



Natural
Environment
Research Council

Minutes of the 24th meeting of NERC Council in UK Research and Innovation (redacted)

NATURAL ENVIRONMENT RESEARCH COUNCIL

Twenty-fourth meeting of NERC Council in UK Research and Innovation held at Polaris House, Swindon on Thursday, 7 March 2024.

Members present:

Professor Peter Liss (Interim Executive Chair), Rashik Parmar (Senior Independent Member), Judith Batchelar, Professor Hannah Cloke, Dr Matthew Harwood, Dr Rebecca Heaton, Professor Sir Stephen Holgate, Professor Mike Kendall, Michael Lewis, Clare Matterson, Gordon McGregor, Professor John Pyle

Professor David Hannah, Chair, Science Committee, Professor Gideon Henderson, CSA, Defra, Charlie McNichol-Fardon, Chair, Future Leaders Council

NERC/UKRI Directors (Head Office): Nigel Bird (Director, Major Projects), Alison Robinson (Deputy Executive Chair and Director, Business Delivery and Insight), Professor Susan Waldron (Director, Research and Skills), Dr Iain Williams (Director, Strategic Partnerships), Tim Bianek (UKRI, Chief Operating Officer) (Item 4 only) (via Zoom)

Apologies: None

Other attendees: Professor Louise Heathwaite, incoming NERC Executive Chair, Kate Hamer and Sarah Turner, Items 6,7,8,9, Professor Patrick Chinnery, Item 8 (via Zoom), Professor Dame Jane Francis, Item 9

Secretariat: Helen Page, Laura Carney

Introductory items

1. Executive Chair's welcome, unconfirmed minutes of the 23rd meeting of NERC Council and Decisions and Actions (Oral)

- 1.1 Peter Liss welcomed members to the twenty-fourth meeting of NERC Council and noted that no apologies had been received for the meeting.
- 1.2 Peter Liss informed Council that this would be the final meeting for Matthew Harwood and Rebecca Heaton and thanked them for their valuable contributions to Council over the past four years.
- 1.3 Peter Liss also noted that this would be the last meeting for Nigel Bird and Susan Waldron. He thanked them both for their excellent service to NERC.
- 1.4 Peter Liss asked members to ensure their declared interests were kept updated via the self-service portal, reminding members that Helen Page would be available during the lunch

period for anyone experiencing difficulty in accessing the Declaration of Interests portal.

He asked if there were any vested interests in any of the items being discussed today. None were declared.

1.5 Peter Liss congratulated those in the environmental science community who had been recognised in the King's New Year Honours including:

- **GBE: Professor Sir Jim McDonald** (University of Strathclyde) who was appointed Knight Grand Cross of the Order of the British Empire (GBE) for services to engineering, education and energy. He is Chair of the BaGF (Building a Green Future) Advisory Board
- **CBE: Professor Penelope Clare Endersby** FREng, Chief Executive Officer, Met Office for services to meteorology, to defence science and to technology.
- **OBE: Professor Richard Templer**, lately Director of Innovation, Grantham Institute, Imperial College London for services to climate innovation
- **MBE: Professor Peter Stott**, Deputy Head of Climate Science and Science Fellow, Met Office for services to climate science

1.6 Peter Liss informed Council of two other notable awards:

Honorary awards to foreign nationals in 2024

(Foreign, Commonwealth and Development Office):

Honorary CBE: Lora Fleming, Chair of Oceans, Epidemiology and Human Health, University of Exeter for services to the Environment and Human Health

Royal Astronomical Society's Gold Medal

Professor Mike Kendall has been recognised for his outstanding work in the field of seismology and for his support for the next generation of seismic researchers.

1.7 Peter Liss asked members for any amendments and matters arising from the minutes of the previous meeting. No amendments were made, and the minutes of the twenty-third meeting were confirmed as a good record.

1.8 Peter Liss advised that the actions from the previous meeting had been completed.

2. Introduction from the new NERC Executive Chair

2.1 Peter Liss introduced Professor Louise Heathwaite who would assume the role of NERC Executive Chair from 11 March 2024.

2.2 Louise Heathwaite welcomed the opportunity to meet with Council members in advance of her formal appointment commencing. She added that her initial focus would be on identifying the key issues and future challenges for the organisation, noting that it would be important to promote the contribution that NERC might make in addressing the Government ambitions on productivity and growth.

