted. This was not considered to be helpful in the current challenging climate, as it is becoming increasingly unclear how or when the wider community can feed into the strategic advisory processes or how information might be communicated to them. Some thought that SAN and SAT members should be empowered to serve as a channel for two way communication with the community. However, in the absence of any clear definition, it was uncertain if this fits with member’s current roles and responsibilities and furthermore there did not appear to be any obvious mechanisms to allow this to happen. Indeed some felt unclear about the extent to which confidentiality applied and which topics/areas they could speak openly about outside of EPSRC.

### **8.2.1 Advice Structures and Processes**

There was uncertainty expressed by many about the respective roles of the SAN and SATs and how they fitted into the strategic decision making processes. This demonstrated a need for clearer and a more public statement defining the EPSRC advisory routes and their roles, responsibilities and processes. Indeed EPSRC’s aspiration to move from a funder to a sponsor organisation provided an added imperative to consider and confirm the roles of the strategic advisory routes in this transition.

It was noted that recently some SATs had been uncomfortable and voiced concerns on more than one occasion about the impact of Council policies. Despite making these concerns clear it was not evident if these had been listened to or recognized by Council. This raised questions about the advice structure and in particular the visibility of SATs with Council. There was also a feeling that policies were developed with a preference for a “one size fits all” solution without giving due consideration to the diverse nature of the communities within the Engineering and Physical Sciences space.

The Panel also detected some frustration regarding inconsistency in the operation of SATs, as evidenced by differing processes and transparency of SAT business (e.g. publishing minutes and agendas, appointment processes etc).

There was considerable discussion about the roles and influence of EPSRC staff in the advisory processes. Not surprisingly the fact that both SAN and SATs reported directly to the Executive and Theme Leaders raised concern about how the advice was ultimately presented to Council. As mentioned previously the lack of explicit feedback was a major source of contention again fuelling perceptions that the advice was not being heard or listened to, leading to concerns that the Executive was taking too many decisions without sufficiently broad advice.

### **8.2.2 Resources**

It should be emphasised that during the course of the Review the Panel encountered considerable empathy for the position that EPSRC staff have found themselves in as a result of severe constraints in the administrative budget.

It was observed by some that greater demands were being placed on EPSRC staff as a result of the EPSRC aspiration to move from funder to sponsor. It was felt that the scientific and communication challenges of managing a research portfolio, especially in the context of Shaping Capability, required an in-depth understanding of the area at a level not expected before of portfolio manager and theme leads. This was further exacerbated by the fact that resource constraints had resulted in staff no longer having the same level of engagement with the wider research community. This provided an added imperative for the advice base to be suitably inclusive and containing sufficient breadth and depth of expertise to allow informed advice and to support EPSRC staff. This was felt to be crucial if these processes were to be trusted and viewed as credible by the wider

stakeholder community. It was felt that both the SAN and SATs might usefully have a role in this regard and should be periodically asked to reflect on the suitability of the available expertise.

The Panel would like to emphasise that the above represents the opinions and perceptions of those who have contributed to the review based on their own experiences.

## **9 RECOMMENDATIONS**

The Panel's recommendations are classified under 'Transparency', 'Consultation and Communication', 'Advice Structures and Processes' and 'Resources'. The same headings have been used under section 6 of this report "Summary of Views Presented to the Panel" so that the recommendations might be more easily cross referenced to the views received by the Panel.

### **9.1 Transparency**

- a SAT and SAN members should be appointed by open and transparent processes with explicit criteria.
- b There should be a public document describing all of the EPSRC's strategic advisory routes and processes and explaining the respective roles and responsibilities of those involved.
- c Minutes of SAN and SAT meetings should be available on the EPSRC website. It is acknowledged that on occasion these would need to be redacted for the purposes of confidentiality.

### **9.2 Consultation and Communication**

- a In the case of major strategic deliberations/decisions, EPSRC's consultation and communication plans should be inclusive, involving two-way engagement both before and after decision making with the broader communities of researchers and institutions – universities, learned societies, industry, etc. Circumstances when this might not be possible should be communicated. This plan should form part of the public document mentioned earlier (see recommendation 2).
- b The circumstances under which agenda items as SAT and SAN meetings must be taken in confidence and not reported in the published minutes should be made clear.
- c To the extent possible, the EPSRC should feed back into the community which advice has been accepted and how and where it has been used. Reasons for setting advice should also be given.



