



Natural  
Environment  
Research Council

## Minutes of the 18th meeting of NERC Council in UK Research and Innovation (redacted)

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### NATURAL ENVIRONMENT RESEARCH COUNCIL

**Eighteenth meeting of NERC Council in UK Research and Innovation held at the Natural History Museum, London on Thursday, 22 September 2022.**

#### **Members present:**

Professor Sir Duncan Wingham (Executive Chair), Nick Folland (Senior Independent Member), Judith Batchelar, Professor Hannah Cloke, Dr Matthew Harwood, Dr Rebecca Heaton, Professor Sir Stephen Holgate, Professor Peter Liss, Clare Matterson, Gordon McGregor, Rashik Parmar, Professor Gideon Henderson, CSA, Defra, Professor Graham Underwood, Chair, Science Committee

**NERC/UKRI Directors (Head Office):** Tim Bianek (Chief Operating Officer, UKRI) (part), Nigel Bird (Director, Major Projects), Alison Robinson (Deputy Executive Chair), Professor Susan Waldron (Director, Research and Skills), Dr Iain Williams (Director, Strategic Partnerships)

**Apologies:** Michael Lewis, Professor John Pyle

**Other attendees:** Anne Sofield and Robyn Thomas for item 4

**Secretariat:** Helen Page

#### **Introductory items**

##### **1. Executive Chair's welcome and introductions (Oral)**

1.1 Duncan Wingham welcomed members to the eighteenth meeting of NERC Council and noted that apologies had been received from Michael Lewis and Professor John Pyle.

1.2 Duncan Wingham congratulated those in the environmental science community who had been honoured in the Queen's Jubilee Birthday Honours:

- **CBE:** Miranda Lowe, Principal Curator, Natural History Museum for services to Science Communication and Diversity in Natural History
- **OBE:** Professor Karen Heywood, Professor of Physical Oceanography, University of East Anglia for services to Oceanography
- **OBE:** Professor John Barrett, Professor of Energy and Climate Policy, University of Leeds for services to Climate Change Assessment
- **OBE:** Dr Helene Hewitt, Science Fellow Ocean Modelling, Met Office, for services to Climate Science
- **BEM:** Professor Julian Orford, Emeritus Professor of Physical Geography Queen's University Belfast for services to the Environment

Duncan Wingham reminded members that nominations for honours were always welcome and encouraged members to submit names (and CVs if possible) for future awards.

- 1.3 Duncan Wingham asked members for any updates to their declared interests or any vested interests in the items being discussed today. None were declared.
- 1.4 Duncan Wingham asked members for any amendments and matters arising from the minutes of the previous meeting. No amendments were made, and the minutes of the seventeenth meeting were confirmed as a good record.
- 1.5 Duncan Wingham advised that all of the actions from the previous meeting had been completed.

## **2. Update from CSA, Defra (Oral)**

2.1 Gideon Henderson explained that his update would focus on four areas:

i. Government

Gideon Henderson commented that the new Government was focused on stimulating 'growth' including through de-regulation and innovation. He added that a fiscal event was due to take place on 23 September which might provide more detail on civil service headcount but was not expected to change the science budget.

ii. International

Gideon Henderson commented that risk from the continuing conflict in Ukraine was ongoing, particularly with regard to supply chains and that a tracking exercise was taking place to ensure supplies. Gideon Henderson informed Council that the Convention for Biodiversity Conference of the Parties (COP15) was being held in Canada in December due to COVID restrictions in China. He added that the UK were now taking legal action against the EU regarding association to EU science programmes such as Horizon Europe which might result in further delays.

iii. Cross-government activity

Gideon Henderson informed Council that net zero continued to be an ambition within Government and that Chris Skidmore was leading a review to find the most efficient and effective ways to meet the target. He added that a Chief Executive for the Advanced Research and Innovation Agency (ARIA) had now been appointed, Dr Ilan Gur, and that a scoping phase was taking place involving stakeholders which would help to shape future activity.

iv. Defra

Gideon Henderson commented that Defra had a new Secretary of State, Ranil Jayawardena, who had outlined four main priorities: food supply, water quality and supply, growth and international. He added that it would be important to ensure opportunities were taken to champion environmental science internationally which Duncan Wingham agreed to consider further.