2.3 Louise Heathwaite informed Council that some key areas of focus embodied the ongoing challenges related to climate, pollution and biodiversity loss interpreted through improvements in digital and analytical capabilities, measures to account for and reduce biodiversity loss, climate adaptation and beyond carbon, nature and finance. She added that the NERC research centres continued to be of critical importance, noting that NERC would continue to discuss their sustainability and how to ensure they were aligned and added value across the areas in which they worked. Louise Heathwaite also highlighted the importance of the talent pipeline in environmental science adding that it would be important to understand where NERC might influence this.

2.4 Louise Heathwaite explained that she would assume the role of NERC Executive Chair on

secondment from Lancaster University retaining one day per week for her research.

- 2.5 Louise Heathwaite highlighted a recent publication by the Times Higher Education which listed the value add of universities globally, 'bang for buck,' demonstrating the importance of analysing the outcomes of university funding.
- 2.6 Louise Heathwaite emphasised the importance of ensuring NERC was a safe, healthy and resilient environment to continue to succeed. She added that it would continue to be important to work collaboratively across the research councils and to ensure NERC worked well in partnership with UKRI.
- 2.7 Louise Heathwaite emphasised the opportunity to highlight and develop NERC's big ideas as part of the Spending Review process and beyond. She added that NERC might do more in encouraging entrepreneurial appetite within the environmental science community and in reviewing, and expanding, those who it worked with in partnership.

3. Update by the Chief Scientific Adviser, Defra

3.1 Gideon Henderson provided an update under six headings:

- King's New Years Honours
- Government key issues
- Environmental
- International
- Government/UKRI working
- National Capability

3.2 Council noted that Solar Radiation Management was currently being funded by NERC and advised that there were issues of governance which UKRI might need to address. Gideon Henderson advised that the Council for Science and Technology had corresponded on this recently, adding that this was also an area of focus for the Advanced Research and Invention Agency (ARIA) and that this issue was likely to be discussed further at the next meeting of the UNEA in November 2025.

3.3 Following on from a discussion on the Innovation in Environmental Monitoring programme, mentioned under the Government/UKRI working heading, Council commented that there was potentially huge commercial value from a range of end users to come from this programme, noting it would be important to have an effective communication strategy in place. Gideon Henderson confirmed that applications would be judged on whether there was a mechanism in place to maximise business interest.

4. Update from UKRI

4.1 Tim Bianek introduced this item to provide an update on current UKRI priorities.

4.2 Services for HR, Accounting, Reporting and Procurement (SHARP) programme

Tim Bianek explained that this programme had been delayed due to its complexity, adding that re-planning of the programme was currently taking place. He informed Council that it was anticipated that the first release would be available at the end of 2024 with the service subject to quarterly updates going forwards.

4.3 UKRI Operating Model/Organisational Change

Tim Bianek informed Council that a workshop was held in January 2024 to consolidate the work underway across the organisation to ensure UKRI was more efficient and effective in the context of the financial and operational expenditure targets set in the Spending Review. He added that it would be a challenging time for UKRI as the implementation phase was initiated.

4.4 Simpler Better Funding

Tim Bianek reminded Council that the new grant system capability was being delivered incrementally with the award function due to be added in the near future and that there was ongoing work to minimise the use of 'workarounds' in the system.

4.5 Spending Review

Tim Bianek commented that the financial context for the forthcoming spending review would be challenging and that this would lead to a highly competitive Spending Review, adding that UKRI would need to provide compelling evidence for further investment. He noted that it would be important to prepare for a range of priorities and ambitions given that the Spending Review would not take place until after the General Election.

4.6 Council queried who held responsibility in UKRI for the Simpler, Better Funding programme. Alison Robinson confirmed that Stian Westlake, ESRC Executive Chair now held this responsibility.

5. **Executive Chair's update (Oral)**

5.1 Peter Liss gave an oral update on some of the key activities since the previous Council meeting.

a) Finance update

Nigel Bird provided a finance update for Council members outlining NERC funding since 2016/17 and providing the core forecast for 2024/25. Nigel Bird explained that inflationary pressures had reduced the core funds in real terms which had already led to a reduction in purchasing power. Nigel Bird added that NERC had a broadly balanced budget for 2024/25 although there was limited headroom. He added that some activity had been delayed into future years to deal with cost pressures.

