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**TRANSCRIPT OF PROCEEDINGS
TRANSCRIPT-IN-CONFIDENCE**

**INSPECTOR-GENERAL AUSTRALIAN DEFENCE FORCE
INQUIRY INTO THE CRASH OF A MRH-90 TAIWAN
HELICOPTER IN WATERS NEAR LINDEMAN ISLAND
ON 28 JULY 2023**

PUBLIC INQUIRY

**THE HONOURABLE M McMURDO AC
AVM G HARLAND AM CSC DSM**

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MS K MUSGROVE, representing the Commonwealth**

0930, TUESDAY, 1 APRIL 2025

DAY 45

TRANSCRIPT VERIFICATION

**I hereby certify that the following transcript was made from the sound recording of the
above stated case and is true and accurate**

Signed	Date	(Chair)
Signed	Date	(Recorder)
Signed	Epiq Australia Pty Ltd	Date	28/04/25	(Transcription)

.MRH-90 Inquiry 01/04/25

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MS McMURDO: Just before we get started, there is just a couple of housekeeping matters I'd like to clarify with Ms Musgrove, if I could, please? Thanks, Ms Musgrove. First, I just wanted to clarify the Commonwealth entities who you, and your instructors, represent. We did discuss this last week, and you, I think, said you were going to get instructions. The Inquiry has received an email from your instructors stating that you act for the Commonwealth, as represented by the Australian Army, the Defence Aviation Safety Authority (DASA) and the Defence Flight Safety Bureau (DFSB) consistent with my grant of leave on 11 June 2024. So can we now confirm that?

MS MUSGROVE: That's correct. We don't appear for DG DASA personally in that role, and so we weren't served with any section 23 Notices for DG DASA.

MS McMURDO: Thank you for that. And the second matter was the time when the Inquiry will receive the long-awaited ASIT DFSB report on Thursday. At the commencement of this hearing block, you stated we would receive it on the morning of Thursday, 3 April. Since then, we've had email information from your instructors that we will receive it in the early afternoon. Could you just clarify what the position is, please?

MS MUSGROVE: Yes, certainly. My recollection was I indicated it would be provided to the Inquiry after the various briefings that were to occur for the families and others involved. The anticipated time now is 12.30 pm, approximately, on Thursday afternoon it will be provided to the Inquiry. I should note that it will not be made public because it is "Official: Sensitive", and so it will not be provided to Counsel representing. That will be a matter for the Inquiry as to whether or not it is provided to Counsel representing.

MS McMURDO: So to whom will it be provided?

MS MUSGROVE: To the Inquiry, pursuant to a section 23 Notice, which I understand is yet to be served.

MS McMURDO: And so will it come to the Inquiry website? Email to the Inquiry website, is that the - - -

MS MUSGROVE: I don't know that it will go to the website. I can seek those instructions.

MS McMURDO: Not the website, sorry, the Inquiry email address.

MS MUSGROVE: I anticipate that will be the manner in which it is

provided to the Inquiry.

MS McMURDO: All right.

5 MS MUSGROVE: I can seek clarification on that. I'm not normally involved in the manner in which material is provided to the Inquiry.

MS McMURDO: So you are requesting a section 23 Notice for the provision of it.

10 MS MUSGROVE: Correct.

MS McMURDO: So can we abridge the time for that, COL Streit?

15 COL STREIT: Yes, thank you, Ms McMurdo. The bottom line is that Counsel Assisting can't issue a section 23 Notice for something that does not exist. So until the final report is signed – and I understand that is today, according to the timeline communicated by the Commonwealth – a section 23 Notice will be issued today upon confirmation that the report
20 has indeed been signed, and is indeed final, and that the Notice will be issued today upon that being communicated to Counsel Assisting. And then that will provide the legal basis for the Commonwealth to deliver the final report this Thursday to the Inquiry's group email address.

25 MS MUSGROVE: If I can, I've just received instructions that it will be provided through an Objective link to the Inquiry.

MS McMURDO: So in terms of the section 23 Notice, can you tell us whether the report exists at this point so that it can be issued?

30 MS MUSGROVE: The report has been finalised. It's been provided to DFAA in accordance with the requirements. We will confirm via email when it has actually been signed by DFAA, but it certainly exists.

35 MS McMURDO: It's finalised. So we understand the report is finalised, so that should be sufficient for a section 23 Notice, shouldn't it, COL Streit?

40 COL STREIT: Well, it really depends on what the distinction is on the role of the Defence Aviation Authority. Is the Defence Aviation Authority receiving a final report, and then, upon review, signs it and accepts it, or is the report communicated to the Defence Aviation Authority as finalised and signed by the Director DFSB as a complete
45 report?

What I'm trying to avoid is if the Defence Aviation Authority, for whatever reason, on review of the report, says something has not been addressed and sends it back, their investigation will continue.

5 So perhaps if that matter can be clarified? It's very easy to issue a section 23 Notice, but upon confirmation that we actually have a final and signed report.

10 MS McMURDO: Ms Musgrove.

MS MUSGROVE: I am instructed that it is appropriate to issue the section 23 Notice now.

15 MS McMURDO: Thank you. We will attend to that later this morning, and you will have no objection to it being returnable on Thursday, 3 April?

MS MUSGROVE: No. Thank you.

20 MS McMURDO: Thank you.

COL STREIT: Thank you, Ms McMurdo.

25 MS McMURDO: Yes, thanks, COL Streit.

COL STREIT: If it may assist the Inquiry and Counsel representing, we have just had some changes in relation to the order of witnesses this week. Today will see the conclusion of MAJ Lamb's evidence. He will be followed by CAPT Davison. BRIG Fenwick will follow
30 CAPT Davison. His evidence, I understand from his Counsel, may run some time and, as a consequence, we have moved the witness listed for Wednesday, GPCAPT Keith Joiner, to Friday. So Wednesday is clear to conclude BRIG Fenwick's evidence on the basis his evidence commences a little later today.

35 MS McMURDO: Because he has commitments from Thursday onwards, doesn't he?

40 COL STREIT: I understand from his Counsel that BRIG Fenwick is available until Thursday evening.

MS McMURDO: Thursday evening, right.

45 COL STREIT: Yes.

MS McMURDO: But not beyond that?

COL STREIT: Not beyond that.

5 MS McMURDO: Yes.

COL STREIT: So we've moved GPCAPT Keith Joiner, and I thank him
for his assistance and cooperation and forbearance. He was travelling
from interstate. So we will move him to Friday. On Friday, Dr Adrian
10 Smith was listed as being recalled. That was at the request of two Counsel
representing. We will now move Dr Smith to be recalled to the next
hearing phase on Monday, 28 April 2025. So the two witnesses for Friday
will be GPCAPT Keith Joiner and Mr Joe Rule, the National Manager
Flight Standards at CASA. That's where we are at the moment.

15 MS McMURDO: Thank you.

COL STREIT: Thank you.

20 MS McMURDO: MAJ Chapman.

MAJ CHAPMAN: Thank you, Madam Chair.

25 **<MAJ DAVID STEWART ANTHONY LAMB (RETD), on former
oath**

30 **<EXAMINATION-IN-CHIEF BY MAJ CHAPMAN, continuing**

MAJ CHAPMAN: MAJ Lamb, I understand that you wish to reiterate
something about your role at CASA?

35 MAJ LAMB: Thank you. Yes. Just as per my disclaimer yesterday, I'd
just like to reiterate that the written statements and testimony for the
purposes of these proceedings do not relate to my work at CASA, nor
should they be taken to reflect CASA's views or position of any of the
issues that I may address. I also note that Mr Joe Rule is my manager at
40 CASA.

MAJ CHAPMAN: Thank you, MAJ Lamb. MAJ Lamb, when the
Inquiry adjourned for the evening last night we were around about the
point of discussing in your statement selection of the DoSA-FT as the
45 Navy DoSA. Have you got a copy of your statement there?

MAJ LAMB: I do. Thank you.

5 MAJ CHAPMAN: We are around about paragraph 6, though there's some movement in that. So as we know from the Military Permit to Fly, you applied to the Navy Delegate of Safety Authority Flight Tests. Is that correct?

10 MAJ LAMB: That's correct.

MAJ CHAPMAN: Just before we go into the reasons why you took that course, is it the case that across the three Services of the Australian Defence Force there are only two DoSA Flight Test appointments? Is that correct?

15 MAJ LAMB: So that is not correct as it stands today. So within the Air Warfare Centre, at the conclusion of my appointment with the ADF we had four DoSA-FTs at the Air Warfare Centre, and there's one at AMAFTU.

20 MAJ CHAPMAN: What about was the position at the time that you applied to CMDR Davison?

25 MAJ LAMB: That is correct. It was just the two.

MAJ CHAPMAN: So just to be clear, we had, at that time, one dedicated to Navy, and at that time that appointment was held by CMDR, now CAPT Davison.

30 MAJ LAMB: Correct.

MAJ CHAPMAN: And you also had a Royal Australian Air Force and Army Aviation shared Delegate of Safety Authority Flight Test; is that right?

35 MAJ LAMB: That is correct.

MAJ CHAPMAN: And at that time the appointment was held by GPCAPT Steven Young?

40 MAJ LAMB: Correct.

45 MAJ CHAPMAN: Just to your knowledge, how long has it been the case that the RAAF and the Australian Army have shared historically a DoSA-FT?

5 MAJ LAMB: So, of course, the DoSA-FT function changed out from when we moved into the DASA construct, but in terms of the approval for a Military Permit to Fly, which is today's vernacular, that's since the inception of ARDU, where the rotary-wing flight was embedded within the Air Force unit, and the governance structure above that provided the approvals for the Military Permit to Fly.

10 MAJ CHAPMAN: So for how long would you say, approximately, over that span in number of years was there this appointment of DoSA-FT reposed in the RAAF Officer for Army and RAAF?

15 MAJ LAMB: So I can certainly go back confidently to the mid-90s. It's likely earlier before that.

MAJ CHAPMAN: I think you said just previously that your understanding is that at the time you separated from the ADF, that had changed?

20 MAJ LAMB: So the work rate had necessitated the need to have multiple doses. It was a very busy time for ADF capability. There was also additional pedigree and acumen that benefited from appointing the most appropriate DoSA to a task.

25 MAJ CHAPMAN: Typically, indeed as in this case, when you are applying for a Military Permit to Fly, being a then Army Officer, you would be applying to the RAAF/Army DoSA-FT for that Military Permit to Fly?

30 MAJ LAMB: That is correct.

MAJ CHAPMAN: Though here, as we have made clear, you applied to the Navy DoSA-FT. Correct?

35 MAJ LAMB: That's correct.

MAJ CHAPMAN: We'll get to the explanation shortly. Just one final question on those appointments. Are you aware of an Army Aviation Officer ever having represented the role of DoSA-FT?

40 MAJ LAMB: Yes, LTCOL Brendan Reinhardt.

MAJ CHAPMAN: When was that?

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MAJ LAMB: So that was established – look, I’d have to look it up, to be honest with you, but it’s in recent years. He still holds that delegation today, is my understanding.

5 MAJ CHAPMAN: Is this an appointment which, given what you’ve said about COL Reinhardt, does it rotate between Army and Air Force?

MAJ LAMB: No, not at all. So that was supernumerary to support ADF capability and distribute the workload for the office. So the Director Test
10 and Evaluation is also the RAAF T&E Accountable Manager, and he holds the DoSA functions. So that office is very busy, and that provided relief to that.

MAJ CHAPMAN: To the extent it’s within your knowledge,
15 MAJ Lamb, can you explain – again, if you can – any rationale for why Navy has a dedicated DoSA-FT?

MAJ LAMB: So there’s peculiarities to that, obviously, in the First-of-Class Flight Trials, so it’s a highly specialised area. So it does
20 warrant having that governance oversight for someone who has acumen, and competence, and understanding of the nuances of that, and so for that reason my understanding is historically they have held that DoSA delegation, and clearly to the satisfaction of DASA because they act on behalf of DASA.

25 MAJ CHAPMAN: Just to return to your statement – and I think I said we were around paragraph 6 on page 2. Have you got that with you there?

MAJ LAMB: I do, yes.

30 MAJ CHAPMAN: You explain your approach to applying to the Navy DoSA-FT by essentially extracting the contents of an email which you received from GPCAPT Steven Young, sent to you on 19 March 2025, so only recently.

35 MAJ LAMB: So that’s right. Preceding that, I had also contacted GPCAPT Figtree, who was the incoming delegate, just to get clarity on the circumstances.

40 MAJ CHAPMAN: Yes, and just to put this into context, the Inquiry had asked you to explain why you applied to the Navy DoSA-FT. Correct?

MAJ LAMB: That is correct.

45 MAJ CHAPMAN: And that’s because it’s somewhat unusual. Is that

right?

MAJ LAMB: In this particular circumstance, only because this was not a First-of-Class Flight Trial. So ordinarily we would stay with the Army DoSA.

MAJ CHAPMAN: And unusual only to the extent that the Navy DoSA-FT typically just looks after Navy exclusively?

MAJ LAMB: That is correct.

MAJ CHAPMAN: In this email that you received on 19 March 2025 from GPCAPT Young, he provides an explanation for why the application was not fielded and determined by him. Correct?

MAJ LAMB: That is correct.

MAJ CHAPMAN: And the genesis of this email, as is clear from your statement, is that you asked GPCAPT Young essentially to confirm his recollection of the narrative.

MAJ LAMB: That's correct.

MAJ CHAPMAN: Just to pause there. Chair, we'll be hearing from GPCAPT Young, who has prepared a statement. It may be tendered later today or tomorrow, but that statement has been received, and it essentially provides that – and this is a summary, just for the purposes of your evidence – that GPCAPT Young was shortly to be deployed to an overseas posting in the United States, and that in the circumstances it was considered prudent for the RAN DoSA-FT to consider and determine MAJ Lamb or AATES' application, and that will be evidence which will be tendered by Counsel Assisting.

MAJ Lamb, is it a fair summary of this email to say that you made enquiries of GPCAPT Young, and when it was discovered he was unavailable, the decision was taken to go to CAPT Davison?

MAJ LAMB: That's right. So it was a collegiate effort between the Staff Officer of the DoSA, who is the conduit to the DoSA, myself, the SO1, LTCOL Brendan Reinhardt, and then to the RAN DoSA.

MAJ CHAPMAN: Just to be clear about this, you did not select to go to the Navy DoSA out of any concern that, for instance, GPCAPT Young might take some unfavourable view of the application, or anything like that?

MAJ LAMB: Not at all, no.

5 MAJ CHAPMAN: It was simply a matter of good governance in the sense that GPCAPT Young had made clear that he'd be overseas at the time.

10 MAJ LAMB: That's right. That's correct. And the important aspect to that, for context, is that whilst providing the approval through the MPTF process, when the trial goes underway it's not uncommon for the applicant – in this case, myself – to have to go back to the DoSA if, during the trial, circumstances change and the approval and the underpinning artefacts have now been invalidated. So the responsibility to that trial, whilst it's temporal – it's stamped in time on the approval date of 22 October – and
15 you can see this in GPCAPT Young's email – is that that responsibility is held over during the trial until that trial is completed, and it was known to all of us, and most notably GPCAPT Young, that he would be overseas at that point.

20 MAJ CHAPMAN: MAJ Lamb, as far as you're aware, this approach – and you've extracted aspects of the DASRs in your statement – but it is an approach which is permitted, and just to be clear, the approach to going to the Navy DoSA in this case?

25 MAJ LAMB: That is correct. I've provided a Regulatory Authority for you.

30 MAJ CHAPMAN: Now, next we're moving to the Regulatory Authority section, which you have just referred to in paragraph 8 and following of your statement, and you set out there in some detail matters which establish the validity of the appointments to those involved in the approval of the Military Permit to Fly. Correct?

35 MAJ LAMB: Yes.

MAJ CHAPMAN: Then further on at paragraph 14 you set out – I'll say helpfully – a narrative, or a step-by-step process of the Military Permit to Fly application steps.

40 MAJ LAMB: Yes.

MAJ CHAPMAN: And you've earlier given evidence about that process in general, though in these paragraphs you refer to, and outline, your recollection of what happened in this particular instance.

45

MAJ LAMB: That is correct.

MAJ CHAPMAN: Now, I might just ask you at this point – you can look at paragraph 14 and following, but I'd ask you just to summarise in your own words the narrative of what occurred with respect to your application to the Navy DoSA, if you will?

MAJ LAMB: Okay. Thank you. I might just take a moment to read it.

MAJ CHAPMAN: Of course.

MAJ LAMB: Yes. So, in essence, sir, the initial engagement was to establish the procedure to move forward with the DoSA. So I needed to understand administratively what his requirements were. They're clearly articulated in the DASR what the absolutes are. But, of course, the manner in which he was to deliberate over the MPTF application, his availability with his own workload, I sought understanding is to that. And then, most notably, the application pack was submitted on a date of 11 October with my signature, following a drafting process that had gone on for a fortnight, but was then not considered and then approved by CMDR Davison until 21 October.

And he did that at his prerogative, and it's not unreasonable to do that without the need of me providing a further brief. The communications that we had between us had satisfied him to the point that he was comfortable to provide the approval on the 21st.

MAJ CHAPMAN: Just in relation to what you have to say at paragraph 15, it's clear there that you engaged in – there was a depth in the engagement with the DoSA-FT with respect to this application process, and the application pack. Correct?

MAJ LAMB: That is correct.

MAJ CHAPMAN: You say specifically that it involved discussions between you and then CMDR Davison as to a number of matters, including – and I'll just list a few of them – the background of the trial. Correct?

MAJ LAMB: Correct.

MAJ CHAPMAN: So that included the AATES testing?

MAJ LAMB: Yes, and the result.

MAJ CHAPMAN: Yes. The trial purpose and the task objectives?

MAJ LAMB: Yes.

5 MAJ CHAPMAN: The task agency?

MAJ LAMB: Yes.

10 MAJ CHAPMAN: An overview of risk controls and the rationale for nominating flight tests, flight leading trial participants, and where it would take place, and details of that nature?

MAJ LAMB: That is correct, with an emphasis on the risk controls.

15 MAJ CHAPMAN: Yes. And while you were the applicant, that engagement that you had with CMDR Davison included engagement also with SO1 AATES, who was COL Reinhardt at the time. Correct?

20 MAJ LAMB: Yes, and that's because the underpinning artefact to that is the test plan, of which he had the authority to sign. I provided the recommendation to the test plan, as I did for the Risk Management Plan, and he's the authority to that. So there needs to be a coherence and a culmination to the pack.

25 MAJ CHAPMAN: And that's because AATES had, by agreement with Standards Section, taken responsibility for the test plan and seeking authorisations?

30 MAJ LAMB: So that is correct. It's also a regulatory requirement under the Military Air Operator, and that's stated – I think I pointed it out there in the Operational Airworthiness Management Plan, paragraph 4.8.2. That was a responsibility that was only delegated to the Army Flight Test Organisation.

35 MAJ CHAPMAN: MAJ Lamb, you've accepted that CMDR Davison was informed of the background, including the AATES testing and, as you say, the results. Correct?

40 MAJ LAMB: That's correct.

MAJ CHAPMAN: And that Standards were effectively running this particular activity.

45 MAJ LAMB: That is correct.

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MAJ CHAPMAN: Do you recall him – that is, CMDR Davison – expressing to you any concerns about that approach, particularly it being categorised “flight testing”?

5 MAJ LAMB: No.

MAJ CHAPMAN: You say also that CMDR Davison was a qualified test pilot and he had familiarity with the system under test, and by that do you mean version 5.10?

10

MAJ LAMB: That is correct. So if I could clarify that?

MAJ CHAPMAN: Yes.

15 MAJ LAMB: So it’s uncertain to me if he’d flown the configuration himself, but by virtue of his appointment as an MRH-90 test pilot, more importantly, the Commanding Officer of the Flight Trials Unit, he provided his own approval for their previous trial, and then the report is within his signature, and it’s his report. So for that, that’s where I drew the familiarity from. You would need to enquire with CAPT Davison whether he’d actually flown the configuration himself.

20

MAJ CHAPMAN: When you say “his own testing”, that’s the First-of-Class Flight Trials?

25

MAJ LAMB: That’s correct.

MAJ CHAPMAN: That preceded AATES’ testing?

30 MAJ LAMB: That’s correct.

MAJ CHAPMAN: Just at a general level, MAJ Lamb, these discussions and the stakeholder engagements with the Navy DoSA, can you just give us a sense of how many meetings or over what period of time this process took?

35

MAJ LAMB: So I can’t give you an exact number, but in terms of the time period, it appears, from our review of the correspondence in the Objective files within AATES – so where I’ve done an audit function under supervision of recent weeks – it commenced on 13 September, and that was with the Staff Officer of the DoSA-FT, who had done that on behalf of GPCAPT Young. And you could see that he’d made enquiry into – or confirmation to CMDR Davison’s DoSA delegation, that it did include, in fact, the ability to provide DoSA-FT oversight to Army.

40
45

5 It was known to us anecdotally, but you can see that the due diligence started on 13 September. And then I do know also in other correspondence of an email that is in reference, that there was a period that CMDR Davison was to be overseas, and I think that's probably best to chat to him exactly about what that meant. And so just to be very prescriptive on just the language, in terms of the communication in my statement, it's very deliberate that I use the word "communication" in place of "conversation", because that communication might have also been via email. I can't recollect exactly.

10

MAJ CHAPMAN: We're not talking about something where you prepare an application, you go to a single meeting, it's all approved, calculated - - -

15 MAJ LAMB: Not at all, no. It's a development. The generation of the application is iterative, and it develops through a number of different phases as the assessment is being put together.

20 MAJ CHAPMAN: And obviously enough, this wasn't your first application for a Military Permit to Fly?

MAJ LAMB: Not at all, no.

25 MAJ CHAPMAN: Did this represent a typical level of engagement for an activity of this kind?

MAJ LAMB: Yes.

30 MAJ CHAPMAN: You next refer to overview risk controls and rationale in your statement. Do you recall giving some evidence previously that you and AATES are responsible for applying something in the order of 24 risk controls to the OPEVAL activity?

35 MAJ LAMB: So that is correct. That's the summation to the OT&E, Test and Evaluation Test Plan, and the Risk Management Plan.

40 MAJ CHAPMAN: And imposing – well, suggesting 24 controls reflected, did it not, AATES' concern that the system under test represented a significant risk to flight safety?

40

45 MAJ LAMB: So that is correct, and also if I may refer back to my statements yesterday, that this was to provide this interim approval for a very narrow and controlled permission, such that the risk level was tolerable, and that, of course, is assessed by the DoSA-FT independently. And so again I've put it in the statement, but understand if

5 you actually look at the test plan today you will see that there are change bars on the test plan around the risk controls, and that is where we have - COL Reinhardt and myself have moved from an established risk baseline, and then, upon reflection, we've added additional risks in there to further tighten and lower the risk to the activity.

10 MAJ CHAPMAN: I assume that part of these discussions with CMDR Davison was to make clear to him as the DoSA-FT that this proposal was only for an interim test.

MAJ LAMB: That is correct.

15 MAJ CHAPMAN: I also assume that there was discussion with him about the scope of those risk controls to be applied to the activity.

MAJ LAMB: Yes.

20 MAJ CHAPMAN: And the scope reflected the interim nature of the testing.

MAJ LAMB: That's right. And also those that would be undertaking the testing, in that they were not all qualified test personnel. So within those controls specifically there was prescription about who was allowed to do what. So in terms of a more experienced instructor, for example, we gave more permission to be able to do more because they've got a proven competency basis in the MRH-90.

30 Someone that had less experience, we put further controls. One of the controls that we put in there was that the 5th Aviation Regiment personnel who were not in that Special Operations role had further restrictions. Again, it was unnecessary for them to be exposed to the risk, so I placed controls in that regard.

35 MAJ CHAPMAN: If hypothetically this was a test plan and an application in support of not just the interim progression of this but to Service Release, then your approach to risk controls could very well be different?

40 MAJ LAMB: So could you rephrase the question, please, MAJ Chapman?

MAJ CHAPMAN: You've given evidence that this was a test plan for the interim progression of version 5.10. Correct?

45 MAJ LAMB: Mm.

MAJ CHAPMAN: And you fashioned risk controls presumably on that basis, that it was only interim and not for final release of this upgrade.

5 MAJ LAMB: Mm.

MAJ CHAPMAN: And it was essentially a process to gather further information in support of the interim release.

10 MAJ LAMB: So it's information of its suitability, so to do that very narrow task. So if we go back to paragraph 15 where we talk about the background to the trial, and the trial purpose, if the trial purpose was to provide approval to Service Release, that is very, very different. And, you know, I would be thinking on my feet, to be honest with you, but I'm not
15 sure that that could be possible, given the unacceptable finding. In fact, I'm confident that it could not be, the more I reflect upon it.

MAJ CHAPMAN: So your evidence is that if the Military Permit to Fly was being applied for to test for the purposes of Service Release, your
20 evidence is that the application would not be able to be made on the basis of the "unacceptable" finding that AATES had determined?

MAJ LAMB: So that's right. So the other way to describe that would be that the assessment for Service Release had already been completed, and that was in the AATES report. We'd found that finality in the AATES
25 report, that as it was described and functioned, then it was not acceptable for Service Release for the projected role.

MAJ CHAPMAN: Just asking you to think about this – and it's not in
30 your statement – but on your feet, as it were, is there some regulatory basis that you can recall now to the effect that where there's the "unacceptable" finding, such as AATES made, that you could not apply for a Military Permit to Fly?

35 MAJ LAMB: No, there isn't. Not in the manner in which the question has been posed, no.

MAJ CHAPMAN: What is the basis for your contention then that there would be no basis for applying for a Military Permit to Fly, having regard
40 to the "unacceptable" finding?

MAJ LAMB: So the Military Permit to Fly is an instrument to go and do further assessment. It's the AATES' position that further assessment was not required to competently conclude that the system under test was
45 unacceptable for the role and environment. So in similarity, it is as we

experienced during the AATES test and evaluation. When we undertook the second sortie of confirmation by day, it confirmed the results of the first sortie, and so we didn't need to proceed to night testing. It's in that similarity.

5

MAJ CHAPMAN: Is the effect of your evidence in this regard to suggest that you had from AATES' perspective the Military Permit to Fly travelling along for the purposes - on your understanding, just for the purpose of gathering further information, though certainly not for consideration for Service Release, and it appears that those in Standards perhaps, as it turns out, had a different view of the world, and that it was being progressed for the purposes of Service Release?

10

MAJ LAMB: As that is stated to me, that is my understanding, but that is a question for them, I would suggest.

15

AVM HARLAND: Could I just ask, with the interim flight test which was clearly limited, and which was intended to support an interim capability, under what instrument would you envisage 6 Avn would fly if the testing model went well, and they could proceed with further familiarisation and testing in the operational environment?

20

MAJ LAMB: Thank you, sir. It's a very good question. So it would be a Military Permit to Fly because it would not have achieved Service Release. In that same period, we provided - or AATES provided a Military Permit to Fly for the 1st Aviation Regiment to operate with a system which had not yet reached Service Release, and was required for a number of other reasons, so that construct is not uncommon in the ADF airworthiness system. The point to be, sir, of course, is that, in itself, indicates that it's interim. So it's not enduring.

25

30

AVM HARLAND: So that Military Permit to Fly would have limitations on it.

35

MAJ LAMB: Correct.

AVM HARLAND: But it will allow line 6 Aviation aircrew to fly the aircraft within a set of guardrails per se.

40

MAJ LAMB: Correct, sir. Yes.

AVM HARLAND: Thank you.

45

MAJ CHAPMAN: Just returning, MAJ Lamb, to the issue of the controls, was the 24 controls considered high or fairly typical for this type of

activity?

MAJ LAMB: No, definitely atypical.

5 MAJ CHAPMAN: Atypical?

MAJ LAMB: Atypical. So an order of magnitude nominally would be less than 10.

10 MAJ CHAPMAN: Of the 24 controls that were applied to the activity, were they all proposed by you and AATES, or did CMDR Davison come across and suggest and apply additional controls?

15 MAJ LAMB: I can't recall exactly, but what I can say confidently is that it was a collegiate approach. I have put in my statement that I had – and I retain today – great respect for CAPT Davison, as he is today, and so that any guidance or additions that he would require, we certainly would have included.

20 MAJ CHAPMAN: Thank you. And to the extent I've been referring in the evidence to CMDR Davison, I apologise. He is CAPT Davison.

MS McMURDO: Well, he was CMDR Davison at the time.

25 MAJ CHAPMAN: He was at the time, yes.

MS McMURDO: So I don't think it's such a terrible sin.

30 MAJ CHAPMAN: Thank you, Chair.

Can I move now to the topic of the OPSPEC, MAJ Lamb, which you deal with - - -

35 AVM HARLAND: Before you go to that, MAJ Chapman, just one question. Just regarding the testing and the test plan, was it your intention that the testing would be conducted in a low level, low cue environment, and in a formation?

40 MAJ LAMB: So not in a formation, sir, to answer that question back to front, but the low cue environment effectively was offset by a "yes", but with a visible horizon. So one of the real distinctions there – and I alluded to this yesterday when I spoke about the AMAFTU trial having strong vertical and horizontal cues – the visual horizon is compelling to use, so despite when looking off-axis, the pitch and roll information is
45 incongruent with the horizon. The horizon gives you that compelling

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attitude. So that, and the ability – so the cognitive capacity of those
aircrew was scaled to their experience. There was a demonstrable
mitigation, in that they were flying in a terrain environment and location
that they were also very familiar with. And, as you know, sir, from your
5 own experience, the more familiar you are with something, the less active
memory it requires to process, and that gives relief. So it was very, very
specific.

AVM HARLAND: Would you have expected those kind of limitations to
10 have gone forward in any future MPTF or Service Release, as it were?

MAJ LAMB: It would have been required, sir. Yes, absolutely.

AVM HARLAND: Were you surprised when that didn't happen?
15

MAJ LAMB: Yes, I was, sir.

AVM HARLAND: A follow-on question there regarding formation,
Because, by my understanding, we've heard from other witnesses a
20 formation was conducted as part of the testing.

MAJ LAMB: Okay. I'd have to review the test plan, but okay.

AVM HARLAND: And again, if formation wasn't intended or wasn't
25 your intention for this test plan, would you be surprised to see that a
Service Release enabled formation for 6 Aviation aircrew to enable them
to fly formation?

MAJ LAMB: So to answer that question confidently, sir, I'd like to see
30 the OT&E Test Plan.

MS McMURDO: It should be attached to your statement, isn't it?

COL STREIT: It is, at B.
35

MS McMURDO: Yes, B, tab B.

COL STREIT: It's not provided.

MAJ CHAPMAN: It's your first statement. Sorry, that's exhibit – if you
40 could be shown Exhibit 86A, please?

AVM HARLAND: Yes, and just a word of caution there. The details
are, "For Official use only", so just be conscious of that.
45

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MAJ CHAPMAN: Yes.

MAJ LAMB: I'm sorry, sir?

5 AVM HARLAND: The details are, "For Official use only", so be cautious with that.

MAJ LAMB: I understand.

10 AVM HARLAND: My understanding is that is "Official: Sensitive" in today's terminology.

MAJ LAMB: Okay, I understand. This might take a moment, sir. Unfortunately, I don't have a control F.

15 MS McMURDO: Risk management is at 61.

MAJ LAMB: Thank you, ma'am. So, yes, so thank you. So there's no reference in paragraph 61 to formation flying.

20 MAJ CHAPMAN: And if you go to Annex B?

MAJ LAMB: Thank you. So I'm yet to see the word "formation" in there. I have put in previous testimony that I have a confidence that the
25 test plan requirements, which were supervised by Standards, would have been upheld. There's no reason for me to think that that wasn't upheld. It's not apparent to me in this just initial look that formation was included in the OT&E trial, but I am very happy to be corrected on that.

30 AVM HARLAND: Perhaps we can follow that up with Standards. If that is the case and formation wasn't intended in the flight test, would it be ordinary that that could just be included in the flight test without notification back to either the Flight Test Organisation, or the person who issued the Military Permit to Fly?

35 MAJ LAMB: So, no, it wouldn't be approved, sir, and the reason for that is because that task in itself would trigger its own risks that would require capturing and mitigating, and then informing the DoSA-FT.

40 AVM HARLAND: So if I'm to understand that, on your review today, and your recollection, there was no intention for formation?

MAJ LAMB: That is my understanding and initial recollection, yes.

45 AVM HARLAND: That's fine. How is it then that we end up in a

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situation where this testing is done, Service Release is granted – which we’ve established was something which wasn’t intended – and that Service Release also permitted formation flying, night, low level, low cue environment - - -

5

MAJ LAMB: Overwater.