Gideon Henderson informed Council that the Genetic Technologies (Precision Breeding) Bill had been delayed and was now expected to complete in the Commons and transfer to the House of Lords later this year.

He commented that there had been a shift in science thinking in the department towards innovation and that changes to the ministerial team might result in some policy changes, for example, on forestry.

- 2.2 Duncan Wingham asked Gideon Henderson to comment on the creation of the new board focused on adaption which would be similar to the Net Zero Innovation Board. Gideon Henderson confirmed that a cross-government group, similar to a task and finish group, was being established which included external representation and was due to have its first meeting soon. He added that one of the aims would be to produce a publication associated with the National Action Plan in 2023.
- 2.3 Council asked whether there was a role for NERC in the Food Data Transparency Partnership being set up to improve data to drive transformation in health, animal welfare and environmental outcomes.
- 2.4 Council commented that it would be important to understand how resilient the food supply chain in the UK was in light of the agricultural issues caused by the conflict in Ukraine and climate issues over recent months. Gideon Henderson responded that the price of both energy and fertiliser was driving the price increases but that food supply within the UK remained robust although he acknowledged it would be more challenging in other parts of the world.

### **3. Executive Chair's update (Oral)**

- 3.1 Duncan Wingham gave an oral update on some of the key activities since the previous Council meeting.

i. New Government

Duncan Wingham commented that BEIS had a new Secretary of State, Jacob Rees-Mogg, and that a new role, Minister of Climate, had been created and further detail on the remit of this role was awaited.

ii. Reviews

Duncan Wingham informed Council that UKRI would ensure the Skidmore review was aware of the range of net zero activity across the organisation. Duncan Wingham reminded Council of three other reviews which had taken place in 2022: the independent review of UKRI by Sir David Grant; the Tickell review of research bureaucracy and the landscape review by Sir Paul Nurse. He added that the first two reports were now published with the outcome of the Nurse review expected this Autumn. One specific recommendation had been made by Sir David Grant that UKRI should seek to appoint a Chief Technology Officer. Tim Bianek was invited to comment further on the outcome of the reviews.

Tim Bianek informed Council that the positive outcome of the Grant review was largely due to the evidence which UKRI had provided on the activities already underway as part of the Spending Review settlement and revised UKRI Operating Model, such as increasing collaboration, reducing bureaucracy and ensuring UKRI was an efficient and effective organisation.

Council asked whether there were any changes expected to the way in which Council operated. Tim Bianek responded that there were no specific recommendations made in the Grant review although there were ongoing discussions regarding better defining the roles of the UKRI Board and Council. Duncan Wingham added that, whilst the role of Council was being considered, particularly the emphasis on its advisory role, this was not as a result of the Grant review. The revised Terms of Reference for Council were currently awaited and Council would discuss these further once available.

Duncan Wingham added that the outcome of the Tickell review had been positive and had made sensible recommendations, for example, the simplification of paperwork requested in grant applications. Gideon Henderson asked whether track record would be considered in future and Duncan Wingham added that UKRI were moving to adopt a standardised 'résumé for researchers' based on the Royal Society approach. Susan

Waldron added that NERC had adopted a 'Capability to Deliver' document to mirror the résumé for researchers within which the applicant might include evidence of what they had previously achieved.

iii. Horizon Europe

Duncan Wingham informed Council that the Government had committed to fund any proposals applied for up to the end of 2022. Council asked whether Horizon Europe was still making new awards to UK applicants and Duncan Wingham confirmed this and commented that a mechanism was already in place to pick up the cost of any awards. Council commented that there would be an adverse impact on the UK ability to partner with Europe in future whilst the uncertainty on association to EU programmes remained.

iv. Visits

Duncan Wingham informed Council that he had initiated a series of university visits and had recently visited the British Antarctic Survey and UK Centre for Ecology and Hydrology (UK CEH). Duncan Wingham added that he was due to visit Northumbria University in November and commented that they had invested considerably in environmental science, particularly glaciology, in recent years.

v. Fracking

Duncan Wingham informed Council that the British Geological Survey had been asked to produce a scientific update on fracking for BEIS earlier in the year which had now been published.

vi. Strategic Delivery Plan

Duncan Wingham informed Council that the NERC Strategic Delivery Plan (SDP) had been published in September and outlined some 20 ambitions over the period 2022-2025. He added that the SDP would be linked to the Head Office Plan and that Council would receive an annual progress report alongside information on strategic science delivery.

Council asked whether greater emphasis on growth would now be required given this priority for the new Government. Duncan Wingham commented that it was unclear whether the balance between research and innovation would be changed as a result and Tim Bianek commented that it would be important to emphasise the focus on growth which was already embedded within the SDPs.

vii. NERC Discovery Science

Duncan Wingham advised Council that the recent Discovery Science round had a higher success rate than usual due to both an increase in available budget and a decrease in the size of the grants. He added that NERC continued to take an experimental approach to its decision making and invited Susan Waldron to provide some detail.

Susan Waldron informed Council that, as part of the Exploring the Frontiers call, NERC had introduced more efficient ways of processing applications to reduce the time spent by panels in making their decisions. She explained that NERC had introduced a random ranking for proposals which were deemed suitable for funding and that this would be trialled for one year initially. The primary aim was to reduce the amount of time spent by panels in differentiating between similarly scored proposals by selecting applications which were worthy of funding at random.

Council was supportive of this experimental approach and asked whether there had been any feedback from the community and Susan Waldron commented that there had been positive feedback so far. Council asked whether 'levelling up' would still be considered in the decision making process and Duncan Wingham commented that growth across the UK would still be important and might be addressed by the UKRI Strategic Themes rather than via NERC responsive mode funding.

viii. NERC Executive Chair

Alison Robinson reminded Council that Duncan Wingham would step down as NERC Executive Chair at the end of June 2023 and that BEIS would be leading the recruitment campaign for his replacement as it was a Ministerial appointment. She added that she would inform Council once the campaign was launched and advised that there may need to be an interim arrangement if the position was not appointed to in time.

### Items for discussion

#### 4. **Reforming our Business: Simpler and Better Funding Programme (NERC 22/25)** *Slides, item 4*

- 4.1 Anne Sofield, Simpler and Better Funding (SBF) Programme Director, introduced this item and presented slides. Robyn Thomas observed this item.
- 4.2 Anne Sofield explained that the aim of the SBF programme was to provide a single, consistent funding service across UKRI to replace the current research funding systems (Je-S/Siebel) which would go out of service in December 2023. She added that there would be considerable activity between March and October 2023 when the transition would take place and that, whilst it had been decided to run the new service alongside the existing one, it would be important to consider limiting the number of funding opportunities launched during this period.
- 4.3 Duncan Wingham asked Anne Sofield to highlight the benefits of the new funding service. Anne Sofield explained that there would be an increased level of consistency which would make it easier for applicants to apply for opportunities across UKRI as well as a reduction in information requested at the application stage which would reduce the administrative burden for applicants. She added that information, such as that requested for Equality, Diversity and Inclusion purposes, would be re-used in the new funding service rather than needing to be re-entered for each application. She added that transactional activity would become more automated in the new funding service resulting in a decrease in the number of staff required to process applications in future.
- 4.4 Duncan Wingham invited Robyn Thomas to provide a view on progress with the programme to date. Robyn Thomas advised that the plan for operationalising the new funding service was progressing well and added that the new funding service was expected to be an improvement on the current system and was also providing opportunities to streamline other activity. He noted, however, that there would need to be considerable effort over the next 12-18 months to deliver it.
- 4.5 Council was supportive of the new funding service and asked how data would be migrated from one platform to the other. Anne Sofield explained that there was a data programme which would be responsible for data migration working in partnership with UK SBS to ensure active awards were transitioned. She added that the new funding service was a component based system and the use of AI level tools was being considered.
- 4.6 Council asked whether end users had been involved in developing the new funding service and Anne Sofield explained that they had taken a 'user centre design' approach and feedback had been sought on a regular basis and had already helped to make improvements. Council suggested that end users be included in the launch of the new funding service which Anne Sofield agreed to consider.
- 4.7 Council asked whether non-association with Horizon Europe was perceived as a risk to the new funding service. Anne Sofield explained that the SBF team were working closely with the team responsible for planning on Horizon Europe and were discussing a variety of scenarios and assessing the potential impact if UKRI were asked to deliver a domestic alternative.

- 4.8 Graham Underwood asked whether the classification system, that is the codes and sub-codes currently used in Je-S, would be updated and Anne Sofield explained that they would be migrated initially but reviewed in the longer term, potentially using AI.
- 4.9 Duncan Wingham summarised that, whilst the SBF programme was moving in the right direction, there were risks related to the staff changes which would be required to deliver SBF and to the timescales as there was still much work to be done. Tim Bianek added that the changes in processes which would be required would require a significant shift internally and would require a level of control across the organisation. Duncan Wingham added that the introduction of uniformity would need centralised control to ensure opportunities for simplification were maximised.

## 5. UKRI Strategic Themes (Oral) Slides, item 5

- 5.1 Duncan Wingham introduced this item and informed Council that it was intended to give them a sense of the scope of each theme in order to help determine how NERC might contribute and understand how the themes worked as a mechanism for collaboration across UKRI.
- 5.2 Duncan Wingham explained that there were five themes:
- i. Building a Green Future (NERC-led)
  - ii. Creating Opportunities, Improving Outcomes (ESRC-led)
  - iii. Securing Better Health, Ageing and Wellbeing (MRC-led)
  - iv. Tackling Infections (BBSRC-led)
  - v. Building a Secure and Resilient World (AHRC-led)
- 5.3 Duncan Wingham informed Council that each theme was led by an Executive Chair who would be delegated a budget of £75 million per theme. Duncan Wingham confirmed that he would be leading on 'building a green future' and would report back to Council on progress under this theme at future meetings. He noted that this was separate to his responsibilities in running NERC and that he had taken care to ensure that Susan Waldron was part of the wider team to ensure NERC was a key partner in shaping and contributing to the development of the theme.
- 5.4 Duncan Wingham explained that the 'building a green future' theme consisted of three sub-themes; targeting national priorities; achieving the last 20% and accelerating the green economy. He added that the intention was to double the funding available by working in partnership, for example, with other research councils and Government Departments.
- 5.5 Duncan Wingham outlined the remaining themes and sub-themes and noted that there were opportunities for NERC to be involved in the 'creating opportunities, improving outcomes,' 'tackling infections' and 'secure and resilient world' themes. Susan Waldron informed Council that NERC was engaging with each of the themes and had helped to contribute to the detail portrayed in the slides. She added that NERC was also looking for opportunities where NERC's strategic ambitions align with the themes to help inform future Strategic Research investments.
- 5.6 Duncan Wingham informed Council that the governance of the themes would comprise a Programme Board, chaired by an Executive Chair, and an Advisory Board populated by existing Council members. He added that Council members would be invited to outline why they might be interested in joining the Advisory Board in due course.
- 5.7 Duncan Wingham suggested that each theme lead might be invited to provide an overview of activity under their theme at future Council meetings.
- ACTION: UKRI Strategic Theme leads to be invited to provide an overview to NERC Council**

- 5.8 Gideon Henderson welcomed the opportunity for partnership working under the land storage and emissions programme within the 'building a green future' theme and suggested that the devolved administrations, especially Scotland, might be useful additional partners. He added that Wellcome might also be an additional partner for the health and the environment programme.
- 5.9 Council commented that the presentation provided a good overview of the themes and asked whether the circular economy was embedded within any of the programmes. Duncan Wingham responded that the themes were seeking to provide funding in areas which were not already funded through alternative mechanisms, such as through the Strategic Priorities Fund.
- 5.10 Council suggested that it would be important to have 'champions' for the themes in a similar way to the Strategic Priorities Fund and suggested that the health elements within the themes might usefully connect with the integrated care systems established in July 2022 across England.
- 5.11 Council commented that it would be important to ensure good guidance was in place for partnership working and to establish when a stakeholder might become a funding partner. Duncan Wingham added that effective partnership working would be a focus for the Advisory Board once established and that the intention was to initiate conversations with major partners with a view to broadening the partnerships if there was additional interest.
- 5.12 Council welcomed the breadth of the themes and added that some programmes, such as transport emissions, appeared to be areas where much was known already and suggested more emphasis on other areas, such as supply chains. Duncan Wingham commented that there had been a focus on alignment with UK objectives but that there were other elements embedded within the themes.

## **6. NERC Doctoral Training investment: next steps (NERC 22/26) *Slides, item 6***

- 6.1 Susan Waldron introduced this item and presented slides.
- 6.2 Susan Waldron informed Council that it was being asked to advise on the proposal to extend the current funding for NERC Doctoral Training Partnerships (DTPs) by one additional year to allow NERC to maximise opportunities arising from the transition to the UKRI collective talent portfolio.
- 6.3 Susan Waldron informed Council that there was good coverage of DTPs across the UK and provided some examples of the DTP remit coverage as well as a summary of where graduates subsequently formed their careers. She added that a future discussion on the balance of the NERC Talent and Skills portfolio was scheduled for the NERC Council meeting in June 2023.
- 6.4 Council agreed that the DTP scheme was successful in attracting new talent and asked what steps were being taken to track diversity. Susan Waldron responded that this information was now being collected although there was limited historical information available. She confirmed that there was an ambition to increase the diversity of applicants.
- 6.5 Council commented that a cultural change was required in Higher Education Institutions to support interdisciplinarity and emphasised the importance of supporting and mentoring students including technical staff.
- 6.6 Council supported the proposal to extend the current funding by one year whilst acknowledging this might be an issue for those universities who were not funded in the last round. Council added that it would be important to ensure the NERC community was signposted sufficiently towards the opportunities which would be available from the UKRI collective fund.

- 6.7 Council queried whether universities were aware of the proposal to extend funding and Susan Waldron responded that the intention was to inform them as soon as possible after the decision was made.
- 6.8 Council suggested that the 'Made Smarter Commission' led by BEIS might provide useful insight into the talent and skills which would be needed to deliver future challenges.
- 6.9 Council asked whether the DTPs aligned with the UKRI Strategic Themes. Duncan Wingham commented that DTP funding was separate to that provided for the themes although it would be important for DTPs to adapt to an increasingly multidisciplinary environment.

[Tim Bianek left the meeting]

## **7. Working with business (NERC 22/27) Slides, item 7**

- 7.1 Alison Robinson introduced this item and presented slides.
- 7.2 Alison Robinson informed Council of the three primary approaches which NERC was taking when working with business:
- i. Commissioning research programmes through NERC's strategic funding line that have outcomes of use to business.
  - ii. Co-funding research and innovation with business in partnership with Innovate UK.
  - iii. Innovation initiatives in the NERC centres supported by NERC investment in national capability.
- 7.3 Alison Robinson informed Council that NERC had a good record of collaboration with business and provided an illustration of the number of research grants with project partners which had been submitted to NERC since 2012. She outlined some examples of the outcomes from the three approaches which were contained within the paper.
- 7.4 Alison Robinson explained that NERC was proposing to run a series of business engagement roundtables to discuss how environmental science might tackle environmental costs that impact business bottom lines. The aim of this was to refresh NERC understanding of the current research needs of business in order to inform future commissioning.
- 7.5 Council was supportive of the approaches taken and agreed to the suggestion to convene a series of roundtables and offered their help with this. Council asked whether there were opportunities to draw on innovative thinking, such as vertical farming, to help create thematic agendas when working with industry.
- 7.6 Council suggested that an additional topic for discussion at the roundtables might focus on growth, in addition to exploring the cost benefits to business. Council asked who might be involved in the roundtables, for example, would those invited be from the sectors which had the biggest impact on the environment both from the UK and globally.
- 7.7 Council commented that it would be useful to explore the top priorities for each sector and ensure that NERC was talking to the right people at the right level within an organisation and promoting the benefits to be gained through interconnectivity. Council suggested that research clubs would be another useful mechanism to explore.
- 7.8 Council asked whether there was a role for NERC in providing advice to business, for example, on how to meet their net zero targets. Alison Robinson commented that NERC Head Office role was to convene discussion and that part of that role would include introducing people, for example, to the most appropriate research centre for advice.



7.9 Council asked whether the roundtables would be used to explore a wide range of issues. Alison Robinson explained that there would be broad themes to guide discussion but that the roundtables would aim to generate specific ideas themselves.

7.10 In summary, Duncan Wingham commented that Council was supportive of the paper and the idea of the roundtables, noting that it would be important to ensure the right level of people were invited. He added that engagement with business on environmental matters had improved in recent years due to the realisation that meeting environmental obligations would have financial implications. Duncan Wingham informed Council that engagement with business by NERC was initiated following his appointment and was originally based on a model used by BBSRC. and he agreed to re-visit the mechanism used.

**ACTION: NERC Executive to proceed to arrange a series of roundtables and engage with Council to agree the content and format**

## **8. NERC Council outcome of the annual self-assessment 2022 (NERC 22/28)**

8.1 Nick Folland introduced this item and thanked members for their contributions and the secretariat for coordinating the activity.

8.2 Nick Folland highlighted the areas where Council believed its understanding had increased or it had become more effective:

- providing leadership in the development and delivery of the Council's strategic plan
- prioritising funding distribution between the disciplines within NERC's field of activity
- improving the diversity of the membership.

8.3 Nick Folland outlined the key issues and recommended actions contained within the paper and provided an update on the actions from the previous self-assessment.

8.4 Council asked whether it might be possible to provide a comparison of the scores since the first self-assessment in 2019 so that it was easier to see the trends and this was agreed.

**ACTION: comparison data to be produced by the Secretariat**

8.5 Council commented that they would welcome more opportunities to share their skills and knowledge outside of Council meetings. Council asked how NERC's self-assessment compared to the other research councils and Helen Page advised that there was no uniform approach across UKRI to conducting self-assessment exercises and it was, therefore, not possible to compare results.

8.6 Council commented that the business engagement roundtables would provide a useful opportunity for Council members to act as ambassadors for NERC. Alison Robinson added that there were some additional opportunities being planned which would include a stakeholder event in November to launch the Strategic Delivery Plan and the NERC Impact Awards being planned for November 2023. She added that there were also plans to bring the RRS *Sir David Attenborough* to Cardiff.

8.7 In summary, Duncan Wingham agreed to review the self-assessment scores from 2019-2022. He confirmed that Council was happy with the outcomes suggested in the paper and suggested that a discussion at a future Council meeting on 'NERC estates investment strategy to meet net zero' be added to the rolling programme to better inform Council on the NERC estate.

**ACTION: an item on 'NERC estates investment strategy to meet net zero' to be added to the rolling programme**

## **9. NERC Council Finance Report 2022 (NERC 22/29)**

- 9.1 Nigel Bird introduced this item and advised Council that NERC had a balanced budget in 2022/23 and that headroom for future years was secure. He added that there was an underspend due to UKRI schemes having concluded and that any underspend would be returned to UKRI.
- 9.2 Nigel Bird highlighted that there were cost pressures in the NERC infrastructure portfolio caused by supply chain problems, inflation and foreign exchange exposure. He explained that this was being managed partly by a slowing of activity/new expenditure since COVID-19.

## **10. Review of the NERC Top Risks at September Council 2022 (NERC 22/30)**

- 10.1 Nigel Bird introduced this item and informed Council that the risks had been reviewed since Council last met but that the main risks remained the same, particularly with regard to volatility and supply chain issues and the risk surrounding non-association with Horizon Europe.
- 10.2 Duncan Wingham asked whether there were steps being taken to address the risks currently listed as outside of risk appetite and Nigel Bird confirmed that mitigating actions were due to be reviewed by the NERC Assurance Board in October.

## **11. Agenda and unconfirmed minutes of Science Committee (NERC 22/31)**

- 11.1 Graham Underwood introduced this item to update Council on the last meeting of Science Committee which had been held in July 2022 via Zoom.
- 11.2 Graham Underwood commented that Science Committee had reviewed, and provided advice to the NERC Executive on, infrastructure developments and Strategic Research Investment ideas developed by Head Office which included:
- four NERC themes:
    - planetary health
    - resilience of coastal seas
    - nature-based solutions for hazard mitigation
    - reducing the risk of solid earth hazard
  - three UKRI themes:
    - transforming land use systems to sustainably deliver multiple societal benefits
    - securing society's foundations: protecting soils for future generations
    - changing greenhouse gas fluxes.
- 11.3 Graham Underwood informed Council that Science Committee would next meet in October at UK CEH, Lancaster. He confirmed that the next NERC Council meeting in December would be his last meeting as his term of office as Chair, Science Committee would end on 31 December 2022.

## **12. Rolling programme of business (NERC 22/32)**

- 12.1 Helen Page reminded Council members that this item provided an opportunity to raise items for discussion at future Council meetings and that items for discussion might also be submitted at any point.

## **13. Any Other Business (Oral)**

- 13.1 There was no further business.

13.2 The meeting was closed.