Council queried whether the partition model for the Antarctic Logistics and Infrastructure might be a model that could be applied to other NERC infrastructure. Nigel explained that this would be a decision at Government level as the partition was in the science budget rather than the NERC budget.

Council noted that the overall success rate for NERC awards over the past five years was reasonably high and asked whether this rate was likely to be sustained. Nigel Bird explained that the success rate varied considerably and the current rates were partly due to the increase in budget for Discovery Science as part of the Spending Review. Susan Waldron explained that the Strategic Research and Innovation budget provided an alternative route for funding, adding that the Highlight Topic scheme was currently being reviewed and had been discussed by Science Committee in January.

b) NERC Council recruitment

Peter Liss informed Council that two new members were due to start on NERC Council from 1 April 2024:

- Ms Cathrine Armour, Global Director, Data Initiatives, Nature Related Financial Disclosures
- Professor Kevin Gaston, Professor of Biodiversity and Conservation, Environment and Sustainability Institute, Faculty of Environment, Science and Economy, University of Exeter

He added that a new campaign to recruit members who would start on 1 April 2025 would commence shortly.

- c) Antarctic
Peter Liss advised Council that a recent trip to Rothera on the RRS *Sir David Attenborough* had taken place which included the Foreign, Commonwealth and Development Office (FCDO) Minister with responsibility for the British Antarctic Territory and five members of the Environmental Audit Committee. He added that Jane Francis, Nigel Bird and Iain Williams would give oral evidence at the Environmental Audit Committee inquiry into the Antarctic.
- d) NERC Showcase, Cardiff, October 2024
Peter Liss informed Council that the RRS *James Cook* would be in Cardiff from 17-20 October 2024 as part of a NERC showcase event and Council members would receive an invitation to attend the event.
- e) NERC Council retreat, June 2024
Peter Liss informed Council that the NERC Council retreat and meeting would take place in Lancaster on 19 and 20 June 2024.
- f) NERC organisational structure: interim arrangements
Louise Heathwaite introduced a closed session for Council members to outline the interim arrangements for NERC. NERC Executive Directors, NERC Science Committee Chair and the Chair, Future Leaders Council left the room during this discussion.

Items for discussion

6. Planning for HMG Comprehensive Spending Review (NERC 24/03)

- 6.1 Alison Robinson introduced this item. Kate Hamer and Sarah Turner observed.
- 6.2 Alison Robinson reminded Council that it was anticipated that the Comprehensive Spending Review would now take place following the General Election. She added that, depending on the timing of the election, it was possible that UKRI would receive a one-year rollover for 2025/26.
- 6.3 Alison Robinson commented that UKRI and NERC were continuing to prepare for a Comprehensive Spending Review using international comparisons, developing ideas and modelling some scenarios, noting that preparations would need to be accelerated if an early election was called.
- 6.4 Council suggested that some of the ideas captured in the Infrastructure Roadmap might be suitable for the Spending Review. Iain Williams confirmed that it was planned to establish a sub-group, which would include Council members, to re-visit the infrastructure pipeline.
- 6.5 Council suggested that the role NERC played in increasing productivity should also be considered when preparing for the Spending Review.
- 6.6 Gideon Henderson highlighted that it would be important to work closely with other Government departments during the Spending Review period to ensure agendas aligned. He added that NERC should be able to demonstrate that research and development was crucial for the growth agenda as this was a key issue for Government.
- 6.7 Council also highlighted the importance of making a strong case for environmental science, particularly the innovation piece, adding that an international benchmarking exercise would be useful.

7. Outcomes of the Nature Positive Stakeholder Roundtable (NERC 24/04)

- 7.1 Alison Robinson introduced this item to update Council on the outcomes of the Nature

Positive Stakeholder roundtable. Kate Hamer and Sarah Turner observed.