### **9.3 Advice Structures and Processes**

- a All of the advisory routes should be operated within an integrated and focused management process.
- b The specific roles and responsibilities of SATs and SAN should be reviewed and clarified taking into account EPSRC's change from a funder to a sponsor organisation. The outcome of such a review should form part of the public document mentioned earlier (see recommendation 2).
- c SAN and the SATs should ensure that they have assembled the expertise needed to meet their roles and responsibilities.
- d Each SAT and each SAN Working Group should be chaired by a member of the relevant community. We believe it is good practice for a member of Council to continue to be on each SAN Working Group.
- e The ownership and leadership of the SAN and the structuring of its work programme should be more clearly established to align with the Council's requirement to seek advice in a planned and comprehensive manner to support all aspects of its principal decision making; the mechanism for this is for Council to determine.
- f SAN and SAT members should see in writing how their advice has been presented to Council and have the resulting Council decision fed back to them.
- g Council should determine how best to ensure it has 'sight lines' into the work of SAN and SATs.
- h All of the advisory routes should be subjected to periodic audit, including, in particular, the relevant risk assessments.

### **9.4 Resources**

- 9.4.1 Every effort must be made to ensure that EPSRC has the resources and skills development capacity needed to achieve the transformational change it has embarked on successfully.

## **10 ANNEX 1 - Panel membership and profiles**

### **10.1 Dr Suzanne Fortier**



Dr. Suzanne Fortier served as President of the Natural Sciences and Engineering Research Council of Canada (NSERC) from January 2006 until March 2013. She will take up the position of Principal and Vice Chancellor at McGill University in September 2013.

Before her appointment as President of NSERC, Dr. Fortier was a faculty member at Queen's University, Canada where she attained the rank of Full Professor in both the Department of Chemistry and the School of Computing Science. She also held a number of senior research and administrative positions, including Associate Dean in the School of Graduate Studies and Research, Vice-Principal (Research) from 1995 to 2000 and Vice-Principal (Academic) from 2000 to 2005.

Dr. Fortier is a crystallographer by training, specializing in the development of mathematical and artificial intelligence methodologies for protein structure determination.

Dr. Fortier has served on a number of Boards and committees, including the European Research Council (ERC) President Search Committee, the Jury of France's Investissements d'avenir, the Global Research Council Board and the Canada Foundation for Innovation Board.

## 10.2 Professor Richard Brook



Richard is the President of AIRTO and was formerly the Chief Executive of the Sira Group of Companies. His career spans over 40 years in research and development in sensors, measurement, instrumentation and related technologies such as optics, imaging and displays for industrial manufacturing, space and defence applications. Richard has extensive involvement with leading technology organisations in the US and Europe including the European Commission and the European Space Agency. He has also been extensively involved with EPSRC, NERC and STFC in past years.

He is also a founder of E-Synergy Ltd, an early stage venture capital business which has a growing portfolio of activities in business angel investing, early stage fund management and investment readiness training. He is currently working with a number of companies in this regard that show significant business potential in the context of the UK's carbon reduction targets, as well as with a variety of companies in other sectors, through the government's Growth Accelerator Access to Finance Programme.

He is Deputy Chairman of the Institute for Sustainability and an independent director on the Board of the National Physical Laboratory, as well as chairing the audit committees of both organisations.

Richard holds degrees in Mathematics, Physics, Computer Science and Engineering from Bristol and London Universities. He is a Chartered Engineer, Chartered Mathematician and a Fellow of the Institutes of Measurement and Control and Engineering and Technology. Richard is a Fellow of the Royal Academy of Engineering and was appointed OBE in 2004 for services to Higher Education and to the UK space industry.

### 10.3 Professor Sir David Wallace CBE, FRS, FREng



Following undergraduate and postgraduate study in theoretical physics at the University of Edinburgh, David Wallace continued research at Princeton University as a Harkness Fellow. In 1972 he was appointed as lecturer in the Physics Department at the University of Southampton. In 1979 he returned to the University of Edinburgh as Tait Professor of Mathematical Physics. He was also Director of Edinburgh Parallel Computing Centre. He was Vice-Chancellor at Loughborough University for 12 years, from 1994. He moved to Cambridge in 2006, as Master of Churchill College, and, to 2011 as NM Rothschild & Sons Professor of Mathematical Sciences & Director of the Isaac Newton Institute.

He is a former President of the Institute of Physics and Treasurer and Vice-President of the Royal Society, and has served as a member of the Engineering and Physical Sciences Research Council and the Scottish Higher Education Funding Council, and as an Expert to the European Commission in a number of areas. More recently he has served as Chair of the Council for the Mathematical Sciences in the UK, and as a member of the management board of the Royal Commission for the Exhibition of 1851. He is a Governor of Harrow School. His non-executive directorships have included the Scottish Life Assurance Company, Taylor & Francis Group plc and UK e-Universities Worldwide Ltd. He has received honorary doctorates from Heriot Watt, Edinburgh, Leicester, Loughborough, Southampton and East Anglia Universities. He was a Deputy Lieutenant of Leicestershire from 2001 to 2006. He is a fellow of the Royal Academy of Engineering, and an Honorary Fellow of the Institute of Mathematics and its Applications. He was awarded a CBE for services to parallel computing in 1996, and knighted in 2004 for services to UK science, technology and engineering.

