

**ADDENDUM TO
COURT OF INQUIRY**

Assembled by the
CHIEF OF NAVY

Into

THE DEATH OF ABLE DIVER

Z.C. YARWOOD, [REDACTED]

CALLIOPE INNER BASIN, Devonport

NAVAL BASE

ON 25 MARCH 2019

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ROYAL NEW ZEALAND NAVY
Office of the Chief of Navy
MINUTE 049/19

NHQ SIC 5000-0001

4 Oct 19



For Information:
DLS

RECONVENING COURT OF INQUIRY INTO DEATH OF ADVR Z.C. YARWOOD,



References:

- A. Record of Proceedings COI Assembled by CN into the death of Able Diver Z.C. Yarwood on 25 Mar 19
- B. MD634 Order for the Assembly of a Court of Inquiry into the death of Able Diver Z.C. Yarwood dated 2 Apr 19

1. Information has come to light post the submission of reference A. This information concerns the expiry of diving Certificates of Competence and the accuracy of the RNZN 2690 dive form.

2. You are to reconvene the Court of Inquiry detailed at reference B specifically to investigate registration and competency details of personnel involved in the incident. An addendum to reference A is to be submitted no later than Fri 1 Nov 19 unless discussed with me prior.



D.C. PROCTOR
RADM
CN

STATEMENT UNDER AFDA s 200G

The Court reconvened at 0900 8 October 2019 to 24 October 2019 to investigate information that came to light with respect to the Certificates of Competence and the accuracy of the Authorisation to Dive RNZN 260.

GENERAL

1. The Court of Inquiry was carried out over the period 8 October to 23 October 2019. Evidence from four witnesses was considered consisting of four interviews. This evidence clarifies and adds to the evidence gathered in the main report.

Report Structure

2. The report will be structured with clarifications and additions to the relevant Terms of Reference number from the main report. The report will first deal with any amendments/amplifications or changes to the main Court of Inquiry report. It will then cover other aspects it deems relevant.

TOR 1 BACKGROUND

ADR Yarwood's training and expertise

TOR 1.7 What level of training and expertise did the deceased have?

3. Under TOR 1.7 of the main report¹ the Court reported that ADR Yarwood had received a WorkSafeNZ Certificate of Competency (CoC) - Occupational Diver Part 1. This was based on evidence received on his qualifications from the Executive Training Officer from his official SAP record.

4. On reconvening it was discovered that ADR Yarwood may not hold a WorkSafeNZ NZ CoC². The Court has been unable to confirm if the certification on his SAP record '*Occupational Diver Part 1 – Certified*' is the required WorkSafeNZ CoC. The tracking of RNZN divers' certifications and qualifications is discussed in greater depth at TOR 6.1 of this addendum.

5. NZBR 37 required ADR Yarwood to hold the following certificate:
WORKSAFE NZ CoC: SCUBA to 30 meters (60 months).³ As stated, the Court received evidence that ADR Yarwood meet the pre-requisites for the Course, was accepted on the Course and evidence received from a SAP record revealed a record he has been awarded: Occupational Diver Part 1- Certified.

6. On reconvening, the Court has discovered the following issues:

- a. Director of Diving Safety and Standards (DDSS) advises that personnel under training are not required to hold a WorkSafeNZ CoC in accordance with para 3.11 of the Guidelines for Occupational Diving 2004.^{4,5} These state personnel under training are '*to be under the*

¹ COI Into the death of ADR YARWOOD [REDACTED] on 25 March 2019. Para 27

² Witness 5, Reconvening Interview, Page 16 Line 18-20

³ Exhibit C

⁴ Exhibit TTT

⁵ Witness 5, Reconvening Interview, Page 3 Lines 35-37

*direct supervision of an instructor that holds a CoC for the category of diving being trained. Direct Supervision means **within reach**, or **within visual contact** to ensure immediate assistance can be provided in the event of an emergency⁶.*

- b. NZBR 45 is silent on requirement for a WorkSafeNZ CoC for personnel under training but, as stated above, a WorkSafeNZ CoC is required in accordance with the NZBR 37.
- c. It appears it is likely the field in the SAP Human Resource Management Information System (HRMIS) Occupational Diver Part 1 has been used to record Australian Diving Accreditation Scheme (ADAS) qualifications in the past and also possibly recording of WorkSafeNZ CoC. The Court was left with an impression there remains confusion between these and this is likely to have affected the accuracy of recording.
- d. The Court also takes the opportunity to highlight the requirement of maintaining direct supervision as part of this allowance in the guidelines quoted in paragraph 6a above. The Court addressed what best practice would look like in the main report under TOR 2.6.⁷ The NZBR 45 states that as the nature of NZDF Diving Operations differs in some important respects from Civilian occupational divers the WorksafeNZ Guidelines for Occupational Diving have not been adopted in totality for use in the NZDF.⁸ While it was acknowledged that for Military Dive training it is not always possible to maintain visual contact, the requirement to stay within reach remains valid. It is the Court's opinion a student diver should be, as a minimum, tethered to each other at such a distance to assist immediately should it be required. The intent of the WorkSafeNZ guidelines for Occupational Diving 2004 further supports the recommendation made by the Court, in the main report, that more effective controls are required for rebreather operations for students undergoing dive training.

7. The Court found there is a contradiction, lack of understanding and clarity within the RNZN policy with regard to what qualifications are required to undertake the Able Diver Training Course.

8. The Court recommends the NZBR 37 is reviewed, clarified and amended to reflect the requirements for attendance on the Able Diver Training Course.

⁶ Exhibit TTT

⁷ COI Into the death of ADR YARWOOD [REDACTED] on 25 March 2019. Page 31-32

⁸ NZBR 45 Art 101 3

9. The Court noted the second part of the Occupational Diving guidelines, stating that personnel under training do not require a CoC if they are under the direct supervision, is not outlined in NZBR 45.

TOR 2 CONDUCT OF ACTIVITY

RNZN 260 Authorisation to dive

TOR 2.1 Who authorised the activity? Did they have authority to do so?

10. In the main report under TOR 2.1 the Court raised a number of issues on the quality of the dive authorisation form (RNZN 260). Those issues remain extant.

11. In reconvening, the Court explored whether the dive authorisation process includes a check to ensure all personnel allocated to diving functions are qualified and certified to do so. The dive authorisation pertaining to the diving incident⁹ and the master copy of the RNZN 260¹⁰ now held in NZBR 45, does not have a clear check that ensures personnel undertaking the duties are competent, qualified and certified to do so.

12. When questioned DDSS stated the qualification and certification of the diver is covered off when the diver is verbally asked if they are fit to dive prior to entering the water.¹¹ The Court acknowledges that there is a question on the form RNZN 260 *'Are any Divers on medication or unwell? Are all divers capable of carrying out the task? Any Questions?'* The RNZN 260 does not have a specific area allocated to recording a diver's response to this.

13. The Court finds that the verbal check by the Dive Supervisor before entering the water is (or should be) more about the wellness of the diver before the activity commences and it is impractical at that point to check qualifications and competencies. The Court believes the final check on competency is better placed at the point of the dive authorisation being signed as it allows time to check competencies and take action if an aspect is not compliant for the specific task, dive equipment type and/or role to be undertaken.

14. The Court recommends the RNZN 260 is amended to require proof all personnel are qualified and certified to undertake the task.

⁹ Witness 6, Exhibit V, Flag 4

¹⁰ NZBR 45 Annex 2B (Amendment No 48)

¹¹ Witness 5, Reconvening Interview, Page 14 Lines 5-8

Personnel qualification

TOR 2.3 Were the personnel involved appropriately qualified (or experienced) to conduct the activity? (Including any Safety staff)?

Dive Supervisor

15. On the 25th March 2019 the dive supervisor was in possession of a Part 1, 2 & 3 WorkSafeNZ CoC¹². This meets the requirements of his instructional duties for the evening of the 25th as per the NZBR 45¹³. As noted in the main report, there are no prescribed requirements for extra qualifications or certifications for rebreather diving¹⁴ and there is no WorksafeNZ CoC for rebreather diving. However, the dive supervisor had completed the Dräger Train the Trainer training on the LAR7000 Rebreather set.

Note: The Court found the Train the Trainer training certification for LAR 7000 does not appear to have an expiry. The Court recommends that an expiry or the requirement to periodically refresh the competency is clarified with the provider of this certification.

Standby diver

16. The standby diver was not an in-date diver as his CoC had expired 15 May 18. He was however, in date for the ADAS certification which contributes to the training and experience prerequisites that allow for award of the WorkSafeNZ CoC. He also had attained the Dräger Train the Trainer training on the LAR7000 Rebreather set and was medically in date.

17. Both the Standby diver and Head of School had been questioned, during previous interviews, over the qualification and 'in date' status of the instructor staff on the night of the 25 March and their replies did not advise of any apparent issues of non-compliance. The Court considered the reliability of the evidence of these two individuals. When re-interviewed on this point and when reminded of their initial evidence both parties advised the Court their responses was based on an understanding that the standby diver was fully in date.¹⁵ Although, it is possible, the Court has not found any evidence to suggest that they were deliberately misleading the Court.

18. Discussion around certification is further addressed in TORs 2.8 and 6.1 later in this report.

¹² Exhibit GGG

¹³ NZBR 45 Art 0203

¹⁴ COI into the death of ADR YARWOOD [REDACTED] on 25 March 2019, Page 26

¹⁵ Witness 18 Page 10 Line 28

Activity compliance with orders, procedures and policies

TOR 2.7 What are the relevant RNZN orders, procedures and policies for an activity of this type?

TOR 2.8 Was the activity conducted in accordance with these orders, procedures and policy?

19. The following RNZN orders, procedures and policies listed below provides a general overview of what constitutes a "Qualified Diver" in the RNZN.

20. NZBR 45, Part 2, Section 1 - Regulations: provides policy and definitions on diver certification and compliance, and states all NZDF diving is to be conducted in accordance with these regulations.

21. NZBR 45 Art 0203. Outlines *Definitions Applicable to Diving* including those that pertain to diver competence and compliance. The Court reported issues of compliance in Article 0203 in the main report¹⁶ and the following outlines further issues from the investigations on reconvening.

- a. **Art 0203 1. b. Qualified Diver:** This is defined as a diver who has completed the requisite training, attained certification and met all the necessary requirements to be issued a WorkSafeNZ Occupational Diving CoC. It further reiterates the CoC is effectively a licence to dive. It states: '*an occupational diver is not permitted to carry out employment related diving without being in possession of a current certificate of competency*'¹⁷.

1. The court determines the standby diver on the night of the 25th, despite holding all of the required ADAS and LAR 7000 certification, was not in possession of a mandatory WorkSafeNZ CoC. Whilst he did not enter the water¹⁸ he was still required to hold the requisite certifications in case the need arose. The Court determines this to be not compliant.
2. The Court notes this appears to be a systemic issue as NZBR 45¹⁹ clearly provides for organisational checks at a various levels. These all appear to have failed with a reliance on individual monitoring of multiple expiry dates. The Court recommends the 'system' of checks is reviewed and made more robust which includes

¹⁶ COI Into the death of ADR YARWOOD [REDACTED] on 25 March 2019. Para 75 a (iv)

¹⁷ NZBR 45, Art 0203 1.b(1)

¹⁸ Witness 18, Page 13, Line 28

¹⁹ NZBR 45, Art 0203 1.b(1), Art 0209 6, Art 0210 3, & Art 0211 4.g

alignment and clear direction in NZBR 45 (specific to positions at the Dive School) and individual Job Descriptions.

- b. **Art 0203 1.f. (3) In-Date Diver;** This requires an in-date “qualified diver” to maintain an up-to-date diver’s logbook [RNZN 112] of all activity.
1. The Court determines that the standby diver was not compliant with this article having not been in possession of a dive log book at the time of the investigation and not able to produce that logbook.²⁰ He has reported he was however in possession of a dive log at the time of the incident²¹, although this is unable to be verified.
 2. The Court recommends having a process for reporting of loss of dive logbooks.

22. The following contains other areas of NZBR 45 that have compliance issues relevant to diver qualification and certification.

- a. **Art 0209 (4). Command and Diver Responsibility for Safety:** This requires the Commanding Officer (CO) to ensure diving personnel meet the minimum standards prior to diving and are appropriately qualified, in date and medically fit.
- b. **Art 0210, Para 3. Diving Officer.** This requires the Diving Officer to inspect the logs of all newly joined divers verifying currency of their WorkSafeNZ Occupational Diving CoC qualifications and experience. It goes further to state these details are to be recorded in a database or calendar to ensure awareness and oversight is constantly maintained. Diving logs are to be reviewed at least every six months.
- i. The definition of the roles and responsibilities at the Dive Training School are not clear this includes the role of CO. Technically this is the CO PHILOMEL but there is also functional command under the Commander Naval Specialist Training position.
 - ii. The Diving Officer is another position not clearly defined in the Dive School – it is not clear if these duties fall to the Head of School or if the intent was for HMNZS MATATAUA to fulfil this role for the Dive School. The

²⁰ Witness 18, Reconvening Interview, Page 9, Lines 30-33

²¹ Witness 18, Reconvening Interview, Page 10, Line 2

view of the DDSS is that all the duties labelled Diving Officer and Diving Training Officer in NZBR 45 are the responsibility of the Head of School/Warrant Officer of the School.²² The Head of School said that in seven months at the school no log books were checked.²³ It did not appear that it was clear this responsibility was conveyed to him. The issue may also be wider with the standby diver reporting that it may have been up to two years since his logbook was checked.²⁴

- iii. The issue of CO responsibilities was also raised in main report under the Authorisation to Dive section. As an example, when asked who the current CO was, the W/O Head of School was unsure and said maybe he was.²⁵
 - iv. The Court believes this suggests a systemic issue were requirements within the NZBR 45 are unclear for the Dive School and pertain more to a Ship structure.
 - v. It is recommended roles and responsibilities are confirmed for the Dive School and are included in Job Descriptions where there is risk, safety and compliance involved.
- c. **Art 0211. Diving Supervisor 4 (g).** This also requires all personnel entering the water are in-date divers and they have confirmed their eligibility and fitness to dive prior to commencing the operation or entering the water.
- i. The DDSS²⁶ and standby diver²⁷ confirmed all divers are asked if they are fit to dive, as part of the pre-dive checks. The Standby diver admitted when asked the question before undertaking the role he replied in the positive but that was his understanding he was in-date.
 - ii. As outlined earlier in this section, the Court believes this check before entering the water is not the appropriate time to check qualifications and certifications.

²² Witness 5, Reconvening Interview, Page 10, Line 1-4 & 12-13

²³ Witness 13, Reconvening Interview, Page 8 Line 14

²⁴ Witness 18, Reconvening Interview, Page 10, Line 22

²⁵ Witness 13, Reconvening Interview, Page 10, Line 9

²⁶ Witness 5, Reconvening Interview Page 14, Lines 5-8

²⁷ Witness 18, Reconvening Interview Page 9 Lines 3-5

- d. **Art 0214. Diver.** This requires each diver to maintain their own certifications and qualifications and if a lapse occurs it is to be reported to their immediate supervisor and the Diving Officer. Additionally, they are to have their Occupational Diving CoC Card available on board/onsite whenever they are involved in diving operations.
 - i. The Court verifies the standby diver allowed his WorkSafeNZ CoC to lapse and did not inform his immediate supervisor or Diving Officer.²⁸ This is explored further in TOR 6.1.
 - ii. The Court determines this to be non-compliant.

23. Issues of compliance for NZBR 37 are referred to earlier in this document at TOR 1.7. The specific area related to NZBR 37 are as follows:

- a. **Art 08065 (2) g. Able Diver Course – Eligibility:** This requires any NZDF individual to have a '*COC Cert of Competence Occupational Diver (60 months)*'.
 - i. The Court has been unable to verify that ADR Yarwood had been awarded the WorkSafeNZ Part 1 CoC. DDSS has stated that it is unlikely it would have been processed by the RNZN and WorkSafeNZ yet and there is no requirement for this CoC to be awarded prior to attending the Able Diver Course.²⁹ This contravenes the above requirement from the NZBR 37 which DDSS suggests is incorrect. The Court determines this to be non-compliant. The NZBR 45 is silent on this issue.
 - ii. The Court recommends that this is reviewed and updated to ensure alignment of both NZBR 45 and 37.

²⁸ Witness 18, Reconvening Interview Page 8 Line 29

²⁹ Witness 5, Reconvening Interview, Page 3, Lines 35-37

OTHER

Any Other Matters

TOR 6.1 Comment on any other matters the Court considers are relevant

Certification and Qualification Tracking

24. The Court explored the lapse in certification of the standby diver. He admitted that he understood he required the WorksafeNZ Occupational Diving CoC³⁰ and that he was responsible for maintaining his qualifications and certifications to retain his status as an 'In-Date Diver'. However, he was unable to explain how he managed to allow his CoC to expire 15 May of 2018³¹ without renewal. He stated he simply thought it was close to expiry sometime in 2019³² but that he was still in-date or he forgot³³.

25. DDSS explained the RNZN utilises the Australian Diving Accreditation Scheme (ADAS) as acceptable means of compliance to meet the required training standard to achieve a WorksafeNZ CoC³⁴. It appears to be assumed that once an ADAS certification is achieved the equivalent WorksafeNZ CoC would then be applied for and awarded by the individual. The standby diver was awarded a WorksafeNZ Level 1 CoC which expired after five years in 15 May 2018 which aligns with him achieving his Defence Diver Qualification (ADAS Part one Diver) which expired in Feb 2018.³⁵ He advised that application to WorksafeNZ was undertaken by the RNZN on behalf of the course members and that he simply received his CoC without him personally applying.³⁶

26. When the standby diver completed his next ADAS Qualification he did not apply to have his WorksafeNZ CoC upgraded to reflect this nor did it appear to the Court that there was an organisation level mechanism to require him to reapply for a new level or endorsement of the WorksafeNZ CoC³⁷. As an example, he completed his ADAS Part 3 which allows him to dive on Surface Supplied Breathing Apparatus (SSBA) to 50 meters in 2014³⁸. This would enable him to apply for his WorksafeNZ CoC Construction Part 3 however, the standby diver did not apply for this nor did the RNZN it seems require him too.

27. Furthermore, the Court heard from CO Matataua there had recently been work underway more broadly in the operational area rectify the issue by recording the WorksafeNZ CoC (either Part 1, 2 or 3) in HRMIS SAP field Occupational Diver

³⁰ Witness 18, Reconvening Interview Page 5 Lines 15-16

³¹ Exhibit XXX

³² Witness 18, Page 14, lines 20-23

³³ Witness 18, Page 6 Lines 8-13

³⁴ Witness 5, Reconvening Interview Page 6 Lines 1-2

³⁵ Exhibit XXX

³⁶ Witness 18, Reconvening Interview Page 15 Lines 3

³⁷ Witness 5, Reconvening Interview Page 14 Lines 29-30

³⁸ Exhibit XXX

(Part 1, 2 or 3).³⁹ The Court believes that this field has also been used to record either course completions or ADAS qualifications already as both ADR Yarwood and the standby diver have Occupational Diver certification recorded, yet the Court now knows the Standby diver does not hold an in date WorksafeNZ CoC.

28. The Court observed that there is a field on the report it was shown called CCOD and proposed that could be meant to record the WorksafeNZ CoC.⁴⁰ When questioned on how it was being used in the operational area the CO Matataua advised that there is confusion about what that column is for and it would be double recording if used.⁴¹ However, the Court believes that it is the Occupational Diver (Part 1, 2 or 3) fields that are being used for multiple purposes. When the standby diver was asked to explain to the Court his own record from HRMIS even he stated that the dates do not match the original qualifications and there was potentially incorrect information in the record.⁴²

29. The Court questions the integrity of the data in SAP HRMIS related to diver qualifications and certifications.

30. The tracking of RNZN Diver qualifications and certifications is not a new concern. A previous Court of Inquiry in 2013⁴³ found an individual diver was out of date and a recommendation relating to the tracking of qualification currency was raised. It was discovered in May 2016 this had not been correctly implemented and the COI was reopened.⁴⁴ In parallel to this, a Seaworthiness Corrective Action Requirement (SwCAR) was raised 04 March 2015 to deal with the Diver Qualification and Competency tracking.⁴⁵ The action required DDSS and the Commander Fleet Personnel and Training (CPFT) to create and implement a solution utilising Human Resource Management Information System (HRMIS), and required the Operational Dive Team (ODT) and the Dive School to keep the qualifications up to date as the courses are undertaken.⁴⁶ This SwCAR was then closed at the Governance Seaworthiness Board (SwB) on recommendation from DDSS in December 2017. He referenced an email that stated the Divers were getting auto-notifications for their ADAS qualifications.

31. On review of the evidence presented by Commander Naval Specialist Training (CNST) the Court has concluded the while a solution was in place it did not include all relevant qualifications and certifications and was not robust enough to survive posting of personnel from key positions. When interviewed by the Court

³⁹ Witness 41, Page 4 13-27

⁴⁰ Exhibit B1

⁴¹ Witness 41, Page 4, Line 30-36

⁴² Witness 18, Page 3 Lines 18-31

⁴³ COI 5202-0024 Op Poseidon 27 May 2013

⁴⁴ Exhibit ZZZ

⁴⁵ Exhibit VVV

⁴⁶ Exhibit YYY

neither standby diver nor the W/O Head of School were able to confirm any solution was in place as a result of the COI recommendation or SwCAR^{47,48}

32. The Court believes it possible that the system, whilst it may have been implemented, did not have the processes and responsibilities documented and in place. Therefore, the action appears to have been closed on implementation as opposed to closed once proven to be a robust and sustainable system.

Clarity of Qualifications and Certification

33. The NZBR 45 states clearly that a WorksafeNZ CoC is required for RNZN divers and is effectively the licence to dive⁴⁹. However, over the course of conducting interviews the Court became concerned that there was not a comprehensive understanding on the detail of how the various qualification and certifications interacted. In particular, the relationship between the ADAS Certification and the WorksafeNZ CoC. Both the W/O Head of School and the standby diver were not clear on the interaction of the ADAS and WorksafeNZ certifications and how they related to each other or even which ones were required for certain positions. The WorksafeNZ Guidelines specifically state Police, Military, and Customs divers are considered part of the Construction Diving Category and are expected to hold at least a part two restricted diving certification.⁵⁰ However, the standby diver has only held a WorksafeNZ Part One Certification for his entire diving career. He had completed the ADAS certification to Part Three. However, as explained above, with four years to run on the WorksafeNZ CoC Part One, he had not updated it nor does not appear the organisation required him to update his WorkSafeNZ CoC.

34. The ADAS qualifications have three parts that are applicable to the RNZN and all have a five year expiry. WorksafeNZ CoC also has a five year expiry. However, there is no alignment of ADAS qualification dates (which make up the endorsements to the WorksafeNZ CoC) and the WorksafeNZ CoC expiry date. The Court determines it could be possible that ADAS qualifications are expired but the WorksafeNZ CoC remains in date. There is no one date to monitor making the tracking confusing and with a manual system, of predominately individual responsibility, open to human error or negligence.

35. As stated earlier NZBR 45 outlines NZDF Diving Operations differs in some important respects from civilian occupational divers the WorksafeNZ Guidelines for Occupational Diving have not been adopted in totality for use in the NZDF.⁵¹

⁴⁷ Witness 13, Reconvening Interview Page 3 Lines 33-34

⁴⁸ Witness 18, Reconvening Interview Page 5 Line 15-16

⁴⁹ NZBR 45 Art 203 1.b.(1)

⁵⁰ Exhibit TTT

⁵¹ NZBR 45 Art 101 3

However, the NZBR 45 also states DDSS is to assess and monitor the content WorksafeNZ Guidelines for Occupational Diving, and all other relevant legislation and guidelines, to ensure that NZBR 45 and all NZDF diving complies with New Zealand standards, unless operational reasons require a different approach.⁵² The Court was not able to ascertain any operational reason why a RNZN Diver should not maintain a Part Two WorksafeNZ certification. It is the Court's view if such a reason exists it should put to WorkSafeNZ via the Diving Industry Advisor Group (DIAG) committee attended by DDSS.

36. A further point to note is that during questioning of the standby diver he proposed to the court that he was unable to apply for his WorksafeNZ Part Two or Three certification as he was unable to provide evidence of SSBA diving as the RNZN does not have this capability⁵³. However, the Standby diver has been able to renew his ADAS Part three certification in recent months despite not having this SSBA experience or his Logbook to record any such diving.⁵⁴ The ADAS certification is renewed on the basis of the applicant certifying that he/she has retained their operating competency over the previous period of certification. It is assumed the way this is achieved is through the applicants providing evidence to demonstrate current experience. Aside from potential credibility issues this exposes a potential issue that individuals are being allowed to 'pick and choose' the qualifications they apply for.

37. When reviewing Chapter 8 of the NZBR 37 RNZN Training Manual⁵⁵ the Court found the WorkSafeNZ Certificates of Competency referred to using a number of different descriptions when defining course eligibility and/or qualifications. Between NZBR 45 and NZBR 37 there are no fewer than five variations of how the WorksafeNZ CoC is termed.

38. The Court believes this lack of consistency is likely to have contributed to the confusion personnel may have had when setting up a Diver Qualification and Certification tracking system. Additionally, the ADAS and WorkSafeNZ certifications should be described as such, not as qualifications as is the case in the NZBR 37.

39. DDSS stated the ADAS certifications, which are received after specific part type training did not require renewing after five years by the RNZN if relevant diving experience had been maintained and the WorkSafeNZ CoC is the required certification⁵⁶. This again contradicts the Guidelines for Operational Diving 2004⁵⁷ which state all Construction Divers are required to hold a current ADAS accreditation.

⁵² NZBR 45 Art 101 4

⁵³ Witness 18, Reconvening Interview Page 6 Lines 8-13

⁵⁴ Exhