

MINUTES OF THE ONE HUNDRED AND TWENTY EIGHTH MEETING OF THE MANAGEMENT COMMITTEE OF ARMAGH OBSERVATORY AND PLANETARIUM HELD ON 11 DECEMBER 2023 AT 11.04 AM IN THE PLANETARIUM BOARDROOM

Present: Mr J Briggs (Chair), Mr S Brown*, Professor M Darnley*, Revd Canon M Hagan,
* via Zoom Professor L Harra*, Professor C Jackman*, Mr P Kennedy, Dr K Lemon, Professor M Mathioudakis* and Mr E Rooney

In Attendance: Professor M Burton (Director), Dr M Sarzi (Head of Research), Mr L Knox (Head of Finance and Income Generation), Mrs S Mackle (Education and Outreach Manager), Professor S Jeffrey (Astronomer), Dr S Dane (Boardroom Apprentice) and Mrs L Brown (Corporate Manager)

Apologies: Mr G Cox, Mr R Wilson and Mrs C Corvan (Head of Corporate Services)

1. APOLOGIES

1.1 Apologies were received as outlined above.

2. CHAIR'S BUSINESS (CONFIDENTIAL)

2.1 Confidential item removed

3. MINUTES OF THE MANAGEMENT COMMITTEE MEETING HELD ON 25 SEPTEMBER 2023

3.1 On the proposal of Mr Kennedy, seconded by Mr Rooney, the minutes of the meeting of 25 September 2023 were approved as a true and accurate record of the meeting and signed by the Chair.

4. MATTERS ARISING FROM THE MINUTES

4.1 The Committee noted there were eight actions arising from previous meetings. It was proposed to close five of these, some of which would be picked up on the Agenda. Three remained ongoing.

4.2 There were no further matters raised.

5. CHAIR'S BUSINESS

5.1 In terms of Membership Issues, the Chair reported that preparations for the recruitment exercise for three new Management Committee members was under way, with interviews likely to take place in March 2024. The recruitment process was scheduled to commence in January 2024 and the Chair reported that he would be representing the Management Committee on the Panel. The new members would replace Mr Brown, Professor Harra and Mr McGurgan.

5.2 As a result of these changes a new Chair was required for both ARAC and REAC and the suggested way forward was that he discuss with Officers and Members and bring forward recommendations in relation to new Chairs for the next meeting. **Action MC 11/12/23-01 - Recommendations for new ARAC and REAC Chairs to be brought to the April meeting.**

6. REPORT FROM DIRECTOR

- 6.1 At the outset, Professor Burton reported that former Management Committee member Professor Tom Ray had been elected as the next President of European Southern Observatory (ESO) Council.
- 6.2 The Chair asked that the Management Committee's congratulations be conveyed to Professor Ray. **Action MC 11/12/23-02 - Congratulations to be forwarded to Professor Ray on his recent appointment.**
- 6.3 Professor Burton's report, which had previously been circulated, included updates on the Research Strategy; Research Integrity; the Astronomical Observatories of Ireland Partnership and UNESCO Aspirations; AOP Redevelopment Project; Autumn Visitors; the Changing Publication Landscape; Meteorological Record; Research Grants; Education Grants; new PhD Students and QUB Review. Professor Burton took members through his report.
- 6.4 With regards to the Research Strategy, Professor Burton drew Members' attention to a Paper included with both the REAC and SPRC papers which provided a commentary on progress in implementing the Research Strategy and the constraints and elaborated briefly on the key issues it identified.
- 6.5 The Committee noted:
- that Researchers from AOP had met with those in Dublin the previous week and in relation to the issue of maintaining a critical mass had discovered that combining the researchers from both together there was a critical mass of international-standing researchers covering a wide area of modern astronomy. The challenge was to draw on the synergies and finding complementarity and a paper outlining the opportunities discussed would be prepared;
 - the UK Committee on Research Integrity (UKCORI) and its wish to raise awareness at Board level of the principles and importance of Research Integrity;
 - that recent activity associated with the Astronomical Observatories of Ireland Partnership and UNESCO aspirations included the submission of a draft application to the UNESCO Rol tentative list;
 - three significant funding applications had been submitted in relation to the Redevelopment Project;
 - the autumn visitor statistics and the growth in off-site engagement;
 - Mission Santa was under way and included BSL and ISL sessions;
 - that in terms of the changing publication landscape for research papers the Royal Astronomical Society had agreed a short term waiver until 31 March 2024 on the proposed charges, however, beyond this the situation remained unclear;
 - record breaking rainfall for October;
 - award of two STFC and one Leverhulme Trust research grants and one Science Foundation Ireland education grant;
 - two new PhD students had commenced;
 - interviews were scheduled for QUB's Periodic Review of the collaborative PhD programme.
- 6.6 The Chair thanked Professor Burton for the positive report and felt that both Management Committee and officers should take credit for the strategic decisions in focusing on the Redevelopment and he hoped that funding opportunities would be realised and that the relationship with Birr and Dunsink would be fruitful. He commented that it was pleasing to know that from a research point of view it was possible to get a critical mass that could be of international importance.
- 6.7 Professor Mathioudakis commented that the question in relation to Research Strategy was one also faced in Queen's where their research strategy was determined by external sources as when applying for funding applications needed to relate to the Research Strategy of the external funder. In terms of