AVM HARLAND: - - - with TopOwl version 5.10 overwater?

10

MAJ LAMB: Overwater. So that - - -

AVM HARLAND: Would this Flight Test Plan support that?

15

MAJ LAMB: No, it wouldn’t, sir. So that’s extrapolation of the results. So yesterday I gave a metaphor, or a picture of, you know, the service flight envelope is something the size of a soccer ball, and the controls in here is something the size of a golf ball, or a tennis ball. Without the evidence and proof beyond those controls, it’s uncharted waters. And so what I mean by that is there are unknown risks out there which have not been captured, documented, considered, and it’s the unknown unknowns that would be really problematic.

20

There is also the culmination of the risks. So there’s the risks in isolation that were addressed by the 24 controls, but then there’s the aggregate risk in that role and environment. And, as my understanding to be on the night of the accident, that’s a confluence of events which is well outside the testing that was undertaken by the OT&E trial, and certainly underpins the unacceptable finding of the role relation that was documented in the seven-part paragraph in the report.

25

30

AVM HARLAND: So in very simple terms, this test plan (a) was never intended to support Service Release, and (b), by your recollection and understanding, wouldn’t support flying formation low level, at night, on ANVIS version 5.10, overwater.

35

MAJ LAMB: Correct, sir.

AVM HARLAND: Thank you.

40

MAJ CHAPMAN: MAJ Lamb, do you recall giving evidence previously about at least two significant limitations or controls that were imposed were not flying below two millilux conditions, and also – correct?

45

MAJ LAMB: That’s one of them, sir.

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MAJ CHAPMAN: And also not flying in the absence of a visual horizon.

MAJ LAMB: That is correct.

5

MAJ CHAPMAN: And just generally, those two, as I think it's been made clear in your exchange with the Air Vice-Marshal, form part of the test plan?

10 MAJ LAMB: That's correct.

MAJ CHAPMAN: With those controls in place, was it the intent – I withdraw that. Was the inclusion of those controls, or the intent behind the inclusion of the controls, that testing would not be conducted, or
15 permitted to be conducted, in those conditions, so below two millilux or without a - - -

MAJ LAMB: That is correct.

20 MAJ CHAPMAN: And it's the case though, isn't it, that in the absence of those controls being applied to Service Release, it was open to operators and pilots of the aircraft to operate in those conditions?

MAJ LAMB: That's correct.
25

MAJ CHAPMAN: Though those conditions had not been tested in any OT&E or any testing?

MAJ LAMB: Well, it had been tested in the forecast, which is within the
30 realm of the Flight Test Organisation. So to not have to go and precede the accident with an accident, that is the role and the expertise of the Flight Test Organisation to project that circumstance and put controls and advice in place to prevent that occurrence.

35 MAJ CHAPMAN: But from the point of view of a Flight Test Organisation, it had not been – because there hadn't been any testing, it was unknown, the impact in which flying in those conditions – the result of flying in those conditions might occur?

40 MAJ LAMB: So we have in evidence – thank you. We have in evidence actually that we did have that absolute confidence, and we had the data to be able to provide that relation, and the reporting format is the internationally accepted format of the seven-part paragraph, and so whilst the testing was conducted by day in the AATES trial, the role relation was

at night in a low useable cue environment, and that's quite normal in flight test assessment.

5 MAJ CHAPMAN: The intent behind this, I guess the bottom line, is that you're putting this control in because you didn't have the confidence that the testing could be carried out safely if they fell below those controls?

10 MAJ LAMB: Correct. I would use stronger language than that. That the flight beyond those controls was an unacceptable risk to the trial.

MAJ CHAPMAN: To make the point that I think you just made before, that there was nothing in Service Release to prevent pilots from flying in those conditions.

15 MAJ LAMB: That's correct.

MAJ CHAPMAN: Can I take you now to the OPSPEC part of your statement? So we're now at paragraph 20 and following, and you deal with – and when I say "OPSPEC", I'm referring to Operational Specification. Is that right?

MAJ LAMB: That's correct.

25 MAJ CHAPMAN: As you note at paragraph 20, you have in your response referred to three versions of the Operational Specification, being versions 5, 6 and 7 dated respectively 14 November 2018, 27 September 2019, and 12 February 2020. Chair and Air Vice-Marshal, I can indicate that those documents are behind tab 17, flags 5, 6 and 7. Can I just hand you those documents, MAJ Lamb?

30 MAJ LAMB: Thank you.

MAJ CHAPMAN: I am handing you the three iterations of the OPSPEC. Just confirm that. Version 5, 6 and 7.

35 MAJ LAMB: Thank you. Yes.

MAJ CHAPMAN: So you recognise those to be the three versions that you refer to at paragraph 20 of your statement?

40 MAJ LAMB: I do.

MAJ CHAPMAN: And the Inquiry can take it that you referred to – well, that material was provided to you with your section 23 Notice to assist you in preparing your statement?

45

MAJ LAMB: That is correct.

5 MAJ CHAPMAN: Thank you. Chair, I tender version 5, 6, and 7 of the Operational Specification.

MS McMURDO: They will be Exhibit 191A, B and C.

10 **#EXHIBIT 191A - OPERATIONAL SPECIFICATION VERSION 5**

#EXHIBIT 191B - OPERATIONAL SPECIFICATION VERSION 6

15 **#EXHIBIT 191C - OPERATIONAL SPECIFICATION VERSION 7**

20 MAJ CHAPMAN: May it please the Inquiry. Now, you've got those to hand, MAJ Lamb?

MAJ LAMB: I do.

25 MAJ CHAPMAN: Just to begin with, can you just explain and assist the Inquiry to understand the purpose of an Operational Specification, or OPSPEC, and where it sits in the regulatory framework?

30 MAJ LAMB: Certainly. So the Operational Specification is a document which articulates prescriptively the DASA permissions for the tasks, activities and the roles that the Military Air Operator is approved to operate in, or conduct.

35 MAJ CHAPMAN: Just if I have this right, is it a fair description that, in essence, it's the Military Air Operator's authorisation to conduct flight tests?

40 MAJ LAMB: So that's part of that. There are other provisions in there around the approvals for specific aircraft types, and then other operational matters as well.

MAJ CHAPMAN: It provides the left and right of arc in terms of authorisation underpinning the Military Permit to Fly?

45 MAJ LAMB: That's part of it, yes. That's in the substantiations, which I'm sure we'll get to.

MAJ CHAPMAN: It provides authority for organisations to conduct categorised and non-categorised flight testing?

5 MAJ LAMB: That is correct.

MAJ CHAPMAN: And by “categorised flight testing”, we’re referring to flight testing which falls within Categories 1 to 4; is that correct?

10 MAJ LAMB: Correct, as per the DASR.

MAJ CHAPMAN: We’ve referred to categorised flight testing. Is there such a thing as uncategorised flight testing and, if there is, can you give an example of that?

15 MAJ LAMB: There is. Uncategorised flight testing, or testing in general, might be something like there is a new uniform, boots, gloves, et cetera, and the gloves might – there might be a question around the dexterity in the gloves to operate in a cockpit, if it’s effective with the interface with the instruments, or the boots in terms of their feel on the rudder pedals, et cetera. So that would be testing, but it’s uncategorised.

MAJ CHAPMAN: In the broad, is categorised testing more related to aircraft performance something to do with the platform itself?

25 MAJ LAMB: It’s actually to do with the certification, where it is in terms of its certification basis; the type certificates, specifically.

MAJ CHAPMAN: At paragraph 22 you again refer to the application for the Military Permit to Fly, and the drafting process being collegiate and cooperative with the Form 18 delegate.

30 MAJ LAMB: Correct.

MAJ CHAPMAN: And that approach is taken to ensure compliance with all regulatory requirements; is that right?

MAJ LAMB: That is correct.

40 MAJ CHAPMAN: You say further in that paragraph that at no time were you or others advised of a change to the OPSPEC. It is for this reason that the error was carried through to approval. So we’re introducing here the concept of an error, and we’ll just develop that. Do you see that?

45 MAJ LAMB: I do.

MAJ CHAPMAN: At paragraph 23 you give an extensive statement of your understanding of this error, and I might just put to you a chronology as the best way of possibly explaining that. So you accept that the
5 AATES testing was conducted between 7 and 11 June 2019. Correct?

MAJ LAMB: That is correct.

MAJ CHAPMAN: And that AATES produced its report not long after,
10 on about 14 June 2019.

MAJ LAMB: Correct. That's correct.

MAJ CHAPMAN: Just pausing there, we have at that time version 5 of
15 the Operational Specification, which is signed by the DASA Delegate on 14 November 2018.

MAJ LAMB: That is correct.

MAJ CHAPMAN: Just to be clear to everyone, that's prior to the
20 AATES testing which was in June 2019.

MAJ LAMB: That is correct. So we were operating under OPSPEC 05.

MAJ CHAPMAN: Just to round out the other side of that, the next
25 version, version 6, of the OPSPEC is signed by the DASA Delegate on 27 September 2019, so that's after the AATES testing?

MAJ LAMB: That is correct.

MAJ CHAPMAN: So we're in version 5.
30

MAJ LAMB: Yes.

MAJ CHAPMAN: Version 5, you accept, was the operational
35 specification that applied to authorisation for the Military Permit to Fly for the AATES activity? Is that right?

MAJ LAMB: It gave approval, the flight test provisions for Army, to
40 sponsor or conduct flight test events in accordance with the DASRs, and the interpretation of sponsor is the regulatory responsibilities.

MAJ CHAPMAN: Have you got the document version 5 there with the –
45 there should be a flag? Does it have a flag number?

MAJ LAMB: Okay. Let me just - - -

MAJ CHAPMAN: It should have been provided with 3.

5 MAJ LAMB: It has. That's okay. Let me just get this right. That's 5.
I've got 5 in front of me. Correct, yes.

MAJ CHAPMAN: Do you see there that – and if we go to the section
10 dealing with flight test provisions – and that's on page – it's hard to read,
but page 3, down the bottom?

MAJ LAMB: Yes.

MAJ CHAPMAN: Now, it's a single sentence and it says this:
15

*Army may sponsor or conduct flight test events in accordance
with the DoSA-FT.*

MAJ LAMB: Correct.
20

MAJ CHAPMAN: You refer in your statement at paragraph 23(c) dot
point – you say this:

25 *That a Military Air Operator conducting flight test activities shall
only conduct a flight test activity of Category 1 to 4 as defined in
a reference if an appropriate privilege has been granted in the
MAO OPSPEC.*

Is that right?
30

MAJ LAMB: That is the – so the extract – the dot point to paragraph (c),
the extract of the DASR FT.05, subpara (a). Correct, yes.

MAJ CHAPMAN: So the MAO, it says that you can only conduct flight
35 tests according to the DASRs if a privilege has been granted in accordance
with the OPSPEC. Correct?

MAJ LAMB: That is correct.

40 MAJ CHAPMAN: So this OPSPEC, boiled down, is the instrument by
which the DASR-FT can authorise the flight testing?

MAJ LAMB: That's correct.

45 MAJ CHAPMAN: Having the benefit of a review of this OPSPEC, was

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the AATES testing – so this is prior to the OPEVAL testing – authorised or not authorised by reference to this OPSPEC?

5 MAJ LAMB: Authorised in accordance with OPSPEC 05.

MAJ CHAPMAN: I just want to turn now to – and that's because it was authorised by reference to the DoSA-FT?

10 MAJ LAMB: The DASR FT.

MAJ CHAPMAN: Sorry, DASR FT.

MAJ LAMB: Correct.

15 MAJ CHAPMAN: Granting the approval. So we have an authorisation of the AATES testing.

MAJ LAMB: Correct.

20 MAJ CHAPMAN: I just want to now go over to the dates for version 6 and the OPEVAL. So version 6 is dated – and that's at number 6, if you've got that in front of you?

25 MAJ LAMB: I do, yes.

MAJ CHAPMAN: Apologies for all these dates, but it's necessary. That's dated 27 September 2019.

30 MAJ LAMB: That's correct.

MAJ CHAPMAN: And version 7 did not come into force until 12 February 2020. Correct?

35 MAJ LAMB: That's correct.

MAJ CHAPMAN: And the OPEVAL was conducted in about November 2019; is that right?

40 MAJ LAMB: Correct.

MAJ CHAPMAN: Do you accept that version 6 applied to the OPEVAL testing?

45 MAJ LAMB: I do accept that.

MAJ CHAPMAN: If we go to version 6, and I take you to Flight Test Provisions, which – this doesn't seem to have page numbers, but it's page 3.

5 MAJ LAMB: Yes.

MAJ CHAPMAN: 3.3, Flight Test Provisions. Do you see that?

10 MAJ LAMB: I do.

MAJ CHAPMAN: If we go to version 6, there's a material difference, do you accept, between version 5 and version 6 in terms of what they say?

15 MAJ LAMB: That is correct.

MAJ CHAPMAN: Just for the benefit of the Inquiry, it says in version 6 this:

20 *Army may conduct Flight Test Operations in accordance with the following provisions:*

(a) *Army may sponsor, or conduct, flight test events that are not Category 1 to 4 in accordance with DASR FT; and*

25 (b) *The authority DoSA-FT should be consulted to determine the category of flight test in accordance with DASA subpara (p).*

And there's a reference. Do you see that?

30 MAJ LAMB: I do.

MAJ CHAPMAN: So do you agree that what we have in this version 6 is that Army may conduct uncategorised flight testing, such as examining dexterity of gloves, et cetera? Is that correct?

35 MAJ LAMB: That's correct.

MAJ CHAPMAN: Though it says here in the OPSPEC that Army was not authorised to conduct categorised flight testing, being Categories 1 to 4.

40 MAJ LAMB: That is correct.

MAJ CHAPMAN: And you say in your evidence that you, and indeed 45 DoSA-FT – to your understanding, no one else in the system was aware

there was this lack of authorisation?

MAJ LAMB: That is my understanding. Correct.

5 MAJ CHAPMAN: And that had you been aware of it, is it your evidence that the application would not have been made?

MAJ LAMB: That is correct, and even if this had been known to
AATES subsequent to the approval on the 21st, or the application on
10 11 October and the approval on 21 October, preceding the trial in November, we would have intervened, and because the substantiation, which you look at in the Form 18, states that the application was made against OPSPEC 05, and there's explanation to that - - -

15 MAJ CHAPMAN: Even if it had been made in error, if it had been known – so even had the application in the OPEVAL been made in error, but that had been discovered, would it – if that was known to the DoSA, it would not have been approved because there wasn't any extant authority to approve it?

20 MAJ LAMB: That's right. So in the substantiations in the Form 18 at paragraph 7 it specifically highlights the OPSPEC to which the application was made, and that states in the application it was 05, and I can talk to that further if you wish, when you're ready.

25 MAJ CHAPMAN: I'll just move on to version 7 because that's also instructive.

MAJ LAMB: Yes, it is.

30 MAJ CHAPMAN: Do you have version 7 there?

MAJ LAMB: I do.

35 MAJ CHAPMAN: I'll ask you to turn to that. So again with these dates, apologies, but version 7 is dated 20 February 2020. Do you see that?

MAJ LAMB: I do.

40 MAJ CHAPMAN: Do you see that's signed by GPCAPT Smith as the DACPA.

MAJ LAMB: Yes.

45 MAJ CHAPMAN: DASA Delegate. And just what's the DACPA?

5 MAJ LAMB: The Aviation – I'd have to go back and recollect. It's now DAVN Ops. It's been changed, but it's the Aviation Coordination Policy Agency. Maybe the DASAs in the room, they might be able to correct me.

10 MAJ CHAPMAN: Just in terms of the timeline that we've been discussing with these changes, we've got version 7 was signed, or promulgated, by the DACPA on 12 February 2020.

MAJ LAMB: That's correct, yes.

15 MAJ CHAPMAN: So this was subsequent to both the AATES testing, and also the OPEVAL testing?

MAJ LAMB: That's correct.

20 MAJ CHAPMAN: So you agree that this Operational Specification applied to neither of those testing events?

MAJ LAMB: That's correct, yes.

25 MAJ CHAPMAN: It came into force, it appears, only a few weeks following the OPEVAL report which was, I think, 29 February 2020?

MAJ LAMB: I'd have to look at the report date, but - - -

30 MAJ CHAPMAN: Now, the reason I raise this is if you go to the Flight Testing Provisions?

MAJ LAMB: Mm-hm.

35 MAJ CHAPMAN: We have a further progression of the authority in terms of who may conduct flight testing. Correct?

MAJ LAMB: That's correct.

MAJ CHAPMAN: And we have, at 3.3.1 on page 3, it says this:

40 *Army may sponsor or conduct flight test events that are not Category 1 to 4 in accordance with DASR FT.*

And that's consistent with version 6. Correct?

45 MAJ LAMB: That is correct.

MAJ CHAPMAN: Though there's been an inclusion here in (b) which says this:

5 *Army Aviation Test and Evaluation Section –*

so AATES –

10 *may conduct Category 1 to 4 flight tests under a Military Permit to Fly issued in accordance with DASR 21(b).*

MAJ LAMB: Correct.

15 MAJ CHAPMAN: So is the effect of all of this to say that Army is not permitted to conduct flight test activities, first proposition, but it's qualified to say that while Army writ large is not able to do it or authorised to do it, AATES is exempted from that and AATES is permitted to conduct Category 1 to 4 flight testing under a Military Permit to Fly?

20 MAJ LAMB: That is correct. And that's the reference, the key reference, and the authoritative source to that is the DASR (b), (p).

25 MAJ CHAPMAN: The conduct of the OPEVAL in version 6 you accept, applied, they were not permitted to conduct, under this Operational Specification, this test activity. Correct?

MAJ LAMB: That is correct.

30 MAJ CHAPMAN: And even under this further iteration in version 7, it's still the case that Standards would not have been permitted to conduct this flight test activity. Correct?

35 MAJ LAMB: So with version 7 at paragraph 3.3.1(c) it does state that Army may conduct Category 4 flight test under a Military Permit to Fly issued in accordance with DASR 21(p); however – so that is the DASR approval. The Operational Airworthiness Management Plan, which is the instructions by the DG AVN constricts that to AATES to provide supervision. At paragraph 4.8.4, I think it is, there is a very definite instruction. Whilst the 3.3.1(c) says Army can do it, the MAO, DG AVN says only AATES can do it.

40 AATES has the prerogative in those further OIP, the Flight Test Ops Manual to either undertake the Category 4 flight testing themselves, delegate it to one of the units or, in this case, Standards, which is in

discussion, or something in between which provides the governance oversight. And it is in that construct that we provided the governance oversight to the CAT 4 testing. That middle ground.

5 MAJ CHAPMAN: Understand.

MAJ LAMB: We weren't to do it. That's in contradiction to what the purpose of the trial was. They couldn't do it unsupervised, so we provided that oversight.

10

MAJ CHAPMAN: And were you aware in this version 7 of this carve-out being made for AATES around about the time this came out in 12 February 2020?

15 MAJ LAMB: Yes is the answer. But more to the point, it was the Staff Officer, the DoSA-FT that discovered the change to, and the advent of, OPSPEC 6.0. And it is certainly our understanding – and when I use the term “our”, I mean COL Reinhardt, myself and the Staff Officer to the DoSA-FT – that when this was made known to ACPA, it is our apparent
20 understanding that was the first this was known to them.

They had not understood the consequence of this change which they had initiated out of other errors which were contained in other OPSPECs that they were trying to correct. There was an unintended consequence here.
25 That may not be the case. They might have already picked up on that, but it is our understanding, this appeared to us this was the first time it was known to them.

30 The subsequent development action or repair to that instrument is what you see in version 7, updated February 2020 with the new appointee GPCAPT Smith coming into the job. There's Christmas in there as well.

MAJ CHAPMAN: And if you were involved in the OPEVAL test activity in terms of flying and this came to your attention, what would you
35 expect the immediate actions to be if you took the view that this just wasn't authorised by the OPSEC?

MAJ LAMB: So it's a reasonable question. You would have to stop. You don't have an approval. But also, I guess in defence of the operators,
40 the OPSPEC is never reviewed when you're going to do authorisation for a flight. You configure that in your own time, sir. It is something which is a higher level governance approval which then flows down into, ultimately, the organisation, the way their SOPs, the Standing Instructions – and how they go about authorisation.

45

This high-level document is not in the visibility of day-to-day operations, nor would I have expected it to have been reviewed routinely by the team that were undertaking the OT&E trial.

5 MAJ CHAPMAN: Was it your understanding at the time – and this is applying for the OPEVAL Military Permit to Fly – that the DoSA-FT had the full authority to issue the Military Permit to Fly in respect of that activity?

10 MAJ LAMB: Yes. And I could speak prescriptively to that to give explanation how the error was carried through if you like.

MAJ CHAPMAN: Sure.

15 MAJ LAMB: Yes, sure. When you go into the audit function of Objective and you look at the drafting process to the Form 18, and particularly the substantiation, you'll see curiously that the Staff Officer had helpfully populated the template for me on 26 September, version 3. And on 26 September version 5 was extant and the approved
20 document. So in that collegiate, cooperative environment and trusted environment, I retain that trust, is that – or they were more vigilant now, following this. I didn't seek to question and did my own due diligence when I looked at it on the morning of 27 September.

25 Now, the time that that was uploaded to the DASA website during the day, if we're going to get into exactly, it's unclear, but once that part has been established further in the development of the document to final signature and application on 11 October, is not reflective of those higher order instruments unless something becomes apparent to us. So there's
30 also explanation, if you go into that audit function, as to the drafting.

You can see in that process that it was commenced on 22 September and there's cut and paste errors from the Air Mobility Group OPSPEC into there. So you could see that it had been commenced but certainly it hadn't
35 been socialised or advised to us that this was being undertaken. Ultimately, too, the question would reasonably be asked, is there a responsibility upon me to ensure, when making application to the DoSA-FT, that everything is absolutely correct. Yes, there is responsibility for me to have done that.

40 MAJ CHAPMAN: And equally, you'd say there's a responsibility on the DoSA-FT to ensure that that is correct also?

45 MAJ LAMB: That is correct. And he does rely on the applicant having done their due diligence. But, yes, that is correct as well.

MAJ CHAPMAN: And just as a final matter, you say in your – I'll just bring it up – you say in your note 5 on page 8 of your statement – you say this:

5

In my professional opinion, the absence of communication to this significant change –

10 and by “significant change”, we’re talking about the change to the OPSPEC version. Correct?

MAJ LAMB: Well, it’s removing the Flight Test Organisation.

15 MAJ CHAPMAN: Yes. So removing the Flight Test Organisation in version 6 is applied to the Operational Evaluation?

MAJ LAMB: Yes.

20 MAJ CHAPMAN:

– significant change during drafting and issue with an immediate effective date was not reflective of good governance practices and certainly indifference to sound regulatory change processes practiced by other national airworthiness authorities.

25

Whether this is an isolated incident or reflective of something more systemic is unknown to me. In any case, applying the process principles espoused by the International Civil Aviation Organisation behind a Notice of Proposed Rulemaking and Notice of Final Rulemaking with a forward projection date that is underpinned by good stakeholder engagement, would almost certainly have avoided this circumstance.

30

Do you agree with that?

35

MAJ LAMB: I do.

40 MAJ CHAPMAN: So is what you were saying here, in substance, that the changes being made to this authority, the Operational Specifications in these three documents that I’ve provided you, without notice being socialised, as you put it, to stakeholders, reflected poor governance?

MAJ LAMB: Correct.

45 MAJ CHAPMAN: And drawing on your experience, you suggest that

the ADF benefit from an approach consistent with that taken by ICAO, which has a procedure where first there's a Notice of Proposed Rulemaking. So a Notice that, "We're going to change the OPSPEC to remove AATES from categorised flight testing", for example?

5

MAJ LAMB: Correct.

MAJ CHAPMAN: And, secondly, a Notice of Final Rulemaking to say, "Everyone, that proposed rulemaking is now taking effect at this particular time".

10

MAJ LAMB: Correct.

MAJ CHAPMAN: And that would enable everyone to have fair warning.

15

MAJ LAMB: Correct.

MAJ CHAPMAN: And to take appropriate actions.

20

MAJ LAMB: Correct.

MAJ CHAPMAN: Is there anything else that you'd like to add, MAJ Lamb?

25

MAJ LAMB: So, no, only to highlight to the Panel that it not only closes the Flight Test Organisation's ability to undertake tests but at a time of high demand it would've shut down the capability enabler for many significant projects to government at that time. And so it had a more profound effect than just the governance and approval aspect, if that was to be in permanency, which clearly it wasn't intended to do that, as is represented by the very quick return to a correction in Army in February 2020. But it does illustrate the importance of these instruments and the diligence that must be undertaken in the broader implications to changing, or amendment, or of issuing, new products.

35

AVM HARLAND: So notwithstanding the governance and notification of the changes and versions from 5 to 6, and then to 7. But 7 you would've been engaged in.

40

MAJ LAMB: Mm.

AVM HARLAND: By my understanding then, version 6 disabled Army from conducting flight tests. So the OPEVAL was conducted without a regulatory authorisation through the OPSPEC.

45

MAJ LAMB: That is correct.

5 AVM HARLAND: I think I heard you just say but you don't think that was actually intended, and that was actually an error in the drafting.

10 MAJ LAMB: I would like to think that in the expertise within ACPA, they would understand the consequences of doing that. More to the point, it is, as a Military Air Operator, something would need to precipitate that if there was to be the closure of a Flight Test Organisation's effectiveness because that's its reason for being, is for doing categorised flight tests.

15 There would've been a much higher order consideration and there's nothing certainly apparent to me that would've precipitated that. When looking prescriptively at the version control, the amendment to it was that unintentionally prior to that the Air Mobility Group, the Air Combat Group, the Air Force Training group, in contradiction or contravention, the DoSAs unintentionally had an approval to do Category 1 and Category 2 testing.

20 In the Air Force construct, of course, that's the remit of the Air Warfare Centre. So they've got their own Military Air Operator to do that. But uniquely in Army, it's within the Military Air Operator as it is within the Fleet Air Arm. A question which is unknown to me, which has been on my mind in recent weeks is, did this error also apply to the AMAFTU – sorry, the Navy OPSPEC as well, because their Flight Trial Organisation, AMAFTU, is embedded inside the Military Air Operators.

30 Well, that's unknown to me. But when you look at that, you can see the cut and paste errors that have applied. And for that reason, in the substitution test I suspect it was unintentional and they didn't realise the organisational construct with Army was that the Flight Test Organisation was within Army itself. It wasn't separate like it is in Air Force.

35 AVM HARLAND: So just for clarity, I'll frame the question just slightly differently just to make sure I'm 100 per cent clear. Noting that you were in the Army Flight Test Organisation, AATES, at the time and preceding that, were you aware of any moves that would've precipitated the removal of that permission to be able to do flight tests, which would've required an update to the OPSPEC to limit that?

40 MAJ LAMB: No, not at all, sir. And in terms of the entanglement, I guess, of a regulatory structure, then that would've had implications in other authoritative documents. So in terms of AATES OIP which has endorsement from the DoSA-FT on behalf of the DASR, the Flight Test

5 Operations Manual. In terms of the MAO, the approvals in the flight test section of the OIMP, which I've been referring to, would've also been invalid. So that cooperation about the principles behind a Notice of Proposed Rulemaking that would trigger the consequential amendments that would have to occur. That would trigger, no doubt, the interest of Command because their capability has now been removed and the outcomes and requirements for Defence and government would've been shut down.

10 AVM HARLAND: That's great. Thank you.

MS McMURDO: So the fact that after the error, as you've described it, was identified, it was fairly quickly remedied with Operation Specification No 7 that we've been taken to, that would tend to support your model suggestion that it was an error.

MAJ LAMB: Yes, ma'am.

20 MS McMURDO: Do you know if there's any power to make those Operation Specifications retrospective?

MAJ LAMB: I don't know, ma'am. GPCAPT Smith might be able to avail that information to you. Yes.

25 MS McMURDO: Thank you.

MAJ CHAPMAN: So just a final question. To the extent that presumably AATES was conducting categorised flight testing during the currency of version 6, that affected not only this flight testing but a whole range of others?

30 MAJ LAMB: So I'd have to look at what other trials were undertaken during that period. There's nothing apparent to me. This was a transition of my delegation to COL Reinhardt. We had birthed that at the beginning of the year, that I would hold the delegation until such time that COL Reinhardt had the capacity, in his high workload, to do it. It is Christmas. We'd have to go and have a look into the files if there was anything else during that period.

40 MAJ CHAPMAN: Thank you, MAJ Lamb. Those are my questions, Chair.

MS McMURDO: Thank you. Applications to cross-examine?

45 LCDR GRACIE: Yes, ma'am, probably half an hour.

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MS McMURDO: Half an hour or so.

LCDR TYSON: 10 minutes, ma'am.

5

MS McMURDO: Yes.

LTCOL HEALEY: 10 minutes, ma'am.

10 MR O'MAHONEY: 10 minutes.

MS McMURDO: One, two, three, four. Any more than the four? No. All right, we'll start. I think we'll start. Yes, thank you, we'll start and have a break about 11.15.

15

<CROSS-EXAMINATION BY LCDR GRACIE

20 LCDR GRACIE: MAJ Lamb, I'll still refer to you as MAJ Lamb, if that's all right.

MAJ LAMB: Sure, thank you.

25 LCDR GRACIE: I'm LCDR Malcolm Gracie, representing CAPT Dannel Lyon.

MAJ LAMB: I'm sorry for your loss.

30 LCDR GRACIE: Thank you, again. Could I ask you to look at your Exhibit 86A. That's your first statement, and it's Enclosure B, which is the OPEVAL Test Plan.

MAJ LAMB: I need a secretary. Thank you, I have that.

35

LCDR GRACIE: Could you go over, please, to Annex C of it. It's the Aviation Risk Management of two pages and I think, as part of it, there's the Event Task Risk Sheet 1 to 12. It's got the yellow, red and green vertical columns. I think you're in the right spot.

40

MAJ LAMB: Good. And so which number are you referring to, sorry? 1, 2, 3 or 4?

LCDR GRACIE: Mine are both called "1 to 12". It's the first page.

45

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MAJ LAMB: The first page, understood.

LCDR GRACIE: And at the top, you should see that line through:

5 *Control rejected due to engineering operational implementation difficulties.*

MAJ LAMB: Yes.

10 LCDR GRACIE: And just to put this in context, that was rejected for those reasons because if you go to “Treatment Controls” that’s the control that could not be configured for the OPEVAL testing, where one pilot only would have the HMSD.

15 MAJ LAMB: Yes, correct.

LCDR GRACIE: So if we run down to the next series of columns - - -

20 MS MUSGROVE: Sorry to interrupt. I’m just reminding you this is “For Official use only”, which is now “Official: Sensitive”. So anything in there can’t be led publicly.

LCDR GRACIE: Thank you.

25 MS MUSGROVE: I’m sorry to interrupt.

LCDR GRACIE: No, not at all. It is April Fool’s Day and I’ve been caught out before midday.

30 If you go to that second line, or second series of entries and you go to “Treatment Controls”?

MAJ LAMB: Mm-hm.

35 LCDR GRACIE: Do you see there’s a reference to “test plan”?

MAJ LAMB: No.

LCDR GRACIE: That’s okay.

40 MS McMURDO: So if you look at the columns across the top, “Treatment Controls”, and then you go down in Block 2 - - -

45 MAJ LAMB: Yes, “test plan”. My apologies.

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MS McMURDO: The first one, “test plan”.

MAJ LAMB: Thank you, ma’am.

5 LCDR GRACIE: That’s the word I’m after, “Block 2”. Thank you, ma’am.

So you see “test plan”?

10 MAJ LAMB: Yes.

LCDR GRACIE: I won’t read anything out in detail. But then the next one down is “Formal Advice”.

15 MAJ LAMB: Yes.

LCDR GRACIE: And then you will see that there’s a reference to three entities.

20 MAJ LAMB: Mm-hm.

LCDR GRACIE: One starts with an “A”, one starts with an “F” and one starts with a “G”.

25 MAJ LAMB: Correct, yes.

LCDR GRACIE: And what I want to know is, are those controls the responsibility of AATES to follow-up or are they controls that Standards, who were conducting the OPEVAL, have to satisfy before they do the OPEVAL?

30

MAJ LAMB: So I’d have the answer. I’m just going to think about it. No, so these are the treatment controls which are in addition to the existing controls that we have applied to get to the risk retention threshold.

35

LCDR GRACIE: So without those treatment controls, you get to the retention threshold of “No”, whether it’s within risk retention. That’s the red column.