- 7.2 Alison Robinson informed Council that a successful business roundtable on Nature Positive had been held recently. A stated aim of participants at the end of the session was to give a commitment to seek to work together, with an understanding of co-funding, and to develop a programme to launch in spring 2025. She added that, following the roundtable, a timetable for future activity was being prepared along with a first step to conduct a 'market readiness' report.
 - 7.3 Rashik Parmar informed Council that a previous digital roundtable held in 2023 had been attended by a broad mix of business representatives adding that attendees had been well engaged.
 - 7.4 Judith Batchelar informed Council that the nature positive roundtable had been attended by a high calibre of attendees who were very engaged. She commented that it was good to see that NERC had the ability to convene such events, adding that it was a timely discussion with a high level of interest in the outputs of any research and innovation programme. Judith Batchelar commented that there was potential for implementing a research club model with this group which would be explored further.
 - 7.5 Alison Robinson explained that the group would re-convene to further explore the research questions, adding that there was an intention to include wider partners, for example the Environment Agency and the Department for Transport in future discussions.
 - 7.6 Council welcomed these initiatives and asked for more detail on what was meant by 'market readiness'. Alison Robinson explained that this was a way of setting out the broader landscape of potential barriers and opportunities to progress this to a business model in an open way that was not specific to a single business and so could provide a shared understanding of the broader context.
 - 7.7 David Hannah commented that the roundtables demonstrated the convening power of NERC and asked whether there had been any consideration of investment in the talent pipeline. Alison Robinson confirmed that this had been part of the discussion and Judith Batchelar commented that, as a lot of work was ongoing in this area, it would be important not to duplicate existing initiatives.
 - 7.8 Council asked whether there were additional stakeholders who might be included in the discussion, including at an international level. Alison Robinson confirmed that the initial focus was on the UK although it might be possible to widen the reach of the project in future, adding that the longer term thinking would also include who NERC might co-fund with. Charlie McNichol-Fardon suggested that different stakeholders might be invited to different roundtables to develop this further and that a public roundtable might also be useful.
 - 7.9 Gideon Henderson welcomed the initiative and suggested that the focus should be on what business needs to be nature positive. He added that biodiversity net gain should continue to be an important consideration and that an international aspect would also be useful.
- 8. UKRI Strategic Theme: Securing Better Health, Ageing and Wellbeing (Oral) Slides, item 8**
- 8.1 Peter Liss welcomed Professor Patrick Chinnery, MRC Executive Chair, to NERC Council and reminded Council that it had been decided to invite each of the UKRI Strategic Theme leads to provide an overview of the themes they were leading on.
 - 8.2 Patrick Chinnery presented slides which provided an overview of the UKRI Strategic Theme: Securing Better Health, Ageing and Wellbeing. He added that the focus of the theme was to improve population health, address health inequalities and advance

interventions to improve healthy life expectancy. Patrick Chinnery explained that there were four key components to the theme and outlined some of the investments made under each component:

- populational health improvement
- ageing throughout life
- mental health
- digital health

8.3 Patrick Chinnery explained that prevention had been identified as a key focus area and that MRC was hosting a cross-UKRI workshop 'A Prevention Society and Economy' on 13 March with representatives attending from all councils.

8.4 In discussion, the following issues were raised:

- the consideration of non-communicable diseases as part of the prevention strategy, including potential links to child health and maternal health
- the importance of ensuring a cohesive approach, for example, working collaboratively with others on areas such as air quality, nature connectedness and the quality of green spaces
- whether there was an intention, under this theme, to seek to address the cultural issues around health in the UK
- how existing research might be better integrated given that there was a significant amount of research in this area already
- the importance of consideration of the 'breathed environment'

8.5 Patrick Chinnery agreed that it would be important to consider non-communicable diseases as part of the prevention strategy, adding that the forthcoming workshop would help to provide some areas of focus in what was a broad theme. He informed Council that chronic respiratory disease was currently an area of focus for strategic investment and that it would be beneficial to discuss further collaboration with NERC on opportunities to fund this area of research. Patrick Chinnery also noted that a recent workshop on 'National Data Assets' had discussed opportunities to work collaboratively. Iain Williams added that work on data access through Trusted Research Environments was progressing although there were challenges in bringing together environmental science data with medical research data, noting that some work had been funded through the Digital Solutions programme. Patrick Chinnery commented that the current legislation was inhibiting data sharing and that policy changes were needed to address this.

8.6 Gideon Henderson commented that it would be useful to think of the environment in broad terms, not just the climatic aspects, adding that several initiatives were ongoing within MRC on zoonotic diseases.