the Leverhulme Trust grant he acknowledged that it did not provide overhead costs however it was his understanding that it did provide other direct costs. Brief discussion ensued during which Mr Knox confirmed what the recent grant awarded to AOP covered and he reported on the level of support funding associated with the recent STFC grant versus the previous grants. It was also noted that there had been recent changes as a result of which AOP was more limited than a university in what it could apply for. In terms of the Leverhulme Trust grant it was noted that this was based on DVL use for which the infrastructure was already in place.

Dr Lemon retired from the meeting at 12.00 noon.

- 6.8 With the aid of PowerPoint and screen share, Professor Jeffrey gave a presentation on his field of research entitled 'The Secret Lives of Ancient Stars', research carried out by himself, Laura Scott, Ashish Philip Monai and Edward Snowdon (who had finished his PhD), supported by numerous others around the world. Their research was firmly embedded in the AOP Strategy for Research and involved looking for answers to big questions. Whilst from the Research Strategy he was not quite clear what the big questions were, looking around at other astronomical bodies broadly similar questions were being asked. These included questions such as How do stars form and evolve?; What is their role in the Galaxy? and How does physics work in extreme conditions?.
- 6.9 Professor Jeffrey explained that the work involved star stories and related to exotic stars mostly formed as double stars with one or more interactions with a companion. He briefly explained how they were able to decode the story from a single point of light billions of miles away using a toolkit and the supposition that stars had an atmosphere. The light coming from the star provided information on the chemistry and other properties of that atmosphere. Some stars pulsated, providing information about the interior, some stars were still in binaries which could tell them about the masses and sizes and they could build models to see if their predictions matched observations. All the codes were mathematical computational codes supported by high-performance computing.
- 6.10 The research also required data and this came from a number of sources but primarily the South African Large Telescope (SALT). The focus of the presentation would be on the SALT survey of hydrogen-deficient stars and subdwarfs and this was supported by distances from Gaia; light variations from TESS and the Hubble space telescope to explore the chemistry of star surfaces.
- 6.11 A graph showing the classification of 400 stars plotted against their helium/hydrogen content and heat identified five different groups demonstrated both connections and amazing discoveries. It was the aim to reach 800 stars. Professor Jeffrey explained that observations were conducted completely remotely and in some instances amongst new data there might be exciting discoveries such as super-hot stars; planetary nebulae not seen before; stars with enormous magnetic fields; extreme helium stars; heavy-metal stars and weird binaries. He also briefly referred to what he described as 'The Superstars' of his research field.
- 6.12 In terms of the 'big answers', Professor Jeffery advised that, with SALT, they discovered new stars every month and that each star, often an ancient relic from the early Galaxy, was a vital point on a barely glimpsed pathway connecting other stars with extraordinary stellar histories. Their results informed theory of binary star collisions; chemical transport in stars; electron structure of heavy ions; nuclear reaction networks and nuclear explosions.
- 6.13 In terms of next steps, Professor Jeffrey advised that the survey was ongoing; the goal was to reach 800 stars to classify, catalogue, analyse, follow up and publish; pulsation models were still needed for many stars; diffusion theory and atomic data was still needed and then to join the dots to unravel the secret and varied lives of ancient stars.

- 6.14 The Chair thanked Professor Jeffrey for his presentation which he described as fascinating, exciting and inspiring and advised that there had been discussion at SPRC regarding how AOP could put its Research Strategy into a format that excited the public and education stakeholders.
- 6.15 Mr Kennedy commented that he too found the presentation fascinating.
- 6.16 Professor Jeffery responded to specific questions from Professor Harra relating to super magnetic fields and whether those stars had activity on them ie super flares and Mr Rooney as to how he had defined an ancient star and if newer stars followed the same path.