40 MAJ LAMB: Yes.

LCDR GRACIE: Those treatment controls then give you the green answer of, “Yes, it’s within the risk controls”.

45 MAJ LAMB: It’s additional mitigation, correct.

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LCDR GRACIE: So who's responsible to comply with those additional treatment controls?

5 MAJ LAMB: So it's a two-step process. It's the responsibility of those that are authoring and approving the test plan to embed that into the controls. And so that's been permeated through to those 24 risk controls. And then it is obliging of those undertaking the test to comply with those controls that we've dictated in the test plan and the MPTF.

10 LCDR GRACIE: Now, there has been some evidence – and I'll just give the transcript page. I won't identify the person, but it's around 4632 to 4634. And the evidence, particularly at 4633 was that as far as this witness was aware, the German flight test information was reviewed by
15 AATES as part of the OPEVAL. Is that your recollection or understanding?

MAJ LAMB: What this treatment control states is that we have received information and we have considered it. That's probably the limit of my
20 advice at this point.

LCDR GRACIE: Did you see that test plan that the German testing - - -

MAJ LAMB: Did I personally see it?
25

LCDR GRACIE: Yes.

MAJ LAMB: I can't recollect yes or no, to be honest with you. I would, as a signature of the test plan – I can't recall. You know, it's into the
30 approval, so one would assume that the answer to that question is yes. It was certainly the information that we needed.

LCDR GRACIE: And your expectation is that it would have been reviewed and regard had to its findings and other issues as part of that
35 treatment control to the OPEVAL.

MAJ LAMB: Correct, yes.

LCDR GRACIE: And the same in relation to the other two entities – for
40 mention - - -

MAJ LAMB: That's correct.

LCDR GRACIE: If you then go over two pages. I apologise, there

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might be page numbers on this – I don't have it. There's a reference to "Event Task: Name Control Plan Summary" and in the top right-hand corner you'll see it's provided in "Deviation". So if you go to the left of the particular controls, you'll see that this deals with the matters I've just
5 been referring to. That deviation, that's a document, isn't it?

MAJ LAMB: It is. That's right. It's a technical document.

10 LCDR GRACIE: And that's referenced in the application, I think, for the Military Permit to Fly.

MAJ LAMB: Deviation is correct, yes.

15 LCDR GRACIE: So it's a document. So that's Exhibit 189A if you want to look at it, but I don't need to.

MAJ LAMB: Yes.

20 LCDR GRACIE: Why is it described as a deviation?

MAJ LAMB: So it describes the system under test which is indifference. If you want to use a synonym to the word "deviation", it's "indifference" to the normal configuration of the aircraft. The difference being, in this particular circumstance, the symbology or the software part of the
25 TopOwl helmet was indifference.

LCDR GRACIE: Could I go now to the Military Airworthiness Authority recognition that has been referred to? That's the German Military Authority.
30

MAJ LAMB: Okay, yes.

LCDR GRACIE: Again, it's in that same area of the transcript which I've referred, ma'am and sir. The evidence that was adduced was the effect that the AATES finding was completely against the finding of the
35 German Flight Test Authority. Now, my first point is, you haven't seen that test?

40 MAJ LAMB: No.

LCDR GRACIE: Do you know anyone who has? Have you ever spoken to anyone about it?

45 MAJ LAMB: No, I haven't. I make the point, if I may, that with the Air Vice-Marshal yesterday that, first of all, I haven't seen that test. More to

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the point, that doesn't bring a full transferability to the way we are going to operate it. So that would be a very superficial and simplistic understanding of that.

5 LCDR GRACIE: Because it is what you said before, it's about the certification of the type?

MAJ LAMB: Yes.

10 LCDR GRACIE: As opposed to operational airworthiness physical application.

MAJ LAMB: Yes, application. Correct. In the role and environment that we keep returning to.

15 LCDR GRACIE: I just want to move on to another topic.

MAJ LAMB: Thank you.

20 LCDR GRACIE: You were asked some questions about the AMAFTU test. And if we go to Exhibit 189A, which is the series of documents for the application for the Military Permit to Fly, the flight conditions, this is for the OPEVAL.

25 MAJ LAMB: Yes.

LCDR GRACIE: Sorry, no, it's not. It's for your original AATES test Category 2B.

30 MAJ LAMB: Okay, yes.

LCDR GRACIE: My apologies. And if, again, you go to the - - -

MAJ LAMB: So I don't think I have that document with me.

35 LCDR GRACIE: 189A?

MAJ LAMB: I have a test plan, so this is the AATES test - - -

40 LCDR GRACIE: The AATES test, Military Permit to Fly application.

MAJ LAMB: No, so I don't have that provided to me.

45 MS McMURDO: 89 was the Military Permit to Fly for the OPEVAL.

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MAJ LAMB: I have the OPEVAL - - -

MS McMURDO: 190 is the Military Permit to Fly for the AATES testing. 190.

5

MAJ LAMB: Thank you.

10 LCDR GRACIE: I only received the one, so I haven't seen the OPEVAL one, but can you just double-check on that third page the reference is to the Category 2B, thank you?

MAJ LAMB: That's correct, for the purpose Category 2B - - -

15 LCDR GRACIE: If you go to the last page of that? Again, we've got a table for "Treatment Controls". If you just turn that up? It's the second-last page.

MAJ LAMB: So this is just the – sorry, my apologies. Yes.

20 LCDR GRACIE: The very last document of the bundle.

MAJ LAMB: Yes, I've got that.

25 LCDR GRACIE: I think there's three in there.

MAJ LAMB: Yes.

LCDR GRACIE: If you go across to "Treatment Controls".

30 MAJ LAMB: I just see that, yes.

LCDR GRACIE: And scroll down to the last in that first block.

35 MAJ LAMB: Mm-hm.

LCDR GRACIE: And you'll see the reference to "AMAFU".

MAJ LAMB: Yes.

40 LCDR GRACIE: And "Informal Liaison"?

MAJ LAMB: Correct.

45 LCDR GRACIE: And then the same with "Serial 2", AMAFU have already flown.

MAJ LAMB: Yes.

LCDR GRACIE: Did you get a copy of the AMAFTU report?

5

MAJ LAMB: Yes. And I've referenced it and quoted that in my statement, specifically around the points of them identifying the differentiation between their environment of the ship underway testing and the turning manoeuvres that would be the role and environment of

10

LCDR GRACIE: Now, you rattled off the top of your head yesterday paragraph 3.

15

MAJ LAMB: Mm.

LCDR GRACIE: Can I ask you to have a look at the AMAFTU report. And I've flagged it with the Sergeant, it's Exhibit 109 in LTCOL Langley's report, Annex B, but it's only extracts. So I think there's only – it's pages 14, 15, 45. That's it.

20

UNIDENTIFIED SPEAKER: Annex B.

LCDR GRACIE: Yes, I think it's B. Could be one off again.

25

MAJ LAMB: Okay, sure.

LCDR GRACIE: Just re-familiarise yourself with that. It's called, "First-of-Class Flight Trials 2019" - - -

30

MAJ LAMB: Correct.

LCDR GRACIE: - - - "MRH-90", and it's LHD, Phase 3.

35

MAJ LAMB: Mm-hm.

LCDR GRACIE: So I take it when there's a reference in this to embarked operations, is "embarked operations" referable to the LHDs?

40

MAJ LAMB: That's correct. Landing Helicopter - - -

MS McMURDO: Yes, that's - - -

LCDR GRACIE: And the paragraph 3 to which you were referring

yesterday, I don't know if it's any of the matters here, but if you just have a look at section 3.5.2B? That's one of the issues that AATES was looking at. And you'll see that there's the Figure 3.2 showing the pitch ladder roll angle.

5

MAJ LAMB: Correct.

LCDR GRACIE: And then it's section 6.5. If that helps in relation to the overall assessment, 6.5.2.

10

MAJ LAMB: Is there a question? My apologies.

LCDR GRACIE: Mark that – yes, we're getting there slowly.

15

MAJ LAMB: That's okay.

LCDR GRACIE: Could I now ask MAJ Lamb to have a look at – I think the first one will be Exhibit 104, tab 1 to COL Lynch's statement.

20

MAJ LAMB: Thank you.

LCDR GRACIE: Just familiarise yourself with that. This is a decision brief prepared by SO1 Standards.

25

MAJ LAMB: Okay, this is the first time I've seen this document for your awareness.

LCDR GRACIE: Prepared by SO1 Standards to DG AVN through DOPAW. And just look at the heading there, "Test Evaluation – Assessed Risk".

30

MAJ LAMB: Yes.

LCDR GRACIE: I want to take you over to – there are two parts to it. The first is – I might just cut to the chase. We'll go to the – sorry, ma'am, I thought it was here.

35

MAJ LAMB: I can see a number of errors in here.

LCDR GRACIE: Yes, okay. I thought – here it is. If you go to – yes, I might do that, ma'am. I think there are two documents I probably should have taken the Major to, to get a proper sequence of this. Perhaps now is a convenient time and I'll sort this out.

40

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MS McMURDO: All right then. Perhaps if we give the exhibits back; we don't want to lose any. If we give the exhibits back to the Inquiry Officer and we can sort it out during the break. All right, thank you. We'll adjourn for 10 minutes.

5

HEARING ADJOURNED

10 **HEARING RESUMED**

MS McMURDO: Yes, LCDR Gracie.

15 LCDR GRACIE: Apologies, ma'am.

MS McMURDO: No.

20 LCDR GRACIE: I got to the source of the problem. The first decision brief refers to AMAFTU and the one I was looking at refers to Reference A, which is the AMAFTU report, and I was confused between the two. So my apologies.

25 Major, if you could go to that decision brief that we finished off.

MAJ LAMB: Sir, that is not with me at the minute.

LCDR GRACIE: So that will be tab 1 to Exhibit 104. Yes, it's 20 April 2020. Thank you.

30

MAJ LAMB: Thank you.

LCDR GRACIE: And I know you said you've got some comments to make about that. Did you get a chance to look at it over the break?

35

MAJ LAMB: No, I didn't.

40 LCDR GRACIE: Well, then we'll just step through it before I ask you about some of the immediate concerns that you had before looking at it properly. But if we go to paragraph 5, you'll see that there is - - -

MS McMURDO: We're looking at paragraph 5 of?

45 LCDR GRACIE: The decision brief of 20 April 2020, Exhibit 104, tab 1.

AVM HARLAND: And what is that decision brief's title?

5 LCDR GRACIE: "Brief of DG AVN through DOPAW on HUD V5.1
Test and Evaluations and Assessed Risk Prior for Use in Taipan
Operations". That's the one that I said was signed by – or drafted by
LTCOL Norton, cleared by DOPAW.

10 MAJ LAMB: Understood.

LCDR GRACIE: So in paragraph 5 you'll see that there's a reference to
the AMAFTU report, being Ref A?

15 MAJ LAMB: Yes.

LCDR GRACIE: That was the report I asked you to have a look at with
those extracts.

20 MAJ LAMB: Mm-hm.

LCDR GRACIE: And you see that there's a reference for its use?

MAJ LAMB: Yes.

25 LCDR GRACIE: But would you agree with me that the characterisation
of what is there is satisfactory for that description of use does not reflect
the AMAFTU report?

30 MAJ LAMB: That is correct. And that's in their report. It's
differentiating quite clearly from the projected role for 6 Regiment.

LCDR GRACIE: Thank you. Just while we're on that document, can I
ask you now to go back to paragraph 3, under "Recommendations"?

35 MAJ LAMB: Yes.

LCDR GRACIE: And you'll see that there's a recommendation
followed by "Note" at 3(a) that:

40 *Unacceptable risk determined in the initial AATES flight
assessment was reassessed as "undesirable" through OPEVAL.*

45 Now, based on your evidence yesterday, would you challenge both the
accuracy of that and the authority of someone outside of AATES to make
that reassessment?

MAJ LAMB: So absolutely. I'm struggling not to put superlatives on what I am reading. There is no authority for an organisation that is not the Flight Test Organisation to unilaterally change a finding made by the Flight Test Organisation. There is no regulatory basis authority anywhere in the Defence system that permits that. It's illegal.

LCDR GRACIE: And not only did you say that you had not seen this, if you look at the Drafting, Clearing and Consultation List, AATES aren't mentioned there, are they?

MAJ LAMB: So that was one of the first observations I made, was that the consultation does not include the representation from the SO1 AATES. And, in fact, I can give in testimony, having spoken to him about this quite recently, not only was he not consulted the first that he knew of this document, for me it's today to see it, but for him it was after it had been promulgated.

LCDR GRACIE: And do you recall what LTCOL Reinhardt called as "the repechage document", which was the AATES response - - -

MAJ LAMB: Correct. That's yes, sir.

LCDR GRACIE: - - - to the OPEVAL?

MAJ LAMB: That's correct. I gave testimony to that in October.

LCDR GRACIE: And do you remember the effect of part of that recharge document was that AATES has not changed its assessment of the display as reported as "unacceptable"?

MAJ LAMB: That is correct, yes.

LCDR GRACIE: And it made specific mention to the main risk of operating in a particular environment?

MAJ LAMB: That's correct.

LCDR GRACIE: Just following on from something that the Air Vice-Marshal raised with you, but putting it into a very specific context. If, as I want you to assume, there is evidence from one of the pilots, a flying pilot in the formation on 28 July, that there was rain, poor contrast, could not make out a visual horizon between the water and the sky, we're of course at night, low level and in formation - - -

MAJ LAMB: And there's explanation through the physical properties of the IIT and the configuration with the pathway which explain that. DSTG have tabled that.

5 LCDR GRACIE: Let me just put it as bluntly as this though. In those conditions that I've just described from an eyewitness in that sortie, in that formation, in those conditions, is it as simple as this: that based on the AATES assessment, that aircraft with that Human-Machine Interface should not have been flying?

10

MAJ LAMB: Correct.

LCDR GRACIE: I want to move to another topic. There is evidence – and I think, from the point of view of AATES at least, it's uncontroversial – that AATES documented that there was a reversal of pitch and roll with the symbology.

15

MAJ LAMB: Correct. Which is a characteristic of a conformal display, also documented in the AMAFTU Test Plan and Test Report and there's been no contention to that behaviour.

20

LCDR GRACIE: There has been evidence from two Qualified Flying Instructors, QFIs, who participated in the OPEVAL and some other evidence, but I want to focus on the QFIs, to the effect that when you looked off-axis there was a washing out of the symbology. Is that your experience?

25

MAJ LAMB: So it's not a washing out in terms of the acuity of the symbology in terms of a metric of brightness. It is the changeover of the pitch and roll display, as is described in the reports and plans. It's the behaviour.

30

LCDR GRACIE: So if that's the assessment of a Qualified Flying Instructor, and they're responsible for instructing pilots in the use of this symbology, the 5.10, would it surprise you that that was their assessment or their characterisation of that ambiguity or incorrect attitude information?

35

MAJ LAMB: So it's a correct assessment. That is the behaviour. But to place that in that environment is not appropriate, for the very reasons that we understand today.

40

LCDR GRACIE: But it does more than just wash out, doesn't it?

45 MAJ LAMB: Absolutely.

LCDR GRACIE: It actually reverses the pitch and roll.

MAJ LAMB: Correct. It does, that's correct.

5

LCDR GRACIE: So we're only getting part of that assessment.

MAJ LAMB: Yes. So it's an incomplete – the description isn't sufficient.

10

LCDR GRACIE: There has been several references to SO1 Standards and the heavy reliance upon his expertise as a test pilot. He was the Test Director of the OPEVAL. SO1 Standards said that he had deferred to his expertise because he was a test pilot on certain things. Others have documented the fact that the OPEVAL was done with a test pilot. There were actually two.

15

MAJ LAMB: That's correct.

20

LCDR GRACIE: LTCOL Langley had about 230 hours on an MRH, and LTCOL Norton. But do you know at the time if LTCOL Norton was a qualified MRH test pilot?

25

MAJ LAMB: So my understanding is, is that he had undertaken an assessment with LTCOL Reinhardt on 17 May 2019. That did not result in the QTP categorisation being renewed. In our mind, that did not disqualify him from being a suitable candidate to be the test lead in the context of what the trial and the purpose was. So subsequent to that, if LTCOL Norton had received his test qualification, that's unknown to me. But I do know, having spoken with LTCOL Reinhardt about this, and he has done a review in the Patriot Excalibur, that is his recollection and I'm passing that on to you.

30

LCDR GRACIE: Just coming back then to that decision brief, because I know you wanted to make some comments about it. Have you had sufficient time to consider it?

35

MAJ LAMB: So not sufficiently. Not to the level that I like to review documents.

40

LCDR GRACIE: Do you want to just step through it?

MAJ LAMB: But what stood out immediately to me is in paragraph 7.

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LCDR GRACIE: Just bear in mind, I think the Commonwealth wanted me to bear in mind – it's not? Good. I can't keep up.

MAJ LAMB: That's okay. Are you happy for me to continue?

5

LCDR GRACIE: Yes.

MAJ LAMB: Sure. Of course, that attracts my attention, because it's got AATES. But to connect in a single statement that we had not changed our original assessment, that is correct, but then to associate that the FAR guidance material should be considered when making an overall Risk Assessment and Management Plan is true, but really only constitutes about 3 per cent of our real concern.

10
15 So I would – and this goes back to, I guess, the lost opportunity. Had this been socialised with the SO1 AATES, that he would have brought that to attention. Certainly, if he'd asked my view, I would have brought that to attention, that it seems to be that that original assessment is hinged upon that FAR guidance material. That is just, in its name, guidance material.
20 It's not related to the deep concern, the documented concern, of the role relation and how this ambiguity could transpire in the real world.

That's a compliance standard, yes. And that's the seventh part in a seven-part paragraph, is compliance standard. In terms of an
25 "unacceptable" finding, the core of the advice is in the role relation, the conclusion, so the rating to which it was unacceptable, and then the obligations upon Defence to address that. And that's preceded with the words "must". It's obligated.

30 AVM HARLAND: Notwithstanding that the FAR doesn't technically apply in that being a true statement, it's authoritative material from one of the biggest national airworthiness authorities in the world.

MAJ LAMB: Correct.

35

AVM HARLAND: Is it reasonable to use that as part of building your picture and building your conclusions about something?

MAJ LAMB: It is, sir. So to give a more broader context, the DASRs, they are related through the EMARs. Of course, we have recognition to the FARs as well. The MRH-90, in its certification basis, is a FAR 29 aircraft. It is not uncommon in rotary-wing that there's silence in Standards for particular applications or equipment in the rotary-wing that fixed-wing enjoy. That's a commercial reality, because there is the
40 critical mass to generate standards for fixed-wing because there's many
45

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more of them. So it is absolutely appropriate and is common to make reference to a standard which is most like what could be applied to the equipment under test.

5 AVM HARLAND: So while it may not be technically applicable, it's still relevant in your consideration.

MAJ LAMB: It is, absolutely, sir.

10 AVM HARLAND: Just for clarity on the record there, "EMAR" is the European Regulation set?

MAJ LAMB: Military Regulations, that's it.

15 AVM HARLAND: That's EMARs.

MAJ LAMB: That's correct, yes.

AVM HARLAND: And the "FARs" are?

20

MAJ LAMB: Federal Aviation Regulations; they're US.

AVM HARLAND: And they are they civil or military?

25 MAJ LAMB: They're civil. Civil standards. Yes, my apologies, sir.

AVM HARLAND: Thank you.

30 LCDR GRACIE: Anything else you want to say in relation to paragraph 7?

MAJ LAMB: So I would highlight in the last sentence that begins with, "HUD 5.10 specifications were", that's likely a true statement, but I draw my attention to the discussion I had with the Air Vice-Marshal about that's an engineering certification approval only. It's completely void and silent on the application to the role and environment.

35

LCDR GRACIE: Indeed, we don't know what regulations they're assessing it against.

40

MAJ LAMB: Correct.

LCDR GRACIE: The conditions, the purposes, those things.

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MAJ LAMB: It would be good to have had more time looking at this, but anyway, that's okay.

5 LCDR GRACIE: That's right. Let me assist then with paragraph 9. You'll see that there's comment there about:

The OPEVAL determined that the predicted confusion was not observed.

10 But if you bookmark that statement with para 6 and those findings in (a), (b), (c) and (d), they're talking about the fact that there's:

No loss of situational awareness, unusual attitude or confusion encountered during the evaluation.

15 A glaring omission is any reference to the strict test conditions, isn't it?

MAJ LAMB: That's correct. That is the context. So in a way, that's evidential, that the controls that put them in place was representative of an approval that it could be operated in this very limited context for an interim approval, such that Plan Palisade could proceed. So the purpose of the trial had met its objectives. Where it's erroneous in its implication is it doesn't hold true to the "unacceptable" finding for the wider application, the Service Release application. And this document would have benefited greatly having had the review or the consultation of the SO1 AATES.

30 LCDR GRACIE: If you go to paragraph 10, bearing in mind this is April 2020, as at the time that you left AATES, and Army Aviation more generally quite recently, are you aware of there being any full risk analysis contained in the future OT-CRM? What's that?

MAJ LAMB: Operational Technical Combined Risk Management.

35 LCDR GRACIE: Thank you. Are you aware of that ever having occurred?

40 MAJ LAMB: No, I'm not. I think my testimony in October stated, when I had a closer recollection of these events with my study, that it wasn't the case.

LCDR GRACIE: I just want to mention one last topic for your input. No, you've got something else?

45 MAJ LAMB: Just reading the AFCS go-around.

LCDR GRACIE: Yes. Well, we've had quite a bit of evidence on that since you gave your evidence. You were the first, really. We've had some evidence since then. Is there something that you would like to comment in relation to that, that paragraph 12, I think it is, was said by DOPAW to be the purpose of this brief, to – I saw your reaction then. It's one of surprise. That's understandable, because paragraph 12, aside from all the other things, it's an update in terms of the change to the mitigation measures that the OPEVAL identified. Have you got a comment to make in relation to that?

MAJ LAMB: Sir, what concerns me more about the recognition that the go-around mode could be approved is that it wasn't within the test plan requirements. So it wasn't tested. Also, it's outside their remit to make this assessment. When this became apparent – so this is more – my deeper concern is around the cultural aspect behind this, that the recommendation has gone out, without consultation with AATES as to the suitability of this function, and it's well outside the design envelope and Airbus would fairly say that's not what it was intended for, and I would completely agree with them. They are correct and there's nothing wrong with their equipment. It's designed for going around from the minima on an instrument approach when you're not visual.

So what concerns me more about this, despite the technical aspects which ultimately they conceded prove that it was not appropriate, was the impetus behind this, that it was even initiated. That surprised us at the time and drew our attention. So they did, correctly, then remove this from the Standardisation Manual. But the fact that it had gone through, unknowingly, to AATES, all the way through to the Standardisation Manual in itself is quite disconcerting. Without further thought, that's probably enough.

LCDR GRACIE: I think we've got the message. Anything else there, just while you have that?

MAJ LAMB: At paragraph 11, the advice that, "The Army Military Air Operator Accountable Manager will manage low risk for the MRH operations with HUD 5.10", did not set him up for success, in that it's silent on the controls that should have been in place, the interim nature. So the Military Air Operator, in himself, would take the advice without the context of that. That sentence stands out to me that it's grossly incomplete and without context.

LCDR GRACIE: We've already heard quite a bit of evidence about the desirability, even essentiality, in some witness's testimony, of the distance

to go information that the upgrade provided. What's your comment on the essentiality or desirability of that relative to the attitude, ambiguity or incorrect display?

5 MAJ LAMB: So I am the author of the SO Approach Trial. I was brought back in, that was one of the steps that got me back into Defence full-time. I was the flight test lead on that and the author of that trial. We found that to be an undesirable characteristic because of the heads-in component that was required of the non-flying pilot when you project that forward in the operational sphere, where all eyes out for obstacles and termination is really important. So it was not unacceptable, it was undesirable.

15 But risk mitigation is not countered by substituting one risk mitigation with another. So attending to the provision of the distance to go information in no way ameliorates the underlying risk of the disorientation which is likely with the ambiguity in the display and off-axis cueing. They're disconnected. They're two completely separate deficiencies and one does not counter the other. Both needed to be addressed in separate consideration. It's not a justification to say, "We've ameliorated one, so the other one is no longer valid". That's not how it works.

25 LCDR GRACIE: Ma'am, I wasn't going to go to the earlier decision brief, but just in light of that evidence, could I be indulged and take MAJ Lamb to that? Because I think it's important to get his evidence on that.

MS McMURDO: Yes.

30 LCDR GRACIE: It's Exhibit 104, Annex E, I think. It's the 20 March 2020 decision brief. So this does have a classification. I can't explain to you why one in March does and the other one doesn't. That's for others to decide. So I'll just keep that in mind in what I ask you here. Again, you'll see on that second page the "Drafting, Clearing and Consultation". I see "SO1 OT&E" there, LTCOL Reinhardt.

MAJ LAMB: Correct.

40 LCDR GRACIE: So, unlike the latter decision brief, he was included on this.

MAJ LAMB: Correct.

45 LCDR GRACIE: Have a look at paragraph 3, just in the context of the question I asked you then about distance to go. Two aspects to that

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question. First is, is that your reading of the OPEVAL, that it was assessed as essential?

5 MAJ LAMB: Could you rephrase that question, please?

LCDR GRACIE: Yes. Based on your recollection, did the OPEVAL come to the determination that the distance to go was essential or desirable?

10 MAJ LAMB: Essential is my recollection.

LCDR GRACIE: The second limb to that is, would you agree that it is?

15 MAJ LAMB: No.

LCDR GRACIE: You will see that there's a reference there in paragraph 4, "being trialled on three activities". The first we've dealt with, with AMAFTU. Again, I take it that you would take issue with the characterisation of that broad term by reference to the role? R-o-l-e, I mean?

20 MAJ LAMB: Yes.

LCDR GRACIE: You'd take issue with that characterisation?

25 MAJ LAMB: Sorry?

LCDR GRACIE: It was more limited than that, wasn't it?

30 MAJ LAMB: Absolutely. It's in the title of their report, which is correctly stated/articulated, "First-of-Class Flight Trials". That is the interface trial.

LCDR GRACIE: The second, you'll see the AATES Acceptance Trial. The first reference is a day-only activity.

35 MAJ LAMB: Yes.

40 LCDR GRACIE: Can I just remind you, in your Exhibit 86A, at paragraph 28 of the – this is the AATES Test Plan, para 28 says:

Day testing must be completed without any unacceptable findings prior to the conduct of night testing.

45 MAJ LAMB: Correct.

5 LCDR GRACIE: So would you accept that the implied criticism that it was a day-only activity is unwarranted in the circumstance in which AATES decided to not proceed with night testing?

MAJ LAMB: Correct. It's unwise, ill-conceived, ill-informed. That's probably sufficient.

10 LCDR GRACIE: Thank you. In the last sentence there, a reference to, "intentional design feature", what is your comment about that?

15 MAJ LAMB: So that is true. It's a conformal design feature which is known in application. There are mission-relatable manoeuvres which, in their context with other attitude information – say, a visual horizon – that conformal display has applicability for an aircraft type and a role.

20 As early as 1993, NASA did an assessment on this and I think that document's been tabled. It was an experiment in a simulator with F-16 pilots and they made a comparison of a conformal display versus a body-axis display. In their Executive Summary, the finding was that 30 per cent of these pilots – noting they would be above average because they're in the fast jet community – were more likely to depart safe flight with the conformal display. So this display has been known in the aviation community, the test community, for 32 years.

25 So again, there's no question on the design at all and Airbus's product, or Thales', or the symbology, but there's great question around its applicability for the 6 Avn Regiment mission. And this is what I was alluding to yesterday, sir, with my analogy with the Toyota Corolla.

30 AVM HARLAND: So can something meet a design standard but still be unacceptable?

35 MAJ LAMB: Yes, absolutely. And that's Test Pilot School 101. Yes, it is.

AVM HARLAND: Thank you.

40 LCDR GRACIE: Thank you. Just run down to 3(c) there. Do you agree with the characterisation of the activity that was done as part of the OPEVAL to the effect that it was wider?

MAJ LAMB: So I think it's 4(c) that you're referring to, is it?

45 LCDR GRACIE: It is, sorry.

MAJ LAMB: I don't agree with that statement. I think it's misleading.

5 LCDR GRACIE: Because it doesn't identify the 24 control measures, does it?

MAJ LAMB: Correct. That's exactly right.

10 LCDR GRACIE: I think you said in your 50 or so test plans that you've done, or test activities you've conducted, that was by far and away the largest number of control measures ever.

MAJ LAMB: Correct.

15 LCDR GRACIE: Just have a look at para 6. We've dealt with some of that, but this touches on the UA recovery, about which you expressed some surprise. You're shaking your head. What's going through it?

20 MAJ LAMB: Well, it's not just outside the design envelope of the go-around function, it is well outside. In fact, to the point that initiating the go-around function in certain pitch and roll attitudes could actually further depart the aircraft from safe flight. So it can exacerbate an already problematic circumstance. That is not a fault of the system at all. The system's being asked to do something it wasn't designed to do. It's an
25 inappropriate use of the AFCS system.

LCDR GRACIE: You'll see that paragraph 7 says that:

30 *SOI OT&E –*
that's LTCOL Reinhardt –

concur with Standards OPEVAL with the following caveats.

35 Tell me if you think that's a fair characterisation of what was put in that repechage document.

MAJ LAMB: Can I draw on this?

40 LCDR GRACIE: Probably not.

MAJ LAMB: I just note already - - -

45 LCDR GRACIE: Do you want some paper?

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MAJ LAMB: It's okay. No, I'm just ticking them off, or crossing them. I note already someone's underlined it before me, so that's not me. If I may just take a moment, please?

5 LCDR GRACIE: Yes, please do. It's important.

MAJ LAMB: So I'm in complete agreeance up to the last sentence. And I'm in agreeance with the last sentence, but I provide context. Is that the AVRМ – Aviation Risk Management – template? What I imagine the
10 SO1 AATES is inferring to there is transferring the controls that we put in place would allow that to go through. The outcome is still catastrophic, but the likelihood is reduced to "improbable", which gives an overall medium risk. Remember, that's carrying through for this interim approval only until such time that a more permanent solution is made. So in terms
15 of LTCOL Reinhardt's signatures to a number of documents which relate to this matter, that's the context of that.

LCDR GRACIE: And with 7(b), do you agree with me that that isn't an accurate statement in respect of SO1 OT&E's position?

20 MAJ LAMB: Yes, correct.

LCDR GRACIE: Would you go so far as to say it's quite misleading or wrong?

25 MAJ LAMB: So let me read this again.

LCDR GRACIE: Excluding the bit about the go-around.

30 MAJ LAMB: I think the question would best be posed to LTCOL Reinhardt, in truth. But in the second half of the sentence, that is correct, where he correctly states:

35 *The AFCS go-around is not designed for loss of control recovery.*

LCDR GRACIE: If you take that out though, just the bit before that about the control measures?

40 MAJ LAMB: So I can't speak for where LTCOL Reinhardt's mind was when that was written, but I anticipate his expectation would have been that the advice in his document at paragraph 63 to the test plan, which I read out yesterday, would have been carried through. So that that OIP, that categorisation, the training restrictions, that carried through for this interim approval, is what I expect would be the context to that. But that
45 would be best asked of him.

LCDR GRACIE: If they are the control measures that are referred to in 7(b), you are not aware of them being implemented, are you?

5 MAJ LAMB: That is correct.

LCDR GRACIE: To make matters worse, I suggest, paragraph 8 effectively says, “No issues”, subject to the implementation.

10 MAJ LAMB: So that’s the misinformation that I think we discussed yesterday afternoon, that for their context that was a correct assessment, but they – again, I say again they differentiated the role for Army. Yes.

15 LCDR GRACIE: And para 9 reiterates again the effectiveness of risk control measures or the need for effective - - -

20 MAJ LAMB: So that first sentence, it’s lacking context. The Standards OPEVAL, with the restrictions applied, controls implied, for an inter-approval – like, it’s an inadequately drafted statement. It doesn’t help the addressee, who is the DG. It doesn’t help. It doesn’t inform him to be fully informed. And I spoke about the technical literacy yesterday, that having someone with technical literacy close to him, close to that office, is really important for interpretation.

25 LCDR GRACIE: But either intentionally or carelessly omits very significant context.

MAJ LAMB: It has in this case. Correct, yes.

30 LCDR GRACIE: I am now coming to the last thing. I just want to talk about something that I don’t know if you were involved with, but I know that COL Reinhardt was. It’s to do with the subject matter expert for the DFSB report, and I’m talking about an MRH test pilot, or QFI. Were you present when COL Reinhardt raised a concern about SO1 Standards, LTCOL Norton, being engaged by DFSB as a subject matter expert?

40 MAJ LAMB: Yes, certainly. So more to the point, it’s unclear, certainly to me and to COL Reinhardt, if actually I initiated my concern for a conflict of interest. So that came more from a governance background than my time in CASA, more than anything. So the risk of being realised to the unacceptable – sorry, a risk had been realised through the event of the accident. It was unclear, and it remains unclear to me today, what the causation of that accident was.

But in terms of providing objective support to a test agency, that support needs to be beyond reproach. And so a conflict of interest can be perceived or actual, but if there's any doubt, there's no doubt, and so I raised that.

5

I was aware of not necessarily exactly what's been presented to me here today in terms of the decision briefs, but I knew that the 5.1 had been rolled out in the MRH-90 capability because I was flying it myself, and I knew of all this background that we've discussed in the last 24 hours. And so, for me, I was concerned to uphold the integrity that that conflict of interest be declared, perceived or actual. And it's not for me to question the – it's not for me to infer that there was an actual conflict of interest.

10

15 More to the point – and that equally would have applied to myself, had I been approached to provide a demonstration of some sort. And again, I don't know the content of the demonstration activity at all. More to the point, the question that I was really trying to infer was who is the most appropriate person to do this? Someone who is neutral to the background to something which may or may not be contributory or causal to the accident?

20

And, as I said, as we sit here this morning, it is still unknown to me what the exact causation was. But in terms of where this becomes problematic – and this is the 21st time I've sat in an environment like this – is in both Military and civil environments, where it becomes problematic is in the report, and so we need to have a high confidence in the report.

25

It is my experience, having given advice to different parties or stakeholders in accident investigations – and I might need to be careful here, ma'am – you might need to stop me – but historically it has been my experience that reports have been – in the rubric that they apply to distil causation or contributory factors, it's been my experience that sometimes reports are complete or they're incomplete. In my experience, they're never wrong, but the – and this is historical, and there's a benefit that I haven't seen this report, so I can speak objectively here – ultimately, what everyone is yearning for is high confidence.

30

35

So a conflict of interest, perceived or otherwise, is a mechanism to protect the integrity of the report because, in the lens of review, we need to be able to read what we interpret, but also there will be silence on other areas, and we need to understand how that's been concluded. I hope that's acceptable to you, ma'am, in my evidence.

40

45 LCDR GRACIE: I think you made it clear that that includes

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AATES-related experts not being involved as well.

5 MAJ LAMB: Correct. I think in context too, at the time the other advocacy I had was there was an MRH-90 test pilot who was highly respected – he was also a QFI on Type – that was within Army Aviation and was current, and in turn was available – principally was available to undertake that activity. That would have removed any conflict of interest.

10 LCDR GRACIE: Was that name put forward?

MAJ LAMB: I'd have to – I didn't interface with DFSB at all myself. I know that COL Reinhardt did raise this with DFSB in his interview. It's not appropriate, in my extensive experience, to invite yourself to an investigation. That could be seen to someone as being on a crusade or an agenda. That's completely inappropriate. I do know that COL Reinhardt also brought this matter to COL Norton's attention, encouraging that he declare a conflict of interest, and then it's the prerogative of the entity to consider the conflict of interest and consider whether they'd like to continue, or just how they manage that.

20 LCDR GRACIE: Manage it. All right, thank you. Thank you, Major. Unless there's anything else that I haven't covered?

MAJ LAMB: No.

LCDR GRACIE: Ma'am, sir, thank you.

MS McMURDO: Thank you. Could I just clarify something about the document you've got in front of you, the decision brief of 20 March? You were taken to 7(a), where it stated that:

SO1 OT&E maintains his assessment that –

35 sorry?

UNIDENTIFIED SPEAKER: It's "Official".

MS McMURDO: Is this "Official"?

40 UNIDENTIFIED SPEAKER: This one is. The other one is not "Official".

MS McMURDO: The one I have isn't marked as "Official", "Official: Sensitive", or anything.

45

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UNIDENTIFIED SPEAKER: FOUO.

MS McMURDO: Sorry?

5 UNIDENTIFIED SPEAKER: FOUO.

MS McMURDO: I can't see a marking on it. Anyway, all right.

10 AVM HARLAND: "For Official Use Only" at the top.

MS McMURDO: Right. Yes, I've been caught out on that one before. Okay, FOUO. So 7(a), you'll see there some conditions are set out which are remarkably similar to the conditions that actually led to the crash on 28 July.

15 MAJ LAMB: Ma'am, can I have someone support me here? Am I looking at the right document? Is this - - -

MS McMURDO: This is the decision brief dated 20 March.

20 MAJ LAMB: Yes. It's a two-page document only, ma'am, with - yes, I've got - - -

MS McMURDO: Document only, and - - -

25 MAJ LAMB: Yes, thank you. Sorry, my apologies.

MS McMURDO: No, don't apologise. 7(a). So you'll see there in 7(a) there's some mention of supporting the unacceptable risk that seems 30 remarkably similar to the conditions of the crash on 28 July 2023.

MAJ LAMB: Yes, ma'am.

35 MS McMURDO: And then the last sentence, there was discussion of the risk as being medium, and you explained that would be balancing "catastrophic" and "improbable", but that was with the conditions or restrictions. Do you mean the restrictions that were identified in the OPEVAL testing?

40 MAJ LAMB: So, ma'am, the 24 flight controls, and - - -

MS McMURDO: It's the 24 flight controls.

45 MAJ LAMB: Yes, that's right.

MS McMURDO: The restrictions that were identified there.

MAJ LAMB: Yes, that's right.

5 MS McMURDO: So you interpret that as involving – if conditions were allowing flight with those restrictions, it would reduce the risk to medium?

10 MAJ LAMB: That's correct, ma'am. Yes.

MS McMURDO: Then I don't quite understand (b). The OIP, which is an acronym for?

15 MAJ LAMB: Orders, instructions and procedures.

MS McMURDO: So it could be dealt – so that's really saying then in paragraph (b) that you could introduce appropriate control measures to treat the risk, but it doesn't specify what those control measures are.

20 MAJ LAMB: No, ma'am, it doesn't, but noting, as I said, if we interlace where COL Reinhardt's advice has been to the organisation and through his documents of the test plan, et cetera, the Risk Management Plan, then that all correlates, or that all goes into that risk assessment in the context of an interim approval only.

25 MS McMURDO: So again, the restrictions that you would envisage would be the similar restrictions to which the OPEVAL testing was subject?

30 MAJ LAMB: That's correct, ma'am. Yes.

MS McMURDO: That's how you would construe that?

35 MAJ LAMB: Yes.

MS McMURDO: Thanks for clarifying that. I think that's what I thought you said, but I wanted to be sure.

40 MAJ LAMB: Thank you, ma'am. Yes.

AVM HARLAND: Could I just ask a follow-on question from that? Regarding TopOwl more broadly, but version 5.1 in particular, was it certified or intended for use as a primary flight aid?

MAJ LAMB: No. So no Head-Up Display – it's almost never that there's a Head-Up Display, certainly in that vintage and prior, had reached the engineering requirements, and reliability, and integration, for a Primary Flight Display. So you will hear – or you may heard testimony, and it would not be uncommon, you know, if you asked a pilot, "What are your immediate actions upon entering a disorientation?", and they will use a vernacular or terminology to say, "Get your eyes on the clocks", or "on the Primary Flight Display, and fly the aircraft off the aircraft attitude". That's where the certification basis is.

AVM HARLAND: Where is that notified to aircrew, that the TopOwl attitude information is not for use as a Primary Flight Display to be able to manage your attitude?

MAJ LAMB: So I don't have the references offhand, but I can say to you confidently that I've seen that advice in Standardisation Manuals, I've seen it in some aircraft in Flight Manuals. So it can be captured in a number of places. In terms of specifically, sir, 5.1, I'd have to be given the documents to review, and I would expect to see it in either the Standardisation Manual and/or the Flight Manual.

AVM HARLAND: How does that reconcile with the warning that says that if you are to use the HMSD to set attitude, you need to be looking along the four arced axes of the MRH-90?

MAJ LAMB: It doesn't. It doesn't reconcile, sir.

AVM HARLAND: Because that warning effectively says you can use it as a Primary Flight Display, doesn't it?

MAJ LAMB: It does, by inference. That's right, sir, and it's not the case. The conformal display is true when you are looking to the 12 o'clock position.

AVM HARLAND: If that warning was written, it could have said that, "Your attitude information is only accurate when you are looking forward; however, the Primary Flight Display needs to be used to set attitude".

MAJ LAMB: So that would be very good guidance. You would expect to see that in Training Instruction Manuals, so mass briefs, et cetera. You would expect to see that in a number of areas of OIP on how to use the equipment, particularly how to use the equipment when you're in a non-normal circumstance.

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AVM HARLAND: The distance to run feature, would that be considered a Primary Flight Display artefact, if you like, or perhaps something - - -

5 MAJ LAMB: So, no, it wouldn't fall into that because that is navigation information. Yes, Primary Flight Display information is in the name as an attitude indicator, and then the primary instruments, which is airspeed, altitude, RADALT, heading, et cetera. But, no, that's navigation information.

10 AVM HARLAND: Thank you.

MS McMURDO: Yes, LCDR Tyson.

15 **<CROSS-EXAMINATION BY LCDR TYSON**

LCDR TYSON: MAJ Lamb, my name is LCDR Matthew Tyson. I represent the interests of CPL Alex Naggs.

20 MAJ LAMB: I'm sorry for your loss.

LCDR TYSON: Thank you. I'm not going to try to go over any of the very important territory that MAJ Chapman, the Board, and LCDR Gracie have taken you to, but I just have some specific things I want to go to you with. First, I want to give you an opportunity to comment on some of the other evidence before the Inquiry that was critical of the AATES report.

30 MAJ LAMB: Okay.

LCDR TYSON: I want to take you back to that period in the beginning of June 2019, when the sorties were flown, and the report was completed. Now, one witness has said the report was incomplete, it appeared rushed. There's another statement suggesting the report was incomplete and halted prematurely. I want to ask you to comment on that evidence, but before I do so, can you just explain why it was that in the course of the AATES testing in the beginning of June 2019, AATES did not go ahead and do the full range of sorties that had originally been planned before that test activity took place?

40 MAJ LAMB: So thank you for the question. I'll take that in two parts, if I may? The report was rushed. It was - - -

45 LCDR TYSON: Well, before you - I'll specifically ask you about that other evidence, but first by way of background, can you just explain why

it was that the number of sorties that were originally planned did not proceed?

5 MAJ LAMB: So in the test plan – and I think it’s been said in evidence this morning or yesterday afternoon, and I spoke at length about this in October, but happy to review – is that the test plan prevented test point progression if a – and I’d have to look at the exact words – an unacceptable or a significant deficiency was identified by day.

10 The testimony of October would show that we found – or MAJ Wilson and CAPT Jordan Zahra, the Flight Test Engineer, identified the deficiency on the first sortie, and so we took it out. So we deliberated about what we would do in terms of our obligations under the test plan, which is an enabling artefact, or substantiation to the Military Permit to Fly, and the flight conditions therein.

20 So we went and repeated the sortie on the second day in the same day conditions, and inside the risk approval of the Military Permit to Fly, because we were in a good visual environment with strong attitude information and we were aware of the system, and the deficiency was confirmed in that afternoon. That then prevented us from proceeding to night, in accordance with the test plan, and so that was the cessation of flying.

25 There was – and I spoke about this in October – there was deliberation about whether we should put it – we would commence drafting a test plan amendment so that – and then returning to the DoSA-FT, so GPCAPT Young at the time, and ask for a renewed MPTF, or how he – but we realised in the fruition of time that the application in the projected role and environment, which is within our delegation as a Flight Test Organisation, and as experimental test pilots, was sufficient to draw the conclusion, and to go out at night would expose unnecessary risk.

35 LCDR TYSON: Again, and I won’t reveal who it was who has said it, but assume that there’s a statement that suggests the report, your report in AATES, was incomplete, and the testing was halted prematurely. What’s your response to that evidence?

40 MAJ LAMB: It’s ill-informed, and it’s incorrect.

LCDR TYSON: And again, without saying the source of it, assume that there’s a statement before the Inquiry that says the AATES report was incomplete and appeared rushed. What’s your response to that evidence?

MAJ LAMB: So it's incorrect, and I'll provide some explanation. So it was on the conscience of – and I think this is in COL Reinhardt's testimony himself – it was on his conscience, and mine, that this information needed to be distributed quickly and efficiently. So there is within the reporting structure of the Flight Test Ops Manual the provision to provide what's called a Minute Report. Minute by name, minute by nature. And so that report was a mechanism, as opposed to a full report, which takes ordinarily – the business rules around a full report are six weeks. That's a mechanism which conveyed the information which COL Reinhardt knew as the SO1, and we knew as the staff, was going to have the attention of – and have capability implications. So he did that out of good conscience and good intent, and he did that for the organisation's benefit.

LCDR TYSON: Again, without revealing the person, another witness has suggested that the AATES report was flawed. Reflecting back on it now, do you accept there's any validity in that criticism?

MAJ LAMB: No, that's incorrect. For the AATES report to be flawed, it meant that the test plan was invalid and that would infer that the DoSA-FT had endorsed or approved an invalid test plan and test methodology. So it's an assurance function, but there is also – one of the reasons that the Director of Tests and Evaluation Directorate is populated with highly experience testers is because there is a quality assurance function in making sure that there is rigour to test methodology, because that has an implication to capability advice.

LCDR TYSON: I want to now turn to a different topic, and I want to ask you about the scope and meaning of the term "DVE".

MAJ LAMB: Yes.

LCDR TYSON: I just remind you, you said this in your earlier statement – in the context of the AATES test report, you said this:

The Plan Palisade context was particularly concerning to us at AATES as we knew well, based on our collective experience, that much of the flying that would be undertaken by aircrew making use of this particular upgrade would involve dynamic tactical flying, often at night, in formation, overwater, and/or in degraded visual conditions (DVE).

The reality was that these missions were typically high-intensity missions, and very often tied to a no-fail mission outcome. Given that the nature of the flying operations under Plan Palisade were

to be conducted in that challenging setting, it necessarily elevated to our mind the risk to safety inherent in releasing into service a symbology set which produced an ambiguous attitude result when looking off-axis.

5

Do you remember that evidence?

MAJ LAMB: I do.

10 LCDR TYSON: Just in relation to that term “DVE” or “degraded visual conditions”, what is the scope and meaning of that term, please?

MAJ LAMB: So the degraded visual environment, and the good visual environment, are described in the ADS-33 Performance Manual. It is a
15 subset of the useable cueing environment. So the useable cueing environment is a headline statement or encapsulates the full scope of an environment that you could fly an aircraft within. A good useable cueing environment is something that we would see by day, and we know when we are just driving around the streets of Brisbane that different weather
20 will have different effects on the scale of that good visual environment. On a beautiful, fine, blue, 22 day, it's excellent. On other days, there might be rain showers, there might be haze, there might be smoke from a nearby fire. So there is scalability to the good visual environment.

25 The degraded visual environment is a threshold to which there is a change in the – it's a shame I haven't got my document here – but there's a change in the acuity environment which will have an effect on a pilot's response for a given flight control system. So the degraded visual environment, we operate with our visual senses to interpret pitch and roll
30 attitude information. The degraded visual environment typically is overly simplified to be stated as night flying. It's more than that.

A degraded visual environment can occur on occasion by day, in heavy fog, where there's no pitch and roll attitude information available, either
35 by an obscured horizon, or the inability to see the earth beneath you. Another place for the degraded visual environment, by illustration, would be operating over a glacier, which I've done overseas, and so there's ambiguity in the attitude reference that you seek to give aircraft orientation.

40

LCDR TYSON: Do you agree or disagree with this, that “DVE” is a term in more limited scope, and it really means this: it's caused by the creation of dust or snow clouds by the approach of rotor downwash as a helicopter approaches the ground, classically refers to the loss of visual

reference in the terminal phase of an approach? Do you agree that DVE is limited to that narrow situation?

5 MAJ LAMB: No, I don't. So, no, that is incorrect. The DVE is used for a certification basis, or an approval basis, in the ADS Standard, which is a Military Standard, in the US. It is far more than that. It's quite complex. There is a figure which is in my mind that I'm trying to describe to you. It's much more scientific than that. That's an over-simplification by someone who doesn't clearly have the qualification to make comment.

10 LCDR TYSON: I now want to ask you about another term, "operating in a maritime environment". Do you agree that if there are four Taipans, they're flying overwater, they're in formation, they're making a turn overwater, they're navigating between waypoints overwater, they're preparing to go to an LZ on an island, and then fly back overwater, do you agree that that's operating in a maritime environment?

20 MAJ LAMB: So I think our Navy brethren would have real definition on this, and maybe this is a good question for CAPT Davison. But in terms of – it depends the context this is leading to. It's in some of the documents that we have seen already that refer to a maritime environment. It is certainly not an overland environment, is the best way to describe it. It's distinctly different.

25 I think one of the key aspects of this maritime environment is the low contrast ratio and low cue environment, which contributes to the degraded visual cueing environment overwater. There's no textual contrast in there.

30 The other aspect in the night-time environment is the effect that that has on absorption of the infrared radiation, which reduces the visual acuity performance of the NVD. Dr Gavrilescu, in August, spoke correctly about that.

35 LCDR TYSON: I understand that in Fleet Air Arm there's a specific meaning given to a term "maritime operations", as opposed to "maritime environment". I understand that. But are you content, in the circumstance I've described about flying overwater in formation, making turns overwater and so forth, that that is operating in a maritime environment?

40 MAJ LAMB: I am, for the way that I interpret and apply it.

45 LCDR TYSON: Thank you. Then I want to ask you about cues. So if you're in a situation where you're flying overwater but there are islands in the vicinity, there's mainland in the vicinity, would you agree that the value of the land features that might be on the islands and so forth as

vertical cues, the value of those features are diminished in circumstances where you're flying at low level, at about 200 feet, in formation and you've got mission workload requirements?

5 MAJ LAMB: So that is correct. And the illustration to that is you go to a lookout at a higher elevation to see further. So the lower you go, the shorter the distance is. And that can be obscured by atmospheric conditions like rain.

10 LCDR TYSON: So you'd agree that if you're flying at night in formation at that low level overwater, 200 feet, notwithstanding that there might be islands around, you would say that that is still a low cue environment? Correct?

15 MAJ LAMB: It's the pure definition of a degraded visual environment. That's correct.

LCDR TYSON: In terms of what you know about the circumstances surrounding the crash of Bushman 83, the proposition that (a) that flying did not involve flying in DVE conditions, wasn't flying in a maritime environment, and wasn't a low cue environment, you would reject that proposition?

25 MAJ LAMB: Absolutely. That is unqualified advice.

LCDR TYSON: I just want to turn to a different topic now, if you can assist with this. It's about ethical standards, rules, instructions, maybe cultural factors that affect a person when they're participating as a test pilot or in the OPEVAL in that type of operation. So, first, going back to the AATES testing that was conducted in June 2019, what are the requirements, if any, for the Test Director and for the conduct of that test to be conducted in a way that it's independent, it's objective and the people conducting the test don't have any preconceived views?

35 MAJ LAMB: So that is the standard. And that's a primary differentiator, that the delegation in the airworthiness structure is specific to a Flight Test Organisation. The auditing function around that, there's an auditing function around about suitability, so there's very strict competency requirements.

40 But in terms of the specific activity for a system under test, the approval to proceed, that independently is provided by the DoSA. So the DoSA looks at the integrity of the organisation, the planning of the organisation, the personnel that are involved. You could see in my statement that the things that typically you would discuss with the DoSA-FT – and I've got that in

one of my paragraphs in this most recent statement – is the personnel that are involved, their suitability. We put controls around that specifically.

5 So it's very deliberate. To quote GPCAPT Figtree, who was the incoming DoSA – in fact, I know you know him, sir – only as recent on that phone call that I had with him a few weeks ago, his exact words were, "Integrity is everything. If you don't have that, you have nothing". That is the basis of our organisations.

10 LCDR TYSON: You're confident that when the AATES test was conducted in June 2019 it was conducted independently, objectively and without any of the participants in that test having any preconceived views about the version 5.10 HMSD symbology?

15 MAJ LAMB: Absolutely. So there's an obligation under me as the Executive Officer in independent review, providing governance to that and supervision, and then to the report, to make sure that the integrity is being upheld, both in the conduct but by the personnel and the deficiency and findings that they've made.

20 LCDR TYSON: Going forward then to November 2019, when the OPEVAL was conducted. What, if any, requirements were there for the people involved in that test to be involved in the test in circumstances where they didn't have any preconceived views about the version 5.10 HMSD symbology and they were going to be independent and objective?

25 MAJ LAMB: So under, I guess, our assurance function, we work in a trust environment, that their professionalism would have provided objective response to the questionnaires that were tabled to them.

30 LCDR TYSON: I just want to go to something else now.

35 AVM HARLAND: Could I just, while you're shuffling – sorry, I'll let you go first, please.

40 MAJ LAMB: Sure, sir. I recall in my evidence now in October, I spoke a little bit about that in terms of mentoring new test aircrew into the organisation; that we would always value the opinion of operational aircrew, but to remember that they don't have the benefit of the training to aspire for real objectivity and that they may be bringing biases to the table. So we are very appreciative – the flight test community is very appreciative of their observations, but to be circumspect about that.

AVM HARLAND: That's a good point. Just while we're on the

OPEVAL, in terms of expectations going to what is now version 7, where it talks about – the version 7 of the OPSPEC, it talks about:

5 *Army may conduct Category 4 flight test (OPEVAL) under a Military Permit to Fly issued in accordance with DASR 21(p).*

10 You previously spoke about the fact that the Army OAMP further constrains this permission for CAT 4 flight test to be conducted under AATES' supervision.

MAJ LAMB: Correct.

15 AVM HARLAND: So with respect to the management of the OPEVAL, would that supervision extend to the production of the flight test report and the recommendations that may flow out of that, or where would the supervision start and end?

20 MAJ LAMB: So that's not our practice, sir. So similarly in the categorised flight test GPCAPT Young would, in a circumstance – or one of the DoSAs would provide the assurance oversight, but then the reporting function is the responsibility of, in the categorised flight test, the CO of AARDU or the SO1 of AATES. In this case, in the Category 4 test, the responsibility is delegated to the flight test lead. So, in this case, it was LTCOL Norton.

25 AVM HARLAND: But he didn't sign the test report.

MAJ LAMB: Well, LTCOL Langley. Yes, my apologies.

30 AVM HARLAND: So the supervisory piece basically doesn't extend to the production of the report and the recommendations that would follow on from that.

35 MAJ LAMB: No, that's exactly right, sir. The assurance function is about the integrity of the activity and the preparedness and the risk oversight. The actual testing happens thereafter.

AVM HARLAND: Thank you.

40 LCDR TYSON: I want to ask you about a couple of email transmissions before I finish. So the Inquiry has got some evidence that in June 2019, even before AATES had completed the test report in version 5.10, that LTCOL Norton had asked MAJ Scullard to make an enquiry with a German colleague about version 5.10 and the off-axis information that

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came up in the symbology. Were you aware at all of that enquiry being made?

5 MAJ LAMB: So I think I've had this question asked of me before, and I'm only aware of it now. I was not aware of it then.

10 LCDR TYSON: You might not be able to offer any insight into this at all, but doing the best you can, knowing some of the individuals involved and the context of Plan Palisade, et cetera, what would be your explanation, speculating indeed as you might be, about why that enquiry was being made even before the AATES test report was completed?

15 MAJ LAMB: So, respectfully, I'd prefer not to speculate. I think that diminishes the rest of my testimony. It's unknown to me, is the answer to that.

20 LCDR TYSON: But it was never communicated to you, "Look, we're checking with a German colleague of Peter Scullard", or anything like that?

25 MAJ LAMB: So Peter Scullard was an MRH test pilot that had previously been in AATES, and at that point he wasn't with the organisation when we moved to Oakey. He may have communicated that with the SO1 AATES, but it's not my recollection.

30 LCDR TYSON: I want you to just accept too, there's also evidence of another email transmission before the Inquiry dated 24 June 2019. This is from LTCOL Norton, and he says this – so again, just appreciate the date is 24 June 2019. So it's, what, about 10 days after the June 2019 AATES report?

MAJ LAMB: Okay. Yes.

35 LCDR TYSON: That's the context and it's well before OPEVAL, et cetera.

MAJ LAMB: Yes, okay.

40 LCDR TYSON: He says this:

45 *Scully contacted the HMSD T&E crews in Germany regarding the 5.10 HUD symbology upgrade. Comments from the Germans is as I said a few weeks ago. Maybe I'm not going mad after all. I will recommend a caution or note in the STANMAN and GD for FM regarding the issue. The Germans didn't bother. So*

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we have one T&E unit saying “enhancing feature”, while the other says “acceptable”. I’ve never seen this predicament before.

5 So that’s the email.

MAJ LAMB: First, I’ve heard of it.

10 LCDR TYSON: So just in relation to this, so the context here is AATES have provided a report, they’ve said there’s an unacceptable risk to flight safety, and LTCOL Norton is saying on 24 June:

I will recommend a caution or note in the STANMAN and GD for FM regarding the issue.

15 MAJ LAMB: The only comment I could make to that is, is that that doesn’t address the unacceptable standard and the requirements on Defence which must address the unacceptable deficiency. That’s insufficient. And more to the point, addressing the unacceptable
20 deficiency is significant. These recommendations – sorry, these conclusions are very rare. A test pilot can go through their entire posting at AARDU and never have an “unacceptable” finding. So that gives context as to the gravity of this finding.

25 That in no way meets the technical requirements to address a deficiency based on the email correspondence of another airworthiness organisation.

LCDR TYSON: But more fundamentally, isn’t it implicit in this email – doesn’t it assume that notwithstanding your report, that what’s going to
30 happen is that Army Aviation is going to go ahead with 5.10? They will go ahead with it and deal with the issue by way of something in an Aviation publication.

MAJ LAMB: So that’s for others to judge. And I have a view on that,
35 but it’s not of value.

LCDR TYSON: Thank you, ma’am. Thank you, sir.

MS McMURDO: Yes. Who’s next, please?
40

<CROSS-EXAMINATION BY LTCOL HEALEY

5 LTCOL HEALEY: Hello, MAJ Lamb. I'm LTCOL David Healey, and I represent BRIG Fenwick. I just want to take you back to what you said, and my understanding of what you said, yesterday to AVM Harland. You stated in your opinion – or words to the effect that, "TopOwl 5.10 should never have been released into service". Is that right?

10 MAJ LAMB: That is correct.

LTCOL HEALEY: Is that the first time you've raised this?

15 MAJ LAMB: So formally? So, no, I didn't raise that formally at the time.

LTCOL HEALEY: Was there any reason for that?

20 MAJ LAMB: So, yes, staying in my lane. Yes.

LTCOL HEALEY: So what do you mean by "staying in your lane"?

25 MAJ LAMB: So my function – you know, there's a Chain of Command, there's a reported Chain of Command. We needed to hold that integrity. We had documented, through the SO1 AATES, that we had retained the "unacceptable" finding. We understand the delegation of the Accountable Manager. We had clearly articulated it to its full extent. We had been consistent with that approach. In our mind, we had done what our duty required us to do.

30 I also provide, in context at that time, that we had a number of trials – and that's in my initial report – at the time that we were endeavouring to provide advice on. And to quote LTCOL Reinhardt in his own testimony, he "needed to stay engaged". So there's a respectful part of being in the Chain of Command and the delegations therein. But to stamp on your feet and say, "Hey, you're not to do this", it's not a helpful way to communicate.

40 LTCOL HEALEY: Who did you report to again, MAJ Lamb?

MAJ LAMB: So SO1 AATES, LTCOL Reinhardt. I was the Executive Officer at that time. So the SO1. And then he, of course, had a Chain of Command in terms of tasking, which is DACM, but also COL Edmund Barton, or Charlie Barton, was the Commandant AAvnTC. So you

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advocate the position and emphasise the advice, and then there's a Chain of Command to carry that through.

5 LTCOL HEALEY: But you never said to LTCOL Reinhardt that, "5.10 should never be released into service"?

MAJ LAMB: In those exact words, it would be remiss for me to say that I had said exactly those words. But certainly I held ground on, "This is an interim approval only until something more permanent is found".

10 LTCOL HEALEY: Did you test the 5.10 as a test pilot?

MAJ LAMB: Not as a test pilot, no.

15 LTCOL HEALEY: Just a follow-up question on what we just spoke about with LTCOL Reinhardt. Did you ever voice your opinion to DG AVN, BRIG Fenwick?

20 MAJ LAMB: No, I didn't. So that's a lost opportunity, and I've said, in fairness to the context of the time, there's a thing that we all forget about that time, it's called COVID-19, and that was a barrier to communication. I've put in testimony before – and this is not an excuse – but I think in fairness to the Chain of Command, we had a very good, up until that point, Test and Evaluation Review Committee that was done in person, and that was hampered by travel restrictions.

25 I talk to you now, we are looking at each other in terms of communicating with each other. If I see that I'm trying to impart a message to you, but your inflections appear to me that I don't, then I'll re-approach it. So doing something remotely is a barrier to communication. And I can't put a value on that. But it was apparent to me at the time that – and I think that was everyone's experience, not just in Defence. In business as well, yes.

35 LTCOL HEALEY: But the point being, you never said anything back then. Correct?

MAJ LAMB: No.

40 LTCOL HEALEY: Those are my questions.

MAJ LAMB: No. Thank you.

45 MS McMURDO: Thank you. This is, I think, the last one. Will you be very long?

MR O'MAHONEY: I'll be very brief.

5 <CROSS-EXAMINATION BY MR O'MAHONEY

MR O'MAHONEY: Sir, my name is O'Mahoney, and I appear for Airbus.

10

MAJ LAMB: Yes, excellent.

MR O'MAHONEY: Could I start by asking some questions just about your evidence in relation to version 5.10. Tell me if you agree with this: that the V5.10 upgrade was classified or defined within the Military as "a major change"?

15

MAJ LAMB: I would have to go back and look at that. I'd need to look at the tech substantiation. But if that is in the Airbus' tech substantiation, I'm happy to accept that.

20

MR O'MAHONEY: And on the basis that that is accepted with that assumption in mind, do you agree that for any such change the MDO – that is, the Military Design Organisation – wasn't able to authorise itself?

25

MAJ LAMB: So I would need to – these are good questions. I would need to look at the approval principles. It's been a long time. I don't wish to mislead you.

MR O'MAHONEY: No, thank you. As you understand it, DASA played the role here of doing the approving?

30

MAJ LAMB: Yes.

MR O'MAHONEY: And as you understand it, in the context of DASA playing that role, DASA had regard to developments in Germany, if I can put it that way?

35

MAJ LAMB: That is the understanding. To be absolutely clear, I've not been following the proceedings of this hearing since I've left the ADF. But that is my understanding.

40

MR O'MAHONEY: And being specific, as you understand it, what DASA did was have regard to at least the fact of a German Military Aviation Authority approving this V5.10 upgrade.

45

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5 MAJ LAMB: That's as it's explained to me. Whether that's factual or not is another question. So with that evidence, I had a discussion with the Air Vice-Marshal yesterday about that is a recognised process, but incomplete.

10 MR O'MAHONEY: Thank you. And just to explore that briefly, are you aware of any analysis that was undertaken by DASA – not being critical of you or anyone.

MAJ LAMB: No.

15 MR O'MAHONEY: But are you aware of any analysis that it undertook as to whether the Germans had specific needs?

MAJ LAMB: No, I'm not aware. What I would caveat though – I half expected that – was that if there was an inference in other testimony that there had been testing done in an operational theatre, a theatre which is not a maritime environment, that then that would trigger my interest to say that's not a like for like.

20 MR O'MAHONEY: I think you gave evidence to this effect yesterday, but do you in effect say to the Inquiry that one learning from this process is the need to stress test foreign approvals of that kind to see if they are, one way or another, tethered to specific requirements at that foreign actor's end?

25 MAJ LAMB: Yes, I would certainly agree with you, and I think I testified to that yesterday.

30 MR O'MAHONEY: I think that's what gave rise to the Toyota Corolla analogy that you - - -

MAJ LAMB: Yes, that's right. I was going to use the BMW, but - - -

35 MR O'MAHONEY: You downgraded. Just very quickly on communications, drawing upon all of your skills and time in the cockpit, are you aware of there being standard communications for a flying pilot to transfer control of an aircraft to a non-flying pilot?

40 MAJ LAMB: Yes. So it's fundamental. It actually starts at 1 FTS in a tandem seat cockpit between student and instructor.