8.7 Peter Liss thanked Professor Chinnery for an interesting presentation and discussion.

9. British Antarctic Survey – Strategy 2023-2033 (NERC 24/05) Slides, item 9

9.1 Peter Liss welcomed Professor Dame Jane Francis to NERC Council to provide an overview of the British Antarctic Survey Strategy 2023-2033. Jane Francis presented slides. Kate Hamer and Sarah Turner observed this item.

9.2 Jane Francis outlined the vision for BAS and the four priorities for change within the strategy:

- Digital innovation and technology
- Environmental sustainability

- Modernisation
- Safety culture

9.3 Jane Francis provided some examples of activity under these priorities:

- Polar Route: optimised ship planning using AI
- use of Biofuel (HVO) in ship and aircraft
- use of autonomous vehicles including the Wind Racer drone
- Safety Together campaign with a focus on physical safety, mental health and social wellbeing

9.4 Jane Francis outlined progress on the Antarctic Infrastructure Modernisation Programme which included the following activities:

- *RRS Sir David Attenborough*
- runway resurfacing
- replacement aircraft
- Discovery Building
- runway upgrade
- re-development of Signy
- replacement aircraft hangar
- future of Halley

9.5 Jane Francis provided an illustration to show the modernisation taking place at Rothera including the Discovery Building, adding that a renewables project had also installed solar panels and was considering installing a wind turbine. Jane Francis informed Council that the Cambridge site was also due to be upgraded with an intention to replace some of the older parts of the building.

9.6 Council asked for more information on the future of Halley including how much science was taking part at both Halley and Rothera. Jane Francis confirmed that regular reporting from the instruments monitoring the ice shelf showed that Halley station was currently stable, adding that staff only visited during the summer. She explained that the majority of science was undertaken from field trips, using Rothera as a hub.

9.7 Council asked whether BAS had considered setting some nature targets within its strategy. Jane Francis advised that this was not specifically considered as part of the strategy but reminded Council that the Antarctic Treaty included environmental protection which BAS was obliged to follow.

9.8 Council asked whether the modernisation programme and the implementation of more sustainable energy solutions had led to a decrease in running costs. Jane Francis confirmed that there had been a decrease in running costs at Halley although BAS was yet to evaluate this at Rothera as work was ongoing.

9.9 Council asked whether BAS had considered partnerships with other organisations to bring in additional funding. Jane Francis informed Council that this already happened and that Antarctica worked as a collaborative international community. Council commented that it would be important to develop a clear code of ethics ahead of engaging with alternate funders. Jane Francis confirmed that the BAS logo and brand would be protected.

9.10 Council welcomed the focus on digital innovation and asked whether data collaboration was being considered. Jane Francis confirmed that the Antarctic Treaty stated that all scientific data should be open and accessible. She added that satellite communications had recently been installed at Rothera and on the *RRS Sir David Attenborough* which had revolutionised communication.

- 9.11 Gideon Henderson asked whether the BAS strategy was steered towards activity that might be politically or nationally relevant. Jane Francis confirmed that BAS worked closely with FCDO adding that part of the Antarctic Logistics and Infrastructure funding was provided for Government support such as work with the Antarctic Treaty and reports on climate for the FCDO.
- 9.12 Council asked whether BAS had an oral history programme which preserved information for future generations. Jane Francis confirmed that BAS had an oral history programme which it would be interested in expanding on were funding made available.
- 9.13 Jane Francis informed Council that meetings on geoengineering affecting the polar regions were increasing. Proposals included re-freezing the Arctic and placing 'curtains' around the bottom of melting glaciers.
- 9.14 Council agreed the BAS strategy for 2023-2033.

