

UNITED KINGDOM ATOMIC ENERGY AUTHORITY
Minutes of the 5th Board Meeting in 2018

Date: 13 November 2018

Location: Llewelyn-Smith Room, K2
Culham Science Centre

Members present:

David Gann, Chair
Ian Chapman
Norman Harrison
Shrin Honap
Jim Hutchins
Sue Scane
Adrian Smith
Chris Theobald

In attendance:

Adam Baker (BEIS)
David Martin
Maya Riddle (sec)
Catherine Pridham

Kay Nicholson, Head of Assurance (3-4 & 8-9)
Tim Bestwick, Director of Business & Innovation (5)
Andrew Hynes, Head of IT (6)
Oliver Hemming, Deputy head of IT (6)
Amy Bryan, Diversity & Inclusion Manager (7)
Kim Cave-Ayland – EDI team (7)
Jackie Costello – EDI team (7)
Elina Militello – EDI team (7)
Martin O'Brien – EDI team (7)
Mark Shannon, Head of Programme Office (8)
Alli Brown, Finance Director (10)

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1 Chair's Opening Remarks

- 1.1 David Gann remarked on the government's announcement of £20M for the STEP proposal in the Chancellor's Budget statement and the Board offered its thanks to Adam Baker for all his support.
- 1.2 He asked whether members had any conflicts of interest with the Board papers and Adrian Smith commented that the Turin Institute, of which he was the Director, was referred to in the CEO's report.

2 Minutes of the 12 September 2018 meeting

- 2.1 The Board approved the minutes as an accurate record of the Board meeting on 12 September 2018.
- 2.2 The key actions and matters arising were reviewed.

Kay Nicholson joined the meeting

3 CEO's Report

- 3.1 Ian Chapman highlighted key points and updated members on a few things that had changed since the report had been issued, which included:
 - The updated business case for STEP was provided in the Board pack. Funding of STEP in 2019/20 had been agreed, but funding from 2020/21 onwards would be subject to KPIs and government approval of the business case. In order to spend the money in year we would need to start recruiting now, but there would be some liabilities and risk;
 - He had attended several meetings with the CEO's of the UK's main nuclear operators;
 - A 'Tomorrow's world' contemporary science exhibition of fusion had gone live at the Science Museum;
 - The US Dept of Energy Under Secretary for Science, Paul Dabbar visited Culham in October. He was very positive about fusion and the US had increased its fusion budget;
 - The US National Academies of Science report on fusion was due to soon; and
 - A contract had been let by the NDA to update the JET Lifetime Plan and this was due to take 10 weeks.
- 3.2 David Gann asked if the Board supported the STEP business case and there was unanimous support. It was agreed that we should start gearing up the recruitment process. A benefits realisation for year one was requested.
- 3.3 Adam Baker said that following the results from peer review the business case would go to BEIS Ministers and then feed into the spending review.
- 3.4 It was agreed that the peer review report would be circulated as soon as it was available.
- 3.5 The Board endorsed the STEP business case and noted the report.

4 Euratom Update

- 4.1 Ian Chapman informed members that the EUROfusion General Assembly had agreed to include the JET work programme in support of ITER for the period 2021-24 in its Framework Programme 9 proposal. This now needed to go to the Commission, and it was hoped that the regulation would get adapted by May 2019.
- 4.2 To enable this programme, we would need to undertake enhancement and refurbishment work on JET. This needed to start in the new year, and we would urgently need to start recruiting.
- 4.3 The General Assembly also adopted the JET dispersal of assets, which included that the assets required to operate JET would remain at Culham until JET was no longer operated in support of the EUROfusion programme.
- 4.4 The EU Parliament had voted strongly in favour of the Euratom regulations for 2019-20. Amendment of the current JET Operating contract to cover operations to the end of 2020 was going through due process but this was taking time.
- 4.5 David Gann said that we should start the recruitment process, but not sign contracts until we had some assurance.
- 4.6 Adam Baker confirmed that BEIS had sent a letter saying if the JET contract was not signed on time then it would provide three months cashflow cover.
- 4.7 Chris Theobald asked what would happen if there was a no deal on European exit and Adam Baker responded that the government had strong plans for fusion and would look to implement contingency plans.
- 4.8 The Board noted the report.

Kay Nicholson left, and Tim Bestwick joined the meeting

5 Culham Commercial Development

- 5.1 David Gann said the strategy to develop Culham was still evolving. The Board had had an informal discussion the previous evening and key points included:
 - The vision for Culham was as the place for fusion science and technology and related endeavours such robotics, materials and digital twinning;
 - It was an exciting time for fusion, with private fusion players attempting to raise significant investment in fusion research;
 - The site development master plan needed to be updated including consideration of anchor tenants and local dimensions such as planning and traffic;
 - The Board members were pleased to engage; and
 - A brainstorm session would be organised in March.
- 5.2 Tim Bestwick said that there were national and economic benefits in developing Culham as a global cluster for fusion related technology. This would also help to deliver STEP.
- 5.3 There were several important constraints, including approval of the Oxfordshire local plan. Catherine Pridham added that our plans were dependent on Housing Infrastructure Fund (HIF) funding being freed up for Oxfordshire, in particular to improve the local transport network.

- 5.4 David Gann said that it would be useful for the Board to understand the timescale for development.
- 5.5 Jim Hutchins asked about existing outline planning and Tim responded that we had used this for our own growth and that attracting investors was predicated on planning constraints being lifted.
- 5.6 Sue Scane advised that BEIS might be useful in communications with the Department for Transport.
- 5.7 David Gann said that we had tired building infrastructure on site which also needed to be considered.
- 5.8 Adam Baker said that we had bids for world class labs funding, but also needed to consider back up plans.
- 5.9 The Board noted the update.

Tim Bestwick left, and Andrew Hynes and Oliver Hemming joined the meeting

6 Cyber Security Presentation

- 6.1 Andrew Hynes and Oliver Hemming provided a briefing on the types of cyber risks that organisations faced.
- 6.2 UKAEA was on a path to increasing maturity and had Cyber Essentials certification. This covered the five technical controls which protected against 80% of threats. Now we were focusing on the '10 steps to Cyber Security'.
- 6.3 One of the key issues we faced was ageing and obsolete systems which were required by some of the older scientific equipment.
- 6.4 The National Cyber Security Centre (NCSC) advised Board's to ask five question. These questions and what we were doing were as follows:
 - 1. How do we defend our organisation against phishing attacks?
 - We used various levels of checking for malware and phishing;
 - Firewalls and DNS filters were in place, which contained blacklists; and
 - Physical controls were supported by user awareness and training.
 - 2. What do we do to control the use of our privileged IT accounts?
 - There were policies for use of computers and management of accounts and System admins had special privileged accounts; and
 - Monthly reports were provided to department managers.
 - 3. How do we ensure that our software and devices are up to date?
 - We implemented regular patches and anti-malware updates; and
 - CSR funding was being used for IT modernisation.
 - 4. How do we ensure our partners and suppliers protect the information we share with them?
 - Cyber essentials was mandatory for suppliers and we also asked to see the security plans of key suppliers;

- An annual review was undertaken by procurement; and
 - We were planning to roll out Azure Information Protection (part of O365).
 - 5. What authentication methods are used to control access to systems and data?
 - External access had to come through a VPN; and
 - Systems were subject to external Penetration testing and frequent internal vulnerability scans.
- 6.5 The Board was asked to support a ring-fenced fund for IT security and central approval for new systems.
- 6.6 Shrin Honap said that central approval of new system was essential going forward so that we could ensure appropriate security. He asked about Linux and Adrian Smith responded that the community was constantly updating Linux.
- 6.7 Chris Theobald asked about Solaris and unsupported system. Oliver Hemming responded that we got regular updates for Solaris. We did have an issue with hardware/software out of support and we were looking to replace legacy equipment in the longer term.
- 6.8 Jim Hutchins asked whether the issue with laptops had been resolved and Oliver confirmed that we had recalled laptops and removed admin rights.
- 6.9 Andrew Hynes said that we were undertaking risk interviews to identify IT risks and systems not under central control.
- 6.10 David Gann asked for a report on what it would take to get to ISO 27001 certification and the pros/cons for this.
- 6.11 Ian Chapman clarified that any funding request should come to the Executive.
- 6.12 The Board noted the update.

Andrew Hynes & Oliver Hemming left and Amy Bryan, Kim Cave-Ayland, Jackie Costello, Elina Militello & Martin O'Brien joined the meeting

7 Diversity & Inclusion Update plus lunch with the EDI team

- 7.1 Sue Scane, the Board champion for Diversity and inclusion, introduced Amy Bryan, the new Equality, Diversity & Inclusion (EDI) Manager.
- 7.2 Amy Bryan provided a short presentation and said that we wanted a culture of equality. Having a diverse and inclusive workforce would help with attraction and retention of staff.
- 7.3 Athena SWAN was helping to provide structure for improvements and as part of our resubmission we had developed a 4-year action plan. The Athena SWAN scheme was expanding beyond gender equality, into other areas of equality including race.
- 7.4 Jim Hutchins said that the IoP had done a lot of work to help get girls into physics and we could learn from its endeavors.
- 7.5 Adam Baker asked how good we were at diversity data collection and Amy responded that we had started collecting data in the HR system (U4BW).
- 7.6 David Gann said that UKAEA need to have a diverse workforce and that the Board should keep this on its agenda.

- 7.7 Ian Chapman extended thanks to the EDI team for all their hard work in preparing the Athena SWAN submission.
- 7.8 The Board noted the update and held informal discussions with the team over lunch.

The EDI team left, and Mark Shannon and Kay Nicholson joined the meeting.

8 COO's report

- 8.1 David Martin highlighted key points from the report, which included:
- UKAEA faced a challenge on recruitment and retention. A look ahead for next 18 months indicated an additional 180 vacancies. The attrition rate had gone up to 9% which further increased the size of the recruitment drive;
 - We were reviewing our make-buy procedure and wanted to think more broadly about buying in resource;
 - We had run a safety leadership event following a suggestion from Chris Theobald. The workshop involved Level 7s and above and had been very useful and productive. We planned to repeat the workshop for middle management;
 - We were initiating a Facilities Asset Management project to ensure that we had captured all our assets and that they had owners and maintenance schemes. This would be a significant activity; and
 - We had an issue with the time it was taking to close out of non-conformance reports.
- 8.2 Ian Chapman said that a lack of resource was our top risk along with Brexit. For new projects such as STEP we would mandate a certain percentage would have to go to the supply chain.
- 8.3 Catherine Pridham said that make-buy was often considered too late in the process so that the default was often make.
- 8.4 Mark Shannon said that one of the MAST-U lessons learnt was that procurement not brought in early enough in the process. This was being addressed with the new Integrated Delivery Process.
- 8.5 Sue Scane asked whether we were building maintenance into future projects. David Martin confirmed that we were and that this was mainly a legacy issue. It was agreed that the Board would be kept updated.
- 8.6 Chris Theobald commended the senior management for excellent engagement at the safety workshop and said that the next layers down needed to raise their game.
- 8.7 Ian Chapman said that one of the things he took away from the workshop was that we had some pockets of poor practice and should discipline offenders.
- 8.8 Shrin Honap asked whether there was protection for junior staff to report concerns and Kay responded that we had a good culture of reporting and there was a route to do so anonymously.
- 8.9 Mark Shannon provided an overview of the major projects and key points on concern were:

- there was a further delay from the supplier of the new exhaust detritiation system which was now forecasting delivering at the end of January; and
- since the report had been issued, an isolator on JET had blown in a flashover and there weren't any known spares. The National Grid was investigating. As a consequence, a high priority campaign for ITER to test the new pellet injector from Oakridge, which was supposed to take place this month, would now not be until Easter.

8.10 The Board noted the report.

Mark Shannon left the meeting

9 Risk Report

- 9.1 Kay Nicholson said that she would provide training on how we managed risk to any of the Non-Executive Directors who wished it. As most of the key risks had already been covered in earlier discussions, she invited comments.
- 9.2 Shrin Honap asked what the process was for escalating risks to BEIS and Adam Baker responded that UKAEA's top risks were reported to the BEIS Executive Committee monthly. These were the risks around Euratom, Skills and JET.
- 9.3 Ian Chapman said that many of the other risks were underpinned by staffing issues.
- 9.4 David Gann asked how we stopped this escalating. Ian Chapman responded that we were looking to be more innovative about resourcing and we were investigating closer working with other organisations.
- 9.5 David Martin said that it was an exciting time to be working at UKAEA, but that one of the issues was that pay restraints impacted on younger staff. We were using exit interviews to help make improvements.
- 9.6 Jim Hutchins supported setting up satellites where cost of living was lower and also recruiting ahead of need.
- 9.7 Shrin said that that he would expect to see Cyber security and IP protection in the top risks. Kay Nicholson said that these were both corporate risks but didn't score as highly as the ones in the main part of the report.
- 9.8 The Board noted the report and endorsed the risk appetite statement.

Kay Nicholson left, and Alli Brown joined the meeting

10 P6 Financial Report

- 10.1 Alli Brown provided highlights from the report, which included:
- We had received the latest tranche of JET funding and had cashflow cover to end of December;
 - We were forecasting an underspend on EPSRC, primarily due to delays in the phasing of the MAST-U Enhancement project;
 - The Q2 forecast indicated increased losses in the business units, which were manageable but tight; and

- There was a risk of variability on capital spend due to phasing on the big construction projects and potential impact of the weather.

10.2 Chris Theobald asked about challenges in forecasting capital next year. Alli Brown responded that most would be on buildings and that she would start tracking commitments in the finance report.

10.3 The Board noted the financial position at the end of period 6.

Alli Brown left the meeting

11 Sub-Committee meetings

Board Effectiveness

11.1 David Gann said that the paper considered how we operated as a board. To deploy members more effectively it was proposed that members were split between the Audit and Remuneration Committees. This would enable capacity to set up sub-groups looking STEP and Culham development once the strategies for these were more advanced.

11.2 He had put in a request to BEIS to recruit two new members - one with expertise on financing of JVs and the other on campus development. He had also recommended reappointment of the three members whose first term were coming to an end.

11.3 Sue Scane said that they wouldn't get the same feedback if they just read the papers and would prefer to sit on both sub-committee meetings.

11.4 David Gann concluded that we would try to put all the meetings on one day and that Board attendance would be reviewed once we got the additional members in place.

11.5 The Board noted the report.

12 November Board Assurance Committee

11.6 Chris Theobald said that quality was something that we needed to keep an eye on.

11.7 The BAC papers were on the Board system and were visible to members. It might be useful for others NED to attend on rotation.

13 November Remuneration Committee

11.8 Norman Harrison provided highlights from the meeting, which included:

- A discussion about the Executive's objectives;
- A review of succession planning; and
- Verbal update on successful recruitment of a new CFO.

12 Any Other Business

12.1 David Gann wished everyone a good Christmas break.

12.2 The next meeting was on 21 January 2019.

Secretary Maya Riddle

Chair David Gann