

**CIVIL AVIATION AUTHORITY
MINUTES OF AN EXTRAORDINARY BOARD MEETING HELD ON
TUESDAY 13 SEPTEMBER 2022, 16:00, TEAMS**



Present:

Sir Stephen Hillier	Chair
Richard Moriarty	CEO
Rob Bishton	GDSARG
Katherine Corich	NED
Marykay Fuller	SID
Jane Hanson	NED (from 16:20)
Manny Lewis	NED
Paul Smith	GDCMG
Jonathan Spence	Secretary & General Counsel
Chris Tingle	COO

Apologies:

AVM Simon Edwards
Alex Kaufman
Anne Lambert

In Attendance:

Ben Alcott	International Director
Peter Drissell	Aviation Security Director
Tim Johnson	Policy Director
Dave King	Independent Safety Adviser to the Board for Alex Kaufman
Andrew McConnell	Business Manager
Philip Clarke	Secretariat
Graeme Paterson	
Rob Garner	Space Analysis Lead
Garry Lathey	Space Licensing & Oversight Manager
Colin Macleod	Head of Space Regulation

I APOLOGIES & CONFLICTS OF INTEREST

1. Apologies were received from AVM Edwards and Anne Lambert.
2. The Board members present confirmed there were no conflicts of interest to declare in relation to the subject of the Extraordinary Board Meeting.

II THE PASSING OF HM QUEEN ELIZABETH II

3. On behalf of the Board, the Chair expressed sadness at the passing of Her Majesty Queen Elizabeth. The Chair highlighted the Queen's selfless dedication to duty.
4. On behalf of the Board and the wider CAA, the Chair extended condolences to His Majesty The King and the Royal Family.

III CAA SPACE REGULATION: BOARD ASSURANCE FOR FIRST LAUNCH AND SPACEFLIGHT LICENCE DECISION BY TIM JOHNSON

5. The Board welcomed Rob Garner, Garry Lathey and Colin Macleod to the meeting.

6. The Board was reminded that the Extraordinary Board Meeting (EBM) had been convened so that the Board could be assured that the process we had followed in assessing licences was sound and consistent with our statutory duties. This was ahead of potential licensing decisions and first space launches from the UK.
7. The Company Secretary & General Counsel confirmed the Board was quorate for the purposes of the meeting.
8. The Chair also asked the General Counsel to remind the Board of the CAA's statutory duties in relation to Space.
9. The Chair proposed the meeting would be structured in the following way:
 - Process and Governance
 - Discussion of the Seven Tests
 - Safety Assurance
 - Independence of Mind
 - Views of the Independent Safety Adviser to the Board
 - Final View of the Company Secretary & General Counsel
 - Decision
 - Next Steps and Approach to Future Licensing Applications

III PROCESS AND GOVERNANCE

10. The Board was reminded that the CAA was responsible for the granting of three types of licence: launch operator licence; spaceport licence; and range licence.
11. In granting the licences, the CAA needed to be satisfied that the relevant legislative tests had been met. These had been set out in the accompanying paper.
12. The role of the Board was also set out in the accompanying paper. The Board was not responsible for approving the grant of individual licences (this responsibility rested with the Head of Space Regulation and Group Director, Safety & Airspace Regulation Group (GDSARG), supported by their respective teams). Instead, the Board's core role was to assure itself that the CAA had discharged its roles in a proper manner and consistent with its statutory duties.
13. The CAA's primary responsibility was about assessing the adequacy of the mitigations to protect third party safety, particularly in the event of failure.
14. Although the grant of a licence was a key part of the overall process, applicants would still need to meet various conditions before the space activities could take place and be subject to on-going regulatory oversight.
15. The Chair asked the Board if it was content and understood its responsibilities. The Board confirmed that it was content.
16. It was confirmed that the Board was asked to endorse the recommendations on slide two of the pack.
17. It was highlighted that although the Board was being asked to assure itself of the overall licensing process which was now largely completed, with five of the seven tests being judged to have been met, there were still a number of specific outstanding issues that needed to be assessed before the CAA could be in a position to make a licensing decision. These were necessary to complete before reaching a conclusion on whether all the tests had been met. The final decision on whether these outstanding points had been satisfactorily addressed rested with the Head of Space Regulation and GDSARG.
18. The Independent Safety Adviser questioned the aspects of the safety case that were not yet finalised, and whether the Board could be fully satisfied that the licensing process worked effectively and that the tests had been met.
19. In response, it was emphasised that the same process that had been applied to all other aspects of the licence assessments would continue to be applied to the outstanding issues. The safety case would also likely evolve over time in line with plans for the event, and as such we would continue to be evaluating those changes and updating any necessary approvals if appropriate. It was also noted that it was the existing processes used by the CAA that had identified the outstanding safety

case questions, which in the view of the CAA had demonstrated the effectiveness of the processes.

20. It was confirmed that, if the Board gave its approval of the licensing process at the EBM, but a serious issue subsequently arose, such that significantly restrictive licensing conditions were attached to the licences granted; or there were significant changes to the CAA's current assurance processes; then matters would be returned to the Board for a new evaluation of its assurance decision.
21. GDSARG noted that in getting to the point where licences could be granted, there had been extensive collaboration and structured work between colleagues in the Space team and relevant capability teams in SARG (AAA, FO, AW), to identify and resolve issues in their areas of expertise, and with other teams across the CAA with relevant expertise. There had also been extensive input from the Safety Assurance team in establishing how space related risks could be reflected in the existing safety management system, particularly with a view to making the granting of space licences a repeatable activity. GDSARG also explained that periodic reviews of the outputs of meetings and the work undertaken by Space and SARG teams were carried out personally.
22. It was further emphasised that the CAA's existing processes and the diligence of the teams involved had helped to identify outstanding safety questions and were sharing the feedback with applicants.
23. The Chair noted that as part of the assurance process, the Board needed to be comfortable that all necessary steps were being taken to ensure that adequate mitigations were in place to manage third party risk, and that other tests had been met. Based on the explanations provided above, the Board was content that the correct steps had been taken.
24. Noting that there were still some outstanding issues against two of the tests, the Board asked that it be notified once the necessary information had been provided by the applicants, and the decisions taken by the Head of Space Regulation and GDSARG on the basis of the information reviewed.

IV DISCUSSION OF THE SEVEN TESTS

25. The Board was advised that slides eight and nine of the supporting paper outlined the CAA's conclusions in relation to the seven statutory tests. The slides explained where the information underpinning the conclusions had come from, and the additional assurance processes that had been undertaken by the CAA, and where necessary, external subject matter experts.
26. It was noted that the International Obligations test would be one of the final tests to be completed as it required extensive cross-government collaboration.
27. In terms of the Environmental test, the CAA did not need to be 'satisfied' this test had been met, but rather, needed to take it into account. Final sign-off of this test was expected in the next seven days.
28. With regards to the Safety test, the Board was advised that the key processes for assessments had been completed, with all those involved in the decision-making process present when the decision was taken. This discussion had identified the outstanding issue referenced above.
29. Some additional flight training and inspections would also need to be undertaken prior to the licence being finally granted.
30. All of the information generated internally, including meeting minutes, as well as information from applicants and other government bodies, supporting the CAA's assessment of the tests was fed into the CRM system, and was fully auditable.

V SAFETY ASSURANCE

31. The Board noted the paper for the meeting was thorough and that it had seen the process develop over time. Recognising the work that had gone into the licensing process, it was queried whether the CAA had considered whether it had asked all of the questions it could have done of the applicants.

32. In response, the Policy Director highlighted that developing the CAA's Space capability had been a significant time commitment, with colleagues with the right expertise being engaged in the assessment process in a structured way. It was expected that as licensing activity became a more regular activity, the CAA would continue to learn more and adapt, consistent with CAA Values.
33. GDSARG also highlighted that the CAA was undertaking a learning process. The level of engagement between the Space team and SARG had increased significantly over the past nine months, and this had contributed to the successful development of the assurance process.
34. The Board was also advised that the touchpoints between teams had been carefully structured, and significant decision makers were not necessarily present at every meeting. However, this meant that when documentation or decisions were reviewed, those decision makers were able to add additional insight and challenge because they had initially been removed from the process.
35. The CEO noted that in addition to its own aviation and safety knowledge, the CAA had been able to call upon expertise from the UK Space Agency, Health & Safety Executive, and the Federal Aviation Administration.
36. Additional external expertise had also been brought in to support work on the Financial Resources and Environmental tests.
37. The Board acknowledged the importance of the CAA having made use of external expertise in relation to assurance.
38. Noting that extensive work and risk mitigations that were in place, the Board queried what the biggest risks were likely to be.
39. In response, technical failure of the rocket was a significant risk, even with the extensive testing and assurance processes in place, and was where there was a particular focus on risk mitigations. Keeping those who didn't have a genuine operational reason to be within the safety clear zones was particularly important. The other key risk was the scenario in which the aircraft had to return to the spaceport with a rocket. Risk assessments and mitigations had looked at this scenario carefully.
40. The CEO reinforced the need to avoid 'launch fever' as the launch date approached. It was acknowledged this could be present, but it was imperative that safety remained upper most in everyone's mind, including the operators, CAA and Government. The Chair reminded the Board, that if the CAA was not satisfied that the final outstanding questions and conditions had not been met, then it may be necessary to refuse the licence.
41. The CEO was required to leave the EBM, but agreed prior to leaving, to confirm his view on the assurance of the licensing process to the Chair.

VI INDEPENDENCE OF MIND

42. Noting the previous part of the meeting, together with the Board's previous discussions on the subject, the Board was asked to consider whether any other matters relating to independence of mind needed to be addressed.
43. The Board was reminded that the accompanying paper included details of the structures and internal decision-making process. Extensive efforts had also been made by senior CAA colleagues to give the assessments teams across the CAA the time and space to undertake their roles.
44. It was also noted that in discussions with government bodies and applicants, there was a recognition and open acceptance that regulatory decisions needed to be made on a firm evidence base.
45. Clarity was sought on a point on slide sixteen regarding a certification issue involving the FAA. It was confirmed that the discussion related to the difference in interaction of the aircraft and space regulation frameworks between the UK and US. The issue was satisfactorily resolved by the CAA with the FAA and the operator.

VII VIEWS OF THE INDEPENDENT SAFETY ADVISER

46. The Independent Safety Adviser noted the discussion about independence of mind. There was always a risk of corporate group think. However, the involvement of different internal capability teams and external parties would have helped to mitigate this.
47. It was advised that the CAA would need to be alert to managing the risk of launch fever by all parties involved, as this was likely to occur in the build up to the launch.
48. From a corporate risk perspective, it was recommended the CAA have a clear statement regarding its role in the process.

VIII FINAL VIEW OF THE COMPANY SECRETARY & GENERAL COUNSEL

49. The Company Secretary & General Counsel advised that once the Board had made its decision, OGC would provide an additional level of assurance through a final review of the tests and the drafting of the associated licence conditions. If any issues were identified from the legal review, these would be escalated within OGC, and where necessary to the Policy Director and/or GDSARG.

IX DECISION

50. The Chair asked the Board to confirm that it was assured of the licensing process, and agreed with the recommendations set out on slide two of the accompanying paper.
51. The Board confirmed it was content and endorsed the recommendations. The Chair confirmed that the CEO had indicated to him that he was also in agreement.
52. In endorsing the recommendations, the Board requested that it be notified once the outstanding information has been received from applicants and assessed, and of the decisions made by the Head of Space Regulation and GDSARG against the outstanding tests.

X NEXT STEPS AND APPROACH TO FUTURE LICENSING APPLICATIONS

53. It was advised that once the CAA's assessment processes had concluded, it would seek consent from the Secretary of State for Transport to issue the licences. The timing for this would depend on when the outstanding information was provided by the applicants and assessed by the CAA. As part of the submission, the accompanying paper and minutes from the EBM would be provided as a record of the Board's discussion and decision.
54. The Chair advised that the Board would be involved in assuring the process for granting the first vertical launch space licence whenever that occurred. Once the first horizontal and vertical licences and launches had taken place, the intention was for Space to move to BAU, with updates on the work of the Space team provided to the Board in the normal way.
55. The Chair thanked the Board for its input at the EBM and over the course of the last year. The assurance and, if appropriate subsequent first licensing decisions for these space activities was a significant moment for the CAA.
56. On behalf of the Board, the Chair thanked Space and SARG colleagues for their work in standing up the CAA's space capabilities, recognising this was excellent progress.

Date and Time of Next Meetings:

September Board: Wednesday 21 September, 11:00 hours, Westferry House