## 10.4 Professor Helen Atkinson FREng



Professor Helen Atkinson has a first class degree from Cambridge University and a PhD from Imperial College. She was appointed to a Chair in Metals Processing at Leicester in 2002 (and was previously in Engineering Materials at the University of Sheffield). She has been Head of the Mechanics of Materials Research Group since 2005 and became Head of the Department of Engineering in 2012.

Prof Atkinson is a Fellow of the Institute of Materials, Minerals and Mining (IoMMM), a Fellow of the Institution of Mechanical Engineers and a Chartered Engineer. She was elected a Fellow of the Royal Academy of Engineering in 2007. She has served on a number of bodies including:- UK Government Technology Foresight Materials Panel (1994-99); Chemicals and Materials Task Force for the Government's Foresight Crime Prevention Panel (1999-2001); Office of Science and Technology Action Group on Sensors (1996-97); Institute of Materials Council (1992-96); Institute of Metals Council (1989-91); Higher Education Funding Council for England (HEFCE) Teaching Quality Assessment in Materials (1996-99); British Transport Police Committee (the national committee responsible for the governance of the Transport Police) (1998-2003); Lord Chancellor's Advisory Committee for the Appointment of Magistrates in Rotherham (2000-02); an MoD Safety Committee appointed by the Secretary of State for Defence.

She is a member of the Engineering and Physical Sciences Research Council (EPSRC) Structural Materials College and has served on and chaired Panels prioritising proposals for funding and candidates for Fellowships. She was a member of the EPSRC Panel evaluating the Materials Portfolio (~800 projects) (1998-2000). Prof Atkinson is Immediate Past President of the Engineering Professors' Council (which represents engineering in higher education throughout the UK) and a Vice-President of the Royal Academy of Engineering.

## **11 ANNEX 2 – Engineering and Physical Sciences Research Council Visiting Panel on behalf of EPSRC – Review of EPSRC’s strategic advice routes**

### **TERMS OF REFERENCE AND OPERATION**

#### **11.1 BACKGROUND**

At its meeting in October 2012 EPSRC’s Council discussed the relationship between the executive and its stakeholder community as a result of concerns amongst some stakeholders about decisions that had been taken (e.g. shaping capability, project studentships) in the context of a reduced budget and increased international competition. The concerns that had been raised related variously to the decisions themselves and the process by which decisions were taken.

Council concluded that it was important to acknowledge these perceptions and to demonstrate that EPSRC is listening and responding to these. It therefore proposed a number of communication activities to restate and re-emphasise the rationale behind specific strategic decisions and the changes that resulted. Council also agreed to commission an independent and transparent review of how strategic advice is obtained within EPSRC. This will be followed by a separate review looking at the advisory and decision making processes associated with individual research grant funding.

#### **11.2 STRATEGIC ADVICE REVIEW - PURPOSE**

The EPSRC obtains strategic advice to help develop and shape its policy-making and direction-setting. The visiting panel will undertake an independent review of how EPSRC obtains and utilises this strategic advice, looking at both the mechanisms and sources for obtaining such advice and how this influences strategic decision-making. Note that this specifically excludes the peer review advice that EPSRC obtains for its project-level decision-making.

The visiting panel will report directly to Council.

#### **11.3 SCOPE**

The visiting panel will be responsible for defining the precise scope of the review. Areas which we would expect it to investigate are:

- **Nature of advice** being sought – who decides what advice is sought and needed in order for Council and the executive to develop effective policies and strategies.

- **Structures** – to review the adequacy and effectiveness of the structures in place for obtaining strategic advice. These include the Strategic Advisory Network, the theme-level Strategic Advice Teams, and through relationships with the Framework Universities and the company Strategic Partners;
- **Credibility of Advisory Sources** - assurance over the extent to which the individuals and bodies providing advice are credible sources;
- **Roles and responsibilities** – to review the effectiveness, and clarity, of roles and responsibilities of those involved in commissioning, and those providing, strategic advice in EPSRC;
- **Provision and utilisation of advice** – to review the effectiveness of the advice provided (e.g. its robustness and the degree to which it is free from bias or vested interest), and its value (e.g. its relevance and timeliness) in informing EPSRC’s strategic planning and decision making.
- **Transparency** – to review the clarity and transparency of the strategic advisory processes to EPSRC’s wider stakeholder community.

The visiting panel will be invited to make recommendations on each of these areas.

Before the review commences, the visiting panel Chair will meet with the Chair and Chief Executive to discuss the terms of reference, roles and objectives for the review.

#### **11.4 MEMBERSHIP**

Members will be drawn from senior and highly regarded individuals from academia, business and a peer organisation. At least one member will be drawn from an overseas organisation. Members are not required to represent their own organisation nor to represent their entire sector

The membership will be appointed by the Chair and CEO of EPSRC in conjunction with a sub-group of Council members.

#### **11.5 METHODOLOGY**

The visiting panel will define its own methodology and schedule of tasks in keeping with the desired scope of the review. This might include:

- Review and scrutiny of documentation and data;
- Interviews with EPSRC staff;
- Consultation with members of current EPSRC advisory streams and Council;

- Discussions with members of EPSRC's key stakeholder groupings;
- Making reference, where appropriate, to contextual information about international analogue organisations.

The Panel will have access to all areas and staff of EPSRC. The Panel will be free to request access to any documentation or data considered appropriate for the review tasks.

A designated member of EPSRC will act as Secretary to the Panel for the duration of the review and will be responsible for arranging meetings/interviews for the Panel and ensuring that all necessary documentation and requested information is provided in a timely manner, and that a record is maintained of the panel's work.

## **11.6 TIMESCALES**

The visiting panel will begin its review in Spring 2013 and will report to the Council meeting scheduled for July 2013. The visiting panel will determine the number of meetings that will be required based on the agreed scope and modus operandi.

Issues that the panel would not wish to include in a report should be covered in an oral report from the Panel Chairman to the Chair and Chief Executive.



## 12 ANNEX 3

### LIST OF THOSE INVITED TO SUBMIT WRITTEN EVIDENCE TO THE REVIEW

<b>Higher Education Institutes (HEIs)</b>	
All UK based HEIs eligible to receive EPSRC funding	
<b>HEI Representative Groups</b>	
1994 Group	Russell Group
Universities UK	Million +
University Alliance	
<b>Learned Societies and Institutions</b>	
Royal Society	Institute of Physics
Council for the Mathematical Sciences	The Royal Society of Chemistry
Institute of Maths and its Application	The London mathematical Society
The Royal Academy of Engineering	Institution of Mechanical Engineers
Institution of Civil Engineers	Institution of Engineering and Technology
Institute of measurement and Control	IOM3
Royal Aeronautical Society	
<b>Other Groups</b>	
The Campaign for Science and Engineering	Council for the Defense of British Universities
Science for the Future Campaign	
<b>Industry Representative Groups</b>	
CBI	AIRTO

<b>EPSRC'S Strategic Partners in Industry</b>	
GE Aviation RSSB P&G E.On Cancer Research UK BAE Systems EDF Energy Arup Astra Zeneca DSTL NPL GSK	AWE NDEVR Rolls Royce Department for Transport Dyson Mobile VCE Airbus Wellcome Trust Jaguar Land Rover Pfizer Centre for the Protection of National Infrastructure
<b>EPSRC's Strategic Advisory Bodies</b>	
Members of EPSRC's Strategic Advisory Teams	Members of EPSRC's Strategic Advisory Network

## 13 ANNEX 4

### 13.1 Review of EPSRC's Strategic Advisory Routes

#### Call for written evidence

#### Completed by: (name and organisation)

**Question 1:** Are the advisory processes that underpin EPSRC's strategic decisions transparent and clearly conveyed? (Please indicate below as appropriate).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 2:** Are these advisory processes credible? (Please indicate below as appropriate).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 3:** Are there any particular gaps in the areas on which strategic advice is being sought? (*please indicate below as appropriate*)

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 4:** EPSRC's advisory routes currently provide advice directly to EPSRC's Executive and Theme Leads. Do you feel that this arrangement could be strengthened? (Please indicate how in the comments).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 5:** Are the advisory processes sufficiently inclusive of the EPSRC stakeholder base? (Please indicate below as appropriate).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**).

**Question 6:** Should there be more open consultation? (Please indicate below as appropriate).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 7:** Are the processes and criteria for appointing EPSRC advisers clearly articulated and sufficiently transparent? (Please indicate below as appropriate).

Yes	Partly	No	Cannot comment

Please provide comments to support your answer (**maximum 150 words**):

**Question 8:** Are you aware of the constraints that EPSRC is operating under?  
(Please indicate below as appropriate).

<b>Yes</b>	<b>Partly</b>	<b>No</b>	<b>Cannot comment</b>

Please provide comments to support your answer (**maximum 150 words**):

**Question 9:** What changes, if any, do you think could be made to the strategic advisory processes which would help to allay the concerns expressed within parts of the stakeholder community about some aspects of EPSRC's strategic decisions making? (**Maximum 150 words**).

**Please use the space below to provide any supplementary comments about aspects of this review not covered above:**

## Organisational Structure