Having been thanked for his presentation, Professor Jeffrey retired from the meeting at 12.15 pm.

7. UPDATE FROM THE RESEARCH AND EDUCATION ADVISORY COMMITTEE (ARAC)

- 7.1 Professor Harra reported that REAC had met the previous week and had discussed a number of topics. The paper on Intellectual Property, which had been prepared by Mr Cox, was very much appreciated and useful. REAC felt that this was a topic that should be revisited regularly, perhaps as a standing agenda item as the situation in the world changed quickly and the issues were complex.
- 7.2 REAC had also discussed the publication issue.
- 7.3 Discussion at REAC in relation to PDRA salaries surrounded whether these could be changed since they were funded by a third party; whether AOP would be less appealing if it offered a lower salary than anywhere else and an appreciation that an imbalance could create internal resentment.
- 7.4 As REAC had not had sufficient time to discuss the Research Strategy in any detail this should be the focus of the next meeting so that there was a Research Strategy with a clear implementation plan.
- 7.5 REAC agenda items for the next meeting should include Intellectual Property and Research Strategy. **Action MC 11/12/23-03 - Intellectual Property and Research Strategy to be focus of the next REAC meeting.**
- 7.6 There were no questions for Professor Harra and the Chair thanked Professor Harra for her last update from REAC.

8. UPDATE FROM THE AUDIT AND RISK ASSURANCE COMMITTEE (ARAC)

- 8.1 Mr Kennedy reported that he had chaired the ARAC meeting on Mr Brown's behalf. He reported that a tri-lateral meeting with auditors and the Department had taken place prior to the commencement of ARAC at which the 2024-25 budget had been discussed.
- 8.2 An ARAC Bi-Annual Members' Discussion which had been scheduled for Friday 8 December had had to be postponed.
- 8.3 In terms of ICT matters, ARAC had noted the ICT Strategy and Action Plan Progress Report and considered the updated ICT Policy and ICT Risk Register which identified 15 risks across 4 risk categories. Of the 15 risks, once treated, 2 remained extreme, 5 high, 7 moderate and 1 low. ARAC recommended Management Committee approval of the ICT Policy and ICT Risk Register.
- 8.4 ARAC had reviewed the Corporate Risk Register which identified 9 risks across 5 risk categories. Of the 9 risks once treated, 3 remained extreme, 3 high and 3 moderate. The extreme risks primarily related

to financial pressures. ARAC recommended approval of the Corporate Risk Register and had noted that the financial situation would be discussed at the meeting in progress.

- 8.5 ARAC noted a paper on Assurance Mapping which had set out a roadmap of assurances in place.
- 8.6 Mr Kennedy reported that ARAC had noted the final Report to Those Charged with Governance, the Annual Report and Accounts having been signed on 13 October and laid with the Assembly. The Auditors had been reappointed for a further three years.
- 8.7 ARAC had noted the Finance Report to October 2023, which would be considered later in the meeting along with the 2024-25 budget.
- 8.8 Mr Kennedy advised that ARAC had considered three papers in respect of Internal Audit. The Audit Report in respect of Governance including Whistleblowing and Risk Management provided satisfactory assurance and contained 2 x Priority 3 recommendations. The Audit Report in relation to Budgetary Controls also provided satisfactory assurance and contained 1 x Priority 3 recommendation.
- 8.9 With regards to outstanding audit recommendations, of the six outstanding recommendations five were deemed to be complete and one relating to retention of records, which included historical records, remained ongoing. Discussion had taken place around the recommendation relating to the Education Programme and the need for a more formal strategy and ARAC requested that REAC take this forward.
- 8.10 ARAC considered and was content to recommend Management Committee approval of the updated Risk Management and Health and Safety Policies. It had also considered a new Reserves Policy and whilst it requested that clarification be sought from DfC regarding an issue of indemnity, was content to recommend it for Management Committee approval.
- 8.11 A report on Environmental Social and Governance Policy which demonstrated how ESG principles had been embedded into AOP's culture, decision-making, processes and daily operations had been presented. ARAC felt that a formal policy should be developed.
- 8.12 The Management Committee accepted the report from ARAC and approved the ICT Policy; ICT Risk Register; Corporate Risk Register; Risk Management Policy; Health and Safety Policy and draft Reserves Policy.
- 8.13 There being no questions, the Chair commented that the Management Committee was indebted to ARAC in providing it with assurance.

9. UPDATE FROM THE STAFFING POLICY AND REMUNERATION COMMITTEE (SPRC)

- 9.1 Mr Rooney reported that since the last Management Committee meeting SPRC had held a Special Meeting regarding Strategic Workforce Planning. That meeting had considered the skills and resources needed for AOP to deliver on its objectives and the aims set out in the Business Case for the redevelopment. At that meeting each of the areas of the business had been considered in turn - Research, Corporate, History and Heritage and Education – looking at the resource and skills issues. He said that in the future, probably at the next stages of the redevelopment, it would be valuable for the Management Committee to have detailed discussion on the matter.
- 9.2 SPRC had considered the Paper 'Commentary on AOP Research Strategy' which had been prepared by Professor Burton and Dr Sarzi and had also previously been discussed by REAC. This paper looked at the issues around the Research Strategy for AOP, referencing a 2017 document published as a Research Strategy, the REF assessment update of 2021 and the collaborative work with DIAS and Birr.

Mr Rooney reported that SPRC Members were very clear that AOP needed an updated separate Research Strategy document that could be used in engagement with external stakeholders and other partners to articulate what AOP's Research Strategy was and how it would be taken forward. REAC would consider this matter at its next meeting.

- 9.3 Mr Rooney advised that SPRC had considered the same paper that had been discussed by REAC in respect of PDRA salaries and being aware of REAC's comments SPRC had agreed the need to consider the issues in more depth in order to reach agreement on the best way forward.
- 9.4 SPRC had considered a proposal on Relief Weather Reading Allowances to put in place an allowance system to ensure that weather readings could continue, that there was resilience and staff were remunerated for being skilled and trained in doing this. SPRC recommended that a Business Case be developed and engagement with DfC in order to take the proposal forward.
- 9.5 SPRC considered the position of Tours and Outreach Officer and noted that it had previously been a temporary position based on income generation. Following review in December 2022 SPRC had considered it should be retained in the structure but due to budget uncertainties the term had only been extended for six months. Given the success and evident growth in this area SPRC recommended that the position be confirmed as permanent.
- 9.6 In terms of Policies, SPRC had considered and was content to recommend approval of the Equal Opportunities Policy, Hybrid Working Policy and Employee Exit Interview Policy.
- 9.7 Confidential item removed
- 9.8 The Chair commented on the amount of work undertaken by each of the Committees and thanked them for this.
- 9.9 In response to a query from Dr Sarzi regarding the issue of PDRA salaries Mr Rooney advised that SPRC recognised the urgency however it wanted to fully consider the matters raised in the paper and the comments made at REAC and to review the detail to reach a sensible way forward. Conscious of the time pressures, SPRC could take a view via correspondence or video-link. Mr Rooney briefly explained the key considerations and confirmed that SPRC had taken into consideration that PDRAs were not permanent positions and were funded by external sources. The intention was not to cause delay but to have a fully informed defensible position that also ensured research continued to be attractive for potential applicants.
- 9.10 Professor Mathioudakis stressed the importance of reaching a timely decision. In terms of the two issues, he explained that the Leverhulme grant was cash limited in that a higher scale could be paid but that would mean having less money, whereas STFC grant funding was not cash-limited provided it stayed within the pay scale. If they went beyond that pay scale and the position was reclassified to a higher scale then the grant would become cash limited. The situation was further complicated by the fact that PDRA salaries were aligned to QUB salary scales and QUB had awarded a pay rise not followed by every UK University in salary negotiations or did not follow at the same time resulting in misalignment. He asked that SPRC promptly reach its conclusion to enable the recruitment process to get under way and appointments made from 1 April 2024.
- 9.11 In response to a query from Dr Dane it was clarified that AOP used the QUB salary scales for PDRAs and NICS Salary Scales for all other employees.
- 9.12 Professor Darnley suspected that academic pay scales in the UK did not correlate to Civil Service pay scales. They were similar and comparable in places but were getting more divergent. Whilst there had been national agreements in academia in the UK lots of universities had gone further. In terms of

PDRAs comparing institutions in England and NI he felt that QUB was probably still the best yardstick for what Post Docs coming to NI would expect to be paid.

9.13 The Chair advised that the matter would be looked at within the timetable to allow the advertisements to go ahead and all those matters raised would be taken into consideration by SPRC.

9.14 Mr Rooney confirmed that the discussion had been helpful and reiterated SPRC's position and the need for a fully informed decision.

9.15 To aid SPRC Dr Sarzi undertook to expand on the paper considered by SPRC and to summarise the discussion which had taken place at REAC.

10. CONFIDENTIAL ITEM REMOVED

11. MID-TERM REVIEW OF STRATEGIC PLAN

11.1 The Mid-term Review of the Strategic Plan had previously been circulated. Professor Burton advised that the paper, which had been prepared by Mrs Corvan, set out the progress against the Strategic Plan 2021-26. The key changes were that the leisure village project was not proceeding; the challenges of the non-functioning NI Executive and the Astronomical Observatories of Ireland Partnership was taking AOP in new directions. Most of the priorities within the plan were being achieved.

11.2 The Chair considered it a very good position paper and endorsed the paper.

11.3 The Mid-term Review of the Strategy Plan was noted.

12.1 PERFORMANCE AGAINST BUSINESS PLAN 2023-24

12.1 The Corporate Plan Non-KPI Objectives; KPIs for the periods April-October and April-November; a Finance Report for the seven months to October 2023 and a paper on Potential Cost Savings 2024-25 had previously been circulated.

12.2 The Committee approved the Non-KPI Objectives and KPIs April-October and April-November.

12.3 The Finance Report to the end of October had previously been circulated. In terms of the current financial year Mr Knox advised that they were on track to break-even at financial year end and due to strong income generated by the Planetarium it had been possible to absorb approximately £60k redevelopment related costs. The capital budget was all committed at present and it had been made clear by the Department that there would be no further capital or resource funding in the current financial year.

12.4 In terms of the 2024-25 financial year, Mr Knox explained that this presented a much greater challenge. With the loss of one of the consolidate grants which provided in the region of £60k towards overheads and a estimate of £200k in relation to the OBC and redevelopment he predicted a budget deficit of approximately £400k, assuming receipt of the same resource grant in the next financial year as the current, which was not guaranteed. He expressed great concern that AOP would not be able to meet the budget deficit and that some hard choices would have to be made. He recommended that the Management Committee set up a Subcommittee to give the matter detailed consideration.

12.5 The Chair expressed his support for Mr Knox's recommendation. Messrs Kennedy and Brown confirmed their willingness to sit on the Subcommittee to come up with options.

- 12.6 In response to a query from Mr Rooney it was confirmed that the paper on Potential Cost Savings 2024-25 had been prepared in response to a question at the Accountability Meeting in October when officers had been asked what AOP would do if it only secured one of the two grants. A request for an extension to the deadline for submission had been sought to enable Management Committee consideration. Professor Burton sought guidance as to whether this should now be submitted to the Department or a further extension sought in light of the establishment of the Finance Subcommittee.
- 12.7 The Chair felt that the report should be held until after consideration by the Subcommittee but that if the Department pressed for it it should be submitted. Mr Rooney suggested that if further extension was not granted then it should be marked 'draft not approved' and made clear that it was still to be considered.
- 12.8 It was noted that the paper presented related only to potential cost savings to address the loss in grant funding.
- 12.9 The Committee approved the appointment of a Subcommittee to consider the 2024-25 budget. **Action MC 11/12/23-05 - Finance Subcommittee to be established.**

13.0 POLICIES

- 13.1 A report on policies reviewed, which included the Access Policy, Conservation and Collections Care Policy and Use of Bailey House Policy, had previously been circulated.
- 13.2 The Committee approved the policies.

14.0 AOB

- 14.1 The Committee noted the:
- dates of the meetings for 2024 – Monday 8 April, Monday 24 and Tuesday 25 June, Monday 30 September and Monday 16 December;
 - availability of training as outlined in the report;
 - PR Coverage Reports September, October and November 2023.
- 14.2 The Chair advised that it was Professor Harra's last meeting. He thanked her for her contribution since appointment on 1 November 2014 and for Chairing the REAC meeting for the past two years. Professor Harra thanked everyone and said it had been a pleasure to work with then and confirmed she would be visiting again in the future.
- 14.3 The date for the Finance Subcommittee was set as Tuesday 19 December at 10.00 am in the Planetarium Boardroom.
- 14.4 In response to a query from Mr Rooney, Mr Knox confirmed that not all of the potential cost savings listed had been costed as some were open for consideration. He reiterated that the paper presented only considered a small portion of the deficit and that a larger solution was necessary. More detailed discussion would be held for the Subcommittee.

The Chair thanked members for their attendance and participation.

The meeting concluded at 13.09 pm.

Signed as a true record of the meeting

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(Chair)

Dated: