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

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

PUBLIC INQUIRY

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

COL J STREIT, with FLTLT A ROSE, Counsel Assisting

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SQNLDR J GILES, representing LT M Nugent
MAJ H PERROTTET, with Lcdr M TYSON, representing
CPL A Naggs
SQNLDR C THOMPSON, representing WO2 J P Laycock
COL N GABBEDY, representing MAJGEN Jobson
MR G O'MAHONEY, representing Airbus and related entities
SQNLDR M NICOLSON, representing D10**

1000, THURSDAY, 2 MAY 2024

DAY FIVE

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	17/05/24	(Transcription)

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MS McMURDO: Yes, COL Streit.

COL STREIT: Good morning, Ms McMurdo. I call Barry John Trapp.

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<MR BARRY JOHN TRAPP, Affirmed

<EXAMINATION-IN-CHIEF BY MR O'MAHONEY

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MS McMURDO: I understand, Mr O'Mahoney, who is appearing for Mr Trapp, is detained elsewhere, but has - - -

15 COL STREIT: He is here, and I was just about to indicate that Mr O'Mahoney will take the witness through the evidence.

MS McMURDO: Good, thank you.

20 COL STREIT: Thank you, Ms McMurdo.

MS McMURDO: Yes, Mr O'Mahoney.

MR O'MAHONEY: Sir, your full name is Barry Trapp.

25

MR TRAPP: Barry John Trapp, yes.

MR O'MAHONEY: Yes, thank you. And you have prepared a statement to assist this Inquiry?

30

MR TRAPP: Yes.

MR O'MAHONEY: In preparing that statement, you've turned your mind to a large number of questions that were asked of you.

35

MR TRAPP: Yes.

MR O'MAHONEY: And you have, to the best of your ability, sought to answer those.

40

MR TRAPP: Yes.

MR O'MAHONEY: As I understand it, there are a small number of additions or changes you'd like to make to that statement; is that correct?

45

MR TRAPP: Yes.

MR O'MAHONEY: Do you have a copy of that in front of you? We'll
organise that right away.

5

MR TRAPP: No, I don't.

MR O'MAHONEY: Thank you. Mr Trapp, before I ask you some
questions of background just in terms of your own career trajectory, I
understand if I take you to paragraph 21 of this statement – just have a quick
look at that for us.

10

MR TRAPP: Yes.

MR O'MAHONEY: I think there is some clarification you'd like to make
in relation to that paragraph. Just step us through that.

15

MR TRAPP: That's right. So the clarification I'd like to make is the
responsibilities of my current position are pretty much covered over the
previous positions within the Responsible Manager roles, so it's in addition
to what is actually in paragraph 21.

20

MR O'MAHONEY: I see. At paragraph 50, if you turn to that, it starts at
the bottom of page 9, Mr Trapp. I believe in relation to that paragraph
there's a matter you'd like to make clear.

25

MR TRAPP: Yes. The second sentence goes on to say that I was the Senior
Airworthiness Manager delegate. That should read I was the Continuing
Airworthiness Manager delegate.

30

MR O'MAHONEY: Could you just say that last bit again a little more
slowly, Mr Trapp?

MR TRAPP: It should read that I was the Continuing Airworthiness
Manager delegate.

35

MR O'MAHONEY: Thank you. And finally I think paragraph 86.

MR TRAPP: Yes. So I say that there was no aircraft at AA vnTC that were
fitted the modified engine. So in actual fact there was three aircraft that
were fitted with engines, so one each engine on each aircraft.

40

MR O'MAHONEY: Thank you.

MS McMURDO: Sorry, could you just explain that again.

45

5 MR TRAPP: So where there was no aircraft at AAvnTC that were fitted with the modified engines post the ditching in March in Jervis Bay, there were three aircraft. Each aircraft was fitted with one of the modified engines.

MS McMURDO: So one of their two engines was modified.

10 MR TRAPP: That's correct, yes, ma'am.

MS McMURDO: Thank you.

15 MR O'MAHONEY: Thank you, Mr Trapp. I now just want to ask you briefly some questions about your own background. You have yourself an extensive background in the military.

MR TRAPP: Yes.

20 MR O'MAHONEY: I think at Annexure A to your statement you set out in quite some detail your period of service, and the integers of that period for the Australian Navy.

MR TRAPP: Yes.

25 MR O'MAHONEY: You started, I think, serving as a junior recruit in the Australian Navy in 1982.

MR TRAPP: That's correct.

30 MR O'MAHONEY: I don't want to embarrass you, but it's fair to say you climbed up through the ranks across the journey after that point in time.

MR TRAPP: Throughout the career, yes.

35 MR O'MAHONEY: Just briefly explain the final role that you had in the Australian Navy.

40 MR TRAPP: So my role was Chief Petty Officer. I was responsible for senior technical training within the Navy Fleet Air Arm, as well as workplace training and assessment, and leading seamen advanced technical training as part of that.

45 MR O'MAHONEY: Is it fair to say that across the body of that 22-odd years of work with the Navy you worked in a large number of roles that involved aircraft support and maintenance teams?

MR TRAPP: Yes.

MR O'MAHONEY: I think one was on the HMAS *Albatross*.

5

MR TRAPP: Yes, HMAS *Albatross* is the Naval Air Station in Nowra.

MR O'MAHONEY: And another, HMAS *Darwin*.

10

MR TRAPP: So it's a frigate – or it was a frigate within the Royal Australian Navy.

15

MR O'MAHONEY: It's fair to say as well, I think, that across that journey you also received extensive training when it comes to matters of aircraft maintenance.

MR TRAPP: Yes.

20

MR O'MAHONEY: You, I think, went on a number of tours to the Middle East during that time.

MR TRAPP: Yes.

25

MR O'MAHONEY: One was in 1990, and one was in 1996.

MR TRAPP: Yes.

30

MR O'MAHONEY: Is there anything in particular you'd draw attention to about your roles in that regard?

35

MR TRAPP: I was part of a team who was looking after a Sea Hawk helicopter for the Navy and the ships as part of the Multi-National Force. Part of that, we were making sure that the aircraft was ready, capable, and available to perform its tasks. Of that, we ensured that the aircraft could do it. And in actual fact, over the course of six months in that last tour, we dropped only one sortie.

40

MR O'MAHONEY: Just explain, if you would, what that language of "dropping only sortie" means.

45

MR TRAPP: So one sortie is a planned flight activity that may have gone out there in support of whatever the ship was doing at the time, and it was necessary for the security and the capability of the operation that was happening.

MR O'MAHONEY: Thank you. Mr Trapp, I won't ask you to step through all of it, but in the opening part of your statement I think you'd agree that you've really tried to step through your career, and the various aspects of your career and experience post working at the Navy.

5

MR TRAPP: Yes.

MR O'MAHONEY: You explain, for example, at paragraph 9 the training you've received.

10

MR TRAPP: Yes.

MR O'MAHONEY: If you turn that up you'll see a reference to that, and if you go down a couple of paragraphs below that, you indicate that in early 2008 you started working at the company now known as Airbus Australia Pacific Limited. Do you see that?

15

MR TRAPP: Yes.

MR O'MAHONEY: You explain in that paragraph the initial role that you had at Airbus, and just very briefly explain in your own words what that was.

20

MR TRAPP: It was the maintenance quality manager, ensuring that within the Maintenance Organisation for both ARH and MRHs that we had all the processes and systems in place to be able to maintain ARH and MRH aircraft to the level that was expected by the Regulator at the time.

25

MR O'MAHONEY: In 2012, you changed roles, and you explain the new role that you took on at paragraph 12. You indicate at paragraph 12 various subparagraphs that speak to the different aspects of the responsibilities you had in that role. Is there anything you draw particular attention to in terms of the role of the position of production quality manager?

30

MR TRAPP: It was certainly something that was out of the ordinary, particularly for me. I was probably a little bit assured of myself, and I've moved from a maintenance environment into a production environment, but I'd quickly become aware that they're two completely different beasts, and as a result of that we had to reshape the production environment so that we could deliver aircraft to the Australian Army and Navy. We did that, and over the period of my time in there we were able to meet all of the delivery requirements, and I think in one year we actually exceeded those.

35

40

MR O'MAHONEY: Thank you, and then at paragraph 13 you explain the new role that you took on in April 2015, and that was as manager of the

45

MRH-90 program and production quality. Just very briefly step the Inquiry through what that comprised.

5 MR TRAPP: So the program is effectively the contract organisation who deals with the likes of CASG, and the Systems Program Office for Defence deals with a lot of the commercial stuff and all of the interfaces with engineering, maintenance, supply, commercial activities. And as well as that, I kept an oversight role of production at the time.

10 MR O'MAHONEY: I'm very conscious, Mr Trapp, that you are a specialist in this space, and you will from time to time use language that has an industrial meaning, and a shorthand form is sometimes used, and you explain what that is in your statement. But just for the benefit of those listening, and the Inquiry most importantly, when you say "CASG", what
15 are you referring to?

MR TRAPP: Okay. It's the Commonwealth Acquisition and Sustainment Group. So they are the government body who issues out the contracts to acquire new Defence capabilities.

20 MR O'MAHONEY: You go on to say three years later, in April 2018, that you moved to the role of manager of Rotary Wing Programs Quality. Just again, if you would briefly step the Inquiry through what that involved.

25 MR TRAPP: That was pretty much the same as what I did with MRH; however, it also encompassed ARH.

MR O'MAHONEY: Again, ARH? When you use that acronym, I think – I know what you're referring to, but just explain it for the benefit of the
30 transcriber.

MR TRAPP: Sure. Armed reconnaissance helicopter.

MR O'MAHONEY: I think you said armed reconnaissance helicopter; is that correct?
35

MR TRAPP: Correct, yes.

MR O'MAHONEY: In March 2019, you moved on to a different role. You explain this at paragraph 15. That was the Maintenance Standards Technical Lead. Could you just explain what that comprised.
40

MR TRAPP: So what we were looking at is having a look across the Maintenance Organisations that we had at the time, and looking at what the best practice was, and trying to amalgamate that best practice across the
45

Maintenance Organisations, and combine the two Maintenance Organisations into one.

5 MR O'MAHONEY: Then in early 2020 you were appointed the maintenance credibility manager ARH. You say some things in your statement about what that role involved, but just at a high level, step the Inquiry through what your work comprised of in that.

10 MR TRAPP: Okay. It's the maintenance capability as opposed to credibility. And as a result of that is that I effectively performed the role as the Responsible Manager, which meant that I was the Regulator's Form 4 holder, or post holder, for maintenance for that platform, and for the Maintenance Organisation.

15 MR O'MAHONEY: Just in terms of that last piece, being the Regulator's point person in those regards, what was the significance of that, to your mind?

20 MR TRAPP: So it's a point of contact from the Regulator into the organisation, and I hold the responsibility for all maintenance that is carried out on those particular platforms for which I'm responsible.

25 MR O'MAHONEY: Then in February 2023 you were appointed to a role that you set out at paragraph 17 of your statement, and that is the Defence Aviation Safety Regulation Part 145 Responsible Manager Deeper Maintenance. Just explain to the Inquiry what that involved.

30 MR TRAPP: So for ARH and MRH – and actually for all aircraft – but for ARH and MRH, each aircraft has a requirement that after a certain amount of events, or hours, or years the aircraft come in for a deeper maintenance where they get stripped down and a whole heap of components, airframes, dynamic systems, get inspected, repaired as necessary, and rebuilt, and returned back to the operator.

35 MR O'MAHONEY: If I could perhaps – you certainly answer a lot of questions on this front in your statement, but perhaps at a high level you could just explain the role of Airbus in terms of the maintenance of MRH-90 aircraft.

40 MR TRAPP: So Airbus has a contract with the government to perform a deeper maintenance of MRH-90, as well as also providing operational or line and base maintenance out at Oakey, and also provided the line and base maintenance support to 6 Avn Regiment. We also provided labour hire people embedded in with 5 Avn Regiment in Townsville to support that
45 Regiment up there with their operations and the maintenance ongoing.

MR O'MAHONEY: You've played, I think it's fair to say, something of an oversight role in relation to at least some of those personnel.

5 MR TRAPP: Yes.

MR O'MAHONEY: Just explain the nature of that, if you would.

10 MR TRAPP: So the oversighting role is to ensure that they've got the training, the qualifications, the experience, currency and all of that, working within the Maintenance Organisation, and that they have a knowledge, and that knowledge is continuously maintained to be able to work on the aircraft. So we keep them up to date with the latest technologies and information that is applied to the aircraft.

15

MR O'MAHONEY: Am I right in thinking that post leaving the military you have kept up, yourself, your own training?

MR TRAPP: Yes, that's correct.

20

MR O'MAHONEY: Is that an important part of your ability to go about the tasks you have?

25 MR TRAPP: I think training is a good place to start and get into the experience side of things, yes.

MR O'MAHONEY: I don't have any more questions, but I think Mr Streit does. Thank you.

30 MR TRAPP: Thank you.

MS McMURDO: Thanks, Mr O'Mahoney. COL Streit, yes.

35 **<CROSS-EXAMINATION BY COL STREIT**

COL STREIT: Thank you, Ms McMurdo. First, may I tender Mr Trapp's statement?

40

MS McMURDO: Yes. Mr Trapp's statement will be Exhibit 15.

#EXHIBIT 15 - STATEMENT OF MR TRAPP

45

COL STREIT: Mr Trapp, just picking up on something you said at the conclusion of Mr O'Mahoney's questions, you gave a response that provided some oversight in relation to what the role of Airbus was. Am I
5 right in understanding that in terms of Airbus's involvement in the MRH-90 platform across the Aviation Training Centre, 5 Aviation Regiment and 6 Aviation Regiment, Airbus had different roles in terms of its workforce in relation to those three areas in Defence?

10 MR TRAPP: Yes, that's correct. AAvnTC and 6 Avn were similar, but 5 Avn, from a Maintenance Organisation perspective, we had no oversight.

COL STREIT: With the Aviation Training Centre which is out at Oakey, Airbus maintainers were responsible for maintaining the MRH-90 aircraft
15 at Oakey; is that correct?

MR TRAPP: Yes.

COL STREIT: In relation to 5 Aviation Regiment, Airbus provided a
20 workforce to the 5th Aviation Regiment, but it was otherwise the responsibility for the maintenance of the aircraft was a 5 Aviation Regiment responsibility.

MR TRAPP: Yes, that's correct.

25 COL STREIT: And at 6 Aviation Regiment, Airbus worked as part of a blended workforce with 6 Aviation Regiment to maintain the MRH aircraft at 6 Aviation Regiment; is that correct?

30 MR TRAPP: That's correct.

COL STREIT: Are you able to assist the Inquiry to understand in a broad sense the reasons as to why there were different processes of maintaining
35 MRH aircraft in those three different organisations?

MR TRAPP: So within the school, that was part of the contract that we had with the government to do that. Within 5 Avn Regiment, is that we provided that maintenance support, that continuation and longevity for the maintenance support, that we're able to be tasked by 5 Avn to support a
40 maintenance effort. Within 6 Avn, we started off with the maintenance side of it with the intent to hand over to the Army at a point in time. That never happened, and Airbus continued on being responsible for the maintenance at 6 Avn.

COL STREIT: One other question in relation to something Mr O'Mahoney asked you. Towards the end of his questions he asked you about whether or not you maintain your training, given that you're effectively in a managerial oversight role. Do you remember him asking that question?

5

MR TRAPP: Yes.

COL STREIT: You said that you – well, the effect of your evidence was that you did maintain your training. What training were you referring to in response to that question?

10

MR TRAPP: So in my current role at the moment I am a chartered engineer associate, as a pre-requisite for that position. Part of that is that I need to provide a level of continuous professional development. The level within my chartered status is management and aerospace engineering, and leadership, and something else there. And as a result of that, I maintained that level of training, and certainly within a safety management system as well. So mainly the leadership and the management side of things.

15

COL STREIT: So your evidence should not be understood as you being maintaining training on the tools for fixing the MRH-90 aircraft?

20

MR TRAPP: No, not at all.

AVM HARLAND: Excuse me, COL Streit. Can I just ask a clarifying question.

25

I thought I heard you say at the outset that 6 Avn was a blended workforce, and then in your second round you indicated that Airbus was doing all of the maintenance at 6 Avn.

30

MR TRAPP: No, you're correct, 6 Avn is a blended – or was a blended workforce, but it was under the responsibility of the Airbus 145. So we would have a certain amount of people down there to support the management and the maintenance of that. And the Army would have a number of people who would work together with the Airbus maintainers and if the Army needed to deploy, then the Army maintainers would deploy with the aircraft.

35

AVM HARLAND: So it was under the Airbus 145?

40

MR TRAPP: Yes, sir, that's correct.

AVM HARLAND: Okay, thank you.

45

MS McMURDO: So could I just follow up on that. So it was the intention, as I understood you to say, that you would move to the model you have with 5 Avn?

5 MR TRAPP: No, ma'am.

MS McMURDO: No? What was it?

10 MR TRAPP: No, the intention was that we would get 6 Aviation Regiment up to a level where they would take over and we would handover. I see where you're going with that. Then, yes, our workforce would blend in with the 6.

MS McMURDO: Blend in with theirs.

15 MR TRAPP: Yes.

MS McMURDO: So it would be a similar model to 5 Aviation?

20 MR TRAPP: Yes.

MS McMURDO: But you never got there. Was that because they didn't have the trained staff to move to that model at that point?

25 MR TRAPP: I'm not sure of the full reason. It was at a stage where we just continued on.

MS McMURDO: So you just were told what the arrangement was, and made sure it worked?

30 MR TRAPP: Yes, ma'am.

MS McMURDO: I see. All right, thank you. Yes, COL Streit.

35 COL STREIT: Mr Trapp, I echo Mr O'Mahoney's request of you that when we deal with certain parts of your evidence, when you're using an acronym, if you might be able to extrapolate that acronym. I might be able to help you in that space.

40 MR TRAPP: Sure.

45 COL STREIT: But I'll just give you forewarning that I might ask you to do that. One question, really sort of starting at the end of the chronology, I'd like to take you through, but nonetheless important: was Airbus involved in the disestablishment of the MRH-90 fleet after it was grounded?

MR TRAPP: Yes.

5 COL STREIT: So that's Airbus involved in the taking apart of MRH-90 aircraft; correct?

MR TRAPP: Yes.

10 COL STREIT: Did that occur in Townsville?

MR TRAPP: In some cases, yes.

15 COL STREIT: To your knowledge, did that involve the selling of parts of the MRH-90?

MR TRAPP: Yes.

COL STREIT: Did that include the selling of engines?

20 MR TRAPP: Yes.

COL STREIT: To your knowledge, when did Airbus become engaged in that process of taking apart MRH-90s?

25 MR TRAPP: September/October last year.

COL STREIT: To your knowledge, are you able to say has that process now been concluded or is it still continuing?

30 MR TRAPP: It's still continuing.

COL STREIT: To your knowledge, are you able to say where parts have gone? In other words, what other countries' militaries have purchased parts.

35 MR TRAPP: No, I can't give you that information.

40 COL STREIT: Do you know – I withdraw that. We might return to that at a later stage. Can I begin back at the start.

MS McMURDO: Can I just follow up. If you know of the fleet, do you know roughly, approximately, what proportion of the fleet has been dismantled in this way?

45 MR TRAPP: More than 75 per cent, ma'am.

MS McMURDO: Thank you. Yes, COL Streit.

5 COL STREIT: Mr Trapp, can I just confirm your statement which you have in front of you – and I'm very happy for you to refer to your statement as we move through this – but you'll see at paragraph 2 of your statement - - -

MR TRAPP: Paragraph 2?

10 COL STREIT: You'll see at paragraph 2 of your statement you say:

In providing this statement, I have addressed a number of questions set out in a template statement provided to me by the Office of the IGADF on 22 March 2024, as indicated below.

15

So the genesis of your statement is the Inquiry sent you a number of questions, which we asked you to answer; is that correct?

MR TRAPP: Yes.

20

COL STREIT: And you've answered those questions as best you can, in the body of your statement; is that right?

MR TRAPP: Yes.

25

COL STREIT: You've also received some documentation for the Inquiry, requiring your appearance here today. That's correct?

MR TRAPP: Yes.

30

COL STREIT: And that was a section 23 Notice, requiring your appearance today?

MR TRAPP: Yes.

35

COL STREIT: That Notice also required you to answer questions, which then became your statement. Is that right?

MR TRAPP: Yes.

40

COL STREIT: You also received an extract of the Inquiry's Directions?

MR TRAPP: Yes.

COL STREIT: And a copy of the Frequently Asked Questions Guide for Witnesses in IGADF Inquiries. Is that correct?

MR TRAPP: Yes.

5

COL STREIT: You joined Airbus in January of 2008; is that right?

MR TRAPP: Yes.

10 COL STREIT: Before that, you've had, on the face of it, an extensive military career, over some 22 years?

MR TRAPP: That's correct.

15 COL STREIT: In the Royal Australian Navy.

MR TRAPP: Yes.

20 COL STREIT: And predominantly, if not very close to entirely, that was in relation to maintaining of aircraft?

MR TRAPP: Yes.

25 COL STREIT: Principally amongst that is maintaining of helicopters?

25

MR TRAPP: Yes.

COL STREIT: I'll just ask you to turn to paragraph 11 in your statement. The second sentence of paragraph 11 reads:

30

In this role, I provided support to delivery of ARH and MRH-90 system maintenance support, with a specific focus on compliance with Airbus Australia Pacific's quality management system and the requirements of –

35

then you list a policy. In relation to the MRH-90 system maintenance support, who controlled that maintenance support? Was it something Airbus did, or was that the ADF?

40 MR TRAPP: Yes, that's correct. So at the time, Airbus maintained approved Maintenance Organisation, under a previous Regulator.

COL STREIT: Airbus is required to comply, for those aspects that are applicable to it, with the Defence Aviation Safety Regulation. Is that right?

45

MR TRAPP: Yes.

COL STREIT: And that's a publicly available Regulation?

5 MR TRAPP: Yes.

COL STREIT: You can just search it up on the Internet, can't you?

10 MR TRAPP: Yes.

COL STREIT: I appreciate you've had significant training in the maintenance of helicopters. The question I have though is, have you ever been trained in the maintenance of an MRH-90 helicopter?

15 MR TRAPP: No.

COL STREIT: At paragraph 12(i) of your statement, which is on page 3, you identify in the context of describing that in 2012 you:

20 *Moved to the position of production quality manager where you were responsible for all quality aspects related to the production of military helicopters, ARH and MRH-90, assembled at Airbus Pacific facility in Brisbane, including –*

25 then you list a number of things. The last thing you list at (i) is:

Conducting investigations of nonconforming product and processes.

30 Can you just explain your role in that matter.

MR TRAPP: So within that area, within a quality position, if there was something that was – if there was a component that we received that was incorrect or it was the wrong component, was damaged or whatever, either
35 me or one of my team would conduct the investigation into identifying the root causes and suggesting corrective and preventative actions, so that we can move forward.

40 Sometimes, we would put the aircraft together and we would make a mistake and needed time to understand how we could make the mistake, put out the information so that everybody was aware of what was going on. With that information, we expected that that mistake wouldn't be made again.

COL STREIT: In 2012, at that time was there a management system that recorded the initiation of an investigation, its conduct and the outcome of the investigation?

5 MR TRAPP: Yes.

COL STREIT: What was that called?

10 MR TRAPP: It was a system within the Airbus production side of it, so quality management system.

15 COL STREIT: To your knowledge, what was the linkage between what Airbus was doing in that space; that is, conducting investigations into nonconforming products and processes, to link in with Defence, basically letting Defence know that you were looking at something? How did that work?

20 MR TRAPP: Within the production environment, there was no linkage. Once it moved from the production environment into the in-service environment, then it was anything like that would be reported within the Defence system.

25 COL STREIT: You had that role, if I read your statement correctly, from 2012 until about April 2015; is that correct?

MR TRAPP: Yes.

30 COL STREIT: So depending on when in 2012 you started, we're looking at 2012/13 to April 2015. I appreciate that's a little while ago, but are there any sort of key investigations that come to mind as to what you had to look at?

35 MR TRAPP: So from a production point of view, if we had any damage to the aircraft, that was unable to be delivered to the customer, so we had to replace that part with a non-damaged part. The part would go back and either get repaired or reworked into a serviceable condition. There was some process errors that we needed to correct, and help with the flow of the delivery of the aircraft.

40 And I think there was some errors with regards to transferring some of the information from the production documentation into the in-service documentation.

45 COL STREIT: So this period of time in your career, we're talking about production of MRH-90s, aren't we?

MR TRAPP: Yes.

COL STREIT: So is that building them from scratch, in Brisbane?

5

MR TRAPP: Not necessarily from scratch. So the airframes would come over from Europe and all of the parts that needed to be fitted to the aircraft or assembled to the aircraft would come alongside the aircraft. Over a period of time, the guys would start fitting the aircraft, then testing, then flying, painting, and delivering.

10

COL STREIT: Are you able to assist the Inquiry by expressing an observation that at that point in time, the component of Airbus workforce involved in the production of MRH-90 in Brisbane, are you able to say roughly what component of that involved ex-ADF Service members?

15

MR TRAPP: It would have to be close to 50 per cent, I think.

COL STREIT: You're an example of that.

20

MR TRAPP: I'm an example, yes.

COL STREIT: Do you know when the last MRH-90 rolled off the production line?

25

MR TRAPP: 2017.

COL STREIT: What happened then, to the facilities that were used to produce the MRH-90s, were they then repurposed?

30

MR TRAPP: Yes, that's correct.

COL STREIT: To what?

35

MR TRAPP: So the initial assembly line was repurposed to a warehouse, and the final assembly line was repurposed for deeper maintenance and modification.

COL STREIT: Was deeper maintenance being undertaken by Airbus on existing MRH-90 frames at the same time as they were building MRH-90?

40

MR TRAPP: Toward the end, yes.

COL STREIT: At paragraph 13 you say:

45

In April 2015, I moved to the role of manager of MRH-90 program and production quality, which included:

5 (a) *Acting as the primary interface with the Commonwealth project authority and project subcontractors, for MRH program and production quality related matters.*

10 Just one question. Who is the Commonwealth project authority? Who is that?

15 MR TRAPP: AASPO at the time – or RAMSPO, I think they were called then. So Rotary Wing Army System Project Office, and Army Aviation System Project Office. And I think there was also another one, is Army Project Office, for the production side of it.

20 COL STREIT: Were you therefore dealing with uniformed people in the ADF in those organisations?

25 MR TRAPP: Sometimes, yes, but mostly it was with Australian Public Service people.

30 COL STREIT: At paragraph 15 you refer to what you did in 2019. You say you were appointed as the Maintenance Standards Technical Lead where your duties included – and I'm just looking at (b):

35 *Ensuring compliance with the Maintenance Management Systems used by the maintenance function within the framework detailed in the company's document quality management system.*

40 That's, respectfully, quite a lot of information in that response. Can I just ask, what do you effectively mean by saying that, "ensuring compliance with the Maintenance Management Systems"?

45 MR TRAPP: So across the Maintenance Organisation, we have a head document. Underneath that head document it cascades into a series of procedures that give the people on the floor some guidance into the actions that they need to take that are outside of the actual maintenance of the aircraft. So the administrative, the governance side of it, and making sure that what we did was value adding all the way along, and staying compliant within the Regulations.

As I said before, we were combining a couple of Maintenance Organisations together, and those Maintenance Organisations, for the same type of work, had different ways of doing things.

45

COL STREIT: In that same subparagraph, you used the phrase “maintenance function”. The sentence is “used by the maintenance function.” What do you mean by “the maintenance function”?

5 MR TRAPP: So we moved into a fully integrated organisation. So within that organisation, it had engineering functions, support engineering functions, supply functions. We were the maintenance function.

10 COL STREIT: Those other functions you mentioned, who was performing those functions?

MR TRAPP: The people who were – Airbus, sorry.

15 COL STREIT: Airbus, yes. Paragraph 17, coming to more recent times. That’s your evidence in relation to what you were doing in February 2023: you were appointed the DASR Part 145 Responsible Manager Deeper Maintenance. You then set out in four subparagraphs what your role was. So, first of all, DASR is the Defence Aviation Safety Regulation?

20 MR TRAPP: Yes.

COL STREIT: So your role, to some extent, was stipulated within a Regulation; is that right?

25 MR TRAPP: Yes.

COL STREIT: When you say “Part 145 Responsible Manager Deeper Maintenance”, is that term “Responsible Manager Deeper Maintenance”, is that something that’s defined within the Regulation?

30 MR TRAPP: The “Responsible Manager” is defined in the Regulation and it gives you some broad guidelines and boundaries of what you needed to do. But it was really up to the organisation to determine the position description and the roles and responsibilities. Deeper maintenance was my particular area of responsibility.

35 COL STREIT: At paragraph 18 you say – there’s a typo there; it says, “I this role”. I presume you mean “In this role”. Anyway, you say –

40 *this role, I was DASR Part 145 Form 4 holder, with regulatory reporting lines directly to Airbus DASR Part 145 Accountable Manager.*

So your role under the Defence Aviation Safety Regulation, as the Responsible Manager Deeper Maintenance, was to report to another employee in the Airbus hierarchy?

5 MR TRAPP: Yes, that's correct.

COL STREIT: And that employee had a particular appointment under the Defence Aviation Safety Regulation?

10 MR TRAPP: That's correct.

COL STREIT: The Defence Aviation Safety Regulation, would you agree with me, is a policy that is managed by the Department of Defence?

15 MR TRAPP: Yes.

COL STREIT: So how do you gain an appointment under the Defence Aviation Safety Regulation to do a particular function?

20 MR TRAPP: So first of all the company has a contract to maintain the aircraft. In order for us to maintain the aircraft, we must be a regulated, approved Maintenance Organisation. To do that, we apply to the Defence Regulator to receive that letter of approval. And we are subjected to a series of oversights and audits, I suppose, to ensure that we are acting in a safe
25 manner that is acceptable to the Regulator.

COL STREIT: So if we break it down in this way: other than being paid a salary pursuant to a contract, your actual day job to some extent was controlled or mandated pursuant to an authorisation that a Defence
30 representative provided to you. Is that right?

MR TRAPP: Yes, that's correct.

COL STREIT: What oversight then did you experience of the Regulator in
35 relation to discharging your roles when you had this particular responsibility in 2023?

MR TRAPP: Because it was a carry over from my responsibility from
40 2020, is I'd already had the interview and the oversight from the Regulators, so they were familiar with me and my performance, as well as for me with the Airbus performance as a result of that. If I needed any support from the Regulator, I had direct contact to the Desk Officer if I needed support from a company point of view as I had direct contact to the Accountable Manager who would provide that. The level of oversight is dependent on what the
45 Regulator want to do, but no less than once every two years.

COL STREIT: What happens, to your knowledge, if a Regulation is breached?

5 MR TRAPP: We would report that as part of a safety report that would then go into the Defence system and we'd have visibility across whoever has access to that system; definitely the Regulator and certainly the Continuing Airworthiness Management Organisation, and also within our own organisation.

10 COL STREIT: I suppose, depending on how significant the breach might be, it might result in some sort of investigation.

15 MR TRAPP: Generally, all breaches would. Something like that would result either in an investigation internally or, depending on severity, it may go to an external body.

20 COL STREIT: Now, at paragraph 22 of your statement you say your current role is report to a Mr Paul Jones, who's the Senior Manager Maintenance Repair and Overhaul, and administratively through Clinton Duffield, Manager Oakey Maintenance. You also have direct reporting to an Andrew Dettl – and I apologise if I pronounced that incorrectly – the Vice President of Defence and Services, who is also the Airbus Accountable Manager for the Maintenance Organisation. So the people you report to at
25 the moment are all internal to Airbus; is that correct?

MR TRAPP: Yes.

30 COL STREIT: Can you just turn now in your statement to governance of the MRH-90 maintenance. I have some brief questions in relation to this. That commences at paragraph 23 of your statement. At paragraph 28 you respond to a question that the Inquiry asked you. The question was:

35 *Describe the process the maintenance teams followed when seeking clarification from the OEM about maintenance issues and any difficulties in that process?*

OEM is Original Equipment Manufacturer?

40 MR TRAPP: Yes.

COL STREIT: You said in response:

In clarification, we sought from one of the Original Equipment Manufacturers in respect of any maintenance issue. This involved a submission of an Engineering Advice Request to the CAMSO.

5 The CAMSO is the Continuing Airworthiness Management Services Organisation; is that correct.

MR TRAPP: Yes.

10 COL STREIT: Is that a Defence organisation?

MR TRAPP: No, it's an Airbus organisation.

15 COL STREIT: So do I understand your evidence correctly then that when a clarification is sought from one of the Original Equipment Manufacturers in respect of any maintenance issues, the Engineering Advice Request was sent to another Airbus organisation to address? Is that right?

MR TRAPP: Yes, that's correct.

20

COL STREIT: Did they, to your knowledge, then go off to the Original Equipment Manufacturer to deal with the request?

MR TRAPP: Yes, they're obliged to go with the manufacturer.

25

COL STREIT: What's the role of the Continuing Airworthiness Management system in that space. In other words, why couldn't you just go direct to the Original Equipment Manufacturer to get the answer you're after?

30

MR TRAPP: So within the Maintenance Organisation, we will consume maintenance artefacts, if you will, based on what those instructions from Continuing Airworthiness have been provided to us from the CAMSO. The CAMSO is a contracted or a subcontracted organisation of the Continuing Airworthiness Air Management Organisation, which is part of a military air operator organisation, part of Aviation Command. So they will outsource to the CAMSO so that we stay within certain boundaries, if you like.

35

40 So the 145, being a Maintenance Organisation, would go into the Continuing Airworthiness Organisation. We would then – when I say “we”, Airbus – Continuing Airworthiness, CAMSO, would then submit a request, a query, back over to their point of contact with the OEMs. They would wait for a response. They would come back through their design department, airworthiness department, whatever. They would provide an authoritative response back to the CAMSO. They would turn it into an

45

artefact that the Maintenance Organisation could consume and then we would follow that direction.

5 If we needed more information, we would ask for more information. If they wanted information from us, they would ask. So that was, I suppose, a customer resource management way of being able to do it and making sure that we had all the management steps in place.

10 COL STREIT: Harking back to my initial couple of questions to you about the difference in processes of Oakey 5 Aviation and 6 Aviation, given the different roles that Airbus had in those spaces, do I understand correctly then that if a widget needed to be fixed, the same widget at Oakey at 5 Avn and at 6, the processes in getting that widget fixed will be different because of the different obligations in requesting information as to the extent to which Airbus was involved?

15 MR TRAPP: No, the process would be the same; it's just different Maintenance Organisations doing the work. So 5 Avn would submit an EAR in much the same way as Airbus would submit an EAR. It would all go into the CAMSO, get funnelled into the CAMSO and then out to the OEM. Information would come back and then the answer to the original requesting Maintenance Organisation if it was across all of the aircraft. So regardless of who operated, who maintained, it would go out to all users.

20 COL STREIT: So widget needing to be fixed at Oakey 5 Avn and 6, if it was at Oakey, it steps through the process that you've described at paragraph 23 of your statement?

25 MR TRAPP: Yes.

30 COL STREIT: If it was at 5 Avn, it's a military maintainer but going to the same Airbus organisation that you would go to if you were at Oakey.

35 MR TRAPP: Yes, that's correct.

COL STREIT: If you were at 6 Aviation Regiment, it might be Airbus or it might be Army, given the workforce was shared, would then go to that Airbus organisation for the fix.

40 MR TRAPP: That's correct.

MR O'MAHONY: Just while we're talking about the EAR process, could you talk about the timeliness and effectiveness of that process in your experience?

45

MR TRAPP: It depends, sir. It depends on the complexity. It depends on what the question is. So it could be anything from a quick turnaround time of overnight, to a couple of weeks, to longer.

5 MR O'MAHONY: Were there occasions where it got in the way of being able to deliver a fleet for operational reasons?

MR TRAPP: Yes, there was a level of cessation of flights and that was usually as a result of waiting for authoritative advice back from the OEM.

10

MR O'MAHONY: Thank you.

COL STREIT: At paragraph 33 of your statement you respond to a question where the question is:

15

Describe any maintenance/governance challenges in 2022, and up to 28 July 2023, that impacted availability of MRH-90 aircraft?

You say at paragraph 33:

20

Toward the latter part of 2021 and into 2022, several special technical instructions were issued by Airbus Australia Pacific CAMSO when Airbus Australia Pacific identified airworthiness limitations on aircraft which were or could have been exceeded when such parts were transferred between different MRH-90 aircraft. As a result, all MRH-90 ceased flying until the issue was addressed for each aircraft.

25

So that's, you say, the latter part of 2021 into 2022. Do you know how long MRH-90 aircraft ceased flying as a consequence of that issue?

30

MR TRAPP: Each aircraft was a little bit different, depending on what it was. Certainly, the aircraft that was in deeper maintenance that didn't get assessed until toward the end of the servicing; 6 Avn Regiment, 5 and AAvnTC, they worked through their aircraft. Some would only take a couple of days, some might take a little bit longer. I think within a fairly short amount of time – and I'm not sure of the actual time – but 6 Regiment was back up and flying. Certainly, AAvnTC wasn't too far behind and I'm unaware of where 5 Avn fell in that regard.

35

40

COL STREIT: Look, the reason I ask you that is because we're seeking some clarification of what you say at paragraph 35. If you just turn to that page of your statement, you say:

5 *This culminated in the implementation of a major improvement project which took approximately 12 months to complete involving the attestation of compliance for each aircraft's Certificate of Airworthiness to the CAMO that confirmed that all maintenance remediation actions had been completed.*

10 Do I understand your evidence in this way; that is, the major improvement project took 12 months from start to finish, but that meant there were individual aircraft coming back on line throughout that 12-month period.

15 MR TRAPP: For some of the aircraft – - so some of the aircraft coming back on line relatively quickly and others took a little bit longer. The whole process involved pretty much 100 per cent check of all components on the aircraft and needed to be attested by the Responsible Manager back to the Continuing Airworthiness manager.

 COL STREIT: What was the issue that needed to be fixed, can you remember – or the issues, if there were more than one?

20 MR TRAPP: So there was some lower-level components or lower-level parts. If a component got transferred from one aircraft to another aircraft, not all the time did those components get transferred within that Continuing Airworthiness records system and, therefore, there was a chance that those components could have overflowed some maintenance and may have impacted the airworthiness of the aircraft.

 COL STREIT: Why would a component be transferred from one aircraft to another? What would cause that?

30 MR TRAPP: We probably didn't have the components available at the time. The time to get the components was excessive for the needs of that particular unit.

35 COL STREIT: I see. So there's a logic to this. You have two aircraft: one has more issues with it, they're going to take longer to fix. You have another aircraft with less issues, you take some parts from the aircraft that's going to take longer to fix to fix the aircraft with less issues, so then you have one aircraft that can fly. Is that the logic that was applied?

40 MR TRAPP: That's the logic to a certain extent. You certainly don't want to make that second aircraft to a state that you can't recover.

45 COL STREIT: Sure. You say in paragraph 36 that this was the most significant challenge encountered as part of the MRH-90 program that you can recall. So that was based on your experience up until that point?

MR TRAPP: From a maintenance point of view, yes.

5 COL STREIT: Did the issue subsequently associated with the Jervis Bay incident where there was an issue with the engine, did that overtake your view that that issue became more significant than everything else you had encountered?

10 MR TRAPP: I don't believe so, no.

COL STREIT: I'm now turning to maintaining training set out in your statement which commences at paragraph 38. You say that:

15 *Airbus Australia Pacific provides personnel to undertake aircraft-type training and also technical trainers who deliver the type of training for and on behalf of Rotary-wing Aircraft Maintenance School at Oakey.*

20 Is that correct?

MR TRAPP: Yes.

25 COL STREIT: So Rotary-wing Aircraft Maintenance School, or RAMS for short, that's an Australian Army unit, isn't it?

MR TRAPP: Yes, that's correct.

30 COL STREIT: Part of its responsibility is the training, conducting ab initio training for ADF members undertaking maintenance training of aircraft?

MR TRAPP: Yes.

35 COL STREIT: So does Airbus provide instructors to the school to deliver instructing to those ADF personnel?

MR TRAPP: Yes, that's correct.

40 COL STREIT: Do you know what percentage – well, to your recollection, when did Airbus commence engaging in the delivery of that service?

MR TRAPP: I think it was before I started with Airbus, so before 2008.

COL STREIT: I see. It's been longstanding.

45 MR TRAPP: Yes, before 2008 for ARH and maybe 2009/2010 for MRH.

COL STREIT: Does that continue today, in relation to the Armed Reconnaissance Helicopter?

5 MR TRAPP: Yes.

COL STREIT: At paragraph 41 you say:

10 *Every two years, maintenance personnel undergo:*
(a) authorisation review;
(b) human factors continuing training;
(c) refrigerant handling licence renewal; and
15 *(d) reviews of computer-aided maintenance management (V2 for military aircraft maintenance licence holders) to ensure six months in two years' currency.*

First, what's an "authorisation review"?

20 MR TRAPP: So within a Maintenance Organisation people have various qualifications. Those qualifications start off as part of the normal nationally recognised qualification, Cert IV in Aeroskills, where it's mechanical structures or avionics. They move past that initial qualification where they may qualify and apply for a military aircraft maintenance licence. That
25 licence is basically a Cert IV plus, and requires extra experience and extra training, and within the regs we need to have a way of demonstrating that we review the people who maintain the aircraft and work within the Maintenance Organisation.

30 As part of my role, I do that review and make sure that they're current and we reauthorise them every two years or, if they are getting promoted in between, as required. Part of that reauthorisation is to ensure that they've got the human factors training up to current. The other part of it is, is that they've been involved with maintenance on the aircraft for at least
35 six months in the previous two-year period.

COL STREIT: Is there any training that's conducted every two years that requires people to receive training concerning safety and reporting of matters that need to be reported?
40

MR TRAPP: Every two years not required. We do the safety side of it as part of the human factors training, but also there's continuation training that we provide; that does safety side of it. We're involved with the safety days within Oakey and also in Darwin at the moment. So they are well versed

with regards to the safety side of it. Certainly, within our organisation we require a current – sorry, continuation training for safety issues internally and that gets done every year.

5 COL STREIT: You have mentioned “human factors continuation training” at paragraph 41(b) of your statement. What does that incorporate?

MR TRAPP: It covers off a lot of the known issues to do with maintenance error and operational error within the aviation system between the human and the machine interface. So we focus on a whole heap of different
10 subjects and that stays contemporary, so it gets updated fairly regularly.

But from a maintenance point of view, we concentrate on what they call a “dirty dozen”, which is effectively the top 12 factors that are the cause for
15 maintenance error.

COL STREIT: Is there capacity for anyone working at Airbus as a maintainer on an MRH-90 if they thought there was an issue in relation to the aircraft and they weren’t getting any luck with their superiors in reporting it, is there any mechanism that they could use; some reporting process that makes them anonymous?
20

MR TRAPP: Absolutely. So we have an integrated quality safety management system. Within that, is a reporting tool. People can report into that and they can remain anonymous also, as a level of confidentiality associated with that, if they want to keep it that way as well.
25

COL STREIT: And where does that anonymous report go? Who actions it?
30

MR TRAPP: It goes to within the system and it is actioned by our Safety Department.

COL STREIT: I see. Paragraph 43 you say:
35

Personnel are authorised within Defence Maintenance Organisation. The information is maintained on Patriot Excalibur, which is the Army’s training and authorisation database for aircrew and maintainers.
40

So do I understand your evidence correctly that if Airbus personnel have been authorised by Defence, they can then put information on the Patriot Excalibur, which is Army’s training and authorisation database. Is that right?
45

MR TRAPP: Yes. Hopefully, I've got the name right. So as an acronym, it's called PEX, but generally only if they're working within the Defence – the Army Maintenance Organisation.

5 COL STREIT: So would that – having regard to your evidence about what was happening at Oakey 5 Avn and 6 Avn in terms of Airbus's different involvements, are you able to say with any degree of certainty whether Airbus personnel were authorised to put information on PEX in any of those three areas?

10

MR TRAPP: Certainly not within Oakey. Probably not so much in 6 Avn, but within 5 Avn they may not have been able to input the information. But the information would have been retained on PEX.

15 COL STREIT: So they'd have to go to an Army person, say, at 6 Avn Regiment if you're an Airbus employee and have that Army person gain access to Patriot Excalibur if they needed certain information?

MR TRAPP: I would expect so, yes.

20

COL STREIT: I just want to now turn to what Airbus did at Aviation Training Centre. At paragraph 56 of your statement you say:

25

MRH-90 were allocated between Aviation Training Centre and Airbus Pacific at Brisbane Airport for deep maintenance, and other units as determined by the Fleet Planning Working Group.

Do I understand your evidence correctly in this sense: that Airbus had the contract to fix and maintain MRH-90 aircraft at Oakey; is that correct?

30

MR TRAPP: Yes.

COL STREIT: But an aircraft that might need deep maintenance from Oakey might end up at the Airbus Australia Pacific facilities at Brisbane Airport for that maintenance?

35

MR TRAPP: It would end up there.

COL STREIT: It would?

40

MR TRAPP: Yes.

COL STREIT: So all deep maintenance was undertaken in Brisbane; is that right?

45

MR TRAPP: Yes.

COL STREIT: What about deep maintenance for the MRH-90s at
5 Aviation, would they - - -

5

MR TRAPP: Brisbane.

COL STREIT: So they would be brought down to Brisbane?

10

MR TRAPP: Yes.

COL STREIT: Would they be flown down or - - -

15

MR TRAPP: Yes, generally.

COL STREIT: Generally. Or put on a truck if there was another problem?

MR TRAPP: Or other means of transport, yes.

20

COL STREIT: Sure. And the same with 6 Aviation Regiment, they'd be brought up to Brisbane for deep maintenance?

MR TRAPP: Yes.

25

COL STREIT: Paragraph 65, still on 6 – sorry, wrong – still on Aviation Training Centre at Oakey, but perhaps applicable across the fleet. You use a phrase in the last sentence where you say:

30

The cannibalisation rate for 2022 was manageable with 36 part transfers and barely impacted by 2023, with only eight part transfers.

What does “cannibalisation” – what do you mean by using that word?

35

MR TRAPP: It's a colloquial term that's used throughout Defence where we take operating parts from one aircraft to service another aircraft, fairly similar to what you were explaining earlier on.

40

COL STREIT: I see. So if there's a shortage of a particular part or the time to get that part is not acceptable, you would take a part from another aircraft – cannibalise it – to place on a different aircraft so it can then get back to flying?

45

MR TRAPP: Yes.

COL STREIT: So was that cannibalisation process a method by which to keep a percentage of the fleet flying whilst waiting for spares to be delivered?

5 MR TRAPP: The purpose of that is to optimise the availability of the fleet, yes.

COL STREIT: Did that sometimes mean priority was given to a different part of the MRH-90 fleet in Army?

10

MR TRAPP: Sometimes. It would depend on the criticality, yes.

MS McMURDO: So of course while – it is self-evident, I guess, but while the aircraft gets cannibalised it can't fly, it's out of service?

15

MR TRAPP: That's correct, ma'am.

MS McMURDO: So do you tend to use one aircraft for spare parts until you've got - - -

20

MR TRAPP: We try not to. Sometimes it's inevitable, but generally we try not to cannibalise that aircraft to such an extent that it makes it really difficult to bring back into service.

25 MS McMURDO: So generally it would just be a question of working out where an aircraft is least needed and then that one would be used for spare parts if absolutely essential, is that how it would work?

MR TRAPP: Yes, ma'am.

30

MS McMURDO: Okay, thank you. Thanks, COL Streit.

AVM HARLAND: Just a follow-up question. In paragraph 63 you talk about cannibalisation being common. While that may be the case, that it's common, but is it desirable? And can you talk about some of the downsides associated with cannibalisation in terms of fleet management and aircraft availability?

35

MR TRAPP: Yes, so it's common. It's a known tool, I suppose, that we have within our kit from a 145 perspective where we would try and maximise the availability of the aircraft to meet the capability of the operating unit. So we try not to do it as a Maintenance Organisation. And certainly as an ex-maintainer, we're not into recreational maintenance if we can help it. So wherever possible, we look at excuses not to cannibalise as opposed to excuses to cannibalise.

45

5 The downsides are that you create greater usage of parts, attaching hardware, O-rings and that type of thing. There's an opportunity or a chance that you may cause more damage to what you do, plus the maintenance effort involved with that is considered excessive.

AVM HARLAND: So by doing the cannibalisation, you actually end up creating more work in the long run?

10 MR TRAPP: Yes, sir.

AVM HARLAND: Okay, thank you.

15 COL STREIT: When an aircraft is cannibalised to make another aircraft serviceable and there's a request for parts to be delivered, who is paying for those parts?

MR TRAPP: I'm sorry, I don't have that information.

20 COL STREIT: Sure. I'm just wondering whether you're able to assist the Inquiry as to whether Airbus had to wait for Defence to pay the bill to get the part or whether Airbus, under its contract, just ordered the part and paid for it and then billed Defence?

25 MR TRAPP: We would get the part to support Defence and financially they would sort that out at the program level.

LTCOL STREIT: So any requirement for Defence to pay was not the cause of delay in getting a part?

30 MR TRAPP: No.

LTCOL STREIT: To your knowledge, what generally were the reoccurring causes of delay in getting parts for MRH-90?

35 MR TRAPP: Turnaround times where parts go back to the main manufacturer; unscheduled or early failure of the parts, which therefore meant that we didn't have enough parts to go back into the pool. There was quite a few different reasons.

40 LTCOL STREIT: And when you were going to get a part from the original aircraft manufacturer, who actually is that?

45 MR TRAPP: So our point of contact would be back through Airbus and then, through the Airbus system, they would reach out to the component

manufacturers. So we have certain maintenance subcontractors that we oversight and manage and within the Airbus subcontractor group side of it, they would have the same as well as the rest of the partner companies within the NH90 side of it.

5

LTCOL STREIT: So in big hand/small map, are we talking getting parts out of Australia or are we going overseas?

10 MR TRAPP: Sometimes they're parts from Australia; most of the time it's overseas.

LTCOL STREIT: And when we say "overseas", where are we talking?

15 MR TRAPP: Generally Europe.

LTCOL STREIT: Any particular country?

MR TRAPP: France, Germany, Netherlands.

20 LTCOL STREIT: Because?

MR TRAPP: Because that's where they were manufactured. That's where the partner companies are based.

25 LTCOL STREIT: And to your knowledge, those three countries operate NH90; is that right?

30 MR TRAPP: Yes. So there's actually four major partner companies: Airbus in France and Germany; Leonardo, now in Italy – you might know them as Agusta – and Fokker in the Netherlands.

LTCOL STREIT: Thank you.

35 AVM HARLAND: Excuse me, one question. In your time – because you've been involved in MRH-90 since its initial production – did you see an improvement in the management of spares inventory over time which would have normally corresponded with a reduction in cannibalisations and an increase in availability?

40 MR TRAPP: Yes, sir. As we learnt the aircraft and became more and more aware of, you know, causes for problems and that, we learned to be able to troubleshoot a little bit better and there's always continuous improvement going backwards and forwards between us and our partner companies to try and improve and rationalise the way that we use spares.

45

AVM HARLAND: Okay, thank you.

LTCOL STREIT: At paragraph 66 you say:

5 *We reported the cannibalisation rates to the Army Aviation
Systems Program Office on a monthly basis, and the information I
have provided above is available from the cannibalisation register.*

10 So is that a register maintained by Airbus?

10

MR TRAPP: Yes, it's a register maintained by myself as the
145 Responsible Manager, but also part of the CAMSO.

LTCOL STREIT: I see. So who else has access to the register?

15

MR TRAPP: At request it's available, but generally I hold it. It's not secret
or anything like that.

LTCOL STREIT: Sure.

20

MR TRAPP: And also the numbers in a – yes, the numbers, particularly
for the maintenance managed items, are maintained on CAMM2.

LTCOL STREIT: Sorry, CAMM2 is?

25

MR TRAPP: Is your Continuous Airworthiness Maintenance Management
System version 2.

LTCOL STREIT: I guess if I put my question this way: is there a person
30 in uniform in the ADF able to – has access at the time of their choosing to
that cannibalisation register?

MR TRAPP: I don't know. I've never been asked to provide that level of
access. I'm sure that upon request they would have.

35

MS McMURDO: Well, do you know if the aircraft the subject of this
Inquiry had any history of cannibalisation of parts?

MR TRAPP: I'm sure it did, ma'am.

40

MS McMURDO: You're sure it did?

MR TRAPP: Yes.

45 MS McMURDO: So we can find that out from your register?

MR TRAPP: Absolutely.

MS McMURDO: Thank you.

5

LTCOL STREIT: Yes. I was going to narrow the field of questioning down to that point. We'll come to that at 6, if that's all right. We'll return to this issue.

10

MR TRAPP: Sure.

LTCOL STREIT: Now, at paragraph 69 you say:

15

The MRH-90 program at Oakey achieved approximately 92 per cent of its planned hours during the 2022/2023 reporting period, and approximately 76 per cent availability in the first six months of 2023.

20

So "76 per cent availability", can you just explain what you mean by that.

25

MR TRAPP: It probably should say "serviceability". So availability is that at a point in time every day the aircraft were assessed as whether it was serviceable and available for flight, and part of that assessment would determine whether it would be ready within the next four hours or more. So effectively the serviceability was counted and captured as part of a KPI.

30

LTCOL STREIT: I see. So best outcome is obviously 100 per cent of availability or serviceability of aircraft. I appreciate we're talking best outcome.

35

MR TRAPP: Sure. Yes.

40

LTCOL STREIT: What was achieved was 76 per cent availability. So, in essence, three-quarters of the fleet was available for flights or to be flown in the first six months of 2023.

45

MR TRAPP: Yes.

50

LTCOL STREIT: Does Airbus have any involvement with the TopOwl night-vision device in terms of its maintenance?

55

MR TRAPP: To a degree. So Thales, who is the TopOwl manufacturer and maintenance subcontractor, they are subcontracted by us to repair TopOwl helmets. We have a very minimal level of what we can do. We can change day and night prisms as part of the system, as well as change

60

batteries, and do before and after flight inspections or before and after use inspections.

5 LTCOL STREIT: Who makes TopOwl?

MR TRAPP: Thales.

10 LTCOL STREIT: And am I correct in understanding, therefore, that Airbus's involvement in TopOwl is because the TopOwl is part of the equipment used on the MRH-90?

MR TRAPP: Because TopOwl has been identified to interface with the aircraft, yes.

15 LTCOL STREIT: Airbus does not maintain the device, though, do they?

MR TRAPP: No. Not by any real stretch of the - - -

20 LTCOL STREIT: But Airbus - - -

MS McMURDO: Other than the minor maintenance that you've just mentioned.

25 MR TRAPP: Yes, ma'am.

LTCOL STREIT: So the principal role Airbus has is ensuring that the TopOwl device interfaces with the aircraft; is that correct?

30 MR TRAPP: Yes.

LTCOL STREIT: And if there's some issue with the TopOwl device that doesn't work or interface, then you send it off to Thales to be fixed?

35 MR TRAPP: Yes.

LTCOL STREIT: I'm just going to turn now to paragraph 85 – or paragraph 86, I'm sorry. So paragraph 86 is your response to a question. The question is this:

40 *Following the ditching of a MRH-90 in Jervis Bay in 2023, the OEM confirmed that subsurface pores introduced at the manufacture caused crack initiation at the fir tree root of the blades in the HP1 turbine, and subsequently issued a Service Bulletin recommending a replacement of all turbine blades with*
45 *new blades at the next engine repair or overhaul.*

The question was:

5 *Were new blades fitted to the MRH-90s at the Aviation Training
Centre prior to the Grounding of the fleet? If not, why not?*

You say at 86:

10 *Up to the time of the grounding of the fleet, no aircraft at the
Aviation Training Centre - - -*

MS McMURDO: Sorry, he changed that to three aircraft.

15 COL STREIT: Sorry?

MS McMURDO: If you recall, he changed that to three.

COL STREIT: Yes. Yes, sorry.

20 Perhaps I'll do it this way – I was just reading a statement. I realise you've
altered that. Perhaps I'll do it this way:

Up to the time of the grounding of the fleet, no aircraft –
25 and you've changed that to three aircraft –

*were fitted with engines modified in accordance with the Service
Bulletin because the modified engines were transferred to units
with higher priority; example, 6 Aviation Regiment.*
30

So that's correct to your knowledge?

MR TRAPP: Yes.

35 COL STREIT: So if I can just - - -

MS McMURDO: Just to be – sorry, COL Streit, but he said with one of
their two engines; that was his evidence.

40 COL STREIT: Sorry?

MS McMURDO: So it was three aircraft, but he said with one of their two
engines.

45 COL STREIT: I apologise, you're quite right.

MS McMURDO: So I just wanted to get that right at the beginning, thank you.

5 COL STREIT: Thank you.

Do you understand what the Inquiry Chair has just said?

MR TRAPP: Yes.

10

LTCOL STREIT: So if I get it wrong again, can you let me know?

MR TRAPP: Okay.

15 LTCOL STREIT: Thank you.

AVM HARLAND: Can I just clarify, before we move on, that that grounding we're referring to in paragraph 86 is the final grounding of the aircraft after the July incident and not the grounding that happened after the March incident?

20

MR TRAPP: Sorry, I thought it was after the March incident.

MS McMURDO: March incident, yes. That's what I understood; that it was after the March incident, because the question that it relates to is referring to the Jervis Bay March incident.

25

MR TRAPP: So the first part of it up to the time of the grounding of the fleet, yes, I agree with you, sir, is the final grounding, and then – sorry, that's my answer.

30

AVM HARLAND: Just take your time, it's okay.

MR TRAPP: No, that's okay. Following the ditching in Jervis Bay – so my response, up to the time of the grounding of the fleet is July.

35

AVM HARLAND: Thank you, yes, because the Service Bulletin hadn't been issued at the time of the March grounding.

40 MR TRAPP: No.

AVM HARLAND: It was subsequent to.

MR TRAPP: No. The Service Bulletin to modify the engines was issued prior to the March ditching, yes.

45

AVM HARLAND: When was that issued?

5 MR TRAPP: A couple of years beforehand. Let's say around – I think it's
around 2018, perhaps. There would've been a couple of Service Bulletins
come out and a couple of other artefacts released, Defence artefacts
released, in that time to modify the engines. And then after the ditching of
10 the aircraft in Jervis Bay, then there was an STI or a directive that came out
that said all the aircraft operating out of 6 Regiment would be fitted with
the post-modified engines.

AVM HARLAND: Apologies for my confusion there. Reading the
question, it talks about:

15 *Following the ditching of the MRH-90 in Jervis Bay in March '23 –*
and then you move forward. After they found crack initiation, it says:

20 *And subsequently issued a Service Bulletin recommending
replacement of turbine blades.*

But you're saying that Service Bulletin was already in place. It's at the
bottom of page 14, paragraph 85, and it's in the italics.

25 MR TRAPP: Okay. I'm only aware of a Service Bulletin, and perhaps an
updated Service Bulletin, that recommended the replacement of
high-pressure turbine blades, and that happened several years earlier.

30 Following the ditching of the aircraft, there was another directive – if I said
STI or something that come out from the CAMO. There would've been a
Direction that said that all aircraft operating out of 6 Regiment would have
both modified engines installed.

35 AVM HARLAND: I'm just interested in terms of whether that initial
Service Bulletin was a “replace the turbine blades at the next maintenance,
or the next” – what was the term – yes, “the next engine repair or overhaul”.
If that 2018 Service Bulletin had that in there, I'd just be interested in
understanding how many engines were fitted with the new blades.

40 MR TRAPP: I am not sure how many engines, or new engines, were fitted.
I know that there were some engines fitted. Like I said, three at Oakey.
There were some engines fitted to the aircraft at 5 Avn, but all the aircraft
at 6 Avn had both engines, both modified engines, fitted – or both the
engines fitted with modified - - -

45

AVM HARLAND: We might get some clarification on that, I think.

5 COL STREIT: Yes, thank you. Let's just take a couple of steps back. Put aside the question that you were asked, just focus on what I'm going to ask you now. In early 2023, there was the ditching of an MRH-90 aircraft in Jervis Bay. Are you aware of that?

MR TRAPP: Yes.

10 COL STREIT: Prior to that ditching, is it your recollection that the Original Equipment Manufacturer had issued a Service Bulletin recommending that the surface pores introduced at manufacture caused crack initiation – sorry, that recommending that the turbine blades be replaced as a result of an engine issue?

15 MR TRAPP: Yes.

COL STREIT: And that was recommended to occur at the next time the aircraft was subject to, what, deep maintenance or maintenance?

20 MR TRAPP: No. So the next time the engine would've been subjected to an overhaul or a repair.

COL STREIT: And that overhaul was determined by some sort of manual containing the guidance as to how many hours the engine could be operated before particular maintenance needed to be done.

25 MR TRAPP: That's correct, yes.

30 COL STREIT: So the recommendation from the Original Equipment Manufacturer that there's a potential issue, and that they're recommending that that potential issue be fixed the next time there was an overhaul for the engine on the MRH-90.

35 MR TRAPP: Yes.

COL STREIT: And your recollection is that that might have been as early as 2018/2019.

40 MR TRAPP: Before 2019, so I'll go with 2018. It's around about that time.

COL STREIT: Say, 2018. Well before early 2023, when the aircraft ditched.

45 MR TRAPP: Yes.

COL STREIT: For that very reason that the Original Equipment Manufacturer had identified a few years earlier.

5 MR TRAPP: Yes.

COL STREIT: What happened then after that, if I understand your evidence correctly, is that there was a grounding of the fleet, wasn't there, following the ditching in Jervis Bay?

10

MR TRAPP: Yes.

COL STREIT: Because they had to work out what happened. That's right?

15 MR TRAPP: Yes.

COL STREIT: So they weren't going to fly any aircraft until they worked that out.

20 MR TRAPP: Yes.

COL STREIT: Identified that it was the issue that the Original Equipment Manufacturer had set out in a Service Bulletin a few years earlier. Then what happened after that? So once that was identified, then in terms of Airbus's involvement in addressing that issue, what happened?

25

MR TRAPP: The immediate action was to change out the engines. Identify where the engines were fitted to aircraft and the operating ablates that the units use, what the priority was, and swap out the engines accordingly.

30

COL STREIT: Does that mean swapping out – now, there are two engines on the MRH-90.

MR TRAPP: Yes.

35

COL STREIT: Does that mean swapping out both engines?

MR TRAPP: If that was what was required.

40 COL STREIT: Why would you only swap out one engine, and not the other?

MR TRAPP: Depending on your operating ablates. So there was a certain ablate that you could operate in and if you didn't operate in that parameter, that would exacerbate the situation that was permitted.

45

COL STREIT: Following the ditching in Jarvis Bay and the identification of the issue concerning the engines, or the risk concerning the engines, to your knowledge did MRH-90 aircraft which Airbus perform maintenance on, did those aircraft fly without having those engines fixed?

MR TRAPP: Yes.

COL STREIT: And the priority you mention in paragraph 86, you say:

The modified engines were transferred to units with the higher priority; example, 6 Aviation Regiment.

Can you just explain what you mean by that. Let me put the context. Are we talking about a cannibalisation issue where an engine is taken from an MRH-90 that's been fixed? This issue of the engine crack, or the risk of an engine crack has been fixed, and then that's then put in another MRH-90, or are you talking about engines as a spare part overhauled and fixed to remove this risk, and then inserted into an MRH-90?

MR TRAPP: A bit of both.

COL STREIT: A bit of both.

MR TRAPP: Yes.

COL STREIT: I'm a lay person, so please take your time to set it out for me, but how complex is it to take an engine out of an MRH-90? How much time does it take?

MR TRAPP: Not very long. An hour, hour and a half.

COL STREIT: I see, and in order to put one back in an MRH-90 and get it up to where it's serviceable and the aircraft can fly, how long would that take?

MR TRAPP: To install it is probably the same again, but then to do all the testing afterwards would take a bit longer.

COL STREIT: I'm just now going to - - -

MS McMURDO: Before you leave that topic, could I just ask a few questions to help my understanding of it because I, too, am a lay person.

5 You've clarified that your paragraph 86 refers to the permanent grounding
in July of the MRH-90. There were three aircraft at 6 Aviation which were
fitted with one of their two engines with the modified requirement. So the
reason that there were three with only one engine done was because there
was, for some reason – was it expense, was it availability of the new parts
this wasn't being done, or because there was a need to keep the aircraft
operational, it wasn't all done at once or quickly? Is that correct?

10 MR TRAPP: So if I may, ma'am, three aircraft were at AAvnTC and not
6 Avn Regiment, and the decisions were made at a much higher level within
Aviation Command.

15 MS McMURDO: So they were made within Aviation Command. The
decision was made within Aviation Command, and you don't have any
insight into why that decision was made that really so few of the engines
were modified, despite the recommendation that they be so much earlier.

MR TRAPP: Yes, ma'am.

20 MS McMURDO: That's the position. Thank you.

COL STREIT: Mr Trapp, Airbus would have records, would it not, in
relation to the work to replace engines on MRH-90 aircraft after the July
ditching?

25 MR TRAPP: Yes.

COL STREIT: Just, really, for your counsel and solicitor, we'll be issuing
a notice for production of that information.

30 MR TRAPP: The records are available on the Defence network as well.

COL STREIT: Sure. We're doing both.

35 MR TRAPP: Sure.

COL STREIT: Can I just turn to 5 Aviation Regiment, if I may, and this is
just to deal with some of your evidence about the differences in how Airbus
was engaged in different places around the country. At paragraph 117:

40 *Airbus Australia Pacific provided a maintenance team into
5 Aviation Regiment as essentially labour hire staff to provide
maintenance support as directed, and under the authority of
5 Aviation Regiment.*

45

Do you recall when that occurred, how long that had been going on for?

MR TRAPP: I think it was somewhere around 2009 or 2010.

5 COL STREIT: Did that exist, that arrangement, up until the time the fleet was permanently grounded?

MR TRAPP: Yes.

10 COL STREIT: You may not be able to answer this, so if you can't, please say so. It may be beyond your knowledge. Do you have any knowledge or understanding as to why that arrangement in 5 Aviation Regiment was different to what was happening at Oakey?

15 MR TRAPP: The arrangement was that 5 Avn Regiment would maintain their own aircraft and we would supplement their maintenance teams.

COL STREIT: Did it have something to do with 5 Aviation Regiment needing an ability to deploy with maintainers to fix aircraft?

20 MR TRAPP: I don't think so.

COL STREIT: You don't think so?

25 MR TRAPP: If 5 Avn Regiment was looking after their own aircraft, I expect that those maintainers would deploy regardless.

30 COL STREIT: Sorry, my question is a bit clumsy. Did you have any understanding as to whether the reason why 5 Avn wanted to maintain its own aircraft was because it needed to be able to deploy with maintainers?

MR TRAPP: I would expect that would be the case.

35 COL STREIT: But you don't have any knowledge though.

MR TRAPP: No, I don't have direct knowledge.

COL STREIT: In paragraph 118 you say:

40 *The maintenance management at 5 Aviation Regiment differed from Aviation Training Centre and 6 Aviation Regiment because the 16 Aviation Brigade held the authorisation as the DASR Part 145 Maintenance Organisation, and not Airbus Australia Pacific.*

45

What do you really mean by making that statement?

5 MR TRAPP: Within each Maintenance Organisation we have our own procedures that comply with the Regulations, and out of those procedures our business decisions on which way that we need to go. So our procedures would differ a bit to what the 16 Brigade procedures would be.

10 COL STREIT: Is it also as a consequence that because you are essentially just supplying a workforce at 5 Avn, the accountability and the responsibility overall rested under the Defence Aviation Safety Regulation Part 145 that that rested with the relevant 5 Aviation delegate? Is that right?

MR TRAPP: That's correct.

15 COL STREIT: At paragraph 20 you say:

With the grounding of the MRH-90 fleet, Airbus Australia Pacific has no continuing role at 5 Aviation Regiment.

20 But I take it, given your evidence earlier, there was a continuing role in this sense: and that's in the sense of taking the aircraft apart, which 5 Aviation Regiment had operated.

25 MR TRAPP: So until 5 Aviation Regiment stopped maintaining and operating the MRH-90, our guys were still contracted for 5 Avn up until, I think, November/December last year, and then they transferred from 5 Avn Regiment back into Airbus.

30 COL STREIT: Just a question – again, you may not be able to answer it. Please say so if you don't have the knowledge. You gave some evidence earlier that approximately 50 per cent of the Airbus workforce are ex-serving ADF members. Do you know if any of those persons are still serving members, just in a reserve capacity?

35 MR TRAPP: So if I may, sir, the question was with regards to production people.

COL STREIT: Okay. Yes.

40 MR TRAPP: As production have gone, some of the production people come over into the Maintenance Organisation. I am aware that there are some people who do reserve time; I couldn't tell you how many.

45 COL STREIT: At paragraph 129 – just still with 5 Aviation Regiment – we're talking about rate of effort there. At paragraph 129 you say:

MRH-90, at 5 Aviation Regiment, achieved approximately 83 per cent of its planned hours during the 2022/23 reporting period, with approximately 40 per cent serviceability.

5

And the period we're talking about is 2022/2023. Do I understand your evidence correctly that in that 2022/23 period 40 per cent serviceability means 40 per cent of the aircraft MRH-90 at 5 Avn were available to undertake flights?

10

MR TRAPP: Yes.

COL STREIT: Do you know how many aircraft were at 5 Avn in that period of time?

15

MR TRAPP: Beginning of '23, there was 10 aircraft. By the middle of '23, there was probably five.

20

COL STREIT: Are you able to assist the Inquiry to understand why it was only less than 50 per cent serviceability during that period?

MR TRAPP: No, I can't. That's a question better asked of the Army.

25

COL STREIT: Airbus is just doing the labour support in that space, aren't they?

MR TRAPP: Yes.

30

AVM HARLAND: Would you consider 40 per cent serviceability to be extremely low, or how would you characterise that?

MR TRAPP: If it was for us, yes, it's low.

35

AVM HARLAND: It would be contract termination, mightn't it be, 40 per cent availability of aircraft?

MR TRAPP: As a contractor, we're governed by KPIs, so yes.

40

MS McMURDO: Do you know what your KPI would be for serviceability?

MR TRAPP: Above 75.

45

COL STREIT: Can I turn to 6 Aviation Regiment. We're nearly done, Mr Trapp. At 6 Aviation Regiment it was a different maintenance regime to which Airbus was involved than existed at Oakey, wasn't it?

MR TRAPP: Yes, the blended workforce. That's right.

5 COL STREIT: A blended workforce. So when you're dealing with a blended workforce, you have the military which has a hierarchical structure to it; Airbus has civilian employees. Are you able to explain, to your observation, how that blended workforce was managed? In other words, who's on the ground and responsible for this blended workforce?

10 MR TRAPP: So the responsibility overall rested with the Responsible Manager at Holsworthy at the time, an Airbus employee. The day-to-day tasking was done through Airbus as well. The Army administration was done by the 6 Avn Regiment people. The maintenance of the authorisations and all of that was done by Airbus and the tasking, so there was a
15 combination between the Airbus and 6 Regiment maintenance personnel working together.

COL STREIT: Does Airbus have any involvement in the maintenance of – I appreciate I'm stepping out from the 6 Aviation lane – but in the
20 maintenance of the simulators that were used for MRH-90?

MR TRAPP: Sorry, say that again, please.

25 COL STREIT: Did Airbus have any involvement in the maintenance of simulators used for MRH-90?

MR TRAPP: Not direct maintenance, no. We contract the maintenance out to Thales.

30 COL STREIT: I see. So Thales maintain the simulators?

MR TRAPP: Actually, I'll go back to that. It was contracted out to whoever the provider is for the simulator.

35 COL STREIT: I see.

MR TRAPP: I mention Thales because Thales do it for Tiger or for ARH.

40 COL STREIT: To be clear, did Airbus contract that responsibility out to another organisation? Because that would seem to indicate it has some involvement or responsibility in the maintenance of the simulator.

MR TRAPP: I'm sorry, I'd have to go back and research that again.

45 COL STREIT: Sure. That's all right.

MR TRAPP: I'm probably getting my contracts mixed up a bit.

COL STREIT: I might come back through your solicitor for a question.

5

MR TRAPP: Sure.

COL STREIT: Thanks.

10 MS McMURDO: Mr Trapp, you've been giving evidence for a while now. Would you like a break?

MR TRAPP: No, ma'am, I think I'm good.

15 MS McMURDO: You'll go on, okay.

MR TRAPP: As long as everybody can listen to my dulcet tones a bit longer.

20 COL STREIT: Indeed. We won't be too much longer. At paragraph 101 of your statement you say:

25 *There were more maintenance burdens at 6 Aviation Regiment due to the contractual requirement for the availability of four mission-capable aircraft.*

Can you just explain what you mean by that.

30 MR TRAPP: It's part of our contract to provide – the support for 6 Avn Regiment is the aircraft were required to be in the configuration that was considered to be mission capable; so rescue hoist, FLIR, forward-looking infrared, repelling steps and equipment, as well as I think above the 75 per cent serviceability rate.

35 COL STREIT: You say at paragraph 102:

40 *Given these demands, there was significant cannibalisation rates of spare parts, with 117 parts transferred during 2022/2023 and high maintenance efforts to achieve this requirement.*

MR TRAPP: Yes, that's correct.

COL STREIT: Where do you get the number 117 from?

45 MR TRAPP: Out of the register.

COL STREIT: Which is something you maintain?

MR TRAPP: Yes.

5

COL STREIT: To confirm, that's an internal Airbus document?

MR TRAPP: That's correct.

10

COL STREIT: You were asked a question about the 6 Aviation Regiment's rate of effort to achieve training goals in 2022/2023 on MRH-90. Your answer at 103 in relation to the entirety of the question is:

15

Based on the information I have extracted from my records, MRH-90, at 6 Aviation Regiment, achieved approximately 79 per cent of its planned training hours during the 2022/2023 reporting period, with approximately 76 percentage serviceability.

Is that correct?

20

MR TRAPP: Yes.

25

COL STREIT: So is the Inquiry to understand that 76 per cent serviceability is 76 per cent of the fleet of aircraft at 6 Avn in that 2022/2023 period were ready to be flown?

MR TRAPP: Yes.

30

COL STREIT: At paragraph 113, if you turn the page to page 18 of your statement, you say this:

35

By the time of the grounding of the fleet, all MRH-90 aircraft at 6 Aviation Regiment were fitted with modified engines in accordance with the Service Bulletin.

Were any aircraft fitted with modified engines after 28 July 2023?

MR TRAPP: Yes, absolutely.

40

COL STREIT: So as of July, 28 July 2023, there were aircraft a 6 Aviation Regiment that still needed to be fitted with modified engines in accordance with the Service Bulletin?

MR TRAPP: No.

45

COL STREIT: I might have misunderstood your evidence. I'll ask the question again. At paragraph 113 you say:

5 *By the time of the grounding of the fleet, all MRH-90 aircraft at
6 Aviation Regiment were fitted with modified engines in
accordance with the Service Bulletin.*

10 So first question: when you say "by the time the grounding of the fleet",
what date are you referring to, or time?

MR TRAPP: Before the end of July 2023, all aircraft at 6 Regiment were fitted with modified engines.

15 COL STREIT: Does that mean, to your knowledge, the aircraft from
6 Aviation Regiment that deployed to Exercise TALISMAN SABRE in
July 2023 were fitted with the modified engines?

MR TRAPP: Correct, yes.

20 MS McMURDO: And both engines?

MR TRAPP: Both engines, ma'am.

25 COL STREIT: In addition to your evidence, where would the records exist
that would confirm that?

MR TRAPP: In CAMM2.

30 COL STREIT: CAMM2 is what?

MR TRAPP: The Continuing Airworthiness Maintenance Management
system.

35 COL STREIT: Airbus has access to CAMM2?

MR TRAPP: Yes.

COL STREIT: Does Defence have access to CAMM2?

40 MR TRAPP: It's a Defence tool.

COL STREIT: So it has access to it?

45 MR TRAPP: Yes.

COL STREIT: If we were to search CAMM2 to identify that issue you've just given evidence about, what would be the search parameters?

5 MR TRAPP: Engine part number, serial number, modification.

COL STREIT: Would we use the aircraft serial number or the aircraft number?

10 MR TRAPP: From there, yes, you could. From there it would identify which serial numbers are fitted to which aircraft.

COL STREIT: I see.

15 MR TRAPP: Sorry, which serial number engines are fitted to which aircraft.

20 MS McMURDO: Do you know if you are able to say at the time of the – do you know when 6 Aviation Regiment had fitted all its fleet with engines in accordance with the Service Bulletin? Do you know when that occurred?

MR TRAPP: Not precisely, ma'am.

MS McMURDO: Approximately?

25 MR TRAPP: Sorry, between the end of March and the beginning of July.

MS McMURDO: So it was fairly recent. Okay, thank you.

30 COL STREIT: Ms McMurdo, they're my questions for the witness.

MS McMURDO: All right, thank you.

COL STREIT: Thank you, Mr Trapp.

35 MS McMURDO: Do you have any questions?

AVM HARLAND: I just had a couple of follow-on questions.

40 Perhaps you could help the Inquiry understand how 6 Avn had a 76 per cent serviceability rate and delivered 79 per cent of its planned training hours, whereas 5 Avn had a 40 per cent serviceability rate and delivered 83 per cent of its flying hours.

45 MR TRAPP: I can't help you out there, sir. My understanding is that the requirements at 6 Avn were met a lot quicker during their program sortie

time and therefore their required hours wasn't – they didn't need to burn off their required hours.

5 AVM HARLAND: It's just an interesting stat. Regarding the process for updating manuals and the likes, IETP you talked about, the PIRR process. What is the PIRR process?

10 MR TRAPP: It's a Publication Improvement Report and Reply process that if there's an identified opportunity for the improvement of a publication, people can submit that request. It would go to the publication sponsor. They would consider the importance and the level of return of investment required to amend that publication. That would be amended and then published at the next release.

15 AVM HARLAND: Can you comment on the timeliness and effectiveness of that process as it applied to MRH-90 publications?

20 MR TRAPP: So if I look at the IETP, which is the interactive electronic technical publication, depending on the priority of it, it could be updated within six weeks if it was a reasonably high priority. If it was a low priority, it could take several months.

AVM HARLAND: Would you characterise the process as effective?

25 MR TRAPP: It appears effective, yes, sir.

AVM HARLAND: In terms of the volume of amendments, I'm putting myself in the position of a maintainer, what sort of volume of amendments were there put through, and was that a challenge for the maintainers?

30 MR TRAPP: Certainly over the course of the life of the aircraft in the early days, yes, there was absolutely a lot of amendments required. Certainly a lot of amendments are required to be reviewed and done. At the moment, I am not aware of how many amendments would have been put through last year, certainly none at the moment. But I don't believe that that was excessive or onerous in the last couple of years, but I can certainly find that out.

40 AVM HARLAND: Okay, thank you. One final question: did you have anything to do with the RNZAF NH90 operation and maintenance?

MR TRAPP: Personally, no.

45 AVM HARLAND: Does Airbus have an involvement in that?

MR TRAPP: Used to, yes.

AVM HARLAND: Okay, thank you.

5 MS McMURDO: A few questions from me of a more general nature. Did you see the recent 60 Minutes program about the crash the subject of this Inquiry?

MR TRAPP: Yes, ma'am.

10

MS McMURDO: You might recall that in that program they referred to a document that Airbus had sent to NATO users of MRH-90 – and you mentioned who they were earlier in your evidence – assuring them that despite the crash on 28 July 2023, an investigation had shown that the aircraft were safe. Do you recall that?

15

MR TRAPP: So the document would have been sent by the OEM which is NATO Helicopter Industries, to the other user nations. So, yes, ma'am.

20

MS McMURDO: So given that, did the decision to permanently ground the MRH-90 and dismantle and sell off the parts after the grounding surprise you?

MR TRAPP: Yes, ma'am.

25

MS McMURDO: Did you understand why Defence had made that decision?

MR TRAPP: No, ma'am.

30

MS McMURDO: Thank you. Given your experience in maintenance, you heard certainly in that program – I don't think you've been sitting in the evidence this week, have you?

35

MR TRAPP: I sat in on Monday, a little bit yesterday and a little bit on Tuesday.

40

MS McMURDO: All right, okay. So you've heard of the circumstances of the crash, the trajectory of the aircraft immediately before it crashed, and then crashed into the sea. Given your experience in maintenance, is there anything that occurs to you maintenance-wise as to how this might have happened?

45

MR TRAPP: I really don't have enough information to understand what the situation is, other than what we've been told as part of the Inquiry and

what's certainly on the public register. So from a maintenance point of view, no.

5 MS McMURDO: Nothing occurs to you that would have contributed or could possibly have contributed?

MR TRAPP: No, ma'am, not from a technical perspective.

10 MS McMURDO: No, all right then. You mentioned there was a reporting process for safety concerns in the spectre of certainly maintenance issues. Were you aware of – were there reported concerns about the maintenance of MRH-90 that you received over the period you've been involved in its maintenance?

15 MR TRAPP: Every month I pull a report through the Defence tool that identifies safety reports that have been submitted by all operating units of MRH, and certainly ARH. At the time, the Responsible Managers and myself, we used to review those, assess, see whether there was any implications into what we did. If the maintenance report was generated by
20 us, we would look at it from a learning perspective and how we could get that information out to our Maintenance Organisations. If it impacted, let's say 5 Avn as well, is that from time to time we would provide some information or some guidance of what we thought 5 Avn could use to support that.

25 Over the years – and we've been collecting it for 40 years – is there's a couple of areas that we are working through collectively with the CAMO and other units to try and address. But from an MRH-90 perspective, we didn't see a lot of the recurring themes on the same level of those systems.

30 MS McMURDO: What were the couple of areas that emerged as of concern?

35 MR TRAPP: There's a level of supervision and oversight that needs to be improved, and certainly what we call independent inspections.

MS McMURDO: Independent inspections?

40 MR TRAPP: Yes.

MS McMURDO: The level of supervision and oversight, was that within the Airbus system at 6 Aviation or the integrated system at 5 Aviation?

45 MR TRAPP: I think it's across the whole system.

MS McMURDO: Across the whole – yes, okay. Thank you. Any applications for cross-examination?

5 LCDR GRACIE: Yes, ma'am, there is. It's an important topic. I would estimate that I would like about 15 plus minutes. It could even be half an hour. There's quite a bit I would like to cover that hasn't been touched on. I'm happy to proceed now, but I appreciate everyone's been here for two hours without any break.

10 MS McMURDO: Well, why don't we start – are there going to be any other applications for cross-examination. I suppose it might depend on what emerges from this.

15 UNIDENTIFIED SPEAKER: Yes, ma'am, I have some short questions.

UNIDENTIFIED SPEAKER: I'll have some short questions, ma'am.

20 MS McMURDO: Short questions. Mr O'Mahoney, would you be re-examining him?

MR O'MAHONEY: I don't think so, not at this stage.

25 MS McMURDO: Not at this stage. All right. Well, I think Mr Trapp indicated – would you probably have a preference to finish, would you?

MR TRAPP: Not if this is going to go on for a little bit longer. I think a comfort break would be welcome at the moment.

30 MS McMURDO: Okay. Well, we could take an early lunch. We could take lunch from now until 12.45. I'm told lunch is available for the families now. So we might take an early lunch break and resume at 12.45.

LCDR GRACIE: Thank you, ma'am.

35 MS McMURDO: Thank you.

HEARING ADJOURNED

40

HEARING RESUMED

MS McMURDO: Yes, LCDR Gracie.

5

<CROSS-EXAMINATION BY LCDR GRACIE

10 LCDR GRACIE: Mr Trapp, I represent the interests of CAPT Lyon, one of the deceased from the accident, the Captain. Can I just ask some fairly basic matters, just going back to fundamentals. There's the ARH, which is the Armed Reconnaissance Helicopter.

15 MR TRAPP: Yes.

LCDR GRACIE: Also known as the Eurocopter?

MR TRAPP: Manufactured by Eurocopter Airbus.

20

LCDR GRACIE: Then we've got – is it a variant, the NH90?

MR TRAPP: The NH90 is the base model of what we know as the MRH-90.

25

LCDR GRACIE: What's the NH stand for?

MR TRAPP: NATO Helicopter. NATO Helicopter.

30 LCDR GRACIE: Thank you. And the MRH-90 is a multirole helicopter?

MR TRAPP: Yes.

LCDR GRACIE: Is Australia the only country that operates an MRH-90?

35

MR TRAPP: To the best of my knowledge, yes.

LCDR GRACIE: So the other countries that you mentioned – I think you mentioned Germany, France, Italy, Netherlands. You didn't mention New Zealand?

40

MR TRAPP: So those countries that I mentioned - - -

LCDR GRACIE: NATO.

45

MR TRAPP: - - - were the countries within which the companies or the partner companies of NATO Helicopter Industries reside.

5 LCDR GRACIE: So New Zealand operates outside of that NATO sphere, but still operates the NH90?

MR TRAPP: Yes.

10 LCDR GRACIE: Do any other countries outside of NATO operate the NH90?

MR TRAPP: Italy, Qatar, Oman, Finland, Sweden.

15 LCDR GRACIE: Nowhere else, to your knowledge, operates the MRH-90?

MR TRAPP: MRH-90 is a designation for Australian operations.

LCDR GRACIE: That's what I'd like to go to.

20 Ma'am, do you mind if I put to Mr Trapp the evidence of CAPT Balaam in Exhibit 4 which explains, I think, the differences between the two platforms.

25 MS McMURDO: So you'd like him to look at Exhibit 4?

LCDR GRACIE: If you don't mind me putting that to him, yes.

MS McMURDO: Yes, that's all right.

30 LCDR GRACIE: Mr Trapp, just by way of background, this was some evidence given by CAPT Andrew Balaam. He's a Captain in the Australian Army at the Army Aviation Training Centre at Oakey. He's a Qualified Flying Instructor. I don't know if you know CAPT Balaam.

35 MR TRAPP: No.

40 LCDR GRACIE: And I don't expect you to accept what is in here, but I'd like your assistance in seeing if it's - or if you have any comments about it, to see if it's accurate. And if you can go to paragraph 47, please, and just take your time to read it to yourself. When you've done that, let me know.

Can we just step through it. I don't think the first sentence is at issue in terms of the MRH-90 and the NH90:

Medium-sized twin engine multirole helicopter developed in Europe in the 90s.

You accept that?

5

MR TRAPP: Yes.

LCDR GRACIE: Then I think he's referring to the NH90:

10

It was a 5th generation aircraft which featured entirely fly-by-wire flight controls.

MR TRAPP: Yes.

15

LCDR GRACIE: Does the MRH-90 have that same feature?

MR TRAPP: Yes.

LCDR GRACIE: It says:

20

Instead of traditional flight controls connected by control rods augmented by hydraulic actuators moving the control services, the NH90 has no direct connection between the flight controls and the control services.

25

Does that apply to both NH90 and MRH-90?

MR TRAPP: Yes.

30

LCDR GRACIE: It says:

Instead, the controls are connected to interceptor transducers which convert the physical inputs into digital signals.

35

MR TRAPP: Yes.

LCDR GRACIE: Applies to both?

MR TRAPP: Yes.

40

LCDR GRACIE:

Which in turn are connected to an actuator control computer which sends signals to move the control services.

45

Same?

MR TRAPP: Yes.

5 LCDR GRACIE: What's the fundamental different then between the MRH-90 and the NH90?

MR TRAPP: Some of the mission equipment that is uniquely Australian. It's about the same. A colour scheme designation; that's probably about it.

10

LCDR GRACIE: But it's not the off-the-shelf NH90, is it?

MR TRAPP: It's mostly off-the-shelf, with some Australianised components added to it.

15

LCDR GRACIE: Is one of those the automatic flight control system?

MR TRAPP: No.

20 LCDR GRACIE: So if you look at paragraph 59, is the – sorry, take a moment to have a look at it.

MR TRAPP: Sure. Yes.

25 LCDR GRACIE: So does that AFCS feature apply to both platforms?

MR TRAPP: Yes.

30 LCDR GRACIE: Is there any difference in the platforms in terms of the engines utilised?

MR TRAPP: There's different variants that run different engines. The MRH-90 ran a 322 engine. There are other variants around the world that will run a T700 engine, but all the engines that we run are the same as the engines that are run by any other country using the same engine.

35

LCDR GRACIE: So that's in terms of the engine. What about in terms of the control systems; the same?

40 MR TRAPP: The flight control systems?

LCDR GRACIE: Yes, flying control systems.

MR TRAPP: Yes, they're the same.

45

LCDR GRACIE: That AFCS is the same. All other fly-by-wire inputs the same?

MR TRAPP: Yes.

5

LCDR GRACIE: In terms of maintenance then, would it be similar to what's required of the NH90?

MR TRAPP: The Aircraft Maintenance Plan is put out by the OEM and contextualised for each individual country's operation.

10

LCDR GRACIE: So is the airframe the same?

MR TRAPP: Yes.

15

LCDR GRACIE: So in terms of these Australian variants, are they mission-related mainly?

MR TRAPP: Communications, yes.

20

LCDR GRACIE: Comms within the aircraft?

MR TRAPP: Yes.

25

LCDR GRACIE: Weapons, something like that?

MR TRAPP: Not that the aircraft really carried weapons.

30

LCDR GRACIE: What made it sufficiently different to give it a different designation to the NH90?

MR TRAPP: Just it was the Australian version of – they just wanted to recognise it as the Australian version of the NH90.

35

LCDR GRACIE: Yet in your evidence you say that there is no direct contact between Airbus Australia Pacific with the maintainers of NH90 around the world.

MR TRAPP: Correct, yes.

40

LCDR GRACIE: Why did the MRH-90 operate in such a bubble?

MR TRAPP: I'm sorry, I don't understand.

LCDR GRACIE: Well, my understanding is that the NH90 fleets have direct contact with each other in terms of serviceability, maintenance and even contracts.

5 COL STREIT: There's no evidence before the Inquiry in relation to that matter, and my friend can't give that evidence from the Bar table.

MR O'MAHONEY: I also rise to object on the same basis, that the question is without a premise that's been made good from - - -

10

MS McMURDO: Well, I just don't see the relevance of it in any case.

LCDR GRACIE: Are you aware of how the NH90 worldwide fleet operates in terms of liaising in relation to maintenance and serviceability?

15

MR TRAPP: As I explained earlier, the information would be passed up through a single point of contact within the OEM, and the OEM would pass that information back to us. Information of other user countries would not be further transmitted outside of the NHI or that delegated partner company.

20

LCDR GRACIE: Have you heard of military-type certification?

MR TRAPP: Yes, absolutely.

25 LCDR GRACIE: The NH90s have that certification within the international fleet, don't they?

MR TRAPP: Within the individual countries, user countries, yes.

30 LCDR GRACIE: But the Australian Defence Force don't have that for the MRH-90 - - -

MR TRAPP: Yes, they do.

35 LCDR GRACIE: - - - in relation to the NH90, do they?

MR TRAPP: No.

40 LCDR GRACIE: Because as I understand it, having a military-type certification lets the holder of that certification – let's say in this case New Zealand – to enter into direct contracts with NHI.

MR TRAPP: Okay.

45 LCDR GRACIE: Do you know that or not?

MR TRAPP: No.

5 LCDR GRACIE: And other NH90 users. Do you know that?

MR TRAPP: No, I'm not aware of that.

10 LCDR GRACIE: Counsel Assisting asked you some questions about serviceability and I think your evidence was to the effect that serviceability equates to availability of aircraft. Is that - - -

MR TRAPP: Sometimes, yes.

15 LCDR GRACIE: It's a percentage based on the fleet size?

MR TRAPP: Yes.

20 LCDR GRACIE: So it's a percentage of the operational fleet that is available to fly, basically.

MR TRAPP: Within that unit.

25 LCDR GRACIE: If I refer to Airbus Australia Pacific Limited as Airbus, I hope it's okay.

MR TRAPP: Yes.

30 LCDR GRACIE: You said in paragraph 51 of your statement – and feel free to go to it - ma'am, I apologise. This is a bit clunky, but I don't have printed copies of these statements and every time my laptop goes off, I have to relog in with my Defence card.

35 MS McMURDO: So you've finished with Exhibit 4, or will you be referring back to it?

LCDR GRACIE: I think there may be a matter to come back to, ma'am.

So are you at para 51 there?

40 MR TRAPP: Yes.

LCDR GRACIE: So between 2022 and 2023 at Oakey, Airbus maintained five ARH and up to nine MRH-90 aircraft.

45 MR TRAPP: Yes.

LCDR GRACIE: What are the five ARH? Are they NH90s?

5 MR TRAPP: Armed Reconnaissance Helicopters.

LCDR GRACIE: But not MRH-90s?

MR TRAPP: No.

10 LCDR GRACIE: The distinction there is what?

MR TRAPP: Completely different aircraft.

15 LCDR GRACIE: So we've got nine MRH-90s at Oakey. And then, if you go to paragraph 91, please, of your statement, you say:

In 2022 and 2023 Airbus maintained up to 12 MRH-90 at 6 Avn.

20 MR TRAPP: Yes.

LCDR GRACIE: So that's 21 MRH-90s for which Airbus is responsible?

MR TRAPP: Yes.

25 LCDR GRACIE: There's a fleet of, I think, 46 – or there was at the time?

MR TRAPP: Yes.

30 LCDR GRACIE: Who maintains the balance of the fleet?

MR TRAPP: The balance of the fleet would have been spread out between 5 Avn Regiment – '23 – so this is before July '23: the storage facility in Townsville and the depot maintenance facility in Brisbane.

35 LCDR GRACIE: So Airbus has a contract with Defence in relation to the 21 aircraft that it maintains?

MR TRAPP: Plus the ones in depot maintenance, plus the ones in the storage facility.

40 LCDR GRACIE: Do you have an understanding of how the balance of the fleet have the maintenance system designated or regulated?

45 MR TRAPP: Yes.

LCDR GRACIE: How does that work? Who does it come from and how is it - - -

5 MR TRAPP: The maintenance system is flowed down from the OEM NHI, then distributed out through what we call a Technical Maintenance Plan and embedded within CAMM2. Within CAMM2, the guys will apply the maintenance as required by the CAMO and - - -

10 Lcdr GRACIE: Just say that again, the?

MR TRAPP: The CAMO, the Continuing Airworthiness Management Organisation.

15 Lcdr GRACIE: Thank you.

MR TRAPP: And we will do the maintenance as required out of those maintenance schedules.

20 Lcdr GRACIE: When you say “we do the maintenance”, you mean Airbus?

MR TRAPP: Airbus. Airbus.

25 Lcdr GRACIE: So does it come back to Airbus in relation to those aircraft, other than the 21 that you directly maintain?

MR TRAPP: No, other than those aircraft that we directly maintain, it goes through 16 Brigade.

30 Lcdr GRACIE: Is that then seconded to a civilian contractor or - - -

MR TRAPP: No.

35 Lcdr GRACIE: Do you know why there was a dichotomy between Airbus having less than 50 per cent of the fleet to maintain and Army, in effect, directly responsible for the balance of the fleet?

40 MR TRAPP: So the way I see it is, 5 Avn Regiment was responsible for 10 aircraft – up to 10 aircraft and Airbus was responsible for the remainder.

LCDR GRACIE: So when you were talking about serviceability percentages, that’s only in relation to those aircraft that Airbus maintained.

45 MR TRAPP: No.

LCDR GRACIE: It's across the fleet, is it?

5 MR TRAPP: No, it's at each individual unit. So when I talk about 5 Avn Regiment, it's at 5 Avn. If I talk about 6 Avn, it's at 6 Avn. If I talk about AAvnTC, it's at AAvnTC.

LCDR GRACIE: But if it's 5 Avn, is it only in relation to the nine MRH-90s at - - -

10 MR TRAPP: The 10 at 5 Avn. So at the beginning of 2023 there was 10 aircraft. At the time of the accident, there was only five.

15 LCDR GRACIE: So let me just clarify that. I appreciate the serviceability figures related to the number of aircraft at 5 Avn, but is it only the number of aircraft that are maintained by Airbus or did Airbus maintain all of them?

MR TRAPP: No, Airbus maintained all aircraft except for the aircraft at 5 Avn.

20 LCDR GRACIE: So can you just repeat that again. Airbus - - -

MR TRAPP: Airbus maintained all of the aircraft except for that aircraft that was at 5 Avn, in which case 5 Avn, even though we had Airbus-contracted people in there, 5 Avn maintained that aircraft – or those aircraft.

25 LCDR GRACIE: So is that included in your statistics, the 5 Avn maintained aircraft?

30 MR TRAPP: Yes, absolutely.

LCDR GRACIE: The same with 6 Avn?

MR TRAPP: Yes.

35

LCDR GRACIE: Have a look at paragraph 69, if you don't mind, of your statement.

MR TRAPP: I'm comfortable if you want to read it.

40

LCDR GRACIE: You'll find it faster than I can, scrolling back. You say that the MRH-90 program at Oakey achieved approximately 92 per cent of its planned hours during 2023.

45 MR TRAPP: Yes.

LCDR GRACIE: And approximately 76 availability in the first six months of 2023?

5 MR TRAPP: Yes.

LCDR GRACIE: If you then kindly look at paragraph 129 - - -

10 MR TRAPP: Which is 5 Avn?

LCDR GRACIE: Yes. I just want to see if I'm reading it correctly, or understanding it correctly, because the statistics seem to be just a little bit different. You say:

15 *MRH-90, at 5 Avn Regiment, achieved approximately 83 per cent of its planned hours.*

MR TRAPP: Yes.

20 LCDR GRACIE: Whereas I think in 69 you said 92 per cent. I'm just wondering which it is.

MR TRAPP: Yes. So each unit is allocated a certain amount of hours each year that they need to fly based on what their perceived requirement is, and certainly what the Army requires them to meet as part of their proficiency. So for Oakey, it was X amount of flying hours that they needed to meet all of their training continuums with. 6 Avn, they had a certain amount of flying hours that they needed to meet for all of their requirements. And 5 Avn, exactly the same.

30 The hours varied between sites, depending on what the role was that each site needed to do. So when I say that there was 83 per cent, or whatever it was – 83 per cent of the planned flying hours, the flying hours were quite a bit less at 5 Avn than what they were at the other two units.

35 LCDR GRACIE: And when you say “the other two units”, you mean Oakey?

MR TRAPP: Yes.

40 LCDR GRACIE: And 6 Avn?

MR TRAPP: Yes.

LCDR GRACIE: So you've got, at Oakey, 92 per cent of planned hours; 83 per cent of planned hours at 5 Avn. And you mentioned for 6 Avn – if you want to have a look, it's at paragraph 103 – you've got 76 per cent.

5 MR TRAPP: Yes.

LCDR GRACIE: But you're saying that's dependent upon – that's solely related to unit planned hours, is it?

10 MR TRAPP: Yes.

LCDR GRACIE: So are the planned hours planned by reference to maintenance issues? So that if there are three aircraft unserviceable, the planned hours are less?

15

MR TRAPP: No, the planned hours are the planned hours. If there's X amount of aircraft that are unserviceable, they may not necessarily be able to meet their required, or their planned, flying schedule.

20 LCDR GRACIE: Who sets the planned hours?

MR TRAPP: So there's an organisation within the Army. So another acronym. I'm sorry, I can't remember it off the top of my head. It's a capability requirement. In conjunction with each of the units, they will turn around and set the hours, dependent on what it is that they need to be able to perform and the levels of proficiency that they need to maintain.

25

LCDR GRACIE: So the planned hours are a theoretical estimate?

30 MR TRAPP: No.

LCDR GRACIE: But it's not referable to the number of aircraft that are actually available then.

35 MR TRAPP: Not necessarily, no.

MS McMURDO: But serviceability would relate to the aircraft that were available, wouldn't it?

40 MR TRAPP: Certainly, ma'am, yes.

LCDR GRACIE: Is there any particular reason why you might see at Oakey a much higher availability or serviceability than 6 Avn?

45 MR TRAPP: No, not necessarily.

LCDR GRACIE: Do you have the statistics available for the period prior to 22/23?

5 MR TRAPP: I'm sure they're available.

LCDR GRACIE: Do you think they would be roughly consistent with the 22/23 figures?

10 MR TRAPP: No, I couldn't tell you; I didn't look. It would definitely depend on what the requirements were for each unit.

LCDR GRACIE: Just while you've got CAPT Balaam's statement there, just given those statistics, it strikes me as a bit of an anomaly where in paragraph 75 you give some evidence. Can you look at that for me, please?

15 MS McMURDO: Sorry, what paragraph?

LCDR GRACIE: 75, ma'am, of Exhibit 4; particularly the second and third sentence.

20 MR TRAPP: 75?

LCDR GRACIE: Yes. Not of your statement; of CAPT Balaam.

25 MR TRAPP: Sorry.

LCDR GRACIE: That's all right. Exhibit 4, the second sentence says:

30 *Being a complex aircraft, it was difficult to maintain.*

Do you agree with that proposition?

MR TRAPP: I am probably not in a position to say whether it was difficult to maintain. I have never physically worked on the aircraft.

LCDR GRACIE: But in your role, I imagine you would have had some feedback from your employees as to whether they were experiencing difficulty in maintaining the aircraft.

40 MR TRAPP: The guys who actually did the maintenance, they felt that when they were actually doing the hands-on side of it, it was quite easy; things were readily accessible, that type of thing. If you're talking about difficulty to maintain, getting parts and getting information back, that type of thing, yes, it was difficult. It was overcome through various practices

45

such as cannibalisation and also going back to the OEM and, you know, getting more clarification on any sort of limit that was required.

5 LCDR GRACIE: Then the Captain goes on and says along the lines of what you have just said, "Spares were not always forthcoming".

MR TRAPP: Yes, correct.

10 LCDR GRACIE: But then he says the cost of ownership and overall reliability is what he understood led to the demise in Australian service.

MR TRAPP: I'm sorry, I'm not privy to that information.

15 LCDR GRACIE: Well, when we're talking about overall reliability, that might be relevant to the fact that your statistics only cover the last 12 months.

MR TRAPP: That's my input. I was only asked to - - -

20 COL STREIT: I rise to object. What my friend is putting to the witness is an expression of opinion by another witness. So the way to do that is to put the opinion and ask whether this witness agrees or disagrees with what is asserted. Considering the broad nature of the opinion expressed and the
25 reason why this witness is called here today, and his level of expertise, it probably is not a proper question to be put, in my submission.

MR O'MAHONEY: Could I rise to speak briefly to raise that objection and raise a separate ground of objection. At the final point of that question, the suggestion was that the statistics provided only cover a period of 12 months.
30 And to the extent that that's put in any critical way, I just wanted to highlight it shouldn't be, because that was responsive to the question that was put to him. I'm sure my friend didn't mean to put it in that way.

35 LCDR GRACIE: No, I fully accept that.

MS McMURDO: That's noted, Mr O'Mahoney. Let's get on with it, please.

40 LCDR GRACIE: We've only got the - - -

MS McMURDO: Would you just reframe the question in order to make it clearer.

45 LCDR GRACIE: You were only asked to provide the statistics by Counsel Assisting for the last 12 months, weren't you?

MR TRAPP: Yes.

5 LCDR GRACIE: You've just said you don't know what the previous statistics would show.

MR TRAPP: Sure.

10 LCDR GRACIE: So we don't know whether or not there is an issue statistically with the overall reliability of the fleet because we only have the last 12 months' statistics.

MR TRAPP: For my side of it, correct.

15 LCDR GRACIE: Thank you.

MS McMURDO: You said, I think, that you agreed that parts were difficult to get and information could be difficult to get. I think you agreed with that.

20 MR TRAPP: That the information was difficult to get?

25 MS McMURDO: Yes, that the maintenance, the actual service that you heard from the people that you supervised, that all went okay, but there were difficulties getting parts and information back. That's, I think, what you said.

MR TRAPP: Yes, ma'am.

30 MS McMURDO: Who did that information and parts come from?

MR TRAPP: So the information would normally come from either the CAMSO or the engineering organisation, and the parts would come from our suppliers.

35 MS McMURDO: Thank you. Yes, LCDR Gracie.

40 LCDR GRACIE: Thank you. I think your evidence earlier, Mr Trapp, was that Australia didn't have a spare aircraft, or a spare MRH-90, that they utilised for spares, but instead they cannibalised the fleet that was otherwise fully to be operational. Is that it?

MR TRAPP: Yes.

45 LCDR GRACIE: Do you know about the New Zealand experience?

MR TRAPP: Not first-hand, no.

LCDR GRACIE: Do you know that they purchased nine aircraft, nine NH90s, and one spare that didn't fly?

5

MR TRAPP: No.

LCDR GRACIE: That would assist in obtaining spares without cannibalisation, wouldn't it?

10

MR TRAPP: I would imagine that you would still have to cannibalise off that one aircraft.

LCDR GRACIE: Yes, but it was not a flying aircraft; it was purchased for spares.

15

MR TRAPP: Yes, that would assist to a certain degree. I would imagine that any operator would still have to cannibalise at some stage.

20

MS McMURDO: Once you'd used the parts from the spare aircraft, if you still needed more of them, and they weren't there anymore, you'd have to cannibalise.

MR TRAPP: Yes, ma'am. It would depend on the logistic process and the resupply process that would be implemented at the time.

25

LCDR GRACIE: Do you know what the maintenance schedule was in terms of ordering spares in advance?

30

MR TRAPP: For deeper maintenance, we knew what parts we would replace and what parts needed to be replaced, so we would pre-order the parts to make sure that they were available at the right time.

LCDR GRACIE: Did you have a planned schedule, though, in terms of ordering what would be anticipated when, for example, the flight hours had expired and the aircraft needed to be serviced?

35

MR TRAPP: Yes, sure.

40

LCDR GRACIE: What lead time was that, do you know?

MR TRAPP: It could vary, depending on the parts and the quantity needed. The lead time, if it was coming into deeper maintenance, we could be looking at three months or something like that. It was a low priority, so we

could order well in advance, expecting to get the parts around about at the time that they were needed as part of the servicing.

5 LCDR GRACIE: And again, just utilising the New Zealand model, I want you to assume this: that they had the spare aircraft that was never operational, for spares. That's the first proposition I'll ask you to accept. The second is that they had a program for the early ordering of spares for six to nine months in advance to avoid the cannibalisation of the operational aircraft.

10

MR TRAPP: Okay.

LCDR GRACIE: They're the two things. Do you know anything about that on a first-hand basis?

15

MR TRAPP: No.

LCDR GRACIE: Do you know what the other operators of the NH90s do in that case?

20

MR TRAPP: No.

LCDR GRACIE: Do you know if they have the same difficulty in relation to the ordering of spare parts that you've talked about?

25

MR TRAPP: No.

LCDR GRACIE: In terms of rather than looking at serviceability based on planned hours, do you have statistics on what the actual flying hours are per year for each of the MRH-90s?

30

MR TRAPP: Yes.

LCDR GRACIE: Is that available in your statement?

35

MR TRAPP: No.

LCDR GRACIE: Because that would be a good indication of reliability, wouldn't it; how many hours it actually flies, as opposed to how many hours or the percentage of serviceability relative to planned hours?

40

MR TRAPP: I'm sure it's considered, yes.

LCDR GRACIE: Do you have an idea of what the average of actual flying hours are per aircraft?

45

MR TRAPP: No.

5 LCDR GRACIE: Were you privy to the NH Industries' notification to the NATO and Middle East customers about the contents, or the analysis, initial analysis, of the voice and flight data recorder from Bushman 84?

MR TRAPP: Not specifically, no.

10 LCDR GRACIE: Do you know generally what it was?

MR TRAPP: Only what I've seen on the news.

15 LCDR GRACIE: Do you know that it was specific only to the NH90-type design?

MR TRAPP: No, I didn't know that.

20 LCDR GRACIE: It didn't mention MRH-90.

MR TRAPP: Okay.

LCDR GRACIE: Did you know that?

25 MR TRAPP: No, I didn't notice.

LCDR GRACIE: Do you know how long after the accident the New Zealand Defence Force put their NH90 fleet back into Service?

30 MR TRAPP: Not specifically, but I know it was fairly soon afterwards.

LCDR GRACIE: Two days.

MR TRAPP: Okay.

35 LCDR GRACIE: Whereas what we saw in relation to the March Jervis Bay incident, I think it was 23 March and the fleet was grounded until 6 April. So it seems to be – in that context, that seems to be a remarkably quick decision that these aircraft are airworthy to continue flying for the New Zealand Defence Force. Would you agree with that?

40

MR TRAPP: Yes.

45 LCDR GRACIE: Would you have any concerns with them going back that quickly?

MR TRAPP: No.

5 LCDR GRACIE: And they did that before they got the notification from NH Industries about the initial analysis of the voice and flight data recorder.

UNIDENTIFIED SPEAKER: Sorry. I'm sorry - - -

10 MS McMURDO: This is not evidence for the Inquiry. You're just putting these things to him; he doesn't know them. You're telling them, telling us. If you've got that information, perhaps you should offer it to the Inquiry.

LCDR GRACIE: Well, it's public knowledge, ma'am. It's in the Sydney Morning Herald.

15 MS McMURDO: Well, is that better than the Courier Mail?

LCDR GRACIE: I hope so. But, Mr Trapp, you said "a few days", I think you said.

20 MR TRAPP: Yes.

LCDR GRACIE: Or shortly thereafter.

25 MR TRAPP: Yes.

LCDR GRACIE: But when I said to you six weeks after the accident NH Industries circulated its initial analysis, or the initial analysis, you said you were generally aware of it.

30 MR TRAPP: Yes.

LCDR GRACIE: Are you therefore aware that the New Zealand Defence Force did go back flying the NH90s before that initial analysis of the voice and flight data recorder was available?

35 MR TRAPP: Yes.

LCDR GRACIE: Thank you. Nothing further, ma'am. Thank you.

40 Thank you, Mr – sorry, you can return Exhibit 4. Thank you.

MS McMURDO: And did that surprise you, that New Zealand - - -

MR TRAPP: No. I expected that they had information that was relevant for their decision.

5 MS McMURDO: Yes, thank you. Yes, LCDR Tyson.

<CROSS-EXAMINATION BY LCDR TYSON

10 LCDR TYSON: Thank you, ma'am.

Mr Trapp, my name is LCDR Tyson. I represent one of the deceased aircrewman on Bushman 83. Mr Trapp, when you were a maintainer in the Fleet Air Arm, would this be right: that you principally worked on
15 Sea Kings and Sea Hawks?

MR TRAPP: No, Wessex and Sea Hawk.

20 LCDR TYSON: So the Wessex in, what, the early 1980s, mid-80s?

MR TRAPP: Early 80s, yes.

LCDR TYSON: Both the Wessex and the Sea Hawk, they don't use fly-by-wire controls, do they?
25

MR TRAPP: No.

LCDR TYSON: And the Chinook and the Black Hawk that was previously used by the Australian Army, those aircraft don't use fly-by-wire controls, do they?
30

MR TRAPP: No.

LCDR TYSON: And, of course, the MRH-90 Taipan does use fly-by-wire controls, doesn't it?
35

MR TRAPP: Yes.

LCDR TYSON: Incidentally, when you were in the Fleet Air Arm, what was your rate? Were you an ATA or ATV?
40

MR TRAPP: ATA.

LCDR TYSON: I just want to ask you about the scenario where there's a helicopter flying at night, an MRH-90 helicopter, that's at about 350 feet,
45

and it wants to move down to 200 feet and rejoin a formation of which it's part. Do you understand?

MR TRAPP: Mm.

5

LCDR TYSON: Is this right: that there are two ways the pilot can bring that aircraft down to that level? It could be done through using, if I could call it, physical controls, the cyclic and the collective. Is that right? That's one way.

10

MR TRAPP: The cyclic and collective, yes.

LCDR TYSON: And the other way on the MRH-90, you can put – there's an automatic or computerised system where you can put a heading and an altitude and speed in, and you can actually press a button and the helicopter will go to where you want it.

15

MR TRAPP: As far as I'm aware, yes.

LCDR TYSON: But there are those two different ways you can fly the aircraft, can't you?

20

MR TRAPP: I'm not an operator so, I'm sorry, that's probably the limit of my knowledge. I do know that the collective makes it go up and down, and I do know that you can put in an input into the AFCS that will take you to your heading and speed references.

25

LCDR TYSON: You may not be able to answer this, but in terms of how the automatic system or computerised system works, is that a matter of a software program operating?

30

MR TRAPP: I'm sorry, I'm just not right across the architecture of those sorts of systems.

LCDR TYSON: For example, with Bushman 83, if I looked at the CAMM2 records for Bushman 83, would I be able to go in and see when the software or the program that operates the automatic system has been checked for functionality, serviced and so forth? Would that be in CAMM2?

35

MR TRAPP: You could check when the system or the component was last checked or serviced, yes.

40

LCDR TYSON: And that record should exist.

MR TRAPP: Yes.

45

5 LCDR TYSON: Then when one comes to the collective and the cyclic – and you may not know this – but how does that work? Is there, what, optic fibre and servos, or what’s the system? Is it a different system to a software program, or do you not know?

10 MR TRAPP: I couldn’t answer confidently. I know that the inputs are put in, like I said before, interceptor transducers. The signal is transferred into a computer. The computer signal is then sent up to the flight controls.

15 LCDR TYSON: And again, do you have any knowledge whether if one looked on CAMM2 for Bushman 83, whether or not CAMM2 would show us when the physical controls – if I use that term – were checked that they’ve been properly maintained, that they’re functioning correctly?

MR TRAPP: Yes.

20 LCDR TYSON: Do you know, in terms of the flight controls, who’s ultimately – I withdraw the word “ultimately” – who maintains that flight control? Is that done by uniform personnel at the Regimental Squadron level, or is that done by Airbus as part of deeper maintenance, or is it a combination? Do you know who actually maintains the flying control systems?

25 MR TRAPP: When you say “maintain”, what do you mean?

30 LCDR TYSON: Well, “maintain” is probably not the correct word, but checks that the system is functioning according to design and how it should be.

35 MR TRAPP: Yes, so it’s both – any of the operators. So there will be a servicing that the maintainers will need to do periodically, and they could be done at any unit that has the scope to do it. So 6 Avn, 5 Avn, Oakey, Brisbane.

LCDR TYSON: And again, but there should be records which will show who was responsible for those systems?

40 MR TRAPP: Yes.

45 LCDR TYSON: But in simple terms, if I’m an aircrewman in Bushman 83 on 28 July in the evening, what’s my assurance that if the pilot wants to move the plane from about 350 feet down to 200 feet, what is my assurance that if the pilot uses the physical controls, that that system is going to work as it should? Who gives me that assurance?

MR TRAPP: The person who has signed for the release of the aircraft.

LCDR TYSON: And that can be seen in CAMM2?

5

MR TRAPP: Yes.

LCDR TYSON: And if, in the same scenario, I'm the aircrewman in that helicopter on that night and the pilot has used the automatic system to regain the aircraft's position in the formation, who gives me the assurance that the automatic computerised system is working as it should?

10

MR TRAPP: I would expect the pilot would do as part of pre-flight checks.

15

LCDR TYSON: You don't personally know about what pre-flight checks would have been done with Bushman 83 on 28 July 2023, do you?

20

MR TRAPP: Not specifically. I expect that there would have been a before-flight inspection that would have been carried out in accordance with the inspection cards. What aircrew do prior to them going off on a sortie, I am not sure what they would do.

25

LCDR TYSON: Thank you, that's helpful, Mr Trapp. Can I just go to two other brief matters. I might have misunderstood your evidence, but in relation to the Jervis Bay incident, was this the case: that you gave some evidence that in 2018 the manufacturer had put out an instruction relating to the inspection regime for the turbine blades, but because of what we know about the Jervis Bay incident, one can reason backwards and work out that that inspection regime had not been effected properly? Is that right?

30

MR TRAPP: No, I don't believe that's correct.

35

LCDR TYSON: So what was the reference that you made? You made a reference to the 2018 manufacturing instructions and then I thought you said something about there might have been problems from time to time with the inspection regime. Was that in relation to the turbines in the engine or was that - - -

40

MR TRAPP: Inspection regime?

LCDR TYSON: Yes. You gave some evidence to COL Streit before lunch about some issues arising in the inspection regime. Do you remember that evidence?

MR TRAPP: Not so much with regards to an inspection regime. So with regards to the 2018 side of it, there was a requirement to replace the high-pressure turbine blades. There was a decision made as to when they would get replaced. So if that's the inspection side of it you're talking about, so if it needed to go – if the engine needed to go back for a repair or it needed to go back for overhaul, it determined whether that engine would receive the modified turbine blades or not. So that would have been what you've understood.

10 LCDR TYSON: Thank you. It may have been that I misunderstood your evidence, so my apology for that. Just finally, I wonder whether you could offer any opinion of this: you're aware aren't you that in 2022 the Fleet Air Arm stopped using the navalised version of the MRH-90, aren't you?

15 MR TRAPP: Yes.

LCDR TYSON: You're aware also that in about December 2021 the Army announced that it was going to pension off the Taipans as well in the relatively foreseeable future. You're aware of that?

20 MR TRAPP: Yes.

LCDR TYSON: Given your knowledge and experience in maintenance, both within Defence and within a Defence contractor that supports Defence, is it possible that the fact that the aircraft had limited future in the ADF, that that would then affect the morale of maintainers that would impact on people wanting to train, upskill, become experienced in maintaining that helicopter because it was effectively a dead end?

30 MR TRAPP: I'm not sure; there may have been some people who may have had that mindset. Certainly the people who I spoke with and interacted with within Airbus, yes, they were concerned for the future, but they were very much happy and proud to work on the MRH-90.

35 LCDR TYSON: Thank you, Mr Trapp. Thank you, ma'am.

MS McMURDO: Thank you.

40 SQNLDR GILES: Ma'am, I (indistinct).

MS McMURDO: Yes.

45 <CROSS-EXAMINATION BY SQNLDR GILES

5 SQNLDR GILES: Mr Trapp, my name's SQNLDR Giles. I represent the reputational interest for LT Nugent. So today you gave evidence in relation to the four MRH-90 helicopters that were involved in the incident in July, that they had both of their engines replaced prior to the incident. Is that correct?

MR TRAPP: Modified.

10 SQNLDR GILES: Modified in accordance with the instruction.

MR TRAPP: Yes.

15 SQNLDR GILES: And you indicated that the engines for those particular helicopters were replaced in approximately March 2023; is that correct?

MR TRAPP: I said that they were installed after the Jervis Bay ditching and all of the aircraft within 6 Avn would have been replaced between the end of March and beginning of July.

20 SQNLDR GILES: So within a four-month period, approximately. The beginning of 2023 to July, we could say.

MR TRAPP: Yes.

25 SQNLDR GILES: So in your evidence today you also said that it takes approximately an hour to replace that engine.

MR TRAPP: Hour to an hour and a half to remove it, another hour to an hour and a half to install it; extra to do the testing.

30 SQNLDR GILES: Now, is a test flight required post changing of that engine?

35 MR TRAPP: Yes.

SQNLDR GILES: And are you aware if a test flight was conducted on those four helicopters involved in the incident?

40 MR TRAPP: So we call it a maintenance check flight; trying to discriminate the difference between a test flight and a maintenance check flight. So absolutely.

45 SQNLDR GILES: And that would be recorded in CAMM2?

MR TRAPP: Yes.

SQNLDR GILES: Would there be a record of the person that signed off on Bushman 83's test flight or maintenance check flight?

5

MR TRAPP: Yes.

SQNLDR GILES: After those engines have had their test flight, are you aware of how many hours of service that particular plane, Bushman 83, had after the engines were replaced and prior to its crash?

10

MR TRAPP: No, but the records would be available through CAMM2.

SQNLDR GILES: I've got no further questions, ma'am.

15

MS McMURDO: Thank you, SQNLDR Giles. Yes?

COL GABBEDY: Sorry, ma'am.

20

MS McMURDO: Yes.

<CROSS-EXAMINATION BY COL GABBEDY

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COL GABBEDY: Mr Trapp, I'm COL Nigel Gabbedy. I appear for MAJGEN Jobson. I have a few more questions about the engine upgrade, and I think that's just about the end of it. As I understand your evidence, the engine upgrade was in response to an issue that was identified in about 2018; is that right?

30

MR TRAPP: That's my recollection, yes.

COL GABBEDY: Is it correct that Army Aviation were in the process of upgrading the fleet when the grounding happened at Jervis Bay in March of 2023?

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MR TRAPP: No.

COL GABBEDY: So had the upgrade proceeded at all?

40

MR TRAPP: Yes.

COL GABBEDY: So what had been done, as far as you're aware?

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MR TRAPP: About 45 engines were modified by that stage.

COL GABBEDY: So it was a fleet of 45. Did that mean that every aircraft in that fleet had one modified engine?

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MR TRAPP: No.

COL GABBEDY: What did it mean?

10

MR TRAPP: It meant that some aircraft were fitted with two modified engines, some were fitted with one, some were fitted with none.

COL GABBEDY: My understanding is that that identified problem was one of the contributors to the ditching at Jervis Bay; is that right?

15

MR TRAPP: Yes.

COL GABBEDY: Is it the case that after that ditching, that an upgrade at 6 Avn was prioritised?

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MR TRAPP: Yes.

COL GABBEDY: Is it your understanding that that was due to the sort of work that the aircraft in 6 Avn were to do?

25

MR TRAPP: Yes.

COL GABBEDY: When you refer in paragraph 103 to the serviceability of the aircraft at 6 Avn, you're talking about serviceability at that higher level of operation, aren't you? So if I take you back a little bit, you talked in reference - - -

30

MR TRAPP: That a higher level of operations – so each day a report is made as to the status of the aircraft at each unit. That's recorded over a period of time. Each week that gets reported and – so the weekly serviceability rate will be there over a period of three months, six months, whatever, is that that's the average serviceability rate against that particular unit for the amount of aircraft that that unit carries.

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COL GABBEDY: Just so I understand that, you'd given some earlier evidence that at 6 Avn the aircraft were used for perhaps a more specialised range of things?

40

MR TRAPP: Yes.

45

COL GABBEDY: When you refer to serviceability rate, are you referring to the rate of doing all of the things that they require at that particular Regiment?

5 MR TRAPP: For 6 Avn, no. We had to report on fully capable or fully mission capable.

COL GABBEDY: I understand that. Just to finish off, 6 Avn were prioritised for a double engine upgrade post March of 2023?

10 MR TRAPP: Yes.

COL GABBEDY: As far as you're aware, was it the intent that the entire fleet would ultimately be upgraded prior to July? I mean before the entire fleet were grounded in July 2023.

15 MR TRAPP: No.

COL GABBEDY: So it wasn't the intent that the entire fleet be upgraded at all?

20 MR TRAPP: No.

COL GABBEDY: Do you know why 6 Avn were prioritised for upgrade?

25 MR TRAPP: Because of the type of tasking that they were required to perform.

COL GABBEDY: Thank you. There's nothing further.

30 MS McMURDO: Thank you, COL Gabbedy. Any other applications to cross-examine? Mr O'Mahoney, yes.

35 **<RE-EXAMINATION BY MR O'MAHONEY**

MR O'MAHONEY: Thank you. I'll be extremely brief, Ms McMurdo. There's only a handful of questions, just to clarify one matter.

40 Could I, Mr Trapp, with your assistance, take you to two paragraphs of your statement, starting at – if you wouldn't mind looking at paragraph 103? You've been taken to this a couple of times in the last 20 minutes.

45 MR TRAPP: Yes.

5 MR O'MAHONEY: You've been asked some questions about that today, and in particular about the 76 per cent serviceability percentage that's identified there. You see that. And if I could also just invite you to turn up paragraph 129 of your statement.

MS McMURDO: Was that 129?

10 MR O'MAHONEY: Yes, 129.

MR TRAPP: Yes.

15 MR O'MAHONEY: And you'll see there, this is you providing the same information in relation to the 5 Aviation Regiment. Do you see that? And you've been asked some questions about the percentage that's identified there.

MR TRAPP: Yes.

20 MR O'MAHONEY: Is there anything you want to add to the evidence you've given earlier today about the spread between those two percentages?

25 MR TRAPP: If you have a look at the 6 Avn percentages, they were operating 10 to 12 aircraft at that time and needing to perform whatever tasks it was that they needed to do. They were assigned, let's say, X amount of flying hours that they had to complete within that year that they had identified would be required for those tasks. Those tasks were generally completed a lot quicker than they expected, so they didn't need the extra time to go flying. Once they finished the training requirements, they returned back to base and, therefore, not all of the hours were consumed.

30 If I look at 5 Avn Regiment, at the beginning of 2023 they had 10 aircraft allotted to them and whatever their requirements were as part of their day-to-day capability and everything like that. They had significantly less flying hours to complete with the amount of aircraft that they had available.

35 MR O'MAHONEY: I see. Thank you. I don't have any further questions.

40 MS McMURDO: Thank you. COL Streit?

45 COL STREIT: Nothing further from me, other than this observation, Ms McMurdo, for the Airbus legal representatives: there will be more evidence from Airbus in due course, with a focus on what was happening on the ground at 6 Aviation Regiment in relation to their personnel. Of course that incorporates the ADF personnel as well.

MS McMURDO: Thank you. We're finished with you for the moment.
Thank you very much, Mr Trapp, you're free to go.

5 MR TRAPP: Thank you.

MS McMURDO: Just leave your statement here. And I think
CAPT Balaam's statement, if it's still there, just leave it here, please.
Thank you.

10

<WITNESS WITHDREW

15 MS McMURDO: Yes, COL Streit.

COL STREIT: Thank you, Ms McMurdo. The next witness is
LTCOL Watling, the Commanding Officer of the Rotary-wing Aircraft
Maintenance School. FLTLT Rose will be taking his evidence. I ask he be
called.

20

MS McMURDO: Thank you. That's LTCOL Rick Herbert Watling.

25 **<LTCOL RICK HERBERT WATLING, Sworn**

<EXAMINATION-IN-CHIEF BY FLTLT ROSE

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MS McMURDO: Yes, FLTLT Rose.

FLTLT ROSE: Could you please state your full name, your rank and your
unit.

35

LTCOL WATLING: Yes. It's LTCOL Rick Herbert Watling. Currently
working at RAMS, the Rotary-wing Aircraft Maintenance School at Oakey.

40 FLTLT ROSE: Just next to you there is a glass of water should you like
that during the course of your evidence.

LTCOL WATLING: Thank you.

FLTLT ROSE: Could you please confirm that you were sent the following documents by the Inquiry prior to today: a section 23 Notice requiring your appearance to give evidence?

5 LTCOL WATLING: Yes.

FLTLT ROSE: The extract of the Inquiry's Directions?

LTCOL WATLING: Yes.

10

FLTLT ROSE: A copy of COL Streit's appointment as an Assistant IGADF?

LTCOL WATLING: Yes.

15

FLTLT ROSE: A Frequently Asked Questions Guide for Witnesses in IGADF Inquiries?

LTCOL WATLING: Yes.

20

FLTLT ROSE: And a Privacy Notice for witnesses?

LTCOL WATLING: Yes.

25

FLTLT ROSE: Could I please hand you a document. Did you prepare a statement for the purposes of today?

LTCOL WATLING: I did, ma'am.

30

FLTLT ROSE: If you could have a look through that document and confirm that that's your statement.

LTCOL WATLING: Yes, this is my statement.

35

FLTLT ROSE: If you turn to the last page, can you confirm that it's 14 pages and 43 paragraphs?

LTCOL WATLING: Yes, that's correct.

40

FLTLT ROSE: That's your signature on the back page?

LTCOL WATLING: Yes, it is.

45

FLTLT ROSE: Are there any amendments you wish to make to this statement?

LTCOL WATLING: There's one amendment to paragraph 17, if I could, please? I've incorrectly referred to one of the HP1 modifications as "7210.023-385".

5

FLTLT ROSE: What should it be?

LTCOL WATLING: It should read "-392".

10 FLTLT ROSE: So that's on the fifth line of paragraph 17, in the parentheses at the end of that line?

LTCOL WATLING: That's correct.

15 MS McMURDO: Would you like the Lieutenant Colonel to make that amendment to the statement?

FLTLT ROSE: Would you like that amendment to be made to the statement?

20

LTCOL WATLING: Yes, please, ma'am.

MS McMURDO: I'll give you a pen. If you could just make that amendment and initial it, please.

25

LTCOL WATLING: Thank you.

FLTLT ROSE: I tender a copy of that statement with that amendment.

30 MS McMURDO: That will be Exhibit 16.

#EXHIBIT 16 - STATEMENT OF LTCOL R H WATLING

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FLTLT ROSE: Please keep a copy of your statement with you. I wish to ask you some questions about your background and your qualifications. At paragraph 6 of your statement you state that you enlisted as an officer in the Australian Army in 2002.

40

LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: The corps you originally joined was the Royal Australian Electrical and Mechanical Engineering Corps.

45

LTCOL WATLING: Yes.

FLTLT ROSE: That's within the Electrical and Mechanical Engineering Aviation Officer stream.

5

LTCOL WATLING: Yes. There are two streams, both Ground RAEME and Aviation RAEME. So EMEAO, as you've referred to there in full, is the stream that I joined up to.

10

FLTLT ROSE: That's the Aviation stream?

LTCOL WATLING: Yes.

15

FLTLT ROSE: You also have a Bachelor of Mechanical Engineering which you obtained in 2002.

LTCOL WATLING: Yes, that's correct.

20

FLTLT ROSE: You have a Graduate Certificate in Aerospace Engineering.

LTCOL WATLING: Yes.

FLTLT ROSE: A Master of Military and Defence Studies.

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LTCOL WATLING: Yes.

FLTLT ROSE: And you're a Fellow of the Institution of Engineers Australia.

30

LTCOL WATLING: Yes.

35

FLTLT ROSE: You've provided your posting history in the statement. I won't go through all of it, but if you – it's paragraph 9 of your statement, but if you go to page 3, I note that in subparagraph (j) you were Design Engineer, MRH Sustainment Team from 2009 to 2010.

LTCOL WATLING: Yes, that's correct.

40

FLTLT ROSE: What does that mean, "a design engineer"?

45

LTCOL WATLING: So at the time I was working within the Multi-Role Helicopter Sustainment Engineering Team, so CASG, Capability Acquisition and Sustainment Group, as a design engineer. So that's at Captain level, where you are responsible for engineering decisions within the organisation.

5 FLTLT ROSE: So I take it that, by having the word “design” in front of it, if an item needed to be changed or amended, that you would make that decision as to whether to change that part or to modify it in some way?

10 LTCOL WATLING: Design engineers purely refer to the level of engineering authority that you might have, and certainly as a Captain within that organisation you might contribute to some of those things you mentioned, whether they be new designs or modifications to existing equipment. But certainly at a Captain level within that organisation you’re not the ultimate approver, et cetera.

15 FLTLT ROSE: Understand. Your next posting was a Technical Liaison Officer, Resident Project Team, in France from 2011 to 2012.

LTCOL WATLING: Yes.

FLTLT ROSE: Is this in relation to the MRH-90?

20 LTCOL WATLING: It was.

FLTLT ROSE: So what were you doing in France?

25 LTCOL WATLING: So part of the Resident Project Team in France, it’s an extension of the CASG environment from which I came from as a design engineer previously, and you’re essentially liaison officer on behalf of the CASG environment overseas where the original manufacturer, NHI, actually operate; so embedded within their organisation.

30 FLTLT ROSE: So you weren’t hands-on doing the engineering aspects in that role?

35 LTCOL WATLING: No, it was more of a liaison role between the CASG environment that does all of the sustainment engineering and logistics back here in Australia and the Original Equipment Manufacturer overseas, trying to gain information, et cetera.

40 FLTLT ROSE: By “Original Equipment Manufacturer”, who do you mean?

LTCOL WATLING: NHI, NATO Helicopter Industries.

FLTLT ROSE: Is their headquarters based in France?

45 LTCOL WATLING: Yes.

FLTLT ROSE: Your next posting was Engineering Manager, MRH Logistics Management Unit, in 2013 to 2014. Where was that?

5 LTCOL WATLING: So that was in Brisbane.

FLTLT ROSE: That's within Army?

10 LTCOL WATLING: CASG again, so Capability Acquisition Sustainment Group.

FLTLT ROSE: Your next posting, Responsible Manager and Officer Commanding the Technical Support Squadron at 5th Aviation Regiment, 2015 to 2016.

15 LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: What were you the Responsible Manager of, which aircraft type?

20 LTCOL WATLING: MRH-90.

FLTLT ROSE: By "Officer Commanding", that's within a particular Squadron within 5th Aviation Regiment?

25 LTCOL WATLING: Yes, so the Technical Support Squadron.

FLTLT ROSE: Is that A Squadron?

30 LTCOL WATLING: No.

FLTLT ROSE: What Squadron is it?

35 LTCOL WATLING: It's TSS, Technical Support Squadron. There's a Logistic Support Squadron and then there's the three flying Squadrons of A, B and C at the time.

FLTLT ROSE: How many personnel were in the Technical Support Squadron when you were there, roughly?

40 LTCOL WATLING: I can't answer that question off the top of my head, sorry. It was a number of hundreds of people within the Tech Support Squadron. We also went through a change in my tenure whereby some of the maintenance elements were originally located within the Technical Support Squadrons. Then due to a change, they were then pushed forward
45

within A Squadron, B Squadron and C Squadron to better equip the flying Squadrons with maintenance capability.

5 FLTLT ROSE: So if I understand this correctly, originally the engineers were in A Squadron together and then some of them moved to the flying Squadrons to be embedded with the aircrew?

10 LTCOL WATLING: Not the engineers, the technicians, so the maintenance technicians. Sorry?

FLTLT ROSE: Do you want to just explain that difference?

15 LTCOL WATLING: So engineers, I talk about qualified tertiary engineers. Maintenance technicians, I talk about ECN 4114 Technician Aircraft, and ECN – that's Employment Category Number – and ECN 412, which is Technician Avionics. So in the Technical Support Squadron you do have both engineers: tertiary-qualified officers that have done an engineering degree, similar to myself; you also have technicians who have gone through a different training rigour and program. But what I'm talking about in terms of who is pushed forward out of the Technical Support Squadron, that was essentially the maintenance technician elements.

20 FLTLT ROSE: Understood. Then you had a period of long-term school in 2017?

25 LTCOL WATLING: Yes, that was Staff College in Canberra.

FLTLT ROSE: Then your next posting was in 2018 as Air Force Staff Officer in Headquarters, 16 Aviation Brigade.

30 LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: I take it then you weren't on the tools, so to speak, in that role either?

35 LTCOL WATLING: No, and in fact half of that year I spent deployed overseas.

FLTLT ROSE: You then became the Quality Manager of the Continuing Airworthiness Management Organisation in 2019.

40 LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: Which aircraft types were you responsible for in that role?

45

LTCOL WATLING: So as the Quality Manager, I was responsible across the entirety of the organisation within the CAMO, so looking at the time over MRH-90, ARH Tiger, CH-47, and also uncrewed aerial systems.

5 FLTLT ROSE: What was that last word?

LTCOL WATLING: Uncrewed aerial systems, UAS; so Shadow 200 at the time.

10 FLTLT ROSE: As Quality Manager, what were you responsible for specifically?

15 LTCOL WATLING: Quality Manager of the entire organisation that supports the CAMO. This includes all of the out-stationed individuals and appointments that perform Part M. So a DASR Part M function which is a Continuing Airworthiness Management Organisation function on behalf of the CAMO.

20 FLTLT ROSE: Then turning back to page 2, in 2020 you were the ARH Tiger Platform Manager for Army Aviation Systems Program Office.

LTCOL WATLING: Yes.

25 FLTLT ROSE: Where is that office space?

LTCOL WATLING: So for that particular time because it has changed depending on the year, but at that particular time it was out at Pandanus Avenue Airbus facilities in Pinkenba, Brisbane.

30 FLTLT ROSE: It's moved now?

LTCOL WATLING: No, that's where it currently is but prior to that date it had been in different locations.

35 FLTLT ROSE: Then you became, from 2021 to 2022, the MRH Taipan Chief Engineer for Army Aviation Systems Program Office.

LTCOL WATLING: Yes, that's correct.

40 FLTLT ROSE: Is that at the same location in Brisbane as the ARH?

LTCOL WATLING: At Pinkenba, yes.

45 FLTLT ROSE: What does the Chief Engineer role require? What are your responsibilities in that role?

5 LTCOL WATLING: So there are a number of different responsibilities. Firstly, you hold – as the organisation responsible for holding the Military Type Certificate for the MRH-90. So it's called the MTCHO, Military Type Certificate Holder Organisation. I am the responsible Senior Defence Engineer for Military Type Certificate Holder functions. You're also the Delegate of the Safety Authority. So this is an extension of the Defence Aviation Safety Authority.

10 You get delegated a particular set of responsibilities to perform on DASA's behalf in terms of being the eyes and the ears of the Regulator for the operational and engineering community. You're also the Chief Engineer for design acceptance, technical acceptance of products that would either make their way on to the platform or be removed from the platform through various mechanisms, modifications, repairs, that sort of thing.

FLTLT ROSE: Who issues the Military Type Certificate for the MRH-90?

20 LTCOL WATLING: So that comes from the Defence Aviation Safety Authority.

FLTLT ROSE: Does that have to be renewed or reviewed periodically?

25 LTCOL WATLING: It does get reviewed within the context of the Airworthiness Boards that are held at frequency, depending on Defence Aviation Safety Authority, generally every one to two years, and as a Military Type Certificate Holder function that the Senior Defence Engineer within AASPO would perform. They have to confirm that the Type Certificate remains valid for the particular platform.

30 FLTLT ROSE: During the time that you were the Chief Engineer for the platform, were there any issues in terms of whether or not the Military Type Certificate was going to remain valid?

35 LTCOL WATLING: No, for the time that I was Chief Engineer, the Military Type Certificate remained valid.

40 FLTLT ROSE: Then that brings us to your current Commanding Officer at RAMS.

LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: When exactly did you post into that role?

45 LTCOL WATLING: In January 2023.

FLTLT ROSE: How long is that posting for?

5 LTCOL WATLING: It's for two years.

FLTLT ROSE: I understand at paragraph 13 of your statement you also said you're the Chief Instructor.

10 LTCOL WATLING: Yes, that's correct. So it's two positions. It's Commanding Officer of the school, but it's also a Chief Instructor role because we are a training establishment.

15 FLTLT ROSE: Does that mean that you still take part in some instruction to trainees or that you oversee what they're instructed on?

LTCOL WATLING: I only oversee what the trainees and the students are instructed on.

20 FLTLT ROSE: I'd like to ask you some questions about RAMS. If it's preferable, I'll just call it RAMS, although we're both referring to the Rotary-wing Aircraft Maintenance School when we say that.

LTCOL WATLING: Yes, that's correct, ma'am.

25 FLTLT ROSE: At paragraph 12 of your statement, you state that it's a training establishment within the Army Aviation Training Centre that's at Oakey.

30 LTCOL WATLING: Yes.

FLTLT ROSE: Where does it sit within the other institutions that are in the training centre?

35 LTCOL WATLING: So I guess from a conduct of training perspective, AAvnTC holds the responsibility for training management through the Training Management Cell, and RAMS, along with the School of Army Aviation, which is the other school within AAvnTC, are responsible for training delivery of those outcomes.

40 FLTLT ROSE: You state here at paragraph 12 that RAMS provides individual technical Aviation training in the areas of aircraft maintenance and engineering in support of Army Aviation.

45 LTCOL WATLING: Yes.

FLTLT ROSE: That's one of the things that RAMS does.

LTCOL WATLING: Correct.

5 FLTLT ROSE: I will ask you some questions about that but, however, for completeness, it does provide some other educational training which is in relation to promotional courses specific to Army Aviation technical trades.

10 LTCOL WATLING: Yes. So again, that refers to the Employment Category Number 411 and Employment Category Number 412, which is Technician Aircraft and Technician Avionics, respectively.

15 AVM HARLAND: Excuse me, just one question. In regard to the Defence Aviation Safety Regulations, are you a Part 147 organisation?

LTCOL WATLING: Yes, by derivation through Headquarters Air Force Training Group. So they hold the 147 Maintenance Training Organisation Authority, of which AAvnTC and RAMS are a part of that 147.

20 AVM HARLAND: Okay, thank you.

LTCOL WATLING: Thank you, sir.

25 FLTLT ROSE: Another aspect of training that RAMS provides – this is still paragraph 12 of your statement on page 4 – is development courses for junior Aviation engineering officers.

LTCOL WATLING: Yes, that's correct.

30 FLTLT ROSE: Then short Army Aviation technical courses.

LTCOL WATLING: Yes.

35 FLTLT ROSE: If I can ask you some questions about the technical Aviation training that you provide for technicians, is this their ab initio trade training once they come to RAMS or have they already completed another course before they can come to RAMS?

40 LTCOL WATLING: So for new recruits into ECN 411 and 412, they will come out of Kapooka where they do their basic recruit posting and they'll get posted into RAAFSTT at Wagga Wagga. That's where they'll complete their first – where it's Technician Aircraft or Technician Avionics basic course. So that covers off on all of the theoretical components. They do maths. They do physics, science. They do materiel studies. They do
45 mechanical systems, depending if it's Avionics or the Tech Aircraft

specialisation. But they'll do all of those courses over generally a 12 to 18-month program, completing certain units of competency towards their MEAs.

5 FLTLT ROSE: Is there a civilian equivalent to the courses that they complete in terms of is it equivalent to a TAFE course or Graduate Diploma of some sort?

10 LTCOL WATLING: Yes. So those technicians, by the time they complete all of their training – and not all of it happens at RAAFSTT; we don't have enough, I guess, time to be able to take them through the entirety of the continuum - but they will come out with a Certificate IV in Aeroskills, either Mechanical or Avionics and Electrical, once all of their training is completed and they've signed off on all of the relevant MEAs.

15 FLTLT ROSE: When you say there's not enough time in Wagga Wagga to complete that training, where do they go next?

20 LTCOL WATLING: So straight after Wagga they come to RAMS and we will give them their next stage of the training, which is a Military Aircraft Type Rating specific to a particular platform, whereas the training at RAAFSTT is platform agnostic. So it is general skills. They definitely then go through practical skills as well as doing maths, physics, materials, engineering, structures, avionics. They'll go through the practical side of it, but it is all on platform agnostic equipment.

25 FLTLT ROSE: Is it the case, from what your evidence just was, that as well as having their specific platform training when they come to RAMS, they may have to complete a series of this more generalist training to get that Cert IV qualification?

30 LTCOL WATLING: Sorry, can you repeat the question; I'm not quite sure I'm following.

35 FLTLT ROSE: I understood from your evidence that when they're at Wagga Wagga, they may not have time to complete all of the separate courses required to obtain a Certificate IV. Is it the case that they are able to complete that once they're at RAMS?

40 LTCOL WATLING: Sometimes. Generally, they also have a requirement to complete some of those training serials for final MEAs out in the operational units post their training at RAMS. So it's Kapooka. It then goes to Wagga for basic training. They then come to RAMS for Military Aircraft Type Rating, specific to a platform. It's usually some time down the road that they'll both hit their Certificate IV Aeroskills' requirements

and sign off on all of the on-the-job training associated with the type rating that we provide at RAMS. It's a very extensive training program that takes a number of years to get technicians through to the standard that we require.

5 FLTLT ROSE: So it's not a prerequisite that they have that certificate before coming to RAMS?

LTCOL WATLING: No, it's not.

10 FLTLT ROSE: You mentioned before the School of Army Aviation, which is also in Oakey. What's the relationship then between the technicians training in RAMS and the aircrew that's training in the School of Army Aviation? Do they have courses together or are they separated?

15 LTCOL WATLING: Almost all of the courses are separated. The only time where we might see overlap is for aircraft familiarisation courses which are a very short course, up to one week in duration for training pilots coming through the organisation. So they might come to RAMS to receive that familiarisation training and therefore there's some interaction there.
20 Otherwise, the two schools are very separate in terms of the content that they teach and the professions that they teach.

FLTLT ROSE: At paragraph 13 of your statement you state that there are two main wings within RAMS. First is the Technical Mastery Wing, and
25 then you have the Aircraft Trade Wing.

LTCOL WATLING: Yes.

FLTLT ROSE: Can you describe the difference between those two wings?
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LTCOL WATLING: Okay. So the Aircraft Trade Wing is specific to each of the different platforms that we train on at RAMS. So currently that is ARH Tiger, Black Hawk and Chinook. Previously it was MRH-90 as well. So that's where they will do the Military Aircraft Type Rating courses for
35 both those individuals that come into the system ab initio, so have not done any other training previously. They will go through Kapooka, they'll go through Wagga, and then they'll come to RAMS to do that.

40 It's also where we would deliver training courses for transition from another aircraft type, such as a maintainer who was Chinook qualified and needs to now be Tiger qualified, we would deliver the transition course associated with moving to the new platform.

FLTLT ROSE: Is that the same length of time needed for those who are
45 transitioning as those who are doing the ab initio training?

LTCOL WATLING: No, it's not, and the main difference is the on-the-job training requirement for ab initio technicians which is a lengthy process to go through to sign off on all the OJT that's required.

5

FLTLT ROSE: So you're saying that those who are converting don't need to do the on-the-job training to the same extent?

LTCOL WATLING: Correct. The DASA Regulations for Defence Aviation Safety Regulations Part 66 talk about the first aircraft type and the requirement for OJT on that. For subsequent aircraft types, you don't have to do the full OJT package, but there may be some differences – training required based on the difference of the platform that they're going to and from. Again, that's at the discretion of the Defence Aviation Safety Authority as to how much OJT is performed but it's significantly less.

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FLTLT ROSE: Is it the case that you would currently have some people converting now in this wing from the MRH-90 to Black Hawk, for example, or another aircraft type?

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LTCOL WATLING: Yes, that's correct. So anyone who was previously MRH-90 trained as a technician will have either undergone or is undergoing training across to an additional type from their first one that they experienced.

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FLTLT ROSE: The other wing at RAMS, the Technical Mastery Wing, what does that deliver?

LTCOL WATLING: Yes. The TMW is all about our Subject 4 promotional courses for our soldiers, so again, taking 411 and 412 technicians and providing them the Subject 4 course for Corporal, for Sergeant and for artificers, which we call our Warrant Officer Artificers Course. So that's one portion of it, and then we also deliver the engineering-related training for junior officers in the EMEAO stream.

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FLTLT ROSE: Is it only Warrant Officers that are artificers?

LTCOL WATLING: Yes.

FLTLT ROSE: In general, what does that word mean?

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LTCOL WATLING: Artificers are the trade skill for that particular class of individual. It means that they are – what's the word for it – extremely skilled at their craft to become an artificer.

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FLTLT ROSE: You mentioned the on-the-job training requirements for those who are doing the ab initio technician training. Can you just briefly describe what that means?

5 LTCOL WATLING: Sure. So for the most part it's around a 180-day program to do on-the-job training, certainly for MRH-90, once they had already completed both their technical and then their practical training on the type.

10 FLTLT ROSE: That was completed at Oakey?

LTCOL WATLING: Yes, all of that. So that is all considered part of the Military Aircraft Type Rating for that particular program. So it's about a three-month program for the initial technical academic phase and practical phase combined. And then it's about a 180 days' worth of teaching on on-the-job training.

FLTLT ROSE: Does that mean that's all practical work?

20 LTCOL WATLING: That is all practical work and it's all at a one-to-one student-instructor ratio to ensure that the technician is able to safely perform Aviation maintenance competently.

FLTLT ROSE: So when you did have the MRH-90 platform at RAMS, how many technicians would, on average, go through that ab initio course on that platform type?

LTCOL WATLING: At one time or in a year?

30 FLTLT ROSE: Yes. Are the courses January to December?

LTCOL WATLING: No, they're not. They're spread out throughout the year. And that's generally to try and cater for the directed training requirement that we are to provide from the school, as well as those coming into the school from Wagga. Noting that we're not the first training school that they come to. So we would generally run three courses back-to-back throughout the year, where you'll have some that are in academic, some that are potentially in their practical phase, and some that are in the OJT phase.

40 FLTLT ROSE: Is it only the OJT phase that's the one-to-one instructor-trainee?

LTCOL WATLING: Yes, that's correct.

45 FLTLT ROSE: That's 180 days.

LTCOL WATLING: Yes.

5 FLTLT ROSE: I take it that it's not the same instructor with the same trainee for that 180 days. Does it move around?

10 LTCOL WATLING: No, it has to move around, based on the fact that we only have so many instructors to spread round, so yes. And it also means that you have not just one instructor assessing a particular student throughout, so you can get a number of different perspectives on all other things, such as the softer skills to the training aspects.

15 FLTLT ROSE: Is the theoretical training and the on-the-job training both pass/fail in terms of assessment?

20 LTCOL WATLING: Yes. Everything from the pass/fail criteria is quite prescriptive out of the DASR 66 requirements in terms of how and what level of assessment, what the pass marks are, how many numbers of questions must be delivered under each chapter that we're delivering training to. So it's quite governed in terms of minimum requirements that must be met around all of the assessment criteria and pass/fail marks, et cetera.

25 FLTLT ROSE: I take it there's provision for some remedial training if someone does fail?

30 LTCOL WATLING: Yes, there's certainly provision for a training caution to be delivered after a first-time failure. That can then escalate to a training warning, after a second-time failure on the same subject. And it can go to a Board of Studies, subsequent failures thereafter, to determine whether or not the individual is fit to remain on course.

35 FLTLT ROSE: In your time that you've been the CO of RAMS, has that ever had to happen, where someone's had to go to the Board?

LTCOL WATLING: Yes, there has been members that have had to go to a Board of Studies and been removed from courses.

40 FLTLT ROSE: From your memory, did that happen in respect of trainees on the MRH-90 platform?

45 LTCOL WATLING: No. Generally speaking, it happens on the Subject 4 promotional courses, is where we see that most often. I don't recall any technicians being removed from course from 411 and 412 associated with MRH-90.

FLTLT ROSE: At paragraph 15 of your statement – sorry, I should correct. At paragraph 14 you said that:

5 *The MRH-90 during 2022 and '23, RAMS had a mix of Army, Navy, APS and Airbus instructional staff responsible for the delivery of technical training on the platform.*

10 LTCOL WATLING: Yes. RAMS was a blended – and has been for quite a number of years – training organisation.

15 FLTLT ROSE: Did each of those instructors, being from Army, Navy, APS or Airbus, did they all have similar qualifications; or, because they were from different organisations, their qualifications had different names, had different experiences behind them?

20 LTCOL WATLING: No, they generally – depending on the role, because there's differences in TMW to ATW – Tech Mastery Wing and Aircraft Trade Wing – in terms of the requirements for the instructors. But, generally speaking, there was no difference between a contractor delivering an instructional period of training, an Army technician delivering it or a Navy technician. Our APS positions are generally more in quality management or administrative functions. There's only a couple that deliver training associated with TMW.

25 FLTLT ROSE: So in terms if you're doing the TMW training, the only difference really between Army, Navy and Airbus would be the uniform that they were wearing?

30 LTCOL WATLING: Correct. They were all part of the one organisation. Even the contractors were, I guess, considered as labour hire to fill instructor positions, where they bring a specific subject-matter expertise from their contractor background. And most of those are ex-maintenance personnel that come with the same licences and requirements for the positions that are filled by military personnel.

35 FLTLT ROSE: Can you remember, in terms of the MRH-90 platform, what the percentages were of Army, Navy instructors versus contracted Airbus instructors?

40 LTCOL WATLING: For Navy it was easy, we've only ever had three Navy positions within RAMS and they've all been associated with MRH-90, because it's the only platform that we share, and we only ever had two of those three positions filled in my tenure. I believe they were filled prior to that. For the Army and Airbus contractor mix for MRH-90, there was

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roughly 10 positions associated with the Airbus instructor positions, most of which were filled in my first – sorry, in 2022, but were already starting to taper off in 2023. And we had a similar number within Aircraft Trade Wing MRH-90 area for Army staff.

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FLTLT ROSE: They too started to taper off in 2023, I take it?

LTCOL WATLING: Yes. And we've subsequently trained all of those across on other types since.

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FLTLT ROSE: Paragraph 15, you were asked some questions – sorry, just below paragraph 15, you were asked some questions about the MRH-90 ditching in Jervis Bay in March 2023. And the question was:

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Following the ditching of the MRH-90 in Jervis Bay in March 2023, the OEM –

which is the Original Equipment Manufacturer, agreed?

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LTCOL WATLING: Yes.

FLTLT ROSE:

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– confirmed that subsurface pores introduced at manufacture caused crack initiation at the fir tree root of the blades in the HPI turbine and subsequently issued a Service Bulletin recommending replacement of all turbine blades with new blades at the next engine repair or overhaul.

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Do you remember that?

LTCOL WATLING: Yes.

FLTLT ROSE: And the question was:

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Were new blades fitted to the MRH-90 used by RAMS trainees prior to the grounding of the fleet?

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LTCOL WATLING: Yes.

FLTLT ROSE: Just to confirm, was it the OEM that issued the Service Bulletin?

LTCOL WATLING: Yes, OEMs issue Service Bulletins. They weren't issued following the Jervis Bay incident. They were actually issued prior to that.

5 FLTLT ROSE: Do you remember when they were issued, that particular Service Bulletin?

LTCOL WATLING: Circa 2016 was the first known incident of this phenomena.

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FLTLT ROSE: Do you remember how that was identified, that first known incident?

LTCOL WATLING: So when it comes to MRH-90, they have what they call Incident Boards where they classify a particular incident across the fleet, because there's obviously a number of different operators. And they classify those as either a major or minor incident. And then if they're in the major category – which this one was – “Unsafe: Yes”, or “Unsafe: No”. This one was classified as “Unsafe: No”, based on the impact to the certification of the engine. And they issue those as a subsequent Service Bulletin from the OEM. In this case, from the engine OEM.

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FLTLT ROSE: So is it the OEM that decides if it's “Unsafe: No”?

LTCOL WATLING: That is at the NHI level. So OEM will obviously make recommendations, noting that this came from the engine OEM, but it's at NHI classification level as to whether it's “Unsafe: Yes”/“Unsafe: No”.

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FLTLT ROSE: So just to clarify, NH – NATO Helicopters – is the OEM for the aircraft, and there's a different OEM for the engine?

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LTCOL WATLING: Yes, that's correct. Well, NHI are the conglomerate that sit over the top of the entire organisation. The RRTM, or Safran Helicopter Engines – they've changed names a couple of times throughout history – were the OEM specifically for the RTM322 engine on the MRH-90.

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FLTLT ROSE: Was that a subsidiary of NHI, or not related?

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LTCOL WATLING: No, they're not a subsidiary.

FLTLT ROSE: Do you know where they're headquartered?

LTCOL WATLING: It is in France, I'm just trying to remember the name, sorry. I believe it is Toulouse in – no, sorry, I can't recall the name, but they're headquartered in France.

5 FLTLT ROSE: So was it the Safran – is that the name that it's currently – the engine manufacturer is currently called Safran?

LTCOL WATLING: No, it's Safran Helicopter Engines.

10 FLTLT ROSE: Safran Helicopter Engines. They are the ones that said, "Unsafe: No", in terms of - - -

LTCOL WATLING: No, again – so this is at the higher level, at the NHI level, through the Airworthiness Department within NHI, who take on board all of the different systems on the aircraft. Obviously the engine being a system that is provided as a part from a OEM, being Safran Helicopter Engines, but the NHI Airworthiness Department are the one that come up with the classification in accordance with their EMAR 21 processes and their JMAAN procedures, which is the Joint Military Aviation Authorities for the nations of NH90.

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25 FLTLT ROSE: So I'm just wanting to track the progress here. So NHI issues a Service Bulletin and has made that assessment internally by their airworthiness decision-makers. That's pushed out to all of the users of MRH-90, I take it, around the world?

LTCOL WATLING: All of the users that run their RTM322 engine, because there are some other nations, such as Italy, who operate a different engine variant, T700.

30 FLTLT ROSE: So Australia receives this Service Bulletin.

LTCOL WATLING: Yes.

35 FLTLT ROSE: Does it go into CASG or to CAMO?

LTCOL WATLING: So it goes into the CAM Services Organisation for MRH-90. This is Airbus AP in Brisbane, who have the responsibility to take on board the information and then implement it within the timeframes required in accordance with the Continuing Airworthiness Management organisation's Exposition, the CAME.

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45 FLTLT ROSE: Can you recall what the timeframes were in that Service Bulletin for when these engines should be modified?

LTCOL WATLING: I can't recall, sorry. And I guess dating back to that period of time, around 2016/2017, the fact that it was determined by the airworthiness department as a major "Unsafe: No", means that it only comes out as a recommended Service Bulletin.

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So there are a number of categories for Service Bulletin. Emergency Mandatory is the top one: must be done and it must be done quickly. Mandatory is it must be done, but it has a more relaxed timeframe to incorporate. Recommended – that's where this one came out, because it was a major "Not unsafe"; i.e. not incorporating it does not put you into an unsafe condition. You then have optional Service Bulletins underneath where they're potentially for cost of ownership reductions and things like that. And, finally, information bulletins.

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15 FLTLT ROSE: Is that how Australia received it, as a recommendation?

LTCOL WATLING: We received it as a Category 3, Recommended Service Bulletin, correct.

20 FLTLT ROSE: Do you recall if modifications were made from about 2016 to any of these particular engines?

LTCOL WATLING: No. You have to realise that some of these things take a number of years to incorporate. So the program that was recommended by the engine OEM was as the engines would come back through their organisation, because they're the only ones that can take apart the engine to that level, they would incorporate those at the customer's cost, because it's only a Recommended. If it was Mandated, it would be at industry cost to absorb, to be able to put them onto the aircraft.

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FLTLT ROSE: Does Safran Helicopter Industries have a base in Australia?

LTCOL WATLING: Yes, at Bankstown in Sydney.

35 FLTLT ROSE: So is it the case that these particular engines would have had to be sent to Bankstown in Sydney to be modified?

LTCOL WATLING: I would have to confirm, because I'm not sure when the overhaul facility in Bankstown was actually established. I think it was post-2016, i.e. it was never there from 2007; I know that much. But at some point in time the Safran Helicopter Engines global decided to put a repair and overhaul facility into Bankstown, but I don't know the date, sorry.

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45 FLTLT ROSE: Do you have any personal knowledge of any of the engines that the Australian Army had inside the MRH-90s going to the Bankstown

facility from whatever date the overhaul facility was established to be modified in accordance with the Service Bulletin recommendation?

5 LTCOL WATLING: Again, I don't know whether or not the modifications occurred there or only over in France. I think the answer is that they were likely to have been performed in both locations.

10 AVM HARLAND: Question: are you aware of any other incidents related to that particular Service Bulletin between the 2016 timeframe and 2023 when we had the Jervis Bay incident?

LTCOL WATLING: Any other incidents in the global fleet, is that what you mean, sir?

15 AVM HARLAND: Yes.

LTCOL WATLING: Yes.

20 AVM HARLAND: There were. And was that Service Bulletin updated with another recommendation regarding whether it was "Unsafe: Mandatory", or did it remain as a CAT 3, Recommended, I think you said?

25 LTCOL WATLING: I believe – and so there were a couple of different Service Bulletins issued over time. Certainly because the – the first Service Bulletin talked about replacing the blades with a new blade configuration. That material for that blade ended up becoming obsolete. So the engine OEM and NHI had to come up with a different strategy. So they ended up using a different method to what the first Service Bulletin was. So I'm aware of at least two Service Bulletins that implement two different
30 modifications to the same part within the engine, both of which were Recommended, Category 3, Service Bulletins.

35 AVM HARLAND: So they didn't change the rating up to Mandatory, just stayed at CAT 3, Recommended.

LTCOL WATLING: There's never been a change to major "Unsafe: No", the original decision. And as far as I'm aware there's never been a change from the Recommended, CAT 3, Service Bulletin criteria.

40 AVM HARLAND: Great. And it'd be worthwhile getting hold of those subsequent Service Bulletins. The other question is, following on from the March '23 incident in Jervis Bay, it appears that there was quite a bit of work done getting the engines modified to the point where 6 Aviation, we're told, were completely modified with the updated engines, or updated

turbines. What was the trigger for that if everything just stayed at Recommended, CAT 3?

5 LTCOL WATLING: So as I mentioned, the modification program had already been underway for a number of years, in accordance with the MRH-90 Fleet Plan. The Jervis Bay incident obviously caused the CAMO and CASG to re-look at the Fleet Plan to see whether it was still contemporary, and they were the recommendations to fit out the 6 Aviation aircraft with two of the newly modified engines.

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AVM HARLAND: So that was a “as soon as possible”, or was it a “before next flight”, do you recall?

15 LTCOL WATLING: I don’t recall, sorry.

AVM HARLAND: Great. No, thank you.

20 FLTLT ROSE: Could you also confirm, have you ever been posted to 6 Aviation Regiment?

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LTCOL WATLING: No, I have not.

25 FLTLT ROSE: After the Jervis Bay incident, were any of the engines used in the aircraft at Oakey modified in accordance with the Service Bulletin?

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LTCOL WATLING: I’m not at liberty – I don’t have the information. I can only talk about the engines within RAMS, not at Oakey in general.

30 FLTLT ROSE: You state at paragraph 17 of your statement that none of the – those modifications weren’t made to any of the training devices that were used at RAMS for MRH-90s?

LTCOL WATLING: That’s correct.

35 FLTLT ROSE: You say that’s because of the modification having nil effects on servicing, maintenance, ground handling or flight operation.

40 LTCOL WATLING: Yes, that’s correct, and that’s in the Modification Orders delivered by the CAMSO, which take the information from the Service Bulletin and translate that into an artefact that is able to be implemented within our system.

45 FLTLT ROSE: What do you mean by “the modification to the engine having nil effect on servicing”?

5 LTCOL WATLING: So what I mean by that is every modification that gets incorporated onto an aircraft has to go through appropriate rigour for all of the different impacted systems that it might have. Maintenance and servicing is one of those; just like training, just like operations, ground, equipment, et cetera.

10 As far as maintenance and servicing goes, there is zero difference to the maintainer looking after an RTM322 engine, either pre-modification or post-modification. It has no appreciable effect on how you maintain the engine because our maintainers do not go down to the level of disassembly to get anywhere near the high-pressure turbine disc blades. So there's no maintenance requirements for them to do anything differently to what the procedures have. And as part of the modification there is no update to the interactive electronic technical publication maintenance portion in terms of
15 a different servicing, for instance, being part of it. That wasn't the case for these particular modifications.

20 FLTLT ROSE: What do you mean, "having nil effects on ground handling"? What does that mean?

LTCOL WATLING: So ground handling is about towing the aircraft, moving it around, those sorts of operations, whether or not there would be an impact. Noting that this is an engine, and during ground handling those engines are not turned on; there's no effects.

25 FLTLT ROSE: Then you say the modification has nil effect on flight operation. What involvement do the technicians have in flight operation, or does that mean flight operation for the aircrew?

30 LTCOL WATLING: This means flight operation for the aircrew. And again, these are taken as direct extracts from the Modification Orders themselves as part of that process that CASG must go through in terms of what are the impacted areas.

35 FLTLT ROSE: So your evidence is that even if these engines had been modified, the way that the aircrew handle and fly the aircraft does not change.

40 LTCOL WATLING: That's correct. There is no alternate procedures within the flight manuals for a pre-modification engine or a post-modification engine.

45 FLTLT ROSE: Is it the case that aircraft who needed this modification had to go into deeper maintenance?

5 LTCOL WATLING: Yes, that's correct because our technicians are not permitted to take apart modules on the engine. So this is part of module 2, the combustion chamber and high-pressure turbine area. We can't even, as technicians, take apart the engine to that level, so anything that involves that level of disassembly must be done by the contractor organisation, Safran Helicopter Engines, within a deeper maintenance facility contractor.

10 FLTLT ROSE: At paragraph 18 you stated, and you also responded to AVM Harland's question, that RAMS does not hold the Defence Aviation Safety Regulation Part 145 Maintenance Organisation approval.

LTCOL WATLING: That's correct.

15 FLTLT ROSE: And, as such, does not have the authority to conduct or certify maintenance on live aircraft.

LTCOL WATLING: Yes, that's correct.

20 FLTLT ROSE: What aircraft do the technicians train on instead of live aircraft?

25 LTCOL WATLING: So there is a mixture within MRH-90 in terms of the training devices that they can train on, and that's everything from individual training aids such as an engine, all the way up to, in this case, working on a live aircraft that is allocated from the 145 organisation at Oakey, which is Airbus.

30 FLTLT ROSE: Is it the case that a live aircraft is taken out of service – my words – so that it can be utilised by RAMS for the training of its technicians?

LTCOL WATLING: Yes, that's correct.

35 FLTLT ROSE: Does it then go back into Service after a period of time?

40 LTCOL WATLING: Yes, so generally speaking, the intent is for a live aircraft to be allocated to RAMS from the Airbus Part 145 in Oakey for usually a duration of about two years, after which the aircraft is allocated back to the Part 145 organisation, who do a series of quality checks, refurbish anything that has been broken, through the documentation system conduct all of the normal test flying requirements and everything else prior to bringing it back into a flying state.

45 FLTLT ROSE: Was there a live aircraft, MRH-90, that the trainees were using in your tenure at RAMS?

LTCOL WATLING: Yes, there was.

5 FLTLT ROSE: Was that aircraft ever returned to Service before the grounding of the fleet?

10 LTCOL WATLING: No. So to my knowledge, that aircraft was allocated to RAMS prior to my tenure on 19 January 2021. It was used within RAMS for the entire duration of both the previous posting and myself, and it never returned back to a flying state within the Part 145 at Oakey post the official cessation. So 19 January 2021 was the last time that it actually flew, and it remained in RAMS throughout that whole period, post.

15 FLTLT ROSE: So for about three and a half years – ‘21, ‘22, ‘23 and then half of - - -

LTCOL WATLING: Well, again, 2023 was when the formal cessation occurred – middle of the year.

20 FLTLT ROSE: Do you know where that aircraft has gone now? Is it still at RAMS or in Oakey?

25 LTCOL WATLING: No, I believe – I don't know where it is at the moment, sorry.

FLTLT ROSE: But it was taken away from Oakey, I take it.

30 LTCOL WATLING: All I can tell you is that it was aircraft tail number A40-010.

FLTLT ROSE: I turn now to paragraph 20 of your statement. You refer to learning management packages, or LMP.

35 LTCOL WATLING: Yes.

FLTLT ROSE: And you have an LMP for each of the respective courses conducted at RAMS; is that correct?

40 LTCOL WATLING: That's correct.

45 FLTLT ROSE: They contain all the necessary information to run the courses, including general learning management information, curriculum, major resources necessary, learning and assessment materials, and supporting materials.

LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: So there's a specific LMP for MRH-90 trainees?

5 LTCOL WATLING: For each of the individual courses that we run, yes.
So there are multiple for MRH-90.

FLTLT ROSE: Your earlier evidence was a lot of that is dictated by
requirements under DASR.

10

LTCOL WATLING: So in terms of setting the requirements for
examination pass marks, how many hours of instruction you must do on a
particular chapter, how many minutes per question you're allowed for an
assessment, all of those types of things are heavily governed within DASR
Part 66, Licensing Requirements.

15

FLTLT ROSE: Who then decides the content that goes into the LMPs?

LTCOL WATLING: So again, RAMS is in the training delivery phase.
Upstream of that is the analyse, design, develop. We're in the implement
phase of that system. So within Workforce Training Branch in AAvnTC,
that's where all of the develop content side of it falls in.

20

FLTLT ROSE: As Chief Instructor, do you have any input into that?

25

LTCOL WATLING: Yes, we do, because within the implement phase we
are responsible for doing the conduct of learning reviews post each and
every course that we run to find out whether or not there are any
deficiencies, course material that has become outdated, all of that side of it.
So the RAMS' instructors have a responsibility to feed into the training
system training amendment proposals, based on learning reviews
post-courses, to potentially upgrade and improve the content for the next
courses.

30

FLTLT ROSE: Paragraph 22, in the last sentence, you say that:

35

*Noting that practical and on-the-job tasks on the MRH-90 for
training purposes are generally very stable –*

40

and then you say:

*that is, almost no change in the types of tasks being performed
course to course – there are very minimal requirements for EARs
within RAMS.*

45

Just remind us what EAR is again.

5 LTCOL WATLING: So an EAR is an Engineering Advice Request. It's normally submitted from a Part 145 Maintenance Organisation to seek clarification or amendment of a maintenance practice.

FLTLT ROSE: What did you mean when you said that the "on-the-job tasks for MRH-90 trainees are generally very stable"?

10 LTCOL WATLING: So again, this relates back to the DASR 66 requirements, which are for each particular ATA on the aircraft – so that's a different chapter. It might have a different chapter for engines versus a different chapter for avionics systems, et cetera. It is quite prescriptive in DASR Part 66 as to what the minimum OJT requirements are. So for
15 MRH-90 there are around 200.

It depends on the technician aircraft or technician avionics course, but let's say for argument's sake there's between 200 to 250 prescribed OJT tasks that must be performed from Part 66. So what I was alluding to in that
20 statement is that those task lists are set by the Defence Aviation Safety Authority. They approve them, and there is generally very little change from course 1, to course 2, to course 3, throughout a year of those particular tasks.

25 FLTLT ROSE: And across years, too? For example, if a trainee - - -

LTCOL WATLING: Correct.

30 FLTLT ROSE: - - - in 2020 was learning much the same, or had the same requirements as a trainee in 2023.

LTCOL WATLING: The only thing that changes is when potentially there's a major modification done to the aircraft that introduces a new system that requires additional training and OJT on, that will then be fed in
35 as part of the modification approval process to seek additional OJT tasks to be added to the list. Again, which would get submitted to DASA for approval, and once approved, then that becomes the updated task list. But, generally speaking, not a lot of change to the 250 tasks that are provided through OJT.

40

FLTLT ROSE: Are the trainees instructed on maintenance of the HMSD or TopOwl; that helmet-mounted sight and display, and then the TopOwl night-vision device that the MRH-90 pilots use?

45 LTCOL WATLING: They are if they're an Avionics technician, yes.

FLTLT ROSE: Was there a change in the on-the-job training from when there was a version upgrade for the TopOwl system version 4 to version 5.10 in about 2019 and 2020?

5

LTCOL WATLING: Unfortunately, that was before my tenure as CO RAMS, but from the modification, again, it will detail whether or not there's an impact to training, and if so, what that is.

10 FLTLT ROSE: What was the extent of the training that the technicians were given for maintaining that HMSD and the TopOwl system?

15 LTCOL WATLING: That's exactly what it is. It's about how to maintain the helmet-mounted display, including all of the systems, including the Electronic Unit, which is the box that houses the software that you are referring to. But it's all about how do they maintain that system, not necessarily how it operates or functions.

FLTLT ROSE: At paragraph 26 you state that:

20

The MRH-90 is a complex aircraft with complex support systems and tools.

And you say:

25

There have historically been significant challenges in achievement of aircraft availability and ROE across the entirety of the system.

Is that rate of effort, ROE?

30

LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: Can you explain what you mean by the "historical challenges"? It's the second sentence in paragraph 26, and the third sentence.

35

LTCOL WATLING: I'm referring there to the fact that historically we have underachieved in terms of both availability and rate of effort across the platform for MRH-90.

40

FLTLT ROSE: By "rate of effort", do you mean the number of flight hours the aircraft is able to deliver?

LTCOL WATLING: Yes.

45

FLTLT ROSE: It's a capability assessment. And "availability", do you also mean how serviceable each aircraft is?

5 LTCOL WATLING: Yes, the number of aircraft that are available for a given mission on a particular day.

FLTLT ROSE: Can you explain what the reasons are for these challenges and the inability to, as you say, meet the rate of effort required?

10 LTCOL WATLING: I can call back to my time in 2015/2016, which is the last time that I was in a Maintenance Organisation Part 145, and as I've described here, that there's a number of different contributing factors associated with lack of spare parts, high number of cannibalisations, high number of modifications on the aircraft, complex technical publications,
15 long logistic lead times for parts availability. All of those things were contributors in my time during 2015/2016 in a Maintenance Organisation. I can't speak for post that as I have not been in one of those organisations.

20 MS McMURDO: You'll be a little while yet, FLTLT Rose? I thought we might take a 15-minute break.

FLTLT ROSE: Yes, I'll probably be another half an hour or less.

25 MS McMURDO: Yes, I think we'll take a 15-minute break. Thank you.

HEARING ADJOURNED

30 **HEARING RESUMED**

MS McMURDO: Yes, FLTLT Rose.

35 FLTLT ROSE: Do you still have your statement in front of you?

LTCOL WATLING: I do, yes.

40 FLTLT ROSE: I want to ask you some questions about paragraph 27. You state that RAMS formally ceased MRH-90 technician training with effect from 1 July 2023, following the government announcement on 18 January 2023 of the MRH Rapid Replacement Program and the bringing forward of the MRH-90 planned withdrawal date to no later than December 2024.

45 LTCOL WATLING: Yes, that's correct.

5 FLTLT ROSE: When you say that RAMS ceased training on 1 July 2023 in respect of MRH-90 technicians, did that mean that you completed the course that the current technicians were on or was it suspended mid-course?

10 LTCOL WATLING: No, it meant that we weren't commencing any new courses because, as I mentioned before, the MRH ab initio training is approximately one year long within RAMS, and then there's still a requirement for those technicians to complete their on-the-job training out in the operational Regiments as well. So if you factor in the 12 months at RAMS and the time at the operational unit, it would mean that they would not be able to complete all of their training requirements if we'd commenced courses post 1 July, noting when the expected planned withdrawal date of MRH-90 was.

15 FLTLT ROSE: Does that mean that RAMS knew before 18 January 2023 that there was going to be the withdrawal of the fleet?

20 LTCOL WATLING: Look, we had certainly been given indications, dating all the way back to Minister Dutton's comments earlier than January '23, but that was the formal release from the government associated with MRH expectancy for its planned withdrawal date. So that was the final trigger. We had certainly been planning for those conditions but we were still running courses in the background, waiting for a formal decision to come to us.

25 FLTLT ROSE: When you refer to the government's announcement on 18 January 2023 of the MRH Rapid Replacement Program, is that to be rapidly replaced with Black Hawk?

30 LTCOL WATLING: Yes, that's correct.

35 FLTLT ROSE: Is perhaps "rapid" government's word, or is that rapid because you actually agreed that it was a quick transition from the announcement in January 2023 to the planned withdrawal date in December 2024?

40 LTCOL WATLING: Unfortunately, I can't recall the exact wording from the government of the day as to whether it was their wording or whether that was the comment from myself.

45 FLTLT ROSE: When it says "no later than December 2024", had there been any indication prior to the incident on 28 July 2023 that that planned withdrawal date was closer in time than the end of December 2024?

LTCOL WATLING: So the original contracted planned withdrawal date from my memory is 2037. As at 18 January, that decision was truncated until December '24. So that was prior to the accident.

5 FLTLT ROSE: Knowing that the MRH-90 was going to be withdrawn from service, what was your understanding was going to happen to the aircraft if it had been withdrawn in the same timeline that was predicted? Physically, what was going to happen to the aircraft?

10 LTCOL WATLING: As in the 2024 time frame or the - - -

FLTLT ROSE: Prior to the incident, what was your understanding was going to happen to the physical aircraft once the fleet had been withdrawn from service?

15 LTCOL WATLING: Unfortunately, during my posting at RAMS, I wasn't privy to the information associated with the program and what the future of the platforms would be post the planned withdrawal date decision to bring it forward.

20 MS McMURDO: Did you have any understanding as to why at this time – this is pre the July '23 accident – at this time, why there was to be this planned withdrawal date for the MRH-90s when, as you say, originally under the contract it would have been 2037?

25 LTCOL WATLING: Ma'am, my understanding was that based on the government decision to replace the program with Black Hawk helicopters, that that came with the endorsement of bringing forward the planned withdrawal date. It's too much of an overlapping competition if you were
30 to maintain one and bring in the new system all at the same time because we only had limited resources to account for.

MS McMURDO: So it wouldn't have been possible to maintain two fleets in the transition stage to Black Hawk?

35 LTCOL WATLING: No, definitely not. In any transition that we do, it's always a measured transition drawdown of one fleet as you're introducing a new fleet, taking into account all of the fundamental inputs to capability that we need, too. So training is certainly one of them and there is a training
40 impact that comes with drawing down a fleet. At what point do you cease training and at what point do you recommence training on the new platform and is there a changeover point? It comes down to resources at the end of the day in terms of being able to manage both at the same time and concurrently. That's a difficult thing to achieve.

45

MS McMURDO: So easier to have a relatively clean break, finishing with one and starting with the new?

5 LTCOL WATLING: There is generally always a part where they are transitioning and you will have both in the system. One will be drawing down and on its way out; one will be overlapping with its introduction, such that you don't have a loss in capability that you can provide to government out the other end. But there's certainly a decrease in the capability as you transition one out and bring a new platform in.

10 MS McMURDO: So the December 2024 date did allow for a more gentle transition than what ultimately happened, with it actually happening immediately after the accident in July last year?

15 LTCOL WATLING: Correct.

MS McMURDO: Okay, thank you. Thank you, FLTLT Rose.

20 FLTLT ROSE: Can I take it from your evidence that you, during the course of your career with Army, have overseen or witnessed a transition from one airframe or one platform to another?

LTCOL WATLING: Yes, I have.

25 FLTLT ROSE: Which platforms were they that were being withdrawn and then replaced with?

30 LTCOL WATLING: So I was involved in the last of the UH-1H Iroquois helicopter transitioning to MRH-90, in the first place. And I'm certainly aware of other transitions such as the Chinook D model to the Chinook F model.

FLTLT ROSE: When you say "UH", is that referring to the Black Hawk?

35 LTCOL WATLING: No, the UH-1H, designator for Iroquois helicopter.

FLTLT ROSE: Do you recall what happened to those physical aircraft that were withdrawn, in terms of where they went after they were taken out of Service?

40 LTCOL WATLING: For UH-1H, not in their entirety of all assets, but I know that a lot of them made their way to RSLs to gate guards, things like that, at different Defence bases. But I can't speak for every one of the platforms, sorry.

45

FLTLT ROSE: The other platform that you witnessed transition out of Service?

5 LTCOL WATLING: So Chinook D model to the newer Chinook F model.

FLTLT ROSE: Did those live aircraft have to be replaced entirely or they were just given a modification or an upgrade?

10 LTCOL WATLING: I don't know the details of that, sorry.

FLTLT ROSE: In your experience, from what you just spoke of, have you ever heard of aircraft that have been taken out of Service being dismantled and ready for burial?

15 LTCOL WATLING: No, I don't recall.

FLTLT ROSE: At paragraph 28 – sorry, I apologise, paragraph 27 of your statement, you refer to the on-the-job training that trainee technicians have to complete.

20 LTCOL WATLING: Yes.

FLTLT ROSE: And that they can complete some of this in their operational Squadron?

25 LTCOL WATLING: Yes, or their flying unit, operational unit, yes.

FLTLT ROSE: That's under the Unit Training Coordinator, or the UTC?

30 LTCOL WATLING: Yes.

FLTLT ROSE: When you talk about operational Squadrons, what options were there for technician trainees who graduate from RAMS in 2022 and 2023, which operational Squadrons could they go to?

35 LTCOL WATLING: So we're talking about all the different platforms?

FLTLT ROSE: From MRH-90.

40 LTCOL WATLING: Okay. Just for MRH-90, they only had two options, and that was to go to 5th Aviation Regiment or 6th Aviation Regiment. They were the only two operational Regiments operating MRH-90 in that tenure.

FLTLT ROSE: Was it the usual pattern for newly-graduation technicians to spend some time in the 5th Aviation Regiment before they were then posted to 6 Aviation Regiment?

5 LTCOL WATLING: Not necessarily. So when it comes to a course
graduating out of RAMS, in the lead up to that graduation occurring there
would be consultation between RAMS, the unit, the Career Management
Agency who are the ones who would initiate the posting and also
10 16th Aviation Brigade in terms of where the priority sat within the units.
So if there was a higher demand at 6th Aviation Regiment at a particular
time, and we had a course that was completing at that stage, then that's
where the intended postings for those individuals would be. But if, for the
subsequent course, there was an even prioritisation across Brigade in terms
of filling maintenance positions, then it might be a 50/50 split.

15 So it was a consultation effort between Brigade in terms of what the Service
need was for the particular individuals, whether they were Technician
Aircraft or whether they were Technician Avionics, at a particular point in
time to determine the priority of where they would go.

20 FLTLT ROSE: The Unit Training Coordinator, that's a role for a particular
person within each of those operational Squadrons?

25 LTCOL WATLING: Yes, that's essentially an out-posted position of
RAMS. So they're actually posted to RAMS, but for duty in each one of
the operating Regiment locations, and so their job is to continue the
instruction from an OJT management perspective for all of the trainees that
would be posted to those units.

30 FLTLT ROSE: So, effectively, they're an instructor who's posted out of
RAMS.

35 LTCOL WATLING: Sorry, I said the wrong word. They're not really an
instructor, they're there for management of the OJT. So a trainee would
complete specific tasks. They would bring the journal for the UTC to
review and once they're at the required point, they would submit a whole
bunch of package, including all of their evidence, back into RAMS to be
able to package up and then determine whether or not they've met all of
their units of competency.

40 FLTLT ROSE:

At the completion of their training –

45 you state at paragraph 28 –

they are awarded an ROA for specific B2 Avionics or B1.3 Mechanical MATR course.

5 LTCOL WATLING: Apologies for the acronyms. Yes, so an ROA is a
Record of Attainment, essentially a certificate to state that they have met
the required competencies set forward on the B2 Avionics course, or the
B1.3 Mechanical course. And the MATR was the Military Aircraft Type
10 Rating. So this is the MRH, in this case, specific type course that we would
give the trainees to be able to operate on.

FLTLT ROSE: Did they have to obtain some sort of licence?

15 LTCOL WATLING: Yes, they did.

FLTLT ROSE: Was that a separate process?

20 LTCOL WATLING: Yes. So the licencing part is through the DASR
Part 66 requirements. What RAMS is responsible for is delivering the
Military Aircraft Type Rating that is within the licence. So a licence will
have both scope and level. So the scope in this case will be MRH-90
Military Aircraft Type Rating, and the level would be the licence category
from a Category A3, Category B1.2, Category C, in order of progression.

25 FLTLT ROSE: So in this case, a trainee started at A, Category A, and they
move up to B or C or have I got that around the wrong way?

30 LTCOL WATLING: Normally, that would be how it works, and certainly
that's how it works in civil industry where an individual gets an A licence
as their first licence that they would get. And an A-class licence, whether
it's on helicopters or fixed wing is platform agnostic. When you then go to
do a Military Aircraft Type Rating, that's when you would progressively
hit the milestones to be able to get to a B-level licence. So it's a higher
level licence.

35 There are time restrictions, again, within the DASR Part 66 that mean that
you need to do a minimum of six months' experience within a Part 145
Maintenance Organisation to gain an A3-level licence. Similarly, there's a
40 minimum of two years' experience that you must achieve within a Part 145
Maintenance Organisation to get a B-class level of licence.

FLTLT ROSE: So that's external to Defence requirements – not external
to Defence – external to RAMS or the operational units. It's DASA making
those requirements the trainees have to meet.

45

LTCOL WATLING: Yes.

FLTLT ROSE: Well, not trainees – the technicians have to meet those obligations.

5

LTCOL WATLING: The Defence Aviation Safety Authority set the requirements and they're also the one who will issue licences to technicians.

FLTLT ROSE: At paragraph 33 you say:

10

The primary maintenance manual on the MRH-90 is the Interactive Electronic Technical Publication, or the IETP. This covers all maintenance procedures, inspections, functional testing, troubleshooting and post-maintenance actions required to be performed at the operational maintenance level by the Part 145 MO.

15

We talked about MTOs before – Maintenance Training Organisations – but who's the Part 145 Maintenance Organisation for Oakey?

20

LTCOL WATLING: So for Oakey, the Part 145 MO, Maintenance Organisation, is Airbus AP.

FLTLT ROSE: So Airbus AP, they dictate what's in the Interactive Electronic Technical Publication or does that come from the OEM?

25

LTCOL WATLING: Yes, the OEM is the responsible organisation for generation of the technical documentation, and in this case, the IETP.

30

FLTLT ROSE: That's the primary publication used by RAMS in training all trainees on MRH-90 as their Part 147 MTO?

LTCOL WATLING: It's also – so it is the primary maintenance publication for MRH-90 across the board in a Part 145, which are the only organisation executing maintenance. To try and be as realistic as possible, RAMS, as a Part 147 under Air Force Training Group, operate the exact same maintenance procedures. So we use the same version of the IETP as is used within all of the various Part 145s. So there's a Part 145 in Sydney operating MRH-90, just as there's a Part 145 in Oakey under Airbus Australia Pacific.

35

40

FLTLT ROSE: Do all of those units use the IETP?

LTCOL WATLING: That's correct.

45

FLTLT ROSE: You state further on in paragraph 33:

5 *Observations from transitioning technicians from Black Hawk or
Chinook certainly describe the IETP as complex, but we also
receive similar feedback from trainees transitioning from Tiger or
Taipan to Black Hawk or Chinook as there are differences to
European versus American publications.*

10 What do you mean by that, “differences between European and American
publications”?

15 LTCOL WATLING: So, firstly, there’s different standards that they’re
created from. So the IETP uses a S1000D standard for how to generate and
some of the things I mentioned before about different chapters, ATA codes
that we deliver maintenance to, that maps very well across to DASR Part 66
requirements. For some of the other aircraft the ADF operate, their
maintenance publications are not in S1000D format and so it is a little bit
trickier to do the mapping for OJT across to the relevant chapters within the
maintenance manual.

20 FLTLT ROSE: Just so I can visualise what this IETP looks like, is this an
electronic document that technicians will have an iPad next to them and
they can refer to as they’re doing their training, or is it a hard copy, so thick
publication?

25 LTCOL WATLING: No, it’s not a hard copy. If it was hard copy, it would
be many thousands of pages long and probably difficult to carry around. So
for the most part within the operational units and certainly within RAMS,
we use a laptop, a TOUGHBOOK, so a hardened laptop that is able to take
30 the rigours that Army throw at it in terms of being able to use it. But every
other terminal within Defence or on our Defence Protected Network can
view the IETPs for all number of different platforms that are operated,
including MRH-90.

35 FLTLT ROSE: Then you state in paragraph 33, near the bottom:

*Independent Maintenance Inspection (IMI) requirements were for
some time in a separate publication.*

40 Then you say what that is:

*And had to be cross-referenced with the IETP, which added to the
complexity.*

Is that a relic of the past? Are you talking about something in the past tense then?

5 LTCOL WATLING: Yes, I am.

FLTLT ROSE: When did that change?

10 LTCOL WATLING: Again, I don't know off the top of my head, but it's in the last sort of five years or so.

FLTLT ROSE: I know that you haven't been in a Maintenance Organisation since 2016, but is it your understanding that the publications have been simplified over time?

15 LTCOL WATLING: They've definitely been improved over time. There's been lots of projects associated with making the maintenance publications more readable, more interactive, reducing any errors in them, a number of different improvements across the board. And this was one of them, where there is a separate Australian Air Publication, the AAP that I referred to, 20 that housed all of the Independent Maintenance Inspections for MRH-90. So it was a separate standalone, either pdf electronic copy or hard copy, that maintainers had to cross-reference with the IETP every time they performed maintenance.

25 FLTLT ROSE: In your experience, did this complexity of the training or maintenance publications slow down availability or serviceability of the aircraft?

30 LTCOL WATLING: Sorry, can you rephrase that question?

FLTLT ROSE: Did the complexity in the publications for the maintenance publications for MRH-90 have any effect on the technicians' ability to have the aircraft serviceable for capability purposes?

35 LTCOL WATLING: I would say yes. Obviously any bit of complexity that you add to the system has the potential to delay the final outcomes of maintenance and therefore availability of the platforms.

40 FLTLT ROSE: Do you train your trainees on human factors and how they contribute to maintenance errors?

LTCOL WATLING: Yes, we do.

45 FLTLT ROSE: Can you give an example of some of those human factors?

LTCOL WATLING: So there's probably two that I can think of, certainly within our annual Force Preservation Awareness training. This includes NTS, Non-Technical Skills training, and a significant portion of that is around human factors and how that relates to maintenance error side of it.
5 Then within each of the specific courses we talk about the human factors relevant to either that particular platform; or, if it's on the Subject 4 promotion courses, in terms of the responsibilities of the maintainers at the various levels that they go through.

10 FLTLT ROSE: Can you recall what some of the general human factors are that could attribute to maintenance errors that's not platform-specific, as an example?

LTCOL WATLING: Not off the top of my head, sorry.

15 FLTLT ROSE: Do you recall any that are specific to the MRH-90?

LTCOL WATLING: No.

20 FLTLT ROSE: Would fatigue be one of the human factors?

LTCOL WATLING: Yes.

25 FLTLT ROSE: What's your understanding of how fatigue can relate to maintenance errors?

LTCOL WATLING: So certainly depending on how attentive the individual is can have an impact on how well they perform a maintenance activity. And certainly if there are stressors at home that are keeping them up awake at night and then they come in to work, then we expect that there are plans and mitigations in place, checks and balances for those individuals, for the people that supervise them, for how many hours that they can perform on maintenance, all the way up to such things like crew rest periods and what type of tasks they perform.
30

35 So if we know that someone is going to be working a night shift, for instance, and they've just come from a day shift, you need some sort of transition plan associated with resetting your circadian rhythms from a fatigue point of view. So giving them a high criticality task on their first night of a night shift would be a no-no, because you're potentially setting them up for failure from that point of view.
40

FLTLT ROSE: Is that set out in a Defence publication, what those human factors are, or in fact what the work-rest requirements are?
45

5 LTCOL WATLING: Yes, there's definitely procedures that each of the organisations – it's built into their Maintenance Organisation Expositions at the Part 145 level. And it's also built into the Continuing Airworthiness Management Exposition at the DASR Part M level. It's across the entirety of the organisation. It doesn't matter whether it's a maintainer, an engineer, an operator, a refueller, there are procedures that prescribe, specific to trade, what are those types of requirements from human factors point of view.

10 FLTLT ROSE: At paragraph 36 you refer to the Computer-Aided Maintenance Management, CAMM2?

LTCOL WATLING: Yes.

15 FLTLT ROSE: It's an authorised tool across Army Aviation for the recording of all maintenance actions, including MRH-90.

LTCOL WATLING: Yes, that's correct.

20 FLTLT ROSE: Is this a computer program run by Defence?

LTCOL WATLING: Yes, that's correct.

FLTLT ROSE: Who has access to it outside of Defence personnel?

25 LTCOL WATLING: So contractors working in a Maintenance Organisation will be given a CAMM2 logon as well.

FLTLT ROSE: What kind of information is recorded in that CAMM2?

30 LTCOL WATLING: CAMM2 records all maintenance history of aircraft, components removed from aircraft. It records flight hours associated with the platforms. It's a quite extensive database that logs all the maintenance and operational history of all Aviation spare parts, all the way up to aircraft and their operations.

35 FLTLT ROSE: Does it record defects?

LTCOL WATLING: Yes, it does record defects.

40 FLTLT ROSE: Does it record incidents?

LTCOL WATLING: It will record initiating conditions for an incident in terms of an unserviceability or an ASR, which is an aircraft safety occurrence report.

45

FLTLT ROSE: Are those minor incidents? In terms of is there another system there where you record other types of incidents that may have considered major incidents?

5 LTCOL WATLING: So there's certainly a number of tools associated with recording that sort of thing. So another tool is AVIART, which records all risk-based decisions associated with risk applications for particular missions or pieces of equipment on an aircraft, anything like that.

10 FLTLT ROSE: What do you mean by "risk-based decisions"? Is that decisions that technicians are making based on risk, or is that at higher level?

15 LTCOL WATLING: No, they don't have the authority to make risk-based decisions for a technical piece of outcome.

FLTLT ROSE: Who does?

20 LTCOL WATLING: Not maintenance technicians. So when we're talking about a risk-based decision to proceed on a particular flight, for instance, we have certain levels within Defence that are quite high for Army Aviation, in particular, about who can sign off on what level of risk it is.

25 FLTLT ROSE: You refer to the Ground Logistics Information Management System, or GLIMS, at paragraph 36.

LTCOL WATLING: Yes.

30 FLTLT ROSE: And you say:

It's only used on MRH-90 as an aid in maintenance taking a direct download from the aircraft to GLIMS to enable fault diagnostics and HUMS data, but is not authorised for recording of maintenance actions.

35 What's "HUMS data"?

40 LTCOL WATLING: Health and Usage Monitoring Systems. So they're things like monitoring vibration signals on particular components within the aircraft, those sorts of things.

FLTLT ROSE: How often, or at what stage is that information directly downloaded from the aircraft to the GLIMS?

LTCOL WATLING: You'd have to refer to Part 145. My memory's a little bit vague in terms of how frequent because it depends on the size of the data device that you're downloading from that sits in the aircraft, and there are different sizes. So it could be anywhere from every day to once a week.

5

FLTLT ROSE: Is GLIMS some sort of portable device which you plug into whichever system you want to download from in the aircraft and then you can download that to a computer afterwards?

10

LTCOL WATLING: So the Ground Logistic Information Management System is an OEM proprietary product, so it has its own standalone computer system that it runs with. The interaction with the aircraft is through a Data Insertion Device. So that is essentially a portable memory card that sits within the aircraft that you plug into the ground station the readout of the GLIMS, and then that will provide you the information and the download information from the aircraft.

15

FLTLT ROSE: At paragraph 41 – just as we are on the computer systems at the moment – you state that:

20

Trainees, once they've completed the MRH-90 courses, their qualifications are registered in PMKeyS.

LTCOL WATLING: Yes, that's correct.

25

FLTLT ROSE: And then you refer to:

Patriot Excalibur or PEX, which is the program used across Army Aviation to register authorisations, including any currency requirements and mandatory information or training.

30

LTCOL WATLING: Yes.

FLTLT ROSE: What are the currency requirements for technicians?

35

LTCOL WATLING: You'd have to talk to the Part 145 Maintenance Organisation on that, sorry.

FLTLT ROSE: So those currency requirements only come into place after a trainee has graduated from RAMS and is actually in an operational unit. Is that correct?

40

LTCOL WATLING: Yes, once those qualifications have been loaded through PMKeyS, input into PEX, it's then the system to monitor those qualifications throughout time and any refresher that's required to

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reauthorise those individuals, as well as passing on any mandatory information. So things like a special technical instruction or a significant modification would come out as a notification to the maintainer that they need to read that documentation before they go and do aircraft maintenance.

5

FLTLT ROSE: Those are my questions, Ms McMurdo.

MS McMURDO: Thank you, FLTLT Rose. Yes, applications to cross-examine?

10

UNIDENTIFIED SPEAKER: (Indistinct), ma'am.

MS McMURDO: No applications to cross-examine.

15

AVM HARLAND: I just had just a couple of short questions. The PIRR process, as it relates to the modification of documents, what was your experience with that in terms of timeliness, effectiveness and also the volume of changes that you saw when you were at RAMS?

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LTCOL WATLING: So both in terms of PIRRs, Publication Improvement Reply Request, and also EARs, the Engineering Advice Request, were quite limited in terms of the number from RAMS. And that was primarily based on the fact that we have a quite steady training continuum and a quite steady OJT task list, as I mentioned before, that doesn't generally change course-to-course, year-to-year. So it means that the instructors are quite familiar with those particular maintenance tasks within the publication. They do them quite often and frequently from course-to-course. So if there was any issues with those particular procedures, they will have been addressed throughout the years. So there haven't been very many RAMS-initiated PIRRs or EARs requesting changes for publications.

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30

AVM HARLAND: Great. One final one: did you have any relationship with the RNZAF Maintenance Organisation for their NH90s?

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LTCOL WATLING: Not me specifically, no.

AVM HARLAND: Thank you.

MS McMURDO: Anything arising, FLTLT Rose? No.

40

Thank you very much, LTCOL Watling, you're free to go.

LTCOL WATLING: Thank you, ma'am.

45

<WITNESS WITHDREW

5 MS McMURDO: Could you just collect the exhibits. And then the next witness, FLTLT Rose?

FLTLT ROSE: Yes, I call MAJ Harry More.

10 **<MAJ HARRY MARLBOROUGH MORE, Affirmed**

<EXAMINATION-IN-CHIEF BY FLTLT ROSE

15 MS McMURDO: Please be seated. Yes, FLTLT Rose.

20 FLTLT ROSE: You can remove your headdress. I think there's also a glass of water and you upturn a glass. I wouldn't take that one; I think that's the previous witness's. If you can help yourself to that.

MAJ MORE: Thank you.

25 FLTLT ROSE: Could you please state your full name, rank and unit.

MAJ MORE: MAJ Harry Marlborough More, 5th Aviation Regiment.

30 FLTLT ROSE: Can you please confirm that you were sent the following documents by the Inquiry prior to today: the section 23 Notice requiring your appearance to give evidence?

MAJ MORE: I was.

35 FLTLT ROSE: Extract of the Inquiry's Directions?

MAJ MORE: I was.

FLTLT ROSE: Copy of COL Streit's appointment as an Assistant IGADF?

40 MAJ MORE: I was.

FLTLT ROSE: Frequently Asked Questions Guide for Witnesses in IGADF Inquiries?

45 MAJ MORE: I was.

FLTLT ROSE: And a Privacy Notice for witnesses?

5 MAJ MORE: Yes.

FLTLT ROSE: I'm going to hand you a document. Did you prepare a statement in preparation for today?

10 MAJ MORE: Yes.

FLTLT ROSE: Could you please look through that document and confirm if that is your statement dated 22 April 2024?

15 MAJ MORE: Yes, this is it.

FLTLT ROSE: Is that 22 pages and 50 paragraphs?

MAJ MORE: Yes.

20 FLTLT ROSE: Is that your signature on the back page?

MAJ MORE: Yes.

25 FLTLT ROSE: Are there any amendments you wish to make to your statement?

MAJ MORE: No.

30 FLTLT ROSE: I tender that statement.

MS McMURDO: Exhibit 17.

#EXHIBIT 17 - STATEMENT OF MAJ MORE

35

FLTLT ROSE: Major, I'd like to ask you some questions about your background and qualifications. You were appointed as an officer in the Australian Army in 2012?

40 MAJ MORE: Yes.

FLTLT ROSE: And you entered the Electrical and Mechanical Engineering Aviation Officer stream?

45

MAJ MORE: Yes.

5 FLTLT ROSE: I take it – this is paragraph 4 – that those officers, such as yourself, are responsible for the provision of specialist engineering, maintenance and logistics support to the Army Aviation capability?

MAJ MORE: Yes.

10 FLTLT ROSE: You have a Bachelor of Engineering – or Mechanical Engineering?

MAJ MORE: Yes, from University of Tasmania.

15 FLTLT ROSE: You're a registered Chartered Professional Engineer in the area of Aerospace Engineering and the area of Leadership and Management.

MAJ MORE: Yes.

20 FLTLT ROSE: You've also provided a list of some other courses you've undertaken, one of which is, at paragraph 5(c), the MRH-90 System Managers Course, which was a four-week course teaching an overview of the MRH-90 aircraft at a system level.

25 MAJ MORE: Yes.

FLTLT ROSE: When was that?

30 MAJ MORE: I believe that was either 2012 or 2013. I think 2013, but can't be sure.

FLTLT ROSE: Which organisation offered that training?

35 MAJ MORE: I conducted it at RAMS, Rotary-wing Aircraft Maintenance School.

FLTLT ROSE: That's in Oakey?

40 MAJ MORE: In Oakey.

45 FLTLT ROSE: You've also listed some of the postings you've had, or all your postings in Army. I'll just mention a few of them. Paragraph 6(c): from January 2015 to December 2016 you were the MRH-90 aircraft repair Troop Commander at 5th Aviation Regiment in Townsville.

MAJ MORE: Yes.

FLTLT ROSE: Is that your first specific MRH-90 role?

5 MAJ MORE: Yes, it was.

FLTLT ROSE: Is that because you'd only converted to MRH-90 at that point?

10 MAJ MORE: So I had completed that System Managers Course training earlier, as I just stated. When I first got to the unit, I was there with a number of other – we call ourselves – we're called Learning Engineering Officers – so junior EMOs there to just learn and understand the capability and the trade and the profession. We were assigned to different aircraft to get the different levels of experience. So before taking that role, I'd, yes,
15 just been working on the Black Hawk aircraft in one of our Squadrons. That was the last year that we had Black Hawk in the unit before that Squadron was taken over by MRH-90.

20 FLTLT ROSE: Then in 2017 to 2019 you were a Senior Instructor on the ARH Tiger at RAMS.

MAJ MORE: Yes.

25 FLTLT ROSE: Did you ever instruct for the MRH-90?

MAJ MORE: No.

30 FLTLT ROSE: And from 2019 to 2020 you were the MRH-90 Technical Assurance Engineer in the Army Aviation System Program Office.

MAJ MORE: Yes.

FLTLT ROSE: Where is that office located?

35

MAJ MORE: That's in Brisbane at Pinkenba, near the airport.

FLTLT ROSE: Then from 2020 to 2023, you were the MRH-90 Technical Liaison Officer for ASPO in France.

40

MAJ MORE: Yes.

FLTLT ROSE: Whereabouts in France is that?

MAJ MORE: So the office was in Marignane, which is the airport just outside Marseilles. Otherwise, we were also based in Aix-en-Provence.

5
FLTLT ROSE: That's Marseille?

MAJ MORE: Yes, the Marseille region.

FLTLT ROSE: So in that role, you were there for about two years. That wasn't an engineering role, that was a liaison role?

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MAJ MORE: Yes, technically a liaison role, but yes.

FLTLT ROSE: That brings us to your current posting: Officer Commanding Logistic Support Squadron and Responsible Manager for MRH-90 in 5 Aviation?

15
MAJ MORE: Yes.

FLTLT ROSE: And you posted there in January 2023?

20
MAJ MORE: Yes, correct.

FLTLT ROSE: So when you say that you were the Responsible Manager for MRH-90, when did that responsibility end, or has it ended?

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MAJ MORE: For all intents and purposes, that ended last year in 2023. I'm not sure if it's been formally revoked, as stated in our high level policies. But, yes, for all intents and purposes, that ended when the last aircraft left the unit in October last year.

30
FLTLT ROSE: What were your responsibilities when there were MRH-90 aircraft in 5 Aviation? As the Responsible Manager, what did that entail?

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MAJ MORE: I was responsible for the safe and effective maintenance of MRH-90s at 5 Aviation Regiment. So that included ensuring that: we were conducting maintenance in accordance with the authorised procedures; there were members that I authorised to conduct maintenance – me and my delegates were authorised to conduct maintenance – were appropriately qualified; had the appropriate licence; they were using the correct tooling; operating in the correct suitable facilities; that the quality management system was effective; and that any issues that it was identifying were being acted on and corrected.

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45
I also had responsibilities as a delegate of the Continuing Airworthiness Manager. They included things like the fleet planning within the Regiment;

ensuring correct weight and balance of the aircraft; ensuring any defects that can't be rectified are deferred or referred back to the Continuing Airworthiness Management Support Organisation for consideration. And, yes, that's the majority of my responsibilities.

5

FLTLT ROSE: So that's quite a technical role, I imagine, and took up quite a significant amount of your time.

MAJ MORE: It did, yes.

10

FLTLT ROSE: So when you also had the Officer Commanding role, was that different to being the Responsible Manager?

MAJ MORE: It was, yes. I was also the Officer Commanding of the Logistics Support Squadron. So it was a Squadron responsible for the ground logistics support for the unit, including things like Aviation refuelling, our transport effects, the repair of our ground vehicles and also our supply system.

15

FLTLT ROSE: And you still continue in that Officer Commanding role, and all that it entails in respect of other platforms, now?

MAJ MORE: Yes, I still do that role today.

FLTLT ROSE: Have you become the Responsible Manager for any other platform?

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MAJ MORE: No, I haven't.

FLTLT ROSE: Have you ever been posted to 6 Aviation Regiment?

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MAJ MORE: No.

FLTLT ROSE: You refer at paragraph 8 subparagraph (a) to the MRH-90 Interactive Electronic Technical Publication, the IETP, which is a manual that technicians for MRH-90 use for maintenance. Is that correct?

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MAJ MORE: Yes, it is.

FLTLT ROSE: So that covers the majority of MRH-90 maintenance, including the maintenance of the helmet-mounted sight display?

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MAJ MORE: Yes.

FLTLT ROSE: Does that also include maintenance of the TopOwl night-vision device?

5 MAJ MORE: So, yes, when I say helmet-mounted sight display, that's what I'm referring to. So I'm not across the detail of all the maintenance instructions inside that manual, but I know there is a section there for our aircraft life support is to – are to refer to for at least a number of inspections of that equipment.

10 FLTLT ROSE: Do you know how deep – or what kind of maintenance the technicians can do to the HMSD?

15 MAJ MORE: No, I'm not aware of the exact level of maintenance that they're authorised to conduct in the unit. Our Technical Management Plan we built into our Maintenance Management System, and details the level of repair, or where the level of overhaul and repair is conducted. So that detail is what can be done inside the unit from a repair point of view. It may just be inspections, or it needs to be sent back for repair and overhaul, through Airbus Asia Pacific or one of their vendors.

20 FLTLT ROSE: MAJ More, do you mind if I ask if you speak a little bit slower, so I can catch every word you're saying.

25 MAJ MORE: Sorry.

FLTLT ROSE: Thank you. Please pour yourself some water. So when you're talking about the maintenance that the Logistic Support Squadron performs in 5 Aviation Regiment, that doesn't include deeper maintenance?

30 MAJ MORE: So, no, the main Logistic Support Squadron completes non-aircraft maintenance; our ground equipment, such as our vehicles, power generator and things like that.

35 FLTLT ROSE: At paragraph 9 you say that:

To amend a process relating to the maintenance of MRH-90, a form is raised to the publication sponsor.

40 Who are the publication sponsors, say, for the IETP?

MAJ MORE: So the IETP would raise a Publication Improvement Response Reply form to Airbus Asia Pacific in their role as a Continuing Airworthiness Management Support Organisation.

FLTLT ROSE: And there are other sorts of publications that technicians rely on?

5 MAJ MORE: Yes. So I referred in my statement to a number of Australian Air publications. I guess the main specific ones, it's the sponsor – I would have to refer to that publication to confirm the sponsor, but we'd be sending them to the CAMSO, being AAP, for any of the maintenance-related publications.

10 FLTLT ROSE: Can you just say what CAMSO is in full?

MAJ MORE: Continuing Airworthiness Management Services Organisation actually, I believe. I may have said Support Organisation. I think it's Services Organisation.

15 FLTLT ROSE: Who is the CAMSO in Townsville?

MAJ MORE: There is no CAMSO in Townsville. So we'd send that to the CAMSO – CAMSO being Airbus Asia Pacific – based out of the Pinkenba AAP offices.

FLTLT ROSE: In Brisbane?

25 MAJ MORE: In Brisbane. We did have field service reps, AAP uniform field Service reps, in Townsville that we used as, I guess, a conduit to the CAM Services Organisation, So when I say - - -

FLTLT ROSE: What's an AAP uniform? Is that someone from Airbus that wears an Airbus uniform?

30 MAJ MORE: Sorry, yes, Airbus uniform. Sorry, yes. Sorry, Airbus employees in Townsville.

FLTLT ROSE: At paragraph 9(b) you said:

35 *The only notable difficulties I was aware of in relation to amending maintenance processes or the content of manuals was the implementation of recommended updates to the MRH-90 IETP.*

40 Who was making those recommended updates? Was that from the OEM or was it the other way, from Army office?

MAJ MORE: Yes. So what I was speaking about there was when we were raising one of those Publication Improvement Report and Reply forms, if it had been accepted to be changed, we'd have to wait for the next release of

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the IETP to see that change; it wouldn't be an instantaneous thing. I was aware that some of those PIRRs were sent by the CAMSO to the OEM NHI in Europe, for a change to the NHI IETP, for consideration for them to make that change.

5

It might be us reporting that there was what we call, like, a dead link, one of the hyperlinks not taking you to the correct DMC, the data module, with the next maintenance procedure. So mainly from my previous role – that there was a backlog in NHI updating those. But through 2023, when I was the Responsible Manager, I didn't have knowledge of what that backlog looked like at that time.

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FLTLT ROSE: Just to unpack some of those acronyms. NHI, NATO Helicopters Industries?

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MAJ MORE: Yes.

FLTLT ROSE: OEM?

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MAJ MORE: The Original Equipment Manufacturer.

AVM HARLAND: How would you rate the performance of the PIRR process?

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MAJ MORE: So raising the form was fairly simple, and the submission to the CAMSO, the Continuing Airworthiness Management Services Organisation, was fairly simple. And the change was to be – so I think I make in my assessment as well – I'm referring to my knowledge from my previous role, when I was the Responsible Manager, I'm not actually aware of how many PIRRs were raised. I'm aware of at least a couple that were raised towards the end.

30

So I'm not aware of how that process was seen through because of the subsequent grounding, so I don't think I can – I don't think I'm prepared to make an overall comment on how effective – sorry, what was the question? Was it how easy?

35

AVM HARLAND: Yes, was the performance of the PIRR system.

40

MAJ MORE: The performance.

AVM HARLAND: Was it effective? Was it timely? Was the volume manageable?

MAJ MORE: Yes, hard for me to say for 2023. We weren't raising too many PIRRs. And the ones we did raise, I didn't see the outcome seen through. So I can't make a comment to whether that was about to be or being actioned immediately, or that had been added to some backlog.

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AVM HARLAND: Okay, thank you.

FLTLT ROSE: You continue in that paragraph 9(b), you state:

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I was aware through previous roles that there were, at times, significant backlogs –

as you just said. With these backlogs, did they create any safety concerns?

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MAJ MORE: Not that I'm aware of. The backlogs that I'm aware of were in reference to, I guess, the efficiency of using the publication. Without those corrections, it was still possible to find correct maintenance – data module to conduct the maintenance in accordance with. Yes, so I have no concerns that that led to a maintainer not conducting maintenance correctly.

20

FLTLT ROSE: Did it, in your experience, affect the serviceability of aircraft for use at 5 Aviation Regiment?

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MAJ MORE: It's hard for me to make an assessment for 2023. Yes, my assessment would be it wouldn't have directly been the cause for an unserviceable, unavailable aircraft. It may have. Obviously, the things I'm talking about talk to the efficiency and the effectiveness of – the efficiency of conducting maintenance. So I suppose it may have slowed down our ability to conduct maintenance.

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FLTLT ROSE: In 2023, can you describe how many MRH-90s there were for use at 5 Aviation Regiment?

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MAJ MORE: So when I arrived in January 2023 we had 10 aircraft sitting at 5 Avn that I was responsible for. One of those aircrafts, though, had been earmarked to be moved across to the MRH storage and transition facility, as the plan was already to draw down the fleet at 5 Avn at that time. So we were effectively operating from a fleet of nine aircraft.

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And then very early in the year the decision was made that we'd be ceasing flying in August and were to draw down to five aircraft, and see out our operations at 5 Avn up to August with five aircraft.

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FLTLT ROSE: So when did you reduce down to five aircraft?

MAJ MORE: It was about May that we transferred those other five aircraft to the MSTF.

5 FLTLT ROSE: Where is the storage facility?

MAJ MORE: That's in Townsville, so across the runway from 5 Aviation Regiment.

10 FLTLT ROSE: So five aircraft went to the storage facility by May 2023?

MAJ MORE: Yes. I'd have to refer to my statement for dates. It was about May.

15 FLTLT ROSE: Then the remaining five MRH-90s, when did they transition to the storage facility?

MAJ MORE: I believe it was October that the final aircraft was moved across. So we ceased flying when the accident occurred. That was only a few weeks before our original planned end date of flying in Townsville. 20 The priority after that was to assist 6 Aviation Regiment with their aircraft at Proserpine. It took to about October for us to put our aircraft in the required state, to move them across to the MRH storage and transition facility.

25 FLTLT ROSE: What did the technicians have to do to the MRH-90 to prepare it to go to the storage facility?

MAJ MORE: So the aircraft were required to be – there was an agreed state that we would hand the aircraft over to Airbus who were running, at that 30 date, the MRH storage and transition facility. I can't recall the exact agreed state for those aircraft at that time. That's because – so some of the aircraft we were agreeing to hand over in what we call a "ground runnable state", and others we were conducting a number of preservation servicing, so beginning to prepare the aircraft for long-term or medium-term storage.

35 FLTLT ROSE: This storage facility in Townsville, that's where those 10 MRH-90s are now?

40 MAJ MORE: I believe so, yes.

FLTLT ROSE: The remainder of the fleet that's been grounded, are all of those aircraft in that storage facility in Townsville as well?

45 MAJ MORE: I'm not sure. Sorry, can you repeat that question?

FLTLT ROSE: The remainder of the aircraft, MRH-90s that were being used by 6 Aviation Regiment at Oakey, where did their aircraft go once the fleet was grounded?

5 MAJ MORE: I'm not sure. I know the MRH storage and transition facility was stood up to be able to accept up to the entire fleet, but I'm not sure if those aircraft – if they were all being transferred or not.

FLTLT ROSE: So I take it you've never seen inside the storage facility?

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MAJ MORE: I have, but not for about a year, I'd say. No, sorry, I can't recall the last time I was there. Not since we transitioned our aircraft across, anyway.

15 FLTLT ROSE: When you did visit the storage facility, just roughly how many MRH-90s were there?

20 MAJ MORE: There was about three aircraft at the start of 2023, towards the start of 2023. Our 10 aircraft, I know the remainder of the aircraft that were at Proserpine that weren't involved in the accident were moved up after the accident to the MSTF, and there was a few others that had flown in from 6 Avn and AAvtC. So between 20 or 30.

25 FLTLT ROSE: Those you mentioned before, the aircraft that weren't involved in the incident at Proserpine, were moved from Proserpine to the storage facility in Townsville.

MAJ MORE: Yes.

30 FLTLT ROSE: Were you involved in that exercise of moving them to the Townsville facility?

MAJ MORE: Not directly. Some of my team were.

35 FLTLT ROSE: Were they flown up to Townsville for that purpose?

MAJ MORE: No, they were loaded on the back of trucks and driven up.

40 FLTLT ROSE: The storage facility in Townsville, is that operated and run by Airbus?

MAJ MORE: I don't believe it is anymore. I believe that contract ended at the end of last year.

45 FLTLT ROSE: And you don't know who's got the contract for that now?

5 MAJ MORE: The responsibility of it is with the Army Aviation System Program Office. I know there's a – I understand there's a – I think it's a Reservist Army Captain has some responsibility. I don't know how big his team is, or if they're using other contract support at this stage.

10 FLTLT ROSE: Turning back to your statement at paragraph 10 subparagraph (c), you refer to at 5 Aviation Regiment you had an AAP field service representative, or an FSR, that would be used as direct liaison for the management of EARs. EARs, can you remind me what that stands for?

15 MAJ MORE: So it's Engineering Advice Requests. So it's our formal method of communicating a technical query to the Continuing Airworthiness Management Services Organisation.

FLTLT ROSE: Then up until June 2023, you had an NHI technical support point of contact at 5 Aviation Regiment.

20 MAJ MORE: Yes.

FLTLT ROSE: And that was also the direct liaison for the management of EAR requests that needed technical input from - - -

25 MAJ MORE: Yes.

FLTLT ROSE: And they were both on site?

30 MAJ MORE: Yes, so we – yes, they were. We had multiple FSRs. Yes, they were on site.

FLTLT ROSE: Were they under your command, in your Squadron?

35 MAJ MORE: So, no. No, they weren't. As in they weren't commanded, I guess is my answer. So they were – they had a role. Their only purpose at 5th Aviation Regiment was the support of the MRH-90s. That support was to me and my team, but I didn't command them.

FLTLT ROSE: Then you carry on that:

40 *There is an inefficiency in the process through the TSPO –*

which is the point of contact for NHI.

45 *We would sometimes see the NHI response to AAP or Airbus, however and then it would go to 5 Aviation Regiment.*

Is that correct? So it would go from NHI, to Airbus, to you.

5 MAJ MORE: Yes, I made that comment in relation to saying the overall –
I believe the engineering advice and request process was an effective
system, and I fully – the inefficiency I talk about, I fully understand that
was – so the majority I can show – can quantify, but the response – sorry,
the responsibility for providing an Engineering Advice Response to us was
the CAMSO in Australia, staffed by Airbus Asia Pacific.

10 I am aware that at times they would go back to the industry in Europe – so
the Original Equipment Manufacturer – NHI and their partner companies,
for advice. Having a TSPO at the 5th Aviation Regiment allowed us to be
– actually, so having him there was an improvement to the efficiency of the
15 process because he was able to contextualise our problems directly to the
team in Europe, and it also allowed us to get responses or updates on
responses from Europe direct through him. However, the actual formal
responses, when they were sent from Europe, we couldn't use those
responses as authorised – what we call instructions for continuing
20 airworthiness, so authorised instructions to conduct maintenance, until they
had been analysed by the CAMSO, and the CAMSO had then passed that
response on to us.

25 FLTLT ROSE: Moving away from the EARs for now, what about Aviation
safety events, how were they communicated and then acted on?

30 MAJ MORE: So Aviation safety events were reported through our
Aviation safety reporting tool, a software program called Sentinel. So any
event identified would be raised in that system and appropriately
investigated. If there was a perceived risk level of medium or higher, then
the safety event was classified as a reportable occurrence, and there was
additional immediate reporting obligations.

35 So in those instances, outside of the – we'd report it in Sentinel, but outside
of that system we would also be sending an email or phoning the Brigade
Aviation Maintenance Officer and the Continuing Management
Organisation Desk Officers, and in the email notifying the other
stakeholders as well.

40 FLTLT ROSE: I understand. At paragraph 12 you say:

*I do not recall any major governance challenges in 2023 that I
would assess as impacting availability of MRH-90 aircraft.*

45 MAJ MORE: Yes.

FLTLT ROSE: This is in the context, though, of you significantly reducing your fleet from 10, to five, to none.

5 MAJ MORE: Yes.

FLTLT ROSE: So when you say there's no major governance challenges, was it a challenge in terms of significantly reducing the fleet, in that other challenges - - -

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MAJ MORE: Yes. No, there was definitely a number of challenges. I guess my answer – thinking about the words “impacting availability of the aircraft”. But, no, there was a number of challenges throughout the year that we worked through, and the withdrawal – managing the drawdown of the fleet, yes, was one of those challenges. Yes.

15

FLTLT ROSE: Could the witness be shown Exhibit 15?

MS McMURDO: Yes. That's Mr Trapp's statement.

20

MAJ MORE: Thank you.

FLTLT ROSE: Can you turn to paragraph 129 of the statement. This is a statement of Barry Trapp from Airbus. Have you got paragraph 129?

25

MAJ MORE: Yes, it's in front of me now.

FLTLT ROSE: It says:

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MRH-90 at 5 Aviation Regiment achieved approximately 83 per cent of its planned hours during the 2022/23 reporting period, with approximately 40 per cent serviceability.”

MAJ MORE: Yes, I see it.

35

FLTLT ROSE: Can you talk to the 2022/23 reporting period, or is that outside of your scope?

MAJ MORE: I can talk to half of that reporting period, but I'm not aware of the raw figures. It wasn't a measurement that I monitored as, you know, a gross number throughout the reporting period. It wasn't a target of mine, to hit a certain availability for that reporting period for that.

40

FLTLT ROSE: Did you have another way of measuring serviceability?

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5 MAJ MORE: I guess, no, we weren't – so we were focussed on trying to have as high a level of serviceability as possible. I guess we – instead of raw serviceability, we were focussed on mission success, as in, say, actually having – if there's a mission that needed to be flown, having an aircraft that could fly that.

10 As we were drawing down, though, that wasn't, like, a metric as such that was focussed on. It wasn't – we were just trying to do the best, but we weren't under, I guess, any pressure to achieve our ROE. What really mattered was the high risk for the – this is the start of the year, and having our aircraft available to support domestic taskings, and then elsewhere. So that's our commitment to our preparedness directive. But I can't talk about the specifics of what that is.

15 FLTLT ROSE: I understand. The MRH-90s, were they involved in any deployments in 2023?

MAJ MORE: Domestic, yes.

20 FLTLT ROSE: Overseas or domestic.

MAJ MORE: Domestic, yes. They were deployed on Operation FLOOD ASSIST in Western Australia at the start of 2023.

25 FLTLT ROSE: After that, at the beginning of 2023, were the MRH-90s involved in any other regular missions in 2023 as it was reducing the fleet numbers?

30 MAJ MORE: Yes, there was regular training and a key exercise in the middle of the year.

FLTLT ROSE: In terms of currencies for technicians, were there requirements in 2023, even though the fleet was reducing, for maintainers and technicians to maintain their currencies at a certain level?

35 MAJ MORE: No, maintainer – so maintainer currency is a thing, but it's – I'm not across the exact detail, but it's something like having worked in a Maintenance Organisation the last six months makes you current. So it's more of a consideration for someone new coming into the organisation that's been outside of Defence for a while, and we get them some experience before authorising them, but there's no – if the maintenance throughput is decreasing and there's less things for a maintainer to do, that does not drop their currency.

40

FLTLT ROSE: So there's not a certain amount of hours like there are for aircrew that they have to maintain?

5 MAJ MORE: No, there's not, that I'm aware of.

FLTLT ROSE: You were referring, then, before to certain tasks within a six-month period. Does that include on-the-job training for people who are recently graduated from RAMS or - - -

10 MAJ MORE: I can't say off the top of my head; I'd have to check the policy.

FLTLT ROSE: Is it the case that for technicians coming from RAMS posting to 5 Aviation Regiment, that they did have to complete, to your knowledge, some on-the-job training?
15

MAJ MORE: Yes, they did.

FLTLT ROSE: And that was done in the operational unit, your Squadron.
20

MAJ MORE: Yes. So during 2023, I don't believe I had any new trainees post to me because the focus had already switched to CH-47. I think there was still, at the start of the year anyway, at least a couple of trainees in our organisation.

25 FLTLT ROSE: If this is too difficult for you to remember in terms of numbers, how many technicians were there for MRH-90 at the beginning of 2023, and then how many by the time the fleet was permanently grounded at the end of July?

30 MAJ MORE: I don't know those exact figures. As a rough order of magnitude, I remember we were assessing numbers in the organisation about the middle of that period, and it was about – including the Command team, it was about 50 technical staff.

35 FLTLT ROSE: For the MRH-90 technicians, did some of them convert to other platforms and stay in 5 Aviation Regiment?

40 MAJ MORE: After the grounding?

FLTLT ROSE: Yes.

MAJ MORE: Yes, I couldn't tell you the numbers, but yes.

FLTLT ROSE: If you can just describe the personnel. In terms of technicians, they weren't just Army personnel, were they?

5 MAJ MORE: Maintainers?

FLTLT ROSE: Maintainers. Was there a combination of a mix of Airbus and Army?

10 MAJ MORE: Yes. So at 5 Avn, our Maintenance Organisation, we were also supported by Airbus Asia Pacific employees.

FLTLT ROSE: Was that on a roughly 50/50 split?

15 MAJ MORE: No, the majority was Army. I can't tell you exactly how many AAP employees we had towards the end. It was around 20 – under 20.

20 FLTLT ROSE: Was it the Army personnel that would deploy with the fleet if it was going on exercise, or it had a mission, or a deployment?

MAJ MORE: Yes.

FLTLT ROSE: And it wasn't the Airbus maintainers?

25 MAJ MORE: No.

FLTLT ROSE: Who holds the DASR Part 145 Maintenance Organisation approval for 5 Aviation Regiment?

30 MAJ MORE: Yes, so the 15 Aviation Regiment Maintenance Organisation is part of the 16 Brigade 145 Maintenance Organisation.

35 FLTLT ROSE: And is that different to the structure at 6 Aviation Regiment?

MAJ MORE: Yes. So they have their own 145. They are their own 145 Maintenance Organisation, or they were.

40 FLTLT ROSE: Your current CO of 5 Aviation Regiment, who is that?

MAJ MORE: LTCOL Andrew Lean.

FLTLT ROSE: And that's who you report to?

45 MAJ MORE: Yes.

FLTLT ROSE: Directly?

MAJ MORE: Yes.

5

FLTLT ROSE: At paragraph 23 you say, “As DOCAMD” – just remind me what DOCAMD is. Is it the delegate?

MAJ MORE: The delegate. Yes, I was a delegate of the delegate of the CAM. So a delegate of the delegate of the Continuing Airworthiness Manager.

10

FLTLT ROSE: Who is the delegate in between then?

MAJ MORE: The 16 Brigade Aviation Maintenance Officer.

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FLTLT ROSE: And in that role you state one of your responsibilities is for immediately reporting to BAMO. Who is BAMO?

MAJ MORE: The Brigade Aviation Maintenance Officer.

20

FLTLT ROSE:

Whenever there was a potential for a condition that endangers flight safety that could not be dealt with through standard business practices or may have further fleet implications.

25

MAJ MORE: Yes.

FLTLT ROSE: What kind of conditions would endanger flight safety that you would have to report?

30

MAJ MORE: So if there was a safety event that had fleet-wide implications, would be an example.

35

FLTLT ROSE: Can you think of one that occurred during 2023?

MAJ MORE: Yes, there was an issue with a thing called – so life and coefficient factors. So there was a requirement when downloading information from the onboard computer on the MRH-90, some maintenance data, that when that data was put into our Maintenance Management System that that data had to be validated against another data set. If that validation wasn't done, then a gross number – it was a different number had to be used.

40

It was – I recall it was identified by AAvnTC that they potentially hadn't been doing that correctly. We then checked our system. It was also identified that potentially we hadn't been doing that correctly, so it was raised as a reportable occurrence.

5

FLTLT ROSE: Did you say intentionally, or not intentionally?

MAJ MORE: No, not – so it was a potential that we hadn't been doing it correctly. No, that was – so can you repeat the question.

10

FLTLT ROSE: I may have misheard you, but I thought you said that AAvnTC were intentionally doing something incorrectly with the data download.

15

MAJ MORE: Sorry, potentially. So they raised the – they discovered that – at times they'd identified it hadn't been done correctly, and there could be an issue there. So we – you know, that was communicated to – it would've been communicated directly by them, but also communicated by the CAMO, the Continuing Airworthiness Management Organisation, and we then looked at how we were doing it. We found issues with our system.

20

FLTLT ROSE: What changes did you make once you discovered that?

MAJ MORE: Clarified the correct procedure, and the whole Maintenance Organisation was briefed on the correct procedure. There was, yes, an investigation. That's recorded in Sentinel. I can't recall the exact details, the root causes and how we got to that situation. And then the – I'm aware that the CAMSO itself was taking into account, I guess, those two reportings as to how then they treated the life-ing of certain components in the system, based on the potential for the non-validated data being entered into the system.

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30

FLTLT ROSE: Was the fleet grounded temporarily until you found that resolution?

35

MAJ MORE: No.

FLTLT ROSE: So kept flying?

40

MAJ MORE: Yes.

FLTLT ROSE: Even though you'd identified a condition that endangers flight safety?

MAJ MORE: So I guess my obligation there was to report that. I recall it was that an immediate meeting was called with all the – by the CAMO with a wide range of stakeholders to discuss the issue to understand the risk that posed. The immediate analysis and information was provided to the CAMSO by the – sorry, to the CAMO by the CAMSO. So as in AAP, as the Continuous Management Service Organisation with their expertise was analysing that data and making recommendations to the Continuing Airworthiness Management Organisation and they were making recommendations to the military air operator and their delegates as – and considering a wide range of factors, including whether to pause flying or whether we could continue to fly.

FLTLT ROSE: Was this resolved before the fleet was permanently grounded?

MAJ MORE: Yes. So far as that, we had corrected our processes at that point. And from my understanding, the CAMSO had all the data they required to – and had knowledge of the life-ing that had been potentially affected by the incorrect input of that data. So from my perspective, yes. But I don't have the full knowledge of the CAMSO's position on it.

FLTLT ROSE: Do you remember what month this was identified and then resolved, in your mind?

MAJ MORE: It was – I don't remember exactly. Maybe around May.

FLTLT ROSE: Which was when it was identified or when it was resolved to your satisfaction?

MAJ MORE: Yes, I don't recall the exact dates at all. In my mind, it was the middle of my six months as the Responsible Manager, so maybe around April/May. It was addressed immediately at the time. The investigation into the root causes that – for us to have the organisational learnings about how that came to be, would have gone on for a few weeks. I can't recall when that investigation was closed off.

FLTLT ROSE: Who's doing the investigation?

MAJ MORE: So that investigation was done at the 5th Aviation Regiment level. So we have a – there's a Maintenance Aviation Safety Officer. I can't recall if he did the investigation directly or it was one of the Responsible Manager delegates that's authorised to conduct investigations.

FLTLT ROSE: You said that there was a Maintenance Officer. Who was that?

5 MAJ MORE: So we have a position within the unit, a Maintenance Aviation Safety Officer. So their sole job is to manage our safety events, the investigation of those, to the training of the investigation teams to look for, from the unit perspective, trends to help identify ways we can prevent further safety events from arising.

FLTLT ROSE: And who actually was that person? What was their name?

10 MAJ MORE: Their name is - - -

FLTLT ROSE: If you're assured that we can say it without infringing in any Defence policies in respect of naming persons.

15 MAJ MORE: Yes.

MS McMURDO: It's 5th Aviation.

FLTLT ROSE: I think it should be all right, yes.

20 AVM HARLAND: Taking advice.

MS McMURDO: No one's jumping up; I'm sure they would be if there were a problem.

25 MAJ MORE: Ruri Mill. I'm going to pronounce his name wrong; he's probably watching. Ruri Mill is his name.

FLTLT ROSE: So what rank?

30 MAJ MORE: So it's a - - -

FLTLT ROSE: If you can't remember, you can say so.

35 MAJ MORE: He's a Warrant Officer Class 1 equivalent.

FLTLT ROSE: I note the time. I just have one question to close off this topic, if you don't mind.

40 MS McMURDO: Yes, sure.

FLTLT ROSE: Was this a fleet-wide issue for MRH-90 that was identified and the CAMSO was working with the other operational units, such as 6 Aviation Regiment, on this issue?

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MAJ MORE: I recall it was an issue for AAvtTC and for the 5th Aviation Regiment. I don't believe it was an issue – actually, I can't recall if it was an issue for 6 Aviation Regiment or not. But the CAMO was working with all operators on that issue.

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FLTLT ROSE: I will have some questions tomorrow, if the witnesses could come back tomorrow.

MS McMURDO: Of course.

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AVM HARLAND: Just had one point of clarification before we finished off. So did you say that aircraft with incorrectly lifed items actually flew and that was a safety issue?

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MAJ MORE: So in this instance my recollection is, at the time it was raised there was no aircraft that – so there's no components because of this issue that had overflowed their life-ing. What this affected, though, was the accurate full life-ing of those components. So if it hadn't been picked up, it could have presented as a future issue. But my recollection is the advice at the time was there was no components that had actually overflowed that needed to be immediately replaced.

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AVM HARLAND: Thank you.

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MS McMURDO: All right, we'll adjourn till 10 o'clock tomorrow morning, thank you.

You'll have to come back then, MAJ More, thank you.

30

<WITNESS WITHDREW

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**PUBLIC INQUIRY ADJOURNED UNTIL
FRIDAY, 3 MAY 2024 AT 1000**