45 MR O'MAHONEY: You'd say that that is, to use the parlance, an example of helicopter flying 101?

MAJ LAMB: Correct.

5 MR O'MAHONEY: If a pilot is disoriented and is aware of that fact, would you, based on all of your experience, expect the pilot to communicate that?

10 MAJ LAMB: Well, there's two aspects to that. There's the recognition of the spatial disorientation in the individual. And we can't substitute into the circumstance of the evening that we're talking about, of course. There is probably a degree of if you feel that that may be overcoming you, then the discipline to fly on the aircraft instruments. And then at a point, in an ideal and theoretical world, you would hope that that would occur. But
15 there are many other factors that are going through the mind of an operational pilot. And in the substitution test, I could see that would be me as well.

20 MR O'MAHONEY: Is there training or standard communications directed towards that kind of circumstance?

MAJ LAMB: For the spatial disorientation?

MR O'MAHONEY: Yes.

25 MAJ LAMB: So there is training only around the advice that if you feel spatially disorientated, then you should hand over to the other pilot, you should verbalise it. So certainly that's innate into the operational flying aspects, yes.

30 MR O'MAHONEY: Flying in formation – just casting your mind back to your own experience of doing that – where one is in a four-helicopter formation, to what extent, to your mind, would the pilot of the third aircraft be navigating, typically speaking, by reference to the first and the second?
35

MAJ LAMB: So that's fundamental for their separation and station-keeping.

40 MR O'MAHONEY: You gave an answer to the Air Vice-Marshal's question about 20 minutes ago now about the relevant TopOwl display not being, in your own words, a Primary Flight Display. Just very quickly, what did you mean by that?

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MAJ LAMB: So Primary Flight Display is something which has reached a certification and display performance standard that can be relied upon as the primary instrument.

5 MR O'MAHONEY: Looking at the MRH-90 at the time in question, where were those or that Primary Flight Display found?

MAJ LAMB: So the Primary Flight Display is in the central field of view, which is a certification requirement, so within 30 degrees of the
10 design eyepoint, in front of the pilots. One on either side.

MR O'MAHONEY: Just finally, I think you're aware – I'm sure you are – that within an MRH-90 cockpit there are two sets of controls.

15 MAJ LAMB: Yes.

MR O'MAHONEY: And that they are mechanically connected?

MAJ LAMB: So I'd have to go back. So flight inceptor design, I'd have
20 to have a look at that. Yes.

MR O'MAHONEY: Then you saved us some time. I won't ask you some further questions. Thank you very much.

25 MAJ LAMB: No, thank you for your time.

MR O'MAHONEY: Thank you.

MS McMURDO: Thank you, Mr O'Mahoney. Yes, LCDR Tyson?
30

LCDR TYSON: Ma'am, there was just one part of the low cue environment topic that I just wanted to deal with.

MS McMURDO: Yes.
35

<FURTHER CROSS-EXAMINATION BY LCDR TYSON

40 LCDR TYSON: MAJ Lamb, you've flown many hours in the MRH-90, haven't you?

MAJ LAMB: I'd have to look at exactly. Comparative to others, it's not
45 – three or four hundred, I think, from memory. It's all a blur now.

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MS McMURDO: Probably in your original statement.

MAJ LAMB: It's in my original statement, ma'am, that is correct.

5 LCDR TYSON: But you've flown the MRH-90?

MAJ LAMB: Yes, that's correct. I'm a Qualified Test Pilot and Aircraft Captain, yes.

10 LCDR TYSON: And you've flown it overwater?

MAJ LAMB: Not in the environment for the accident at night. I've flown it overwater just in en route navigation, but that's a very different environment.

15 LCDR TYSON: You've flown the MRH-90 in formation with other MRH-90 helicopters?

MAJ LAMB: I have, yes.

20 LCDR TYSON: When flying the MRH-90 overwater, did you ever rely upon plankton and algae lighting up as a visual cue?

MAJ LAMB: No, I did not.

25 LCDR TYSON: Is there any training in Flight Manuals or Standardisation that Australian pilots flying overwater would be able to rely upon plankton and algae lighting up as a visual cue?

30 MAJ LAMB: No. It's 1 April. Not being disrespectful. But, no, I haven't.

MS McMURDO: I think there is a phenomenon called luminescence which sometimes occurs. But I don't think you'd want to rely on it, would you?

35

MAJ LAMB: No, ma'am.

LCDR TYSON: And you wouldn't rely on that. Correct?

40

MAJ LAMB: Absolutely not, no. That's fascinating.

LCDR TYSON: Thank you.

45 MS McMURDO: Yes. No other applications to cross-examine?

AVM HARLAND: I just had one question. I just wanted to leverage off the benefit of your 8000-plus hours and multiple aircraft types. If you're in the cockpit and without reference to the G-meter that indicates the G-force, if you were subject to zero G, would you be aware of that?

MAJ LAMB: Absolutely. As you'd know, you'd feel that in the seat. So your proprioceptor response, which is what you're alluding to, your body would feel that elevation.

AVM HARLAND: So could you describe how that would feel if you're the flying pilot or perhaps if you're in the back of an aircraft?

MAJ LAMB: So it'd be noticeable to particularly those in the back. They're completely in tune with what's going on, you know, keeping, I guess, a watch on the pilots in a way. But how that would feel physically in that negative environment, you might have felt that in a rollercoaster yourself. It's where you go over the top, so you're no longer in that 1G environment. You're in less than 1G, so that there's no force retaining you into the seat, so you would float. In a negative G environment, which sir is quite familiar with, you would then – actually, the force would propel you out of the seat, up against particularly the shoulder straps and your lap strap, which is ultimately what holds you in.

So in the absence of the G-meter, what I often say to – what you often experience as a helicopter pilot, in manoeuvring, is you're quite – for want of a better term – calibrated to when you are approaching a 2G environment, so a 60 degree angle of bank turn, just because it's an unusual force for a helicopter pilot.

And that's a function of the inherent design of a single main rotor, in that you don't want to over-stress it. And similarly, more to your point, sir, you don't want to under-stress the main rotor. There are certification values in the design which accommodate that within the design flight envelope. And the MRH does that well.

AVM HARLAND: But it certainly would be noteworthy and noticeable to anyone in the aircraft?

MAJ LAMB: Yes, that's exactly right, sir. Absolutely.

AVM HARLAND: Thank you.

MS McMURDO: Any re-examination? Thank you very much,

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MAJ Lamb, for returning to the Inquiry and giving us further assistance. Greatly appreciated.

5 MAJ LAMB: Thank you, ma'am.

MS McMURDO: Please remember that giving evidence to an Inquiry like this, particularly in the circumstances here, can cause issues. So if you need assistance, please don't hesitate to make use of it.

10 MAJ LAMB: Thank you, ma'am.

MS McMURDO: Thank you.

15 MAJ LAMB: Thank you, sir.

<WITNESS WITHDREW

20 MS McMURDO: We'll adjourn until 2 o'clock. Thank you.

HEARING ADJOURNED

HEARING RESUMED

5 MS McMURDO: Yes, MAJ Chapman.

MAJ CHAPMAN: Thank you, Chair. Chair, the next witness is
CAPT Gregory James Davison. I call him.

10 MS McMURDO: Thank you.

<CAPT GREGORY JAMES DAVISON, Sworn

15 **<EXAMINATION-IN-CHIEF BY MAJ CHAPMAN**

MS McMURDO: Captain, let me know if you need a break at any time.
Thank you.

20 CAPT DAVISON: Ma'am.

MS McMURDO: Yes, MAJ Chapman.

25 MAJ CHAPMAN: Thank you, Chair. CAPT Davison, you have some
water there for you. Can you just please state your full name and your
current position?

30 CAPT DAVISON: CAPT Gregory Davison. And I am currently the
Chief of Staff for the Joint Support Services Division Headquarters.

MAJ CHAPMAN: CAPT Davison, can you please confirm you received
each of the following documents prior to today? I'll just list them. A
section 23 Notice requiring your appearance?

35 CAPT DAVISON: I did.

MAJ CHAPMAN: An extract of the Inquiry Directions?

40 CAPT DAVISON: I did.

MAJ CHAPMAN: A copy of my appointment as an Assistant IGADF?

45 CAPT DAVISON: I did.

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MAJ CHAPMAN: A Frequently Asked Questions Guide for Witnesses?

CAPT DAVISON: I did.

5 MAJ CHAPMAN: A Privacy Notice?

CAPT DAVISON: I did.

10 MAJ CHAPMAN: Thank you. Sir, have you prepared and signed, for the purposes of the Inquiry, a statement?

CAPT DAVISON: I have.

15 MAJ CHAPMAN: Can I just hand you a copy? You see that to be a statement of five pages in length?

CAPT DAVISON: It is.

20 MAJ CHAPMAN: That's your signature which appears on page 5?

CAPT DAVISON: It is.

MAJ CHAPMAN: The date is 26 March 2025.

25 CAPT DAVISON: Correct.

MAJ CHAPMAN: Do you wish to make any amendments to this document?

30 CAPT DAVISON: I do not.

MAJ CHAPMAN: Chair, I tender the statement of CAPT Gregory James Davison dated 26 March 2025, and there are no annexures.

35 MS McMURDO: Exhibit 192.

#EXHIBIT 192 - STATEMENT OF CAPT DAVISON

40

MAJ CHAPMAN: Sir, I will just start with a security issue to raise, and that is to say that if there's anything in my questions or in your answers which you consider may raise a security issue over the "Official" level, just please let me know and we may need to go into a private hearing. I don't anticipate that to be the case, but just to be mindful of that.

45

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CAPT DAVISON: Understood.

5 MAJ CHAPMAN: Sir, can I just begin with some of what you've had to say about your background and your experience in your statement, and I'll just set it out in summary form? So you joined the Royal Australian Navy in October 2019.

10 CAPT DAVISON: Correct.

MAJ CHAPMAN: You transferred from the Royal Navy, where you'd spent 20 years as an aviator.

15 CAPT DAVISON: Correct.

MAJ CHAPMAN: During your time with the Royal Australian Navy, you've been an Instructor, an Operational Pilot and a Test Pilot.

20 CAPT DAVISON: No. In my capacity in the Royal Australian Navy, just an Operational Pilot and a Test Pilot. My instructional role was in the Royal Navy.

25 MAJ CHAPMAN: Thank you. You've also been a test pilot on the MRH-90.

CAPT DAVISON: Correct.

MAJ CHAPMAN: And a Flight Commander flying the MRH-90.

30 CAPT DAVISON: Correct.

MAJ CHAPMAN: You've held various command appointments, one of them including being the Officer in Charge of AMAFTU.

35 CAPT DAVISON: Correct. It wasn't at the time a Command appointment, but it was recognised afterwards as a Command appointment. It's Officer in Charge.

40 MAJ CHAPMAN: The reference to AMAFTU is the Navy's Flight Test Organisation.

CAPT DAVISON: That's correct.

45 MAJ CHAPMAN: At paragraph 4 of your statement you say that you have – between 2017 and 2020 you held dual roles, one as the Officer in

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Charge of AMAFTU, and also held the appointment as the Delegate of Safety Authority Flight Test for Navy.

5 CAPT DAVISON: That is correct.

MAJ CHAPMAN: You then say that you ceased flying in about 2020.

CAPT DAVISON: I did, yes.

10 MAJ CHAPMAN: And you've since taken up a number of staff appointments, including your present appointment as the Chief of Staff to the Joint Support Services Division. Correct?

15 CAPT DAVISON: Correct.

MAJ CHAPMAN: In terms of your flying experience, you have approximately 5000 hours over 30 types of aircraft, including significant – you describe – deck landings, operational tours, the use of night-vision devices, including TopOwl. And you have, of interest to this Inquiry,
20 specific experience on version 5.10.

CAPT DAVISON: I have.

25 MAJ CHAPMAN: In fact, you say 20 hours' experience on 5.10.

CAPT DAVISON: It is difficult to discern from the logbook, but yes.

MAJ CHAPMAN: You're a graduate of the Test Pilot Training in 2004 and hold degrees in Chemistry and a Master of Arts in Military and
30 Defence Studies.

CAPT DAVISON: I have.

35 MAJ CHAPMAN: You commenced your role as Chief of Staff in January 2023.

CAPT DAVISON: '24.

40 MAJ CHAPMAN: My correction there. Thank you, sir. Can you just describe, if you will, the role that you have as Chief of Staff before I turn to ask you some questions about the Military Permit to Fly?

45 CAPT DAVISON: So the Chief of Staff of a Headquarters of approximately 15 personnel, providing bureau services in business, finance, governance, work health and safety, contracts. My team provide

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those services for approximately 15 various-sized business units attached to the two Divisions, and I'm the Chief of Staff who coordinates the team effort towards those bureau services.

5 MAJ CHAPMAN: The Joint Support Services Division, I think you've described it as – does that involve any Aviation?

CAPT DAVISON: None whatsoever.

10 MAJ CHAPMAN: So just for the purposes of your evidence, I'm going to take you to talk about the Military Permit to Fly that relates to your approval on 21 October 2019 as the DoSA-FT. Do you recall that?

CAPT DAVISON: I do.

15

MAJ CHAPMAN: That was in connection with the Operational Evaluation conducted by Aviation Standards Branch - - -

CAPT DAVISON: It was.

20

MAJ CHAPMAN: - - - concerning version 5.10. Can I just ask the witness to be shown Exhibit 189A, B and C?

MS McMURDO: Yes.

25

MAJ CHAPMAN: Sir, do you recognise that package of documents – and there is going to be three – in the way it's been tendered, as the Military Permit to Fly application pack?

30

CAPT DAVISON: I do.

MAJ CHAPMAN: You agree with that?

CAPT DAVISON: Yes. Are they all different? Yes, sorry. Yes.

35

MAJ CHAPMAN: Yes, 18b, 20A and a Form 21.

CAPT DAVISON: Yes.

40

MAJ CHAPMAN: Just before I turn to the detail of that particular Military Permit to Fly, as a former DoSA-FT, could you just outline in your own words the function of a DoSA-FT?

CAPT DAVISON: The Delegate of the Safety Authority receives a

5 formal delegation from the Safety Authority through the Director-General to provide a level of assurance that the proposed Military Permit to Fly and supporting documents are safe, so far as reasonably practicable, for the purposes of conducting flights on aircraft or systems fitted to aircraft which would otherwise not be in line with the type certificate basis.

10 So the normal aircraft configuration, an accepted configuration, if you want to propose a change to it and conduct a flight test, to gather evidence on it you would be outside of the normal certification basis and that process requires the Safety Authority to have a level of assurance that that is done in accordance with considered methodologies and instruments.

15 MAJ CHAPMAN: Just taking a step back there. So Military Permits to Fly don't necessarily or typically – they would normally apply to a test organisation that's conducting flight testing?

20 CAPT DAVISON: No, Military Permit to Fly approval would apply to an undertaking of flight test. The limitations to whether an organisation can or can't do flight test is the Operational Specification which is the overarching limitations document which underpins the Military Air Operator's endorsement to conduct operational flying or conduct flying.

25 MAJ CHAPMAN: I'll put it a slightly different way. If anyone in the ADF, or a pilot in the ADF – it doesn't have to necessarily be a test pilot to be flying an aircraft – if it's under a Military Permit to Fly, they don't necessarily have to be a test pilot?

30 CAPT DAVISON: No, absolutely not. If you were flying under a Military Permit to Fly because of a variance to the normal accepted airworthiness, then it can be any pilot. But my role, specifically, is to ensure that I provide DASA assurance that the crewing for any particular trial is appropriate. Now, it depends on the nature of the testing undertaken as to what that crew standard should be. And sometimes it has to be a test pilot. Sometimes it can be a mixed test and operational crew, 35 or sometimes it can be a select variation thereof.

40 MAJ CHAPMAN: And going back to what's occurred in this case. The Inquiry has heard evidence that Army Aviation, in this case, AATES, applied to you for the Military Permit to Fly. That's correct?

CAPT DAVISON: Correct.

45 MAJ CHAPMAN: And can you just give us a sense of whether applications to you as the Navy DoSA from RAAF and Army were typical or atypical during your tenure?

5 CAPT DAVISON: It was atypical and because of a specific requirement. So there were two delegates of the Safety Authority for flight test: myself as the Navy DoSA, and I believe GPCAPT Young may have been at the time as the RAAF and Army DoSA. He and I were in fairly frequent contact and we met at DoSA meetings. He was normally the person that the Army and the Air Force – but the Army would apply to.

10 He was absent for a period of three weeks and asked me if I would step in to cover his responsibilities. My delegation from the Safety Authority allowed that, and the DASA were happy with me conducting that role in his absence.

15 MAJ CHAPMAN: And we'll get to a little more detail about that. Over what period were you the DoSA-FT for Navy?

CAPT DAVISON: Three years.

20 MAJ CHAPMAN: And over that period, can you count how many, roughly, applications are made to you for a Military Permit to Fly other than from Navy?

25 CAPT DAVISON: It would've only been that three-week period, and I think there were three.

30 MAJ CHAPMAN: So a very small number. And that reflected the expectation that if you were in Army, you would be applying, ordinarily, to, as you say, the RAAF or the Army DoSA-FT, which is Air Force.

35 CAPT DAVISON: And in the rare instances that he was unable for being away on duty, then it would more naturally fall to the Director-General or his Deputy. But because this was a three-week period, it was more appropriate for me, as another test pilot and someone with experience in rotary tests, to cover that on behalf of the Safety Authority.

40 MAJ CHAPMAN: And in terms of the source of your authority to approve Military Permits to Fly, is it fair to say that they're service agnostic in the sense that you could field and determine applications from any of the services?

CAPT DAVISON: You could. And, in fact, the DG, the Director-General, or his Deputy, would be able to provide that level of approval for Military Permits to Fly. I suppose by coincidence, my

qualification on this particular type and familiarity with the system under test made me uniquely qualified to have a very informed view of the trials.

5 MAJ CHAPMAN: So we've heard that you had this dual-hatted role as DoSA-FT Navy and you also were, at the time, leading the organisation, AMAFTU which is the Flight Test Organisation. Correct?

CAPT DAVISON: Correct, yes.

10 MAJ CHAPMAN: Do you know, to your knowledge, is that still the case today, that it's a dual-hatted position?

15 CAPT DAVISON: I haven't heard it's changed, but I haven't been involved in that area for a little while. That particular question, that dual role – in fact, it was a triple-hatted role, but the other one is largely immaterial – but that dual role for the Delegate, the Safety Authority role and the OIC AMAFTU role was always raised with my conversations with the DG and during Airworthiness Boards where it was raised as a topic of conversation. And to my knowledge, it hasn't changed.

20 MAJ CHAPMAN: And when you say, "it was raised as a topic of conversation", was it in this context that in practice, what we have with this dual-hatted role is that on the one hand you can, in effect, prepare and sign off on an application being made for a Military Permit to Fly and then, with the other hat on, you can consider and approve the Military Permit to Fly?

25 CAPT DAVISON: No, it doesn't actually work quite that way. The application for a Military Permit to Fly, as you've shown me the pack here, is created by the organisation applying for the Military Permit to Fly. My role as the Delegate of the Safety Authority is to review their submission and determine whether or not it meets various criteria for being approved. So I wouldn't have had any involvement in the preparation.

35 I can provide advice on the preparation, but I would not have been involved in the preparation. But in order to provide the assurance that the trials in question were appropriate, I would have oversight of all the documentation for that particular trial in order to base my decision to approve or otherwise.

40 MAJ CHAPMAN: Understand. So if I can take you to paragraph 8 of your statement now. And you say there, as you've just given evidence a couple of minutes ago, you say that:

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Any Military Permit to Fly for Army would normally be the remit of the DoSA-FT of Army.

5 Though, it was your recollection that they were on leave and there was a requirement to backfill his responsibilities. Do you see that?

10 CAPT DAVISON: Yes. To backfill the DoSA-FT for RAAF and Army, my recollection – and I can't find any emails and I was unable to find any – but my recollection of a conversation was that he was away for a period of several weeks.

MAJ CHAPMAN: And that appointment then held, to your recollection, was GPCAPT Stephen Young. Is that correct?

15 CAPT DAVISON: I believe it was, yes.

MAJ CHAPMAN: And no doubt as one of the two DoSA-FTs in the ADF, I take it that you and GPCAPT Young worked collaboratively and frequently as two DoSAs?

20 CAPT DAVISON: We would call each other, I wouldn't say with frequency but with some regularity, and we would meet at the DoSA, they call them convocations, the conferences which happened several times a year. And we would catch up, have dinner, swap sort of ideas about what was going on in the test world in terms of the mechanisms for approval, and so on and so forth.

25 MAJ CHAPMAN: So there'd be, to some degree, a shared level of awareness of the nature of the applications that were passing your desks, and things of that nature?

30 CAPT DAVISON: No, not on a trial-by-trial basis. There may have been occasions when I sought his counsel for a question on procedure, and less so him seeking my counsel. But as experienced test pilots, we shared a common understanding of tests, which was not necessarily something that was particularly widespread through DASA. So we only had each other, really, to bounce ideas off.

35 MAJ CHAPMAN: Yes. And you say also at paragraph 8 that because he was away on leave, if you had not assisted in the way that you did with this Military Permit to Fly, it would've otherwise had to go to the Director-General DASA or the Deputy. Is that correct?

40 CAPT DAVISON: Yes, that is correct.

45

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MAJ CHAPMAN: And you also say that decision, in this instance, was not taken, from your memory, because neither DASA nor the Deputy were test qualified. Is that right?

5 CAPT DAVISON: That's not specifically the reason. I think that alludes more to my comment a few moments ago where I felt reasonably well placed for this particular trial. But to have that burden of work to be sent up to very busy senior people seemed not very collegiate of me. So I was willing to stand in to provide that level of workload relief on behalf of
10 DASA. There was no reason why they wouldn't have been able to do it perfectly well, but I just felt that they were busy, and it was more appropriate for me to shoulder the work.

15 MAJ CHAPMAN: Well, you felt, in the circumstance, best qualified to do it, to sort of field the application - - -

20 CAPT DAVISON: In this particular case. It's rare that an application comes across in which you have so much knowledge. One of the others was an AC-130 – sorry, was a C-130 trial which, apart from my skills in flight test, I was not particularly well placed to provide any SME knowledge for. So it was just a coincidence.

25 MS McMURDO: Was it likely to have additional delays if it went up the Chain of Command? Was that an issue, I'm just wondering?

30 CAPT DAVISON: Possibly, ma'am. They were quite busy people with a range of draws on their time. So it was possible, yes.

35 MAJ CHAPMAN: And then you say that this decision for you to deal with the Military Permit to Fly, it was agreed to by the authority, by the authority being DASA?

40 CAPT DAVISON: My delegation letter, which I did see, allowed me to fulfill the role of a DoSA-FT for all services. It wasn't specifically for this application. It was a delegation provided for any flight.

45 MAJ CHAPMAN: I understand from your earlier evidence that you were authorised to, you know, to determine this. My question was more directed to the decision that you took to deal with this particular application in that sort of caretaker way that you did. Was that done with the agreement of DASA or you're just saying you're relying on your - - -

50 CAPT DAVISON: No, I believe there were conversations. And my recollection isn't firm, but I believe when I spoke to GPCAPT Young, he had already approached DASA to provide that authority. But I'm starting

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to struggle with my recollection.

5 MAJ CHAPMAN: Yes. I mean, you say this further in your statement where you talk about recalling the conversation with GPCAPT Young about essentially standing in for him while he was away. Correct?

CAPT DAVISON: Correct.

10 MAJ CHAPMAN: And he provided you, for that purpose, with a verbal handover; is that right?

CAPT DAVISON: We spoke before he went on leave and we spoke when he got back, from recollection.

15 MAJ CHAPMAN: And in this verbal handover, and possibly with conversations prior to it, he indicated to you that there were a number of trials which are imminent for Military Permit to Fly approval. Correct?

20 CAPT DAVISON: Correct. And those applications you can never forecast exactly when they're going to drop. So you don't know when they're going to drop.

MAJ CHAPMAN: And one of them was 5.10?

25 CAPT DAVISON: Yes.

30 MAJ CHAPMAN: And just in relation to this application, you say at paragraph 10 that, as you've given evidence, you have some familiarity with 5.10 as you had issued the Military Permit to Fly for the First-of-Class flight trial testing. Is that right?

CAPT DAVISON: I believe so, yes.

35 MAJ CHAPMAN: And do you agree that that trial was essentially directed to the testing of how version 5.10 performed in the maritime domain?

CAPT DAVISON: Correct.

40 MAJ CHAPMAN: And - - -

45 CAPT DAVISON: It was part of a trial, a wider trial, but we took the opportunity to use that symbology to assess it in that environment. So the trial was actually a ship trial for a helicopter.

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MAJ CHAPMAN: Yes. That's embarked operations?

CAPT DAVISON: Embarked operations.

5 MAJ CHAPMAN: Thank you. And do you agree that while the Navy testing, and that testing, and the OPEVAL testing, were both activities which tested symbology, they were conducted in very different contexts.

10 CAPT DAVISON: Absolutely. Yes, very much so.

MAJ CHAPMAN: And that the Navy testing on the embarked operations and the other testing which was for Special Operations and approaches - - -

15 CAPT DAVISON: Hugely different roles.

MAJ CHAPMAN: And presumably, you're aware that the First-of-Class Flight Trials identified that the ambiguous symbology – well, first point, it identified the ambiguous symbology point later raised by AATES.

20 CAPT DAVISON: Yes.

MAJ CHAPMAN: Though it concluded that it did not present an issue for the Navy test team in the context of embarked operations, in effect.

25 CAPT DAVISON: In effect.

MAJ CHAPMAN: Now, moving ahead, did you ultimately have access to, and read, the Operational Evaluation report in respect of the OPEVAL testing?

30 CAPT DAVISON: I did not.

MAJ CHAPMAN: Not having read it, are you aware, generally, that the OPEVAL report referenced the First-of-Class Flight Trials conducted by Navy?

35 CAPT DAVISON: I wouldn't be surprised. It was a trial that had been reported by a test organisation on the equipment, so it would be logical for it to be referenced.

40 MAJ CHAPMAN: And it not only referenced it, but it essentially referenced it in support of the OPEVAL opinion, that the OPEVAL concluded there was no significant issue with version 5.10.

45

5 CAPT DAVISON: I haven't read the report, but I wouldn't be surprised to have the AMAFTU report referenced in that way. Because we did not actually find in our role and environment the symbology set presented barriers and hurdles which were insurmountable. The symbology can be decluttered to remove the ambiguity.

10 MAJ CHAPMAN: Do you see there being an issue or concern that you have about the OPEVAL report having been conducted in a different context, do you agree, relying on the results of the First-of-Class Flight Trials in that way?

15 CAPT DAVISON: It would depend on the weight that the role and environment in which we tested would have been used to justify the role and environment in which the OPEVAL were focused. I can elaborate, if you'd like?

MAJ CHAPMAN: Certainly.

20 CAPT DAVISON: So if they were to have referenced the AMAFTU report to say, "Navy found that there was no issue with the symbology and therefore we find that there is no issue with the symbology in our SF role", that would probably be stretching a link too far. The roles and environments were very markedly different.

25 And, in fact, the AMAFTU testing was, is there any reason this symbology set can't be used in First-of-Class or ship operations? It was quite constrained for that. And our findings were that because you can declutter the symbology and eliminate the ambiguity, there was no reason why it shouldn't be used in approaches and departures from ships.

30 MAJ CHAPMAN: And following on from that, the Inquiry has received some evidence that in a similar vein, certain decision briefs that were taken to recommend Service Release of version 5.10 also referenced and relied on the First-of-Class Flight Trials for Service Release. Were you
35 aware of that?

40 CAPT DAVISON: I haven't been aware of any decision briefs but again, I would be unsurprised that the test evidence in our particular role and environment would be referenced, because it forms and formed part of an important area of evidence to support both Army and Navy roles. So the Navy role would be evidence to say that the Navy have tested it and found no issue with the symbology set in their operations.

45 MAJ CHAPMAN: So you agree though, it's an important part of the history of testing which should be before any decision-maker for the

Service Release?

CAPT DAVISON: The exact reason for flight test.

5 MAJ CHAPMAN: Yes. Though you would expect in any reference to the First-of-Class Flight Trials or reliance placed on it for a decision-maker that there be perhaps a significant qualification added to that recommendation by reference to the very different context in which you've described the test operated.

10 CAPT DAVISON: Correct.

MAJ CHAPMAN: And in the absence of a significant qualification being included in that, there's the potential for the reference of the flight trial to be misleading?

15 CAPT DAVISON: It certainly could. If referenced without qualification, it could be subject to being misunderstood, yes.

20 MAJ CHAPMAN: Misunderstood, then a course of action being embarked upon based on that misunderstanding.

CAPT DAVISON: Yes.

25 MAJ CHAPMAN: And just to return to your consideration of the OPEVAL application, you say at paragraph 10 that you discussed the application at length with MAJ Lamb. Is that right?

30 CAPT DAVISON: From my memory, yes.

MAJ CHAPMAN: And that included the stipulations regarding the incremental progression of training and the conduct of the assessment?

35 CAPT DAVISON: So as you can appreciate, the AATES and AMAFTU Test Organisations, we were reasonably familiar with each other's test campaigns where it crossed over aircraft types which we shared. I was aware that the symbology set, whether it was specifically the symbology or the TopOwl system with version 5.10, had been found unacceptable, which is a very significant finding.

40 So I was aware that Army, in their role and environment, had found it unacceptable in a previous report after Navy had not found the same level of concern. So, therefore, my, I suppose, responsibility from a DASA perspective required that should that finding be found viable or correct, appropriate and not just a single opinion, that would have to have some

45

constraints around further testing, especially if further testing was done by non-test crew/specifically test crew.

5 So there would have to be a much closer lens put upon the training and progression of those test points from a safety perspective.

MAJ CHAPMAN: And did you understand from your perusal of the test plan that what was being proposed here by MAJ Lamb, and in this Military Permit to Fly, was just an interim measure? This wasn't asking
10 for a Military Permit to Fly in support of Service Release, this was in support of an interim measure. Is that correct, sir?

CAPT DAVISON: That is correct, yes.

15 MAJ CHAPMAN: So you understood it was interim only?

CAPT DAVISON: Absolutely. The role of a DoSA-FT, and test teams generally, is to support evidence to provide recommendations for further release within constraints. It is evidence that is provided for
20 decision-makers to decide whether it's safe, so far as reasonably practicable, within the recommended limitations of what's found from test. It is not a recommendation to release whatever change or configuration, or whatever, for operational use.

25 MAJ CHAPMAN: And would there be a different approach taken if this Military Permit to Fly was applied to you on the express basis that the testing is being conducted for the purposes of Service Release, generally?

CAPT DAVISON: I think we need to be careful to ensure that the
30 language that we use does not bleed across into operational MPTS, which were not my remit. My delegation as the Safety Authority for Flight Test was only to do flight test to support evidence and recommendations that can then be used to generate maybe an operational release of equipment. There is a very specific realm for flight test which sits with a firewall and
35 is distinct from operational release.

MAJ CHAPMAN: Did you say that it's not your remit to consider a Military Permit to Fly for operational use? Is that what you - - -

40 CAPT DAVISON: No, only for flight test.

MAJ CHAPMAN: Only for flight test. And whose remit is it to consider the Military Permit to Fly for operational use?

45 CAPT DAVISON: That would be DASA, more broadly. So not flight

test specifically, but for the DG, the Delegates of the Safety Authority, the Engineering Authorities, but they would create a body of evidence based on flight test evidence to then either apply for a Military Permit to Fly, should that be the correct instrument to use for operational use – but an MPTF for operational use is outside of the DoSA-FT's remit, and I was not authorised to provide any sort of MPTF for anything other than flight test.

AVM HARLAND: Could I just clarify there, because I'm not sure I followed the answer to your question.

When you signed the MPTF for the OPEVAL for the purposes of flight test, was it your understanding that that MPTF and that flight test would support a recommendation for Service Release or for an interim capability that would be supported by an operational MPTF?

CAPT DAVISON: I didn't have an understanding either way, sir. So my approval of the MTPT for flight test was to gather evidence which would then be used for recommendations to the authority for either operational release within bounds. It could be that the MPTF was required for a short period of operations in a particular theatre for a constrained period of time, but that the type certificate of the aircraft would be updated to allow that more broad continued operation.

But the flight test aspect of it is just to gather data and make recommendations upon which those decisions can be made by DASA.

AVM HARLAND: Understood. And you considered the Flight Test Plan that was proposed by AATES?

CAPT DAVISON: Absolutely.

AVM HARLAND: Yes, thank you.

CAPT DAVISON: And, in fact, as the Delegate of the Safety Authority, I wasn't going to sign the original approval until I had ensured that there had been some changes placed upon the test plan to more tightly constrain the conditions, the environment, the crewing, the training of the people undertaking the Operational Evaluation based on the fact that I knew that in their particular role and environment, in previous testing they had found it unacceptable. And that is a very specific term which rings alarm bells. So, therefore, the constraints placed on the incremental progression of training and conditions were evolved in the test plan according to my wishes.

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AVM HARLAND: And can you recall if that Flight Test Plan was to support a Service Release recommendation or an interim capability, so that further exposure could be given to 6 Aviation?

5 CAPT DAVISON: I wouldn't have had that visibility of anything other than the recommendations on whether it was safe and if there were shortfalls in the symbology, as I knew there were, what limitations would be placed upon symbology use or that system's use in order to provide that so far as reasonably practicable safety in operational use. Whatever
10 the operational use case would be, be it a short period of time, be it a type certificate change to incorporate that design change, same with any test, when you get to the point where you have provided your recommendations, very few systems that come under test are without flaw or fault. It's a question of whether or not there are sufficient mitigations and constraints, be they operational, training, environmental. There are
15 very few things that come without additional burdens of limitations in order to provide that assurance of safe so far as reasonably practicable.

And I think in this particular case, AMAFTU had similarly identified the
20 ambiguity in pitch and attitude depiction on the symbology when looking ahead, to looking sideways. And that was certainly not a satisfactory quirk of the – not “quirk” - - -

MS McMURDO: Feature?
25

CAPT DAVISON: Feature of the symbology set. But there were other things that were much better than the previous version: the distance to go countdown on the symbology, and so on and so forth. So there will always be pros and cons of systems under test, and the purpose of flight
30 test is to be able to capture what those deficits are and provide recommendations for the safe use.

In our case, in the Navy case, it was declutter and remove the ambiguity pitch bars which were the things that were slightly discombobulating.
35 Declutter the display and not use them in certain circumstances.

AVM HARLAND: And did you still have distance to run available when that declutter was selected?

40 CAPT DAVISON: Which instrument, sir?

AVM HARLAND: On the TopOwl, when you selected the declutter mode, are you saying?

45 CAPT DAVISON: It's a few years now, [REDACTED]

██
██
Noting as well that the symbology set was an aid to situational awareness and was never certified for primary flight use. So not like a HUD on a jet which is certified, in most cases, to be able to be used for orientation without reference to instruments. Symbology was never designed/certified to that extent, and the primary reference for attitude was always going to be the instrument panel.

AVM HARLAND: Understood. Can you recall if distance to run was available on the HMSD if you selected one of those two declutter modes?

CAPT DAVISON: I would have to go back, but I believe it was in all modes.

MS MUSGROVE: Can we cut the feed? That's too specific. The specifics about what's displayed in the various declutter modes isn't available for this level of classification.

MS McMURDO: We'll have to - - -

MS MUSGROVE: So if that can be cut, please? Thank you.

AVM HARLAND: Thank you. Sorry, I led you along that way. Can we continue on, or do we want to hold?

MS McMURDO: No, we'll have to stop it. And it will only take a minute and then once we get the all clear, then we can start again. We can start again? We can start again now, okay.

AVM HARLAND: So going back to the MPTF – so we'll cut that TopOwl discussion. The Military Permit to Fly, so your main consideration was that the test could be conducted in a safe and effective way, and you applied limitations so that could be the case. But you didn't really have a view as to how the test outcomes would be used in the long run?

CAPT DAVISON: Nor should I. I mean, whilst I was and continue to be an operational pilot, I obviously have a professional interest in how it's going to be used. But in terms of whether or not it's a short period of time Military Permit to Fly for operational use for a constrained operation – and I can provide examples of things that were not in type design for use of Military equipment in an aircraft for a single use or a short period of operational use – and then that was no longer going to be a cleared piece of kit, if you like, to use in the aircraft, or whether it was going to be an enduring capability.

5 The difference really is the level of risk exposure for operating that piece of equipment or system. If it was for a short period of time, then the level of risk is going to be slightly higher because your exposure is low. If it's going to be for an enduring period of time, then your constraints and limitations are going to be more stringent because of the life cycle of the exposure.

10 AVM HARLAND: Understood. Thank you.

MAJ CHAPMAN: Thank you. So just before you were being asked questions by the Air Vice-Marshal about that, I think we were at the point of – and it's related to what your answers were, but you're imposing these conditions and limitations with MAJ Lamb on the testing to ensure that there was rigour to the testing reflecting the risk - - -

CAPT DAVISON: Safety rigour, yes.

20 MAJ CHAPMAN: And you say that because of the outcome of the AATES test and that you say in your statement you were insistent on the testing being highly constrained so as to safely gather data with ample time to cease testing should initial reservations be founded. Correct?

25 CAPT DAVISON: Correct. "Insistent" is probably the wrong. They wouldn't get an approval for their Military Permit to Fly application unless they made changes. So "insistent" is wrong, but it's – and it's a conversation and an explanation of thinking and methodologies. There was no resistance to it at all. It was accepted as being sensible and based on the previous findings by a test which had found it unacceptable; nothing but an abundance of prudence and caution was going to be called for for any further testing.

MAJ CHAPMAN: And you continue in your statement to say that:

35 *Gathering data was essential to delineating whether it was safe to use in general Army role environments by Standards crews and if so, what limitations might be required.*

40 Do you see that?

CAPT DAVISON: I do, yes. And I wouldn't say just Standards crews, which are the examiners, but Standard crews in the sense of average operational crewing.

45 MAJ CHAPMAN: And just to return to your Form 18b in the

application package, which included reference to the Flight Test Plan, you're aware that that included the significant number of controls that we've been talking about?

5 CAPT DAVISON: Yes. I am because I was the reason that they had been evolved to the extent that you see in the test plan.

MAJ CHAPMAN: Well yes. And so my question was that there was in the vicinity, we understand, about 24 controls?

10 CAPT DAVISON: I suppose if you add them all up together, then it might come up to 24. But the progression was people who have been trained on the system before, providing training, people being of a required experiential level in the aircraft, flying by day, dusk into night, being exposed to the symbology issues that were known and that sort of level of progression of cascade training, exposure and weather.

MAJ CHAPMAN: And some of those are fairly standard, you would say?

20 CAPT DAVISON: Yes. Day into night - - -

MAJ CHAPMAN: And two particular controls that were included which have gathered some prominence in these proceedings is one control being no flight below two millilux?

30 CAPT DAVISON: And that reflected limitations in the aircraft, the previous aircraft. So earlier iterations of the aircraft and symbology and the TopOwl night-vision device limited the use to above that threshold. So it was a way of articulating, in more scientific terms, a minimum light level for use so that it wasn't pitch black.

MAJ CHAPMAN: So the intent, though, was that on the testing sorties, they would not be flying below two millilux?

35 CAPT DAVISON: Correct.

MAJ CHAPMAN: And the second prominent – my words – control that was included was not to fly in the absence of a visual horizon?

40 CAPT DAVISON: Correct.

MAJ CHAPMAN: And those controls were designed, you'd agree, to just ensure that the conduct of the test activity was practised as safely as reasonably possible?

45

5 CAPT DAVISON: That is correct. But the evidence that you require to base your opinions on, during flight tests, can be gathered without having to go to the extreme of weather and environmental conditions and, therefore, you can get the benefit without having to expose crews to unnecessary risk during a flight test and still get the required data you need to base decisions on future use.

10 MAJ CHAPMAN: And to your knowledge, the testing was conducted in accordance with the test plan and these controls?

15 CAPT DAVISON: Yes. And test organisations are audited on those sorts of things. And we have Airworthiness Boards for Flight Test Organisations which focus on exactly that sort of thing, to ensure that they maintain an authority to continue to - - -

20 MAJ CHAPMAN: Yes. And assuming that to be the case, and there's evidence that it was the case, that meant that testing of this upgrade was not conducted in the OPEVAL if conditions fell below two millilux or in the absence of a visual horizon.

CAPT DAVISON: Correct.

25 MAJ CHAPMAN: And you'd agree that controls are particularly important in this context of flight test because you have pilots operating beyond or outside of normally approved parameters in the airframe?

CAPT DAVISON: Can you repeat that, please?

30 MAJ CHAPMAN: I'll move on from that one. I withdraw that one. I'll put another proposition. Just drawing on your experience and accepting that there were these levels of control, was this level of control, I think you said normal or higher than usual for this type of activity, in your experience?

35 CAPT DAVISON: It was probably high. And it varies from test to test. It depends what you're testing. It was, in my opinion, more stringent than it had been originally included in the test plan. And the reason for that was because of previous findings in the Army role and environment which were not found in the Navy role and environment but still had, therefore, to be treated with an abundance of caution if we were going to go from something that had been found unacceptable, to more wider testing to gather the evidence required for limitations or whether it was appropriate or safe or whatever.

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MAJ CHAPMAN: And when you say in your statement that, “The outcomes of the data-gathering would be central to determining what limitations might be required”, do you recall giving that evidence in your statement?

5

CAPT DAVISON: Yes.

MAJ CHAPMAN: Is that a reference to limitations that might be required to be imposed on Service Release? Is that what you were talking about?

10

CAPT DAVISON: Yes. So the architecture of a Flight Test Report identifies deficiencies and makes recommendations which are then open to being accepted or rejected by the Operating Authority.

15

MAJ CHAPMAN: Understood. And are you aware that in April 2020, around about April 2020, the Director-General Army Aviation recommended Service Release of version 5.10?

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CAPT DAVISON: Am I aware of it, or - - -

MAJ CHAPMAN: Yes, are you aware of it? Just yes or no.

CAPT DAVISON: I don’t recall, but I would have imagined it would’ve been released if it had been, yes. Yes.

25

MAJ CHAPMAN: And in April 2020, a Configuration Control Board effectively endorsed Service Release of version 5.10?

30

CAPT DAVISON: I wasn’t aware, but it doesn’t surprise me.

MAJ CHAPMAN: And are you aware, more particularly, that version 5.10 proceeded through those gates without reference being made to the two specific controls that we’ve just been discussing. So flight below two millilux and in the absence of a visual horizon?

35

CAPT DAVISON: Again, if the evidence garnered from flight tests showed that there were no implications of the symbology in further liberal environmental conditions, I would see no reason for there to be an additional limitation. You don’t have to test necessarily to the extremes of conditions in order to prove the system is safe and effective within other constraints.

40

If there were no aircraft limitations on two millilux, which there weren’t, I don’t believe at the time, then there would be no reason in my mind,

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unless something specific was found from flight test to artificially constrain it. That was just a limitation for flight test.

5 MAJ CHAPMAN: I think we'd all agree you can't test every possible, conceivable scenario. It did allow, though, operators to fly the aircraft in conditions which had not been tested. Do you agree with that?

CAPT DAVISON: Yes.

10 MAJ CHAPMAN: And drawing on your significant experience, is it a concern to you either back then or even now that this upgrade was introduced to service without those limitations being placed on its use?

15 CAPT DAVISON: It isn't a concern when you look at the requirement for data density around areas. Bearing in mind that we are not certifying the equipment. It's been certified by the original equipment manufacturer. We are producing evidence to support our own recommendations based on our own operating environment and so on and so forth. The equipment is previously certified by the OEM.

20 MAJ CHAPMAN: No, in the hypothetical situation – and this is my last question on this topic – in a hypothetical situation that there were limitations put on the operation of – sorry, I'll start again. In a hypothetical situation of controls of that kind being lower than
25 two millilux and without a visual horizon, being imposed on Service Release, is it the case that if you were flying and conditions met that criteria, that they would be required to stop the activity, whatever it was?

30 CAPT DAVISON: Not if the type certification basis and the certification by the OEM provided no limitations, then there would be no direct link without test evidence to constrain the test article to the test plan conditions or the MPTF for flight test conditions. There would be no requirement unless you found something of concern to further constrain the aircraft equipment use in operational use if the certification basis of the aircraft
35 didn't provide that already.

MAJ CHAPMAN: So even if this had been released to service saying, "You cannot fly below two millilux or in the absence of a visual horizon", you're saying there would be no extant requirement of pilots to stop the
40 activity?

CAPT DAVISON: I misunderstood you. So if - - -

MAJ CHAPMAN: I was probably unclear about it.
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CAPT DAVISON: If the release had stipulated not less than two millilux - - -

MAJ CHAPMAN: Yes, correct.

5

CAPT DAVISON: - - - and without a visual horizon you should not be flying, then absolutely that is the limitation placed and should be obeyed by the crews. Irrespective of the type certification of the aircraft. You can always further constrain the OEM.

10

MAJ CHAPMAN: Quite, thank you. Just moving to the topic of the - - -

MS McMURDO: Could I just ask this? The original AATES test was unacceptable and then there was the OPEVAL test with rigorous conditions, which we've discussed, assuming that after the OPEVAL test, which says, "Well, we think it can be managed, it's okay. AATES maintains its objection and say, 'We still regard it as unacceptable'." Would you expect it to proceed to Service Release without the strict conditions that AATES had put on the original OPEVAL?

20

CAPT DAVISON: Ma'am, that is a highly unusual set of circumstances. If the results from testing – and it's not unheard of in the history of flight test and operational aircraft release. If the findings from flight tests were that it was unacceptable, and for a safety reason, and it was released to general service use without some very significant limitations being placed upon it, that would be – in the face of further objections from the test unit, to me, based on those simple pieces of information, there would be a significant breakdown in, I suppose, the procedure of flight test recommendations and Service Release.

25

30

MS McMURDO: Thank you.

MAJ CHAPMAN: Turning to the second aspect of your evidence, which is the OPSPEC, you were asked some questions by the Inquiry concerning those matters in paragraph 11 of your statement?

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CAPT DAVISON: Sorry, could you repeat that? I was - - -

40

MAJ CHAPMAN: Yes. I was just pointing you to your evidence - - -

CAPT DAVISON: Paragraph 11?

MAJ CHAPMAN: - - - about the Operational Specification from paragraph 11.

45

CAPT DAVISON: Yes.

MAJ CHAPMAN: Do you have that?

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CAPT DAVISON: I have.

MAJ CHAPMAN: And you explain that you gave the approval for the Military Permit to Fly in respect of the Operational Evaluation on 10 21 October 2019.

CAPT DAVISON: I did.

MAJ CHAPMAN: And, I'm sorry, I'm going to have to take you to a few dates here, so bear with me. You say that the process for providing assurance was a review of the documents underpinning the application to ensure the latest versions were used. Is that right?

15

CAPT DAVISON: Yes.

20

MAJ CHAPMAN: And this included reviewing the Operational Specification. That is your practice. Is that correct?

CAPT DAVISON: Yes.

25

MAJ CHAPMAN: And you say that you would usually access the Operational Specification on the DASA website for that purpose?

CAPT DAVISON: In this particular case, that's the only option I would have had. And I would, again, note that my normal ecosystem for this work was Navy. And I had the Military Air Operator's certificate and the underpinning OPSPEC pinned to my noticeboard and I knew exactly when the OPSPEC was superseded, and I made sure – and it was given to me.

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It was provided to me through several sources for belt and braces and I would make sure I flicked immediately to the section for flight test to ensure that there were no changes. It would be very strange for me to have a change in my own authorisation for flight test for the Military Air Operator, of which I was the Flight Test Unit who was keenly interested in it.

40

It would normally be messaged. It would normally be understood. I would normally have a conversation with DASA and they would say something like, "We're going to take away the authority flight test

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because of' – this. And I would know. With Army, because I was standing in as the DoSA-FT, the only area what I would be able to find a version to check would have been online. It could have been that I had presumed that it was the same as the last time I'd seen it, and I didn't
5 check. I don't know. But it's more likely that I checked online and the version that had been presented online was version 5. I don't know.

MAJ CHAPMAN: So, sir, we'll get to some of that. So you're saying in your evidence, and am I'm right in this, that there's an OPSPEC in respect
10 of Navy Test Flight Operations, like, generally.

CAPT DAVISON: Mm-hm.

MAJ CHAPMAN: And then there's one in respect of Army and Air
15 Force?

CAPT DAVISON: Each aircraft type – sorry, each Military Air Operator will have an Operational Specification which lists all the aircraft types they are able to operate and any constraints on their operation. And there
20 is also a section specifically for flight test.

MAJ CHAPMAN: Yes, understood. And we're going to get to that. And you said that you had the OPSPEC, I think you said pinned on the wall – the current version – because that represents the authority on which
25 you'd be issuing the MTPF?

CAPT DAVISON: And I used to show it to test pilots and test crews.

MAJ CHAPMAN: And you'd become aware of changes to that in a number of ways. The first, I think you said you'd be briefed, if not formally – you'd hear it in the community that there was change coming?
30

CAPT DAVISON: Yes.

MAJ CHAPMAN: And then once that change had been promulgated, it'd be sent down to you by a more formal means?
35

CAPT DAVISON: Yes. Through a number of means: directly through the DASA contact list, through the Headquarters Fleet Air Arm, but also
40 we would often push for up issue of the Operational Specifications and be waiting for it to drop.

MAJ CHAPMAN: And you'd be aware of that because you were the DoSA-FT. So in your Navy lane, you'd be provided with those updates, but you were not necessarily aware because you were not the RAAF or
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Army DoSA-FT of updates in their lanes, so to speak?

CAPT DAVISON: Correct.

5 MAJ CHAPMAN: And you would expect, would you, that any updates in those lanes to be sent down to GPCAPT Young, in this instance, in a similar way that you were updated as the Navy DoSA-FT? Is that fair?

10 CAPT DAVISON: That is fair.

MAJ CHAPMAN: And I think you've said because by reason of you in this – I think I used the word “caretaker” – but in the just standing in role for GPCAPT Young, I think your evidence is that the changes – perhaps the process was not agile enough to include you in the short duration you were in that role?

15 CAPT DAVISON: That's a speculation on my half, but yes.

MAJ CHAPMAN: So at paragraph 14 of your statement you say that notwithstanding the explanation – you agree that the approval that you gave on 21 October 2019 was made on the basis of version 6 of the OPSPEC? And I might at this point - - -

20 CAPT DAVISON: No, my approval – in accordance with the pack you presented earlier, my approval was based on version 5, but version 6 was extant.

MAJ CHAPMAN: Yes. And can I just ask the witness to be shown Exhibit 191. This is the OPSPEC documents, version 5, 6 and 7, which Chair and Air Vice-Marshal, they're behind tab 17, 5, 6 and 7.

25 CAPT DAVISON: Which I think I quoted in my statement.

MAJ CHAPMAN: And you were provided with that - - -

30 CAPT DAVISON: This is a Form 18b. Sorry - - -

MAJ CHAPMAN: I have Exhibit 191.

35 CAPT DAVISON: This is the Form 20A, 18b and 21. That's the wrong one.

MS McMURDO: Yes, 191. It's 191A, B and C. Which is Operational Specifications.

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MAJ CHAPMAN: No, that's not the document.

CAPT DAVISON: For expedience, if it helps, I have actually quote the sections in my - - -

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MAJ CHAPMAN: Yes, we might deal with it that way because you were provided with a copy of that material.

CAPT DAVISON: 6 and 7, not 5.

10

MAJ CHAPMAN: 6 and 7. I think we might have it. Thank you. So you say you were provided with version 6 and 7. Is that right?

CAPT DAVISON: I was provided with 6 and 7. As I've said in my statement, I accessed 5 myself.

15

MAJ CHAPMAN: And if we go to version 6 that was signed on 27 September 2019?

CAPT DAVISON: Yes, where it says – my response, “Reconduct flight test not categorised”, effectively.

20

MAJ CHAPMAN: Yes, that's right. And you signed the MTPF on 21 October 2019?

25

CAPT DAVISON: With that as the extant.

MAJ CHAPMAN: Yes, with that as the – that's what my point is. That was the extant Operational Specification at the time you signed the Military Permit to Fly?

30

CAPT DAVISON: Correct.

MAJ CHAPMAN: And the next version came in, that's version 7 on 12 February 2020?

35

CAPT DAVISON: Yes, where the endorsement for the flight test is returned.

MAJ CHAPMAN: Yes. So we agree that the extant version one applied when you signed was on version 6.

40

CAPT DAVISON: Correct.

MAJ CHAPMAN: And it was version 6 where, as you've just identified,

45

said that “categorised flight testing”, or “Army may not sponsor or conduct categorised flight testing 1 to 4”?

5 CAPT DAVISON: I don’t think that’s exactly what it says.

MAJ CHAPMAN: That was my summary of it.

CAPT DAVISON: Yes.

10 MAJ CHAPMAN: “Army may not sponsor or conduct categorised flight test” - - -

CAPT DAVISON: No, it says:

15 *Army may conduct Flight Test Operations in accordance with the following provisions.*

Army may sponsor or conduct flight test events that are not categorised –

20 which is – and I believe at the time there was speculation as to why that was so changed from the previous version, because that is an issue. I wasn’t privy to any of the discussions about that.

25 But I seem to remember in my mind the area of the OPSPEC which historically showed a relatively either poor understanding or a little bit of absence of thought where the flight test provisions – but I suppose, in answer to your question, I endorsed the Military Permit to Fly for the trial which was categorised as Flight Test 1 to 4 under the extant OPSPEC, 30 which has the restriction of not Category 1 to 4. I think that’s what you’re trying to get me to.

MAJ CHAPMAN: Yes. So just to be clear, we’re talking about the same document, the flag is 6?

35 CAPT DAVISON: Yes.

MAJ CHAPMAN: It’s version 6 and it says this – and I’ll just put this on the record as the correct provision:

40 *3.3.1 Army may conduct Flight Test Operations in accordance with the following provisions:*

(a) Army may sponsor or conduct flight test events that are not Category 1 to 4, in accordance with DASR FT.

45

So it's saying there - - -

CAPT DAVISON: Yes.

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MAJ CHAPMAN: - - - fairly clearly that Army may not conduct categorised flight test activities.

10 CAPT DAVISON: And I believe my recollection is around the fact that the provision had an errant "not" in it. That not was inadvertent, because that does prohibit conducting categorised flight tests.

MAJ CHAPMAN: It prohibits the central work of the Flight Test Organisation. Correct?

15

CAPT DAVISON: Absolutely. Which is not something that would be done lightly. And it would be done as a result of a significant Airworthiness Board for Flight Test shortfall. It would be something discussed with the Military Air Operator and would be presaged and known. This is not a triviality.

20

MAJ CHAPMAN: No. And given the effect of this would be to functionally remove the ability of AATES to conduct any work, that's something which even noting you're the Navy DoSA, if that was coming down the line, you would be aware of that?

25

CAPT DAVISON: I would probably have had a conversation with GPCAPT Young about it, yes, in that sense. And just for clarification, if the OPSPEC had dropped for Navy that included that limitation, I would make two phone calls. The first one would be to DG DASA to say, "Did you mean that?" And the second one would be to the Captain of any ship that my team were on to say, "Cease flying operations, irrespective of Military Permits to Fly". That is the governing document.

30

MAJ CHAPMAN: Because that's the foundational authorisation for the Military Permit to Fly. So if there's a removal of that authority, they are rendered nugatory or no effect.

35

CAPT DAVISON: Correct.

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MAJ CHAPMAN: But just to be clear about what was approved here was Category 4 testing in those circumstances? Just as a fact.

CAPT DAVISON: So my endorsement of the MTPS was for CAT 4 flight test.

45

MAJ CHAPMAN: Now, then you say at paragraph 14 that had you been – as you’ve just given evidence, had you been aware of the change you would not have approved the application for a Military Permit to Fly for flight test or would have made reference to the limitation.

CAPT DAVISON: Yes.

MAJ CHAPMAN: And you say at paragraph 15 that the OPSPEC was always at the forefront in your mind and that of your team. Do you see that?

CAPT DAVISON: I do.

MAJ CHAPMAN: And then you say that had you been aware of this version of the OPSPEC as limiting testing in this way, as you’ve just said, irrespective of holding an approved Military Permit to Fly, you would’ve ceased testing until it was resolved.

CAPT DAVISON: As I’ve just mentioned.

MAJ CHAPMAN: And is the Inquiry to understand from this, sir, that those conducting the Operational Evaluation had – from your perspective, did they have a responsibility to confirm that the activity was being conducted compliant with a valid OPSPEC?

CAPT DAVISON: Yes.

MAJ CHAPMAN: And that if that step had been checked, they would’ve realised that the OPSPEC did not permit the conduct of the activity and needed to be approached in another way?

CAPT DAVISON: Correct.

MAJ CHAPMAN: And are you aware of the OPSPEC or a requirement to check the validity of it as forming part of a checklist prior to testing?

CAPT DAVISON: I didn’t have a checklist as such. It was based on my knowledge and experience and my prior experience. But, yes, there are documents which are included in the Form 18b, as a reference, which you provided me earlier, and the reference documents are those documents which underpin the application and that I would normally expect myself to check.

MAJ CHAPMAN: Yes, my question was slightly different. It wasn’t so

much you checking, because you've given evidence about that. I think you've given an answer that the individuals conducting the testing had a responsibility to check that the testing was compliant with an extant OPSPEC. I think your answer to that was yes.

5

CAPT DAVISON: Yes.

MAJ CHAPMAN: And my question was, did that requirement to check the extant OPSPEC, and the validity of it, did that form part of some pre-testing – on the people on the ground, pre-testing checklist that you're aware of?

10

CAPT DAVISON: I can't speak to the methodologies of AATES in that regard, but we at AMAFTU, and I think AATES followed a similar procedure, we would have a trials readiness review where these documents were checked and all the assumptions based on the safety requirements and the document sets and all those things were given a tick and a green light, or there were limitations placed upon the trial from an MPTF perspective to cover any shortfalls or unknowns.

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MAJ CHAPMAN: Do you know if that process is undertaken in Army Aviation?

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CAPT DAVISON: The answer is no. However, in accordance with airworthiness requirements, they are required to submit all their documentation, and the documentation has to include access to test plans and appropriate filing of documents like this, and test reports, and so on and so forth. So the Airworthiness Boards audit or their Flight Test Organisation would expect to see evidence of those sorts of mechanisms, yes.

35

MAJ CHAPMAN: Would you agree that there's value in some check being taken immediately prior to testing that it's being conducted in accordance with a compliant OPSPEC?

MAJ CHAPMAN: How close in time is a trial readiness review to actually conducting the testing?

40

CAPT DAVISON: It sometimes can be the same day as the first flight test.

MAJ CHAPMAN: And there's value in that approach and accepting that you don't know whether that's Army's approach, because an MPTF

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could, for example, be valid at one point in time and then the OPSPEC may change and render it invalid. Unusual, but possible?

5 CAPT DAVISON: Well, certainly possible. Again, a restriction that's specific with regards to flight test would not be taken without some significant issue requiring a removal of that authority, which is why I'm recollecting the OPSPEC inclusion of an errant "not". And I don't know whether they repechage that with the Safety Authority, but certainly the change from being allowed, to disallowed, to version 7 where it was
10 allowed again, is something that is significant and unusual.

MAJ CHAPMAN: Now, just coming towards the end of your statement, you say at paragraph 16 that you don't have a recollection of any conversations between you and your staff or anyone else regarding
15 reissuing the OPSPEC.

CAPT DAVISON: No, absolutely. As I attested, I didn't know that version 6 was - - -

20 MAJ CHAPMAN: Certainly. And you again make the point that the category for flight testing should not have been conducted against version 6 of the OPSPEC without clarification being sought from DASA actual. Is that right?

25 CAPT DAVISON: Correct.

MAJ CHAPMAN: That didn't occur, to your knowledge?

30 CAPT DAVISON: I'm unaware.

MAJ CHAPMAN: And you say further that by reason of your temporary standing in that role, you were less intimately involved in the limitations that applied to Navy?

35 CAPT DAVISON: Yes. And my role, not only as the DoSA-FT but more specifically as OIC AMAFTU.

MAJ CHAPMAN: And turning to version 7 of the OPSPEC – and you were provided with a copy of that. Correct?
40

CAPT DAVISON: Correct.

MAJ CHAPMAN: Can you just turn to that? And do you see in version 7 that there's this specific reference to Army Aviation Test and
45 Evaluation Section being authorised to conduct testing in 3.3.1 of

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version 7?

CAPT DAVISON: Yes. Mine says, "Not CAT 1 to 4".

5 MAJ CHAPMAN: So if you go to, sorry, 3.3.1(a), it says the same as version 6, which is:

Army may sponsor or conduct flight test events that are not Category 1 to 4, and in accordance with DASR.

10

So that's the blanket prohibition. Do you agree with that?

CAPT DAVISON: (No audible reply).

15 MAJ CHAPMAN: And then, sir?

CAPT DAVISON: I do. So, looking at it, it seems that they've inserted an authority under a prohibition.

20 MAJ CHAPMAN: Yes, I'm coming to that.

CAPT DAVISON: Okay.

25 MAJ CHAPMAN: So the blanket, if I can put it that way, the blanket prohibition is in (a) and then you have the insertion in version 7 of (b) which is:

The Army Aviation, AATES, may conduct Category 1 to 4 flight testing under a Military Permit to Fly.

30

CAPT DAVISON: Yes.

MAJ CHAPMAN: And do you see also then, (c):

35 *Army may conduct Category 4 flight testing under Military Permit to Fly issued in accordance with –*

a reference there.

40 CAPT DAVISON: Yes.

MAJ CHAPMAN: So you have there this carve-out for AATES to be conducting Category 1 to 4 testing. And do you know why that occurred or - - -

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5 CAPT DAVISON: That is a very clumsy way of articulating Flight Test Authorities from an area which may not necessarily have understood flight test quite as well as the DoSA-FTs. But, yes, whilst it's clumsy, it seems to be driving to the point where Army aren't allowed to do flight test, but you wouldn't need to say that because if you're not qualified to do flight test, you're not doing flight test.

10 You don't have to be told not to. You can only be authorised to do it. So Army, through AATES, are given authority to do flight test 1 to 4 but also given authority to do flight test Category 4, which is a very clunky way of putting it.

MS McMURDO: It seems duplicitous.

15 MAJ CHAPMAN: Yes.

20 CAPT DAVISON: And I think, and I don't know, but I suspect that having had a loose authority which was too broad in version 5, they've tried to correct it and have included an errant "not", which may have been clarified with DASA. And then in 7 they've tried to tighten it up and be clear and have provided a very clumsy authority. Certainly the OPSPECs that I remember for a Navy perspective were simple and clear.

25 MAJ CHAPMAN: Would you expect changes to this OPSPEC to go by DASA?

CAPT DAVISON: They are issued by DASA.

30 MAJ CHAPMAN: They are. Sorry. Through the – I withdraw that. Just in relation to your experience – and the last question – the level of detail that you've seen in the OPEVAL Test Plan and the Military Permit to Fly application, how does that compare with what you would routinely see in Navy applications?

35 CAPT DAVISON: It does vary from trial to trial. The level of detail, from my rereading of the document a couple of weeks ago, was that the level of detail didn't – it wasn't quite the same as I would've expected and hoped for from my own organisation. I think we all have rose-tinted glasses about some aspects to do with our own organisation compared to
40 others.

We worked very closely with AATES. But certainly the data they were gathering and the incremental manner of that was very good, I think.

45 MAJ CHAPMAN: So even if it was perhaps less detailed than you

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expected, that you were used to seeing with Navy, you would have been satisfied that it was sufficient to approve the Military Permit to Fly?

5 CAPT DAVISON: I wouldn't have approved it had I not.

MAJ CHAPMAN: Yes. Those are my questions, thank you.

10 MS McMURDO: Thank you. Are there applications to cross-examine?
How long?

LCDR GRACIE: 10.

MS McMURDO: 10. Any other applications to cross-examine?

15 MR O'MAHONEY: Maybe five minutes.

MS McMURDO: Five minutes. Okay, let's start with you,
LCDR Gracie.

20

<CROSS-EXAMINATION BY LCDR GRACIE

25 LCDR GRACIE: Sir, my name is LCDR Malcolm Gracie, representing
the interests of CAPT Danniel Lyon of Bushman 83. Thank you for your
time, sir. I want to ask something a little bit off topic so far, but it's to do
with the Jervis Bay incident. And there's been some evidence before the
Inquiry about the Service Bulletin being released in about 2017 warning
of the problems associated with the high-pressure turbine in the MRH-90s.

30

There was some consideration of that issue that involved Army Aviation.
It also involved, I think, CDRE Smallhorn then, when he was - - -

35 CAPT DAVISON: COMFAA.

35

LCDR GRACIE: Yes, thank you. I saw a document where he preferred,
of three options, the option of immediately grounding the fleet and
upgrading those engines or taking on the modifications. Do you know if
that occurred for Navy as opposed to Army?

40

CAPT DAVISON: So is your question whether Navy did?

LCDR GRACIE: Yes.

45 CAPT DAVISON: I believe we grounded the fleet and looked to

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incorporate the modifications, from memory.

LCDR GRACIE: So this is before JB, the incident in '23. This is on - - -

5

CAPT DAVISON: It relates to an incident where an aircraft had an engine failure – being transited from, I believe it was Adelaide, and had an engine failure and the resultant investigation into that engine failure showed that there was asymmetric cooling through the engine creating bend in the shaft and that there was a cool down requirement and a modification to the engine. Is that - - -

10

LCDR GRACIE: No, it was more just to do with the Service Release.

15

CAPT DAVISON: Okay.

LCDR GRACIE: There was some discussion between Army and Navy about which were the best options to pursue.

20

CAPT DAVISON: Okay.

LCDR GRACIE: As to whether - - -

25

CAPT DAVISON: I would not have been privy to those discussions between the MAOs.

LCDR GRACIE: But do you know when Navy went about the modifications to the high-pressure turbine, the subject of the Service Release?

30

CAPT DAVISON: I can't remember.

LCDR GRACIE: Would it be done at the same time as Army? Does DG AVN - - -

35

CAPT DAVISON: It would be unlikely that the Military Air Operators would have done something like that out of lockstep. Their discussions may normally have been about which aircraft to prioritise based on operational needs.

40

LCDR GRACIE: Or different opinions within Navy and Army, but DG AVN has the final say.

45

CAPT DAVISON: I don't know that to be true. The discussion would more likely have been around the necessity based on the operational

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environments and the operational imperative of whatever was going on. But I don't know that DG AVN would necessarily have had primacy over COMFAA. I don't think that's the case.

5 LCDR GRACIE: And can you recall when Navy stopped operating its fleet of MRH-90s? What year?

CAPT DAVISON: It was after I left flying, so it would've been around 2022.

10

LCDR GRACIE: '22. So before the Jervis Bay incident.

CAPT DAVISON: I think so, yes.

15 LCDR GRACIE: And – sorry, I withdraw that. Can I take you to a part of the AMAFTU report. It's Exhibit 109, I think I mentioned Annex B. There are only extracts. One thing I'll do just before I ask you a question is I'll just confirm for the Inquiry that I've done a double-check of the reference to the AMAFTU report that's in the OPEVAL and the
20 two decision briefs to DG AVN and they are referencing this report even though it's called a Phase 3 First-of-Class Trials, but that is the same document being referred to across all the other documents.

25 That's just an aside for you, sir. But to lead into that, does Phase 3 mean that there were two earlier iterations of some test, or is Phase 3 something different?

CAPT DAVISON: So, as you can appreciate, the size and complexity of the ship, the LHD, Landing Helicopter Dock, meant that it was going to
30 be very unlikely that all testing for all the spots was going to be completed in one phase. Phase 1 would generally be called Weather Ops, Phase 2 would generally be Hot Weather Ops, but I'd managed to change that to ensure that we had additional opportunities with an expensive asset to get as much clearance every time the ship was made available for testing with
35 different aircraft types.

LCDR GRACIE: And just if you can look at para 6.5.2 for me?

40 CAPT DAVISON: Yes.

LCDR GRACIE: Which it has a page number 45. Don't be misled by the earlier page number of 15. At page 45 there, bear in mind the classification of this FOUO, can you just have a look at the last sentence there of 6.5.2?

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CAPT DAVISON: 6.5.2, which section of it? There's 2.1(a) and (b).

LCDR GRACIE: Is this the AMAFTU report?

5 CAPT DAVISON: It is an extract of the Phase 3 First-of-Class Report.
And 3.5.2 has one subpara 3.5.2(1) and sub-subparas (a) and (b).

LCDR GRACIE: Sorry, unless I said it, I've misstated it: 6.5.2 on
10 page 45. Have you got that?

CAPT DAVISON: Sorry, it's on the back.

LCDR GRACIE: Just that last sentence.

15 CAPT DAVISON: Yes.

LCDR GRACIE: Did Navy, itself, undertake any further testing of that?

CAPT DAVISON: Not in my tenure at AMAFTU.
20

LCDR GRACIE: And if you - - -

CAPT DAVISON: So that is, in fact, a recommendation for further test.

25 LCDR GRACIE: By anyone or only by AMAFTU?

CAPT DAVISON: Well, for anyone. So the test report itself is not
constrained just to Navy. The test report is published across any
organisation that has interest in the outcomes.

30 LCDR GRACIE: Thank you. That assists. Can you just go up to the
third-last line, just before the last sentence of that subpara?

CAPT DAVISON: Mm-hm.
35

LCDR GRACIE: There's reference to "embarked operations". You
used the term earlier in your evidence "ship-to-ship". Is that an embarked
operation, ship-to-ship?

40 CAPT DAVISON: No. So I think the phrase I used – and I apologise if
it was "ship-to-ship" – it's from a ship to a ship. As in, it can be the same
ship. So when you're doing a First-of-Class Flight Trial you're
delineating the safe envelope for operating that aircraft on a ship. The
trial for a launch involves the lift from the deck, the moving across the
45 deck into free airspace, transition to forward flight and climb, hands off to

20 seconds of climb. And, once stable, climb parameters are established. The approach to a ship starts about a minute out and is the control ability workload factors and so on and so forth for the approach and landing on the ship.

5

So when I say “from a ship to a ship”, that’s under the remit of a First-of-Class Flight Trial.

10 LCDR GRACIE: And just in terms of getting a better understanding of “embarked operations” or its limitation, if you’re flying from HMAS *Albatross* to an LHD in Jervis Bay, that’s not an embarked operation, is it?

15 CAPT DAVISON: It’s an operation around embarkation. There are elements of it which clearly are overland from land. And so the use of symbology for anything other than what it was tested for cannot be recommended, necessarily, but it can be used as evidence to help support a case for or against a particular change to an aircraft.

20 LCDR GRACIE: Maybe I should have put this somewhat differently. The AMAFTU report was only conducting testing in an embarked operation. Meaning ship-to - - -

25 CAPT DAVISON: Under constrained – part of an embarked operation as well. Just the launch and recovery of aircraft, not broad operational use in a sea environment.

LCDR GRACIE: In other words, keeping the LHD, in this case, in line of sight?

30

CAPT DAVISON: Not necessarily, no. You can appreciate that Army role and environment involves a lot more requirement to be eyes out, looking to the side, looking forward and in proximity to the ground. So the environment of operating overwater and overland are different.

35

LCDR GRACIE: And that brings me into one thing. When the Navy are conducting embarked operations, is generally the approach to the LHD from the aft?

40 CAPT DAVISON: Yes. Yes, generally.

LCDR GRACIE: I saw, I think it was in 2006, with the Black Hawk on *Kanimbla* not approaching from - - -

45 CAPT DAVISON: And that was subsequent phases of trials. Unless

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you want me to, I won't go into the reasons for that, but there are good reasons why you might want to consider approaches which are less traditional to maximise operational capability for a ship that may not be underway.

5

LCDR GRACIE: But you have strong visual cues on that approach with the ship and - - -

10 CAPT DAVISON: You do. But there are absences of cues and lighting which can be a barrier to safe operations, which is why you do test.

15 LCDR GRACIE: Just before I move off the AMAFTU report, something that I had missed previously. If you go up to 6.5.1, again, just bear in mind, this is FOUO. You see Table 6.1, the second-last block under "Impact"? And you see there's a reference to "slightly distracting impact" for some of the crew dealing with the pitch ladder non-conformal thing?

20 CAPT DAVISON: Yes.

LCDR GRACIE: Would it surprise you that of the 12 pilots who conducted the OPEVAL, none of them had that same experience as reported here in the AMAFTU report?

25 CAPT DAVISON: It would surprise me.

30 LCDR GRACIE: Just as a little bit of information, not questions, just to try and elicit some information, could I ask you to look at the OPEVAL, Exhibit 121? I just want to try and get a handle on one aspect of it. You may have a pseudonym list there, and if you need it, feel free to, but if you could go to the schedule at the end of the OPEVAL for me, please? And this is classified "Official", so I'll just ask you to look at it.

35 CAPT DAVISON: The schedule?

LCDR GRACIE: Yes. There's a schedule at the back of the OPEVAL. There's Annex B after – so Annex A is the "Conclusions and Recommendations, Advice for Readers". And then Annex B has the "Questionnaire Results". Do you see that there?

40

CAPT DAVISON: I've got B1 and B2.

45 LCDR GRACIE: It should be in landscape format. And you'll see a series of names at the top, and pseudonyms. Do you see them there?

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CAPT DAVISON: Yes.

5 LCDR GRACIE: Before we get to the pseudonyms, there's one who's been redacted, but do you know the name of the Navy pilot or pilots that participated in the OPEVAL? You don't have to give it. I'm just wondering if you know?

CAPT DAVISON: I don't see any Navy names there that I recognise.

10 LCDR GRACIE: Can you recall whether there was more than one Navy pilot in the OPEVAL, or any?

15 CAPT DAVISON: I can't recall there being any. I don't think there were any involved in the – and also a Navy pilot conducting a test in Army operational environment would not necessarily value add unless they had Army role and environment experience.

LCDR GRACIE: SO experience in this case. Yes?

20 CAPT DAVISON: I wouldn't constrain it specifically to Special Operations unless that was the intended output of the use of that particular symbology set.

25 LCDR GRACIE: Because one of the recurring themes in relation to the value that the OPEVAL provided was that it had a mix of Army and Navy line pilots, QFIs and so it gave that extra breadth of experience and input. That doesn't ring any bells?

30 CAPT DAVISON: No.

LCDR GRACIE: About the names there? Can I show you this piece of paper?

35 CAPT DAVISON: At the time of this, there were only three Navy MRH test pilots, of which I was one, and my other two were well known to me, and I don't remember them partaking in the trial.

40 LCDR GRACIE: Doing that. I'll just show you this name that's come up in some evidence. I just want to know if you know this person, being a Navy Officer. Do you know that person? It may not even be that person. Do you know that name - - -

CAPT DAVISON: No.

45 LCDR GRACIE: - - - as a Navy pilot?

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CAPT DAVISON: No. I don't.

5 LCDR GRACIE: Thank you. And just before I finish, because I have
only one other thing. I just want to come back to that AMAFTU
report. There was some characterisation of the AMAFTU report as
making the finding of, "Satisfactory for operating in a maritime
10 environment". Now, it might not come as any surprise to you, sir, after all
your years in the Navy, that's what the Navy does, it tends to operate in a
maritime environment. But would you agree with me that the
characterisation of "maritime environment" is different to an "embarked
operation"? They mean different things, don't they?

15 CAPT DAVISON: They do. You can operate in an embarked
environment in the Army role and environment from a ship to the land, do
your mission and come back. That's an operational environment. In the
embarked environment – sorry, a maritime environment would more
traditionally be, expected to be an area search, search and rescue over
water, a coastal littoral.

20 LCDR GRACIE: That's the key thought, isn't it, coastal littoral, sea?
We're talking about sea and ocean, basically, aren't we?

25 CAPT DAVISON: Generally speaking, yes.

LCDR GRACIE: So that would include Jervis Bay, Whitsundays?

CAPT DAVISON: Yes.

30 LCDR GRACIE: Port Stephens.

CAPT DAVISON: Yes. And, in fact, Army were quite specific in
constraining Navy operations with them in their environment as well
at - - -

35 LCDR GRACIE: It doesn't stop becoming a maritime environment if
you're flying an MRH-90 over the water, around the Whitsundays,
because there's islands. It still stays maritime, doesn't it?

40 CAPT DAVISON: Yes. Littoral.

LCDR GRACIE: Littoral, thank you. Right, nothing further. Thank
you, sir.

45 CAPT DAVISON: Thanks.

LCDR GRACIE: Ma'am.

MS McMURDO: Yes. Mr O'Mahoney.

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<CROSS-EXAMINATION BY MR O'MAHONEY

10 MR O'MAHONEY: Just very briefly, sir. My name is O'Mahoney. I appear for Airbus. Sir, about 45 minutes ago you gave, I think an answer to the effect that when flying, the primary guide for pilots was, I think your words were, the instrument panel, or words to that effect. You've made a motion with your hands.

15

CAPT DAVISON: Yes.

MR O'MAHONEY: Could you just very quickly step the Inquiry through what you mean by that?

20

CAPT DAVISON: So when I first became qualified on the aircraft, the symbology set was a previous iteration to the version 4. I'm trying to remember the version. And the discussion was around the use of the symbology set which had a very coarse pitch ladder. I think the pitch ladder increments were 10 degrees.

25

And there were instances where looking at the symbology you couldn't actually see any of the pitch ladder because the field of view of the symbology set was smaller than the gap between the two – the zero, for example, and the 10 degree pitch ladder. Further iterations added a

30

But during the course of this being found unsatisfactory, I remember there being a point that the symbology set was not certified to be primary use. So unlike a HUD in a jet, for example, the symbology set was an aid to situational awareness and was not there designed to be used as primary reference for attitude. The attitude information derived for the aircraft in instrument meteorological conditions or night, for example, was the instruments provided on the multifunction displays.

35

40

MR O'MAHONEY: Thank you. Is another way to put that – and I don't want to get caught up on terminology – but is another way to put that, that the relevant symbology you just referred to is not a Primary Flight Display?

45

5 CAPT DAVISON: That is correct. And in fact, the first four or five years of operational use or encroachings or improving operational use of the MRH-90, the ADF elected to favour and prefer use of the – I think it was the Alpha helmet with night-vision goggles which had no symbology whatsoever. So the aircraft was only operated with visual references and with reference to flight instruments on the primary flight devices.

10 MR O'MAHONEY: And does it accord with your understanding that the HMSD is really properly described as a mission system or a mission display?

15 CAPT DAVISON: It would be difficult to pigeonhole it in those terms because it is solely present in the pilot's field of view when used. But, as I've stated before, the ability to have several declutter modes, or options for particular symbology display, they can either be decluttered or they could be configured to produce different displays for different environments would indicate that the symbology set was there for situational awareness improvement, not primary use.

20 MR O'MAHONEY: Thank you. I don't have any further questions.

25 MS McMURDO: Thank you. No other applications to cross-examine? Any re-examination? Thank you very much Captain for your assistance to the Inquiry. It's been very helpful. Greatly appreciated. You're free to go. Could I just remind you that giving evidence to an Inquiry like this can actually be more confronting than people realise and please, if that does turn out to be the case, remember there is assistance available and don't hesitate to utilise it.

30 CAPT DAVISON: Thanks, ma'am. Thanks, sir.

35 MS McMURDO: We'll have a 10-minute break before the next witness. I understand LTCOL Healey, the next witness, BRIG Fenwick, you'll be taking?

LTCOL HEALEY: I will be. That's right, Madam Chair.

40 MS McMURDO: Yes. Thank you. We'll resume in about 10 minutes. Thank you.

<WITNESS WITHDREW

45

HEARING ADJOURNED

HEARING RESUMED

5

MS McMURDO: Yes, MAJ Chapman.

10 MAJ CHAPMAN: Thank you, Chair. The Inquiry's next witness is
BRIG John Fenwick, who I call.

MS McMURDO: Yes, being recalled.

15 INQUIRY ASSISTANT: Take that seat, sir. You're still under your
affirmation that you last took.

BRIG FENWICK: Righto, thank you.

20 **<BRIG JOHN FENWICK, on former affirmation**

<EXAMINATION-IN-CHIEF BY MAJ CHAPMAN

25

MS McMURDO: BRIG Fenwick, let me know if you need a break at
any time.

BRIG FENWICK: Sir, ma'am. Thank you.

30

MS McMURDO: Thank you.

MAJ CHAPMAN: Good afternoon, sir. I'm just going to go through
some preliminary matters before turning over to your Counsel, who will
35 lead your evidence.

BRIG FENWICK: Yes.

40 MAJ CHAPMAN: Sir, could you just confirm that you've received a
section 23 Notice to appear before the Inquiry today?

BRIG FENWICK: Yes.

45 MAJ CHAPMAN: And you've prepared, for the purposes of the Inquiry,
a further statement dated 26 March 2025?

BRIG FENWICK: Yes.

5 MAJ CHAPMAN: And I might hand you a copy of that. I understand your Counsel, COL Healey, will be tendering that. The first statement is dated 3 November 2024. That's your first statement you gave the Inquiry, sir?

10 BRIG FENWICK: Yes.

MAJ CHAPMAN: And that's, for the Inquiry's information, Exhibit 103. And the folder that you have there is your second statement, 26 March 2025?

15 BRIG FENWICK: Sorry, let me just check that date.

MAJ CHAPMAN: Certainly.

20 BRIG FENWICK: It's 24.

MAJ CHAPMAN: 24 March 2025, my error.

BRIG FENWICK: Yes, 24.

25 MAJ CHAPMAN: And there are 23 annexures to that document, is that correct, 23A?

BRIG FENWICK: Yes.

30 MAJ CHAPMAN: And do you wish to make any amendments to that document, sir?

BRIG FENWICK: No.

35 MAJ CHAPMAN: Thank you, sir. Those are my questions. I hand you over to your Counsel.

BRIG FENWICK: Thank you.

40 MS McMURDO: LTCOL Healey.

<EXAMINATION-IN-CHIEF BY LTCOL HEALEY

5 LTCOL HEALEY: Thank you, ma'am. I'll just tender that statement and those 23 annexures.

MS McMURDO: I think we'll make the original statement Exhibit 193A.

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#EXHIBIT 193A - ORIGINAL STATEMENT OF BRIG FENWICK

15

MS McMURDO: And this will be 193B.

**#EXHIBIT 193B - SUPPLEMENTARY STATEMENT OF
BRIG FENWICK AND ANNEXURES**

20

LTCOL HEALEY: May it please. Thank you, Chair.

25

BRIG Fenwick, you have some water there, so please feel free to pour yourself some water.

BRIG FENWICK: Thank you.

LTCOL HEALEY: You gave a statement previously; is that correct?

30

BRIG FENWICK: Yes.

35

LTCOL HEALEY: Now, I'll just take you there, just as a sort of methodology of running through this massive document that I've prepared with you. Now, in terms of your qualifications, could I take you to paragraph 6 of your earlier statement?

BRIG FENWICK: Yes.

40

LTCOL HEALEY: And it states that you have a Master's degree in Business Administration from Deakin University; is that correct?

BRIG FENWICK: Yes.

45

LTCOL HEALEY: A Bachelor of Arts Degree from University of New South Wales in Information Systems and Economics. Correct?

BRIG FENWICK: Yes.

5 LTCOL HEALEY: And you're a graduate of the Australian Command and Staff and Defence and Strategic Studies courses at the Australian Defence College; is that correct?

BRIG FENWICK: Yes.

10 LTCOL HEALEY: And you're currently now an Adjunct Professor at the Faculty of Business, Government and Law at the University of Canberra; is that correct?

BRIG FENWICK: Yes.

15 LTCOL HEALEY: And it's right that you're no longer in the Army; is that right?

20 BRIG FENWICK: I am functioning in a Reserve capacity still, but not full-time.

LTCOL HEALEY: So when did you cease in Aviation?

25 BRIG FENWICK: Well, I ceased full-time service in May 2021. So my last posting was in Aviation but, of course, I've had postings in and out as a senior officer since then.

30 LTCOL HEALEY: And what type of work are you currently doing for the Army?

BRIG FENWICK: So I am a senior Fellow at the Centre for Defence Leadership and Ethics. I'm also a Board member on Army's Landworthiness Boards, and that's pretty much it.

35 LTCOL HEALEY: And in terms of assisting the Inquiry, so I take it your statement is broken down into a number of headings; is that correct?

BRIG FENWICK: Yes.

40 LTCOL HEALEY: So just looking at paragraph 3(a), your Background and Qualifications in Defence, which we just largely went through. Correct?

45 BRIG FENWICK: Yes. Sorry, are you still looking at the original statement?

LTCOL HEALEY: No, back to your amplifying statement, I beg your pardon. That's my mistake.

5 BRIG FENWICK: Yes.

LTCOL HEALEY: So back to your statement dated 24 March 2025.

10 BRIG FENWICK: Yes.

LTCOL HEALEY: So you've broken that down into subheadings; is that correct?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: And in those subheadings you've got your role and function as DG Aviation in Defence prior to your retirement in 2021; is that right?

20 BRIG FENWICK: Yes.

LTCOL HEALEY: And then at 3(c) you talk about, "Service Release Process and Regulatory Procedures", so airworthiness. Is that right?

25 BRIG FENWICK: Yes.

LTCOL HEALEY: At 3(d) you talk about TopOwl more generally.

30 BRIG FENWICK: Yes.

LTCOL HEALEY: At 3(e) you talk about a relevant chronological background, the approval into the service of HMSD Version 5.10 TopOwl. Is that right?

35 BRIG FENWICK: Yes.

LTCOL HEALEY: And 3(f) you talk about your understanding and the circumstances surrounding the crash of Bushman 83; is that correct?

40 BRIG FENWICK: Yes.

LTCOL HEALEY: And (g) you conclude.

45 BRIG FENWICK: Yes.

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LTCOL HEALEY: Now, you've done that for a very good reason. And that is to take the Inquiry through your evidence in a systematic way; is that right?

5 BRIG FENWICK: Yes, that's right.

LTCOL HEALEY: And in a manner that shows that you followed certain procedures when approving TopOwl; is that right?

10 BRIG FENWICK: Yes. To be clear, approving the operational service of TopOwl.

LTCOL HEALEY: Thank you, sir. And we'll come to that because I understand there are a number of different procedures involved in that
15 process.

BRIG FENWICK: Yes.

LTCOL HEALEY: So turning to paragraph 6, you state in your initial statement also, but you stated that you qualified on seven aircraft types. Is that right?
20

BRIG FENWICK: Yes.

25 LTCOL HEALEY: And you have over 2000 hours of flying experience?

BRIG FENWICK: Yes.

LTCOL HEALEY: And for clarity, this is just the aircraft on which you qualified?
30

BRIG FENWICK: That's correct.

LTCOL HEALEY: You've also flown as a pilot on the Lynx?
35

BRIG FENWICK: Yes.

LTCOL HEALEY: The Apache?

40 BRIG FENWICK: Yes.

LTCOL HEALEY: The Black Hawk?

BRIG FENWICK: Yes.
45

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LTCOL HEALEY: The MRH-R90?

BRIG FENWICK: Yes.

5 LTCOL HEALEY: As well as the – is it Macchi?

BRIG FENWICK: Yes.

10 LTCOL HEALEY: The Hawk?

BRIG FENWICK: Yes.

LTCOL HEALEY: And the F-A18?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: You also state that you were posted into Gazelle with the British Army.

20 BRIG FENWICK: Yes.

LTCOL HEALEY: Is that right?

BRIG FENWICK: Yes, that's right.

25 LTCOL HEALEY: And what's Gazelle?

BRIG FENWICK: The Gazelle is a small single-engine aircraft not dissimilar to the jet ranger that was the Kiowa.

30 LTCOL HEALEY: And that was to the British Army Special Operations Squadron; is that right?

BRIG FENWICK: Yes.

35 LTCOL HEALEY: And what do you mean by that?

BRIG FENWICK: In this period, which was the mid-90s, Army in the British Army was forming a Special Operations Aviation capability. I was resident in a particular Squadron in the Army and I was posted to that Squadron.

40 LTCOL HEALEY: And you flew the MRH-90 in your role as DG AVN; is that right?

45

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BRIG FENWICK: Yes.

LTCOL HEALEY: And was that at night?

5 BRIG FENWICK: Yes.

LTCOL HEALEY: And why did you fly it at night?

10 BRIG FENWICK: Because I was not qualified on the aircraft, but I was making decisions about it, and I felt I should understand some things about it.

15 LTCOL HEALEY: Thank you, sir. And at paragraph 7, as you've previously stated, you're experienced in flying with night-vision devices. You wanted to elaborate on those?

20 BRIG FENWICK: Yes. So the point I was trying to make here is that I've flown on a number of devices since what I would call quite early days of the use of night-vision devices, and on a range of night-vision devices, all of varying quality and nature. So I have some experience in the development over 30 years of the quality of night vision and how we employ it.

25 LTCOL HEALEY: And you state you flew with four forms of night-vision devices; is that right?

BRIG FENWICK: That's right.

30 LTCOL HEALEY: And these included early iterations of night-vision goggles in the Kiowa.

BRIG FENWICK: Yes, Kiowa.

35 LTCOL HEALEY: Kiowa, sorry. With no – is that Head-Up Display?

BRIG FENWICK: That's correct.

LTCOL HEALEY: The Night Hawk?

40 BRIG FENWICK: That's correct.

LTCOL HEALEY: With no Head-Up Display.

45 BRIG FENWICK: Yes.

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LTCOL HEALEY: And then the ANVIS night-vision goggles in the Kiowa Warrior.

BRIG FENWICK: Yes.

5

LTCOL HEALEY: With a clip on Head-Up Display. What does that mean?

10 BRIG FENWICK: So the ANVIS that we were using in Kiowa Warrior, not dissimilar to the one we had here, was two night-vision goggles connected together. The clip on was a small round device that went on the front of one of your night-vision goggles and was then attached by a wire to the aircraft that fed information to it on the display.

15 LTCOL HEALEY: And I'll get to this shortly, but what was your experience in flying with night-vision goggles? Was it a fatigue issue?

20 BRIG FENWICK: Yes, it was very tiring. And hence, fatigue regulations actually stipulate you can fly less time at night than during the day.

LTCOL HEALEY: And why did they fatigue you?

25 BRIG FENWICK: Different things. Some of it was about the actual effect on your eyes of having two television screens in front of your eyes. Some of it is the nature of needing to scan regularly. So because it is a small field of view, you are always moving your eyes to incorporate that small field of view in what would be a normal scene. Then there's also the method by which they sit on your head, so the weight involved in them.

30

ANVIS, for example, had a battery pack on the back, which fed by wires to the front. Nighthawk, in contrast, had the batteries all contained in the very front of the night-vision device, which tended to weigh the helmet down and it wasn't balanced.

35

LTCOL HEALEY: Just for the purpose of the Inquiry, how did that differentiate with TopOwl, for example?

40 BRIG FENWICK: TopOwl was a much more spread weight and because all of the electronics and the power was provided by the aircraft through a control unit, that control unit was separate and so the actual weight on the head was much less.

45 LTCOL HEALEY: You say you flew the TopOwl in Tiger ARH?

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BRIG FENWICK: Yes.

LTCOL HEALEY: What's the Tiger ARH?

5

BRIG FENWICK: It's an attack helicopter aircraft.

LTCOL HEALEY: You've flown in each of these devices in demanding visual environment, you state at paragraph 7.

10

BRIG FENWICK: Yes.

LTCOL HEALEY: You go through a number of those, commencing at, "(a) A genuine maritime environment, the Irish Sea"?

15

BRIG FENWICK: Yes.

LTCOL HEALEY: What do you mean by "genuine maritime environment"?

20

BRIG FENWICK: No visual reference to land at all.

LTCOL HEALEY: That was in formation; is that right?

25

BRIG FENWICK: Yes.

LTCOL HEALEY: A low level, below 200 feet; is that right?

BRIG FENWICK: Yes.

30

LTCOL HEALEY: And in low illumination?

BRIG FENWICK: Yes.

35

LTCOL HEALEY: Poor weather?

BRIG FENWICK: Yes.

LTCOL HEALEY:

40

In aircraft without Automated Flight Control Systems and without GPS.

BRIG FENWICK: That's correct.

45

LTCOL HEALEY: What do you mean by that?

5 BRIG FENWICK: So we were navigating essentially through the Irish Sea from South of England to Scotland on a number of occasions. The aircraft, the Gazelle, it had no flight automated systems, nothing where the aircraft helped you fly it, and it also had no GPS. So that meant that we were flying by time and heading overwater for continuous periods with no other navigation features to help us.

10 LTCOL HEALEY: You state:

That was with night-vision devices less capable than TopOwl.

15 BRIG FENWICK: Indeed.

LTCOL HEALEY: I don't want to repeat exactly what you've said at paragraph 7(b) there, but you also flew on the Prairies of Canada?

20 BRIG FENWICK: Yes. So if I can help you there, quickly.

LTCOL HEALEY: Thank you, sir.

25 BRIG FENWICK: The conditions that are there are, again, many of them re-stated, but different. So the nature of the cueing environment and the problems that you might face under night-vision devices occur in many environments, is my point there. Sometimes overland, sometimes overwater.

30 LTCOL HEALEY: I'll move to your next heading, of your role and function as DG Aviation in Defence. Are you at that point there? It's just above paragraph 8.

BRIG FENWICK: Yes.

35 LTCOL HEALEY: You state that you adopt and repeat your role and functions as DG Aviation; is that right?

BRIG FENWICK: Yes.

40 LTCOL HEALEY: That's from your original statement at Annexure 2; is that correct?

BRIG FENWICK: Yes.

45 LTCOL HEALEY: You're about to go through a few of those roles in

paragraph 9 and 10, but that's to assist the Inquiry; is that right?

BRIG FENWICK: Yes.

5 LTCOL HEALEY: And that's to assist it in terms of your involvement in the approval into service of TopOwl version 5.10; is that right?

BRIG FENWICK: Yes.

10 LTCOL HEALEY: You state at paragraph 9 you were posted to the role of DG Aviation from January 2019 until May '21?

BRIG FENWICK: Yes.

15 LTCOL HEALEY: What happened in May 2021?

BRIG FENWICK: I retired from full-time service.

LTCOL HEALEY: The location, that was at Russell Offices?

20 BRIG FENWICK: Yes.

LTCOL HEALEY: Your direct supervisor is the Commander of Forces Command?

25 BRIG FENWICK: Yes.

LTCOL HEALEY: But you were also responsive to direction from the Head of Land Capability.

30 BRIG FENWICK: Yes.

LTCOL HEALEY: You further state that that's a dual-hatting role.

35 BRIG FENWICK: Yes.

LTCOL HEALEY: What do you mean by that?

40 BRIG FENWICK: Effectively, I worked to two masters. So while Commander Forces Command was my direct report, if you like – I was responsible to him for his accountability as the Military Air Operator Accountable Manager. So I was looking after Airworthiness for him. Then in my role for Head Land Capability and, ultimately, the Chief of Army as the Capability Manager, I was responsible for all Army's
45 Aviation systems, both acquisition and sustainment.

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LTCOL HEALEY: At paragraph 10 you state that you were responsible for the management of all Army Aviation systems.

5 BRIG FENWICK: Yes.

LTCOL HEALEY: That was on behalf of the Accountable Manager.

10 BRIG FENWICK: Yes.

LTCOL HEALEY: That was Commander Forces Command; is that right?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: Commander Forces Command was the MAO-AM. What does that stand for?

20 BRIG FENWICK: The Military Air Operator Accountable Manager.

LTCOL HEALEY: You have annexed to your statement that Directive of 01/19?

25 BRIG FENWICK: Yes.

LTCOL HEALEY: That's Management of Safety, Operational Airworthiness within the Army.

30 BRIG FENWICK: Yes.

LTCOL HEALEY: Flying Management System. And it's referred to as Annexure 3 to your statement.

35 BRIG FENWICK: Yes.

LTCOL HEALEY: I'll just take you to that annexure. That document is titled, "The MAO Directive 1 of 19, Management of Safety, Operational Airworthiness within the Army, Flying Management System". Is that right?

40 BRIG FENWICK: Yes.

45 LTCOL HEALEY: If you turn to the back page of that document, which in essence is a snapshot. That's signed by a MAJGEN C A Field; is that right?

- BRIG FENWICK: Actually, the one I've got in front of me – so this is MAO Directive 01 of 19. The one I've got in front of me is dated 7 February '19.
- 5 LTCOL HEALEY: That's correct, I beg your pardon.
- BRIG FENWICK: By Greg Bilton.
- 10 LTCOL HEALEY: Yes. And then it's co-signed at the back, I understand, in a further document.
- BRIG FENWICK: Well, yes.
- 15 LTCOL HEALEY: Sorry, that's MAO Directive 3 of 19. I beg your pardon.
- BRIG FENWICK: Yes. To be clear, through this period, from the end of 2018 to the beginning of 2020, there were four Commanders of Forces Command. So this was issued at the commencement of MAJGEN Bilton's time as Commander Forces Command in February. Soon thereafter it became MAJGEN Field, and soon thereafter it became MAJGEN Pearse. Hence why you'll see three Commanders of Forces Command through this period.
- 20
- 25 LTCOL HEALEY: Thank you, sir. Now, just going through that document, if I take you to page – I think it's A2, so it must be Annexure A2, it's got at the top there, after Annex A. Can you see that? So if you go back a page - - -
- 30 BRIG FENWICK: Sorry, still on the Directive?
- LTCOL HEALEY: Still on the Directive. If you go past page 7, you'll see the heading, "Commander's Critical Information Requirements"?
- 35 BRIG FENWICK: Yes.
- LTCOL HEALEY: Then on the opposite page you'll see the heading, "DG Aviation Requirements".
- 40 BRIG FENWICK: Yes.
- LTCOL HEALEY: Can you just explain to the Inquiry what that means in relation to that document?
- 45

BRIG FENWICK: Yes. So the Commander's Critical Information Requirements were those things about which the Commander wanted to be notified when certain triggers occurred. And in this case, a lot of this is around fatigue. So the Commander had some and then at a level below
5 the Commander there were another set of requirements that allowed me to know with some warning time that we may hit a problem that may need to come to the Commander. They were a sort of lower level of requirements of notification that I required that would allow me some warning time before then needing to talk to the Commander.

10 LTCOL HEALEY: If you just turn that page you'll see Annex B to the MAO Directive, dated 7 February '19 up the top? It talks about the integration of the Safety Risk Management process. Can you see that?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: Is that familiar to you, that seven-step process, in terms of safety?

20 BRIG FENWICK: Yes, it is.

LTCOL HEALEY: Why is that familiar?

BRIG FENWICK: It is the mandated process for applying risk
25 management inside the MAO.

LTCOL HEALEY: Is that something you followed?

BRIG FENWICK: Yes. And insisted on others following.

30 LTCOL HEALEY: I'll come back to that at various points in your evidence. You also say you had responsibilities under the Military Air Operator Operational Airworthiness Management Plan; is that right?

35 BRIG FENWICK: Yes.

LTCOL HEALEY: I won't take you to that document, because you helpfully summarise that in your statement. So at 10(a), part of your responsibilities are:

40 *Ensuring that Army's Aviation capability operated in accordance with Defence Aviation Safety Regulations.*

Is that right?

45

BRIG FENWICK: Yes.

LTCOL HEALEY: And other Aviation-related Directives?

5 BRIG FENWICK: Yes.

LTCOL HEALEY: You state there at (b):

10 *Ensuring the Army's Aviation capability operated such that
Aviation safety hazards and risks in the personal safety dimension
were eliminated or otherwise minimised.*

BRIG FENWICK: Yes.

15 LTCOL HEALEY: We see that acronym of SFARP.

BRIG FENWICK: Yes.

20 LTCOL HEALEY: And (c):

*Managing Operational Airworthiness (OPAW) aspects of Army
aircraft systems acquisition.*

25 BRIG FENWICK: Yes.

LTCOL HEALEY: Would acquiring the 5.10 be, "aspects of Army
aircraft systems acquisition"?

30 BRIG FENWICK: Yes.

LTCOL HEALEY: Thank you. And:

35 *Performing the duties of the Accountable Manager for Army
Continuing Airworthiness Management Operations.*

Is that right?

BRIG FENWICK: Yes.

40 LTCOL HEALEY: You were also authorised, at paragraph 11, to:

*Make determinations regarding operations to ensure continuing
airworthiness and OPAW.*

45 BRIG FENWICK: Yes.

LTCOL HEALEY:

5 *Sign and release all Army MAO-issued orders, instructions,
publications on behalf of Commanders Forces Command.*

Is that right?

10 BRIG FENWICK: Yes.

LTCOL HEALEY: Now, those orders, instructions and publications will appear later in your statement; is that right?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: That's in terms of some of the recommendations that came out of some tests; is that right?

20 BRIG FENWICK: Yes.

LTCOL HEALEY: And I'll take you to that at the relevant time. At paragraph 11, specifically with relation to Service Release of new equipment – and that's at the top of page 4 – Operational Evaluation new Aviation systems for Service Release was conducted under your authority.
25 Is that correct?

BRIG FENWICK: Yes.

30 LTCOL HEALEY: And on behalf and direction of the Accountable Manager; is that right?

BRIG FENWICK: Yes.

35 LTCOL HEALEY: You've got a reference there to Annex 4. If I can just get you to go Annex 4 of your statement?

BRIG FENWICK: Yes.

40 LTCOL HEALEY: Looking at that particular document, it's the Military Air Operator Operational Airworthiness Management Plan signed by MAJGEN Pearse on 26 February 2020. Is that correct?

BRIG FENWICK: Yes.

LTCOL HEALEY: But more specifically, you ask the Inquiry to be taken to Annex C; is that right?

BRIG FENWICK: Yes.

5

LTCOL HEALEY: And that's paragraph C.2.6(c); is that correct?

BRIG FENWICK: Yes, that's correct.

10 LTCOL HEALEY: I'll just take you to that. Can you just tell the Inquiry what that means? I believe that's on – it's difficult to navigate because there's no page numbers, but it says, "Page C1 into page C2."

15 BRIG FENWICK: Yes. I think the specific paragraph around Service Release is the multi-subpara (c) on the very top of page C2.

LTCOL HEALEY: Thank you, sir. That's titled in bold "Service Release"; is that correct?

20 BRIG FENWICK: Yes.

LTCOL HEALEY: Noting that there's some sensitivity around the document, is that where you would go in terms of when you make decisions upon Service Release, one of those particular categories?

25

BRIG FENWICK: Yes.

30 LTCOL HEALEY: I'll take you to your next heading, BRIG Fenwick, and that's "Service Release Process and Regulatory Procedures". At paragraph 13 you make particular comment about words used in Aviation regulation and practice, and that they have meaning.

BRIG FENWICK: Yes.

35 LTCOL HEALEY: So you aim to be very specific about them in your statement. So what do you mean by that?

40 BRIG FENWICK: It can be commonplace to use words that have meaning in general English, but have very specific meaning in Aviation, and we use them very deliberately to have meaning. Things like, within the airworthiness system we talk about an "assure function", so organisations that assure things. Organisations that ensure things, so have to get things done, as opposed to assuring them. So the words have real meaning and if they are used casually, then the meaning gets lost or

misinterpreted, particularly by those who are not familiar with the terms every day.

5 Indeed, I go later on into my statement to talk about some particular terms that, again, if misused, will cause people to look at their meaning in particular documents incorrectly.

10 LTCOL HEALEY: Has there been any cause for concern during the Inquiry in terms of people using some of these terms incorrectly?

BRIG FENWICK: Yes. So there are some terms, like for instance the use of “a degraded visual environment” which have a kind of common English usage. They can also have very extensive complex terminology to describe variations and grades of degraded visual environments. And then if you go, for example, to the Special Instructions for Aviation Operations, you will see that DVE is only referred to in the context of the final approach and termination of particular activities. And indeed, that, as a term, is the way that a lot of the construct of the Head-Up Display was designed.

20 So I have observed that we are at times describing a degraded visual environment, which has merit at the time that it’s used and in the context that it’s used, but then when transposed to, how is that being affected in orders and instructions, it has a specific meaning. As I say, in SI Aviation Operations, pilots are required to do a certain number of DVE approaches per currency cycle. And that refers quite specifically to terminating an approach in a particular method to avoid the conditions that come with DVE at termination.

30 LTCOL HEALEY: So DVE, in your words, could have multiple definitions?

BRIG FENWICK: Yes.

35 LTCOL HEALEY: Depending on the task.

BRIG FENWICK: Yes. And so, therefore, if it’s used in one context by one person, it should not be assumed that everyone is interpreting it the same way.

40 LTCOL HEALEY: Thank you, sir. We’ll obviously track those particular terms as we go through your evidence. But at paragraph 14 you state:

The CA Directive 36/13 Army Aviation Capability Management thoroughly describes the management system for Army Aviation capability.

5 Is that correct?

BRIG FENWICK: Yes, that's right.

10 LTCOL HEALEY: You've annexed that to your statement, but you then helpfully summarise it. Actually, I withdraw that. But:

The OAMP –

15 which you've annexed at 4 –

then describes the approach to be taken on behalf of the Accountable Manager in modifying aircraft and equipment in Army.

20 What do you mean by that, sir?

BRIG FENWICK: The key point I'm trying to draw out here by linking the Chief of Army's Directive to the OAMP is the structure of authorities for effecting Aviation system management in the Army. So the Chief of
25 Army, as the Capability Manager, has stipulated how the capability is meant to be managed on his behalf. He has appointed an Accountable Manager to look after the Aviation systems and then, through the Head of Land Capability, the capability management responsibilities of the Chief of Army are effected according to that Directive.

30 The Operational Airworthiness Management Plan, referred to there as JRF 4, is Army's response to the requirements upon it for the Defence Aviation Safety Regulations. So it articulates how Army will conduct itself in Airworthiness management to conform with the Defence Aviation
35 Safety Regulations and then that is agreed by the Defence Aviation Safety Authority.

40 LTCOL HEALEY: So perhaps I'll take you to your Annexure 5, which is the Army Aviation Capability Management Directive. Once you're there, you'll see the title is "CA Directive 36 of 13", titled, "Army Aviation Capability Management". Correct?

BRIG FENWICK: Yes.

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LTCOL HEALEY: So that I'm following, or the Inquiry's following, you talk on page 3, at paragraph 10 there, of your responsibilities. Is that correct?

5 BRIG FENWICK: Yes.

AVM HARLAND: Where is this, sorry?

10 LTCOL HEALEY: Sorry, sir. So it's in Annexure 5 to the statement, so JRF 5, and it's on page 3, sir.

BRIG FENWICK: And it's FOUO, sir.

15 AVM HARLAND: I don't have that. I've got a MAO Directive at JRF 5.

20 LTCOL HEALEY: That could be my absolute fault there. I'm not really going to talk to it, sir, if that's helpful, other than to say, is that where you draw your professional responsibilities from?

BRIG FENWICK: Yes. So what this outlines is – sorry, I'll just wait for the Chair.

25 MS McMURDO: We'll share.

LTCOL HEALEY: Yes. I'm very apologetic for that.

MS McMURDO: No, no.

30 LTCOL HEALEY: Sorry, sir. You go on about that paragraph 10, please?

35 BRIG FENWICK: The reason for this structure and the reason why it's articulated this way is to make it clear, because the Commander Forces Command, as the Accountable Manager, is regularly or was regularly not an Aviator. It made quite clear the responsibility then on the Senior Army Aviator, the DG for Aviation, and their role and responsibility as the subject matter expert in Army's Aviation.

40 LTCOL HEALEY: Then it breaks it down into two further points. You can see there at (a) and (b) that you're essentially the head of the Aviation Branch; is that correct?

45 BRIG FENWICK: Yes.

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LTCOL HEALEY: At (b), you're the Head of Corps.

BRIG FENWICK: Yes.

5 LTCOL HEALEY: Without going into the detail of those particular sentences, given the sensitivity, what do they broadly encompass, those particular delegations?

10 BRIG FENWICK: So in the Forces Command Aviation Branch, that is, as I spoke about, the dual-hatting of the responsibility. That is the Airworthiness Management and the Aviation Systems Management on behalf of the Accountable Manager. That's what that Aviation Branch is inside Forces Command. Where you've heard about the Director of Operational Airworthiness and the Director of Continuing Airworthiness, 15 they were both the two Directors in that branch. I had another two Directors who were assisting me, and a sort of sub-branch, if you like, helping me manage the material systems on behalf of Head Land Capability.

20 AVM HARLAND: Why did the Army choose to retain the MAO-AM at the Commander Forces Command level? By my understanding, the other services had that delegated down to the one-star level at the Force Element Group, which would be the equivalent of your DG AVN enterprise.

25 BRIG FENWICK: Yes. I mean, there's quite a bit of history here and, indeed, it led to the change for the Aviation Command in due course. But it was determined that we had tried to have the Airworthiness authority, the Accountable Manager, at the FEG level at 16 Brigade and there was sufficient evidence over time to show that that overloaded the Brigade and 30 diluted its capacity to Command. So it was felt in this timeframe that there was a need to pull that up to a two-star level that could better account for that supported by an Aviation Branch that could provide the subject matter expertise.

35 AVM HARLAND: Why not just put more resources into 16 Brigade so they can do their job?

BRIG FENWICK: I'm sure that was considered. I don't know what the answer is.

40

AVM HARLAND: Thank you.

LTCOL HEALEY: Thanks, sir. So you can close that up again, if you like. You state in paragraph 14, about halfway down, that these

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documents are Army Aviation's acceptable means of compliance against the DASR; is that right?

5 BRIG FENWICK: Yes.

LTCOL HEALEY: That's the Defence Aviation Safety Regulator. Correct?

10 BRIG FENWICK: Yes.

LTCOL HEALEY: These are the procedures that form the airworthiness framework for the consideration of the upgrade of HMSD; is that right?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: That was from version 4.0 to 5.10; is that right?

BRIG FENWICK: Yes.

20 LTCOL HEALEY: You state that they were not deviated from; is that right?

BRIG FENWICK: They were not.

25 LTCOL HEALEY: What do you mean by that?

BRIG FENWICK: We have a mandated process here that I've tried to outline. We followed that procedure.

30 LTCOL HEALEY: Thank you, sir. At paragraph 15, this is quite a helpful segue. So you state at paragraph 15 that:

Service Release, when it affects the certification process of the aircraft, requires two approvals.

35 Is that right?

BRIG FENWICK: Yes.

40 LTCOL HEALEY: This will help, certainly later on, in explaining your actions. But at 15(a):

There is agreement and approval for the configuration change of the aircraft.

45

Is that right?

BRIG FENWICK: Yes.

5 LTCOL HEALEY:

There is approval for the operational use of new configuration equipment by the user.

10 Correct?

BRIG FENWICK: Yes.

15 LTCOL HEALEY: What's the difference between those two, sir?

BRIG FENWICK: They're really about authorities. So in the airworthiness management of the certification basis of the aircraft, that happens through the Army Aviation Systems Program Office and the Military Type Certificate Holder. So that can only be effected through the
20 Type Certificate Holder because there's a change to the certification basis. I had no authority to do that.

My authority was on the Operational Airworthiness aspects. And it would be a mistake to believe that these two processes ran in parallel and didn't
25 talk to each other. They ran in parallel, but communicating routinely. So there was constant communication and checking that the CCB, of the Configuration Control Board, that would decide upon the configuration of the aircraft, knew and understood the risks and controls that were being put in place. And I would do the same thing on the operational execution
30 of the Service Release.

LTCOL HEALEY: So in terms of the configuration, you had no authority over the approval process of the configuration of the aircraft?

35 BRIG FENWICK: No.

LTCOL HEALEY: Who held that authority?

BRIG FENWICK: Well, it was done by the Configuration Control
40 Board, on the actions of the Military Type Certificate Holder.

LTCOL HEALEY: Do you recall who the Military Type Certificate Holder was at the time?

45 BRIG FENWICK: It's an organisation, so it's the Army Aviation

System Program Office.

LTCOL HEALEY: Was it left to a specific person?

5 BRIG FENWICK: Generally, the Chief Engineer would be the one who took control over that on behalf of the organisation.

10 LTCOL HEALEY: I know it was some time ago, but do you recall who that was?

10 BRIG FENWICK: I recall it being LTCOL Marshall.

15 LTCOL HEALEY: Thank you, sir. Post those approvals, that would then be agreed and authorised through the Regulator at DASA; is that correct?

15 BRIG FENWICK: Yes, in terms of the type certificate change, yes.

20 LTCOL HEALEY: You state at paragraph 17 that in the Army you were responsible for the approval for operational use of new configuration/equipment for Army Aviation operations on behalf of the MAO Accountable Manager, Commanders Forces Command.

25 BRIG FENWICK: Yes.

25 LTCOL HEALEY: Do you recall who the Commander of Forces – I know you mentioned earlier there was four in any one period. Do you recall who it may have been at that time?

30 BRIG FENWICK: At which time in particular, mate?

30 LTCOL HEALEY: At the time of the approval into service in TopOwl.

35 BRIG FENWICK: So in the period that constituted my receipt of decision briefs to make that decision from an operational perspective, in the March-April 2020 timeframe, was MAJGEN Pearse.

40 LTCOL HEALEY: You state there, just to be helpful for the Inquiry, that in the Navy the Commander Fleet Air Arm, or COMFAA, was the MAO Accountable Manager for Aviation Operations within Navy. Is that correct?

40 BRIG FENWICK: Yes.

45 LTCOL HEALEY: Did you have much to do with COMFAA in your

role?

BRIG FENWICK: Yes, we regularly communicated.

5 LTCOL HEALEY: What would you communicate on?

BRIG FENWICK: Well, he had similar responsibilities, but also the
accountability. So he was the Accountable Manager for the Airworthiness
system in Navy. And we would also discussion materiel aspects of
10 acquisition and sustainment, because he had similar responsibilities inside
Navy.

LTCOL HEALEY: Did that include discussions about MRH-90?

15 BRIG FENWICK: Yes. And about training systems and so on.

LTCOL HEALEY: What do you mean by “training systems”?

BRIG FENWICK: Navy had the responsibility for the Helicopter Air
20 Training System in Nowra and I would routinely communicate with him
about aspects of that that were serving us or not.

LTCOL HEALEY: You state that you were doing your due diligence
and being thorough in your processes through that cooperation; is that
25 right?

BRIG FENWICK: Yes. So as we were hitting a decision, particularly
on MRH-90, as we were hitting decisions where it was going to affect
operational crews on that aircraft, clearly they were both Navy and Army,
30 and we’d indeed even had some Navy people inside 5 Aviation Regiment
and other places so that we could move the pilots around to a degree. We,
certainly in the first instance, wanted to make sure neither one of us was
making a decision that was cumbersome for the other. But, also, that we
were seeing things the same and we were exercising professional
35 judgment together.

LTCOL HEALEY: It was primarily on the consideration of the
HMSD 5.10 or was there other elements of the MRH-90 you discussed?

40 BRIG FENWICK: No, there was a range of issues. All the way from
MRH full introduction into service beyond Special Operations. And I say
it was on a range of issues with the MRH.

LTCOL HEALEY: We'll come to this later in your evidence. But there were a number of other things that you were considering at the time, is that right, in terms of MRH-90?

5 BRIG FENWICK: Yes, many.

LTCOL HEALEY: Just moving to MRH-90 and Special Operations – and I'm not quite there yet, Madam Chair, but I think there will be a point in the statement that I'll need to go to a Private Hearing. Perhaps I can
10 just get through three or four more paragraphs with - - -

MS McMURDO: Well, presumably then you'll be coming back to a Public Hearing? So what I'd prefer you to do is to go through everything you can do in Public Hearing first.

15 LTCOL HEALEY: Okay.

MS McMURDO: And then we'll deal with cross-examination, re-examination in public, and then we'll go into the Private Hearing and
20 deal with it that way.

LTCOL HEALEY: May it please.

25 So, sir, you refer at paragraph 19 that you will refer to the ARH at times in this statement with the name Tiger; is that correct?

BRIG FENWICK: Yes.

LTCOL HEALEY: The MRH-90 is the Taipan?

30 BRIG FENWICK: Yes.

LTCOL HEALEY: You'll use different terms in the statement when they are used in referred documents in that manner.

35 BRIG FENWICK: Yes.

LTCOL HEALEY: So that sort of coincides with the terms you were talking about earlier in your statement?

40 BRIG FENWICK: Yes. I'm just seeking to be very clear that I don't use those terms differently to try and create any distinction in the way we talk about them or are thinking. But there are times where I will use a particular term because it's been used in a particular document so that it
45 remains consistent.

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LTCOL HEALEY: So it's got relevancy elsewhere, when you start to use that term.

5 BRIG FENWICK: Yes.

LTCOL HEALEY: Thank you. But they should be considered interchangeable, is what you're saying?

10 BRIG FENWICK: Correct.

LTCOL HEALEY: At paragraph 20 you speak about:

15 *As the MRH-90 was purchased to replace the Black Hawk, it was broadly introduced in the maritime support role for Navy.*

Correct?

20 BRIG FENWICK: Yes.

LTCOL HEALEY: The tactical lift role?

BRIG FENWICK: Yes.

25 LTCOL HEALEY: Can you just explain to the Inquiry what the tactical lift role is?

BRIG FENWICK: It's a more general support to combat forces in the Army for Troop lift, the movement of equipment and movement of personnel, those sorts of things.

30 LTCOL HEALEY: So you wouldn't expect to see a particular Special Operations type activity with a Troop lift?

35 BRIG FENWICK: No.

LTCOL HEALEY: You talk about the Special Operations role in 6 Aviation Regiment in terms of the MRH-90 being purchased to replace the Black Hawk.

40 BRIG FENWICK: Yes.

LTCOL HEALEY: And then at the top of page 5 you go into maritime support role and tactical lift roles were also developed.

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BRIG FENWICK: Yes.

LTCOL HEALEY: And that was by 2018?

5 BRIG FENWICK: Yes.

LTCOL HEALEY: And even if they weren't yet fully operationally capable; is that right?

10 BRIG FENWICK: Yes. So I mean that in the terms of full operational capability in the way that we describe capability management.

LTCOL HEALEY: You speak about:

15 *The introduction to the Special Operations role was nascent at this time.*

BRIG FENWICK: Yes.

20 LTCOL HEALEY: What do you mean by that?

BRIG FENWICK: We were in the process of commencing the transition between Black Hawk to MRH for the Special Operations role. It wasn't that the Special Operations role more broadly in Aviation was nascent, it was nascent for MRH.

LTCOL HEALEY: Do I understand that involved training?

BRIG FENWICK: Yes, and qualification of people onto the MRH.

30 LTCOL HEALEY: So a significant activity?

BRIG FENWICK: Yes.

35 LTCOL HEALEY: You state there that:

Importantly, the consideration of the HMSD was only part of the significant amount of development activity behind the test and evaluation.

40 Is that right?

BRIG FENWICK: Yes, that's correct.

45 LTCOL HEALEY: What do you mean by that?

5 BRIG FENWICK: There were a number of aspects of the MRH aircraft which needed modification to be able to suit the Special Operations role and task. And they were significant activities, including changes to the structural configuration of the aircraft.

LTCOL HEALEY: Obviously we won't go through those in this forum, but they were time-consuming?

10 BRIG FENWICK: Indeed.

LTCOL HEALEY: You attach to paragraph 20, at least to your statement, the Joint Steering Committee notes; is that correct?

15 BRIG FENWICK: Yes.

LTCOL HEALEY: Is there anything you'd like to speak about in relation to those notes?

20 BRIG FENWICK: So in general terms for this forum, the reason I present Joint Steering Committee meeting notes is it can show you the number of things with which we were dealing in addition to HMSD.

25 LTCOL HEALEY: If I just take you to that document, and that's at – for the purpose of the Inquiry, and I'm hoping that Madam Chair and Air Vice has got this one, but it's JRF 6.

MS McMURDO: Yes, I've got it. Yes.

30 LTCOL HEALEY: Thank you. I don't see any security on that particular document.

35 BRIG FENWICK: No, the majority of this one – so this Joint Steering Committee – one of many Committees in this period – was largely run and chaired in the initial instance by Airbus. And "joint" in the sense that it was an Army/Navy coming together with Airbus to discuss progress in the MRH development.

40 LTCOL HEALEY: If you turn to page 15 of that annex, looking at the "Next Key Outputs", is there anything you'd want to raise to the Inquiry in terms of what was going on at that point?

45 BRIG FENWICK: Just to highlight, that page shows, in particular, as a summary of things and, indeed, going over on to following pages, of the broad range of things we were working on in order to develop the Special

Operations capability with MRH and you will see in there the HMSD Version 5.10, and it is only one part of a very large program. And in this document and in others we will come to later, you will see a repeated story of continuing to review whether we would proceed with 5.10 or not.

So very early on in the period of 2019, we were expecting it to achieve all that we needed it to. It did not. And we needed to continue our assessment on that, but it was always with a view to whether we would continue with it or not.

LTCOL HEALEY: Thank you, sir. It was remiss of me; I didn't state the date to the Inquiry. On the front page of that document is Friday, 7 November 2019, and it's the Availability Steering Committee. Is that something you chaired, sir?

BRIG FENWICK: I actually can't recall. I think I did chair it. It was kind of co-chaired between myself and COMFAA, in my recollection. I was probably the primary driver because the number of things that were key issues at this time sat within Army. And particularly the Special Forces' role was – this was a particularly key thing at this time. Whereas, as I said earlier, much of the development of the MRH for both the maritime support role and the general support Army role, were done. But this was at the back end of trying to achieve full operational capability and the introduction to Special Forces was the final thing to be done.

LTCOL HEALEY: It's fair to say that that document was to help keep track of all the activities that were going on?

BRIG FENWICK: So this one in particular, this Joint Steering Committee, was, again, primarily with Airbus to keep Airbus on track for things that needed to occur. There were other committees like the – or groupings, like the Plan Palisade Steering Group, which were Defence internal, and specifically about Special Operations.

LTCOL HEALEY: Just drawing from what you just said then, "to keep Airbus on track", what do you mean by that?

BRIG FENWICK: It was not a secret, then or now, that the MRH was not achieving the availability requirements we needed of it. We were, through a process – I can't remember if this Joint Steering Committee refers to Project Bradman; it may do. Project Bradman was a title given to a program by Airbus to improve availability on the MRH.

The primary purpose of this Joint Steering Committee was to feed

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Defence requirements in with Airbus and make sure that we were clear on the priorities for Airbus and what we needed from them.

5 LTCOL HEALEY: So Counsel Assisting has helpfully located Project Bradman, and that's at page 24 of that document.

BRIG FENWICK: Thank you. Let me just check.

10 LTCOL HEALEY: I'll get you just to double-check that, to see if that accords with your memory.

BRIG FENWICK: Page 20, did you say?

15 LTCOL HEALEY: 24, sir.

BRIG FENWICK: You can see in the pages that precede that, graphs of Fleet Serviceability, which was a key driver of this whole program. And then, yes, Project Bradman is on page 23, in summary. And then the subsequent pages are how we were progressing on particular items on Project Bradman, largely focused on improving availability rates of MRH in the fleet.

20 LTCOL HEALEY: So would that be a fair summary of what Project Bradman was?

25 BRIG FENWICK: Yes.

LTCOL HEALEY: Thank you. You state at paragraph 21 that:

30 *The whole process of introducing the MRH-90 to the Special Operations role was subject to detailed planning and risk assessment.*

Is that correct?

35 BRIG FENWICK: Yes, it was.

40 LTCOL HEALEY: That risk assessment, is that fair to say that it was in accordance with the MAO Directive, the Management of Safety, Operational Airworthiness, as it was back then. Correct?

BRIG FENWICK: Yes.

45 LTCOL HEALEY: And that's the one that I took you through previously?

BRIG FENWICK: Yes.

5 LTCOL HEALEY: That's the seven-step process, that's what you're referring to?

BRIG FENWICK: Yes.

10 LTCOL HEALEY: Then, as a new topic, you mention Plan Palisade; is that correct?

BRIG FENWICK: Yes.

15 LTCOL HEALEY: That:

It sat at the heart of the articulation of this.

What do you mean by that?

20 BRIG FENWICK: We had developed, by this point, a well-respected method for introduction into service of Aviation systems, which were plans by type. So we had originally Plan Peregrine for the Tiger. If I remember rightly, Plan Pegasus for MRH writ large. And this Introduction into Service Plan was around the Special Operations
25 capability specifically, Plan Palisade. And we found them very useful documents to make sure people were aligned on priorities, risks, priority tasks and so on.

30 LTCOL HEALEY: You state that:

By this time Army Aviation had developed a number of Introduction into Service Plans.

35 Is that right?

BRIG FENWICK: Yes.

LTCOL HEALEY: You will note that IIS appears later in your evidence; is that right?

40 BRIG FENWICK: Yes, I think I did.

LTCOL HEALEY: And it covers the introduction of, as you said, Plan Peregrine and Pegasus for the Tiger and the Taipan into service.
45

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BRIG FENWICK: Yes.

LTCOL HEALEY: You state that the Plan Palisade was overseen by a steering group. Correct?

5

BRIG FENWICK: Yes.

LTCOL HEALEY: And that was co-chaired by two two-star officers and a CASG Band 2; is that right?

10

BRIG FENWICK: Yes.

LTCOL HEALEY: Can you just explain what that is? How that's structured?

15

BRIG FENWICK: The steering group?

LTCOL HEALEY: Yes.

20 BRIG FENWICK: The composition of those chairs was deliberately structured around the command and control mechanisms in place for Special Operations. So there was a command and control arrangement for 6 Aviation Regiment that allowed Special Operations Command to task it, although it was still under the direct command of Commander Forces Command.

25

So Commander Forces Command had a command responsibility as well as the airworthiness accountability. But Special Operations Command was clearly the key driver of tasking and future capability for the Regiment.

30

So that's why both the Special Operations Commander and Commander Forces Command would sit together to make sure they understood what each other were doing and who was doing what. Then it was the responsibility of the CASG Band 2 to be able to identify and know and understand, because we were still in project delivery at this point, what CASG's role were in each of these items.

35

LTCOL HEALEY: You've annexed to your statement there the Minutes accompanying Plan Palisade; is that correct?

40

BRIG FENWICK: I'm sorry, mate. I'm just picking it up. So that's para 22 of JRF 7?

45

LTCOL HEALEY: That's right, sir, yes. It's a "Protected" document.

BRIG FENWICK: So it's, again, an example in that same timeframe of the steering group and the sorts of things that that steering group was considering.

5

LTCOL HEALEY: Without going into the specifics of what they were considering, what was the general sort of theme in terms of what you considered?

10 BRIG FENWICK: There were changes that needed to be made to the aircraft configuration itself. There were training courses that needed to be run to transition some Special Operations pilots from Black Hawk to MRH. There was some training of MRH pilots into the Special Operations role. So it was personnel-heavy in terms of making sure that
15 personnel were moving into the right place at the right time with the right qualifications and so on, as well as material-heavy.

LTCOL HEALEY: It's fair to say, looking at that particular document at 7(a), without going into specifics, that that's a good summary of the slides
20 in your Annex 7?

BRIG FENWICK: Yes.

LTCOL HEALEY: Just for the purpose of the Inquiry, it does summarise
25 each and every one of those slides. And you will see at page 6 of 7(a) – can you go to there, please, sir? Not page 6 of the slides. Page 6 of 7(a), which is the Minutes.

BRIG FENWICK: Of the Minutes.

30

LTCOL HEALEY: Yes. You'll see some handwritten notes at the top of that page, "Noted"?

BRIG FENWICK: Yes.

35

LTCOL HEALEY: If you turn to the back page, at page 6? Is that your signature at the bottom of that page, on the left?

BRIG FENWICK: Bear with me. Yes, it is.

40

LTCOL HEALEY: It states that you were the DG Aviation and Chairman, dated 29 November 2019. Correct?

BRIG FENWICK: Yes.

45

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LTCOL HEALEY: What does it mean by “Chairman”?

BRIG FENWICK: That I ran the meeting.

5 LTCOL HEALEY: Madam Chair, I note the time. It’s 5 pm.

MS McMURDO: I’m just concerned about – I’m sure the Brigadier
would like to finish his evidence tomorrow if possible. How much longer
do you think you’ll be with him, in Public Session first?

10 LTCOL HEALEY: Public Session, I’m thinking probably another hour
and a half to two hours. And in Private, very short.

MS McMURDO: Cross-examination, without holding you to it, just at
15 this stage, how long would people expect that they would be in and who
would be interested at this stage?

LCDR GRACIE: 30 minutes.

20 LCDR TYSON: 20 minutes, ma’am.

MR O’MAHONEY: 10 to 15 minutes, ma’am.

MS McMURDO: Any others?
25

MAJ CHAPMAN: An hour probably.

MS McMURDO: An hour for you. Well, in that case, we should – and
then a short time in Private Session. We should be able to finish
30 comfortably tomorrow. So I’m quite happy to adjourn now, in that case.

Hopefully, you will be out tomorrow. Though these estimates, we have
found, Brigadier, are not always very accurate.

35 But would it be prudent to start at 9.30 just in case? If we can finish early,
well, we’ll finish early. But I just think the way things have gone, it might
be better to start at 9.30.

LTCOL HEALEY: I think that’s appropriate, Madam Chair.
40

MS McMURDO: That’s convenient to you?

BRIG FENWICK: Yes, ma’am.

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MS McMURDO: Yes. We'll adjourn now and resume tomorrow at 9.30.

5 <WITNESS WITHDREW

**PUBLIC INQUIRY ADJOURNED UNTIL
WEDNESDAY, 2 APRIL 2025 AT 0930**