10. Carbon Storage Research Facility (CSRF) (Oral) Slides, item 10

- 10.1 Iain Williams introduced this item to present the outcome from the Carbon Storage Research Facility (CSRF) project. Iain Williams presented slides.
- 10.2 Iain Williams reminded Council that the CSRF had been discussed by Council in June 2023 and informed Council that a decision had been taken by NERC Head Office and NERC Management Board to close this project at the end of the current financial year.
- 10.3 Iain Williams reminded Council that this had been a two-year project funded by the UKRI Infrastructure Fund and NERC core funding to prepare a business case for a carbon capture and storage research infrastructure.
- 10.4 Iain Williams informed Council that the project team had been asked to produce some alternative options following the Council discussion in June 2023 and these options were outlined at the meeting including the preferred option of the Science Advisory Group.
- 10.5 Iain Williams advised Council that a decision was taken that the preferred option was still too high a financial risk especially without funding from another partner. A decision was, therefore, taken to close the project although BGS would continue to discuss opportunities with key stakeholders within its 'business as usual' programmes.
- 10.6 Council supported the decision to cease the project, noting that this was a difficult decision. Council commented, however, that investment in this area remained important, adding that there was interest from industry for research in this area and that would be possible with a more modest budget.
- 10.7 Gideon Henderson asked whether the Department for Energy, Security and Net Zero had been involved in these discussions and whether consideration had been given to working in partnership with others already doing this work. Iain Williams confirmed that, whilst there was support, this had not translated into a commitment to jointly fund this activity. Susan Waldron added that there were opportunities for future investment, potentially as a Strategic Research Investment.
- 10.8 In summary, Peter Liss confirmed that, whilst this was intended to be a bid into the UKRI Infrastructure Fund for the capital costs, NERC would be responsible for the running costs which NERC had not allocated funding for within the budget and that it had not been possible to negotiate a partnership for co-funding.
- 10.9 Iain Williams informed Council that the Science Advisory Group would be informed of the

decision to close the project shortly.

[Gordon McGregor left the meeting]

11. Agenda of the NERC Assurance Board (NERC 24/06)

11.1 Rashik Parmar introduced this item to update Council on the NERC Assurance Board (NAB) meeting held on 14 February 2024.

11.2 Rashik Parmar highlighted the items for discussion at the recent meeting which had included the risks connected to the Antarctic Airbridge and the use of Artificial Intelligence.

11.3 Rashik Parmar informed Council that NAB had a discussion on the challenges surrounding the project to replace the Dash aircraft including whether this was within tolerance levels at both BAS and UKRI levels. He added that the project was being reviewed and that a valuable discussion had been held at NAB.

11.4 Rashik Parmar commented that NAB had also discussed the risks round the use of Artificial Intelligence, as well as infrastructure and environmental sustainability items.

12. Agenda and unconfirmed minutes of Science Committee (NERC 24/07)

12.1 David Hannah introduced this item to update Council on the Science Committee meeting held on 24 and 25 January 2024 at the University of Birmingham, adding that five new members attended their first meeting.

12.2 David Hannah informed Council that the items for discussion at the last meeting included: the governance and operation of Science Committee; EDI: Positive Action Update; Strategic Research Investments; Big ideas workshop; Highlight Topics; NERC Doctoral Training Investments and NERC's impact and outcomes.

12.3 David Hannah informed Council that Science Committee was due to launch a recruitment campaign in April to recruit four new members. Interviews were due to take place in September/October and he thanked Rashik Parmar for agreeing to join the interview panel.

12.4 David Hannah informed Council that the next meeting of Science Committee would take place on 3 and 4 July 2024. He added that the items for discussion would likely include: Infrastructure pipeline; Highlight Topic evaluation; NERC sustainability update.

12.5 David Hannah expressed thanks, on behalf of Science Committee, to Peter Liss, Nigel Bird and, particularly, to Susan Waldron for her excellent support for Science Committee.

12.6 Council asked for more information on the Highlight Topic evaluation. David Hannah responded that the focus would be on the outcomes from the projects, rather than the application/evaluation process. Susan Waldron confirmed that Council would be consulted on any changes to the Highlight Topic programme following the review.

13. NERC Council forward agendas (including rolling programme of business) (NERC 24/08) Slides, item 13

13.1 Rashik Parmar thanked members for their suggestions for future agenda items and presented a slide which captured the ideas raised under six categories: future trends; societal issues; National Capability; operation of the Council; role of the Council member; wider topics for strategic input.

13.2 Louise Heathwaite commented that it would be useful to ensure a retrospective look where topics had been discussed previously to ensure that lessons learnt might also be

considered.

13.3 Council agreed that these topics should be incorporated into the rolling programme.

ACTION: Rolling programme to be updated to incorporate new topics for discussion

14. Any Other Business (Oral)

14.1 Alison Robinson expressed thanks, on behalf of Council, to Peter Liss for his willingness to serve as the NERC interim Executive Chair.

14.2 Peter Liss thanked the Council secretary for her organisation of the Council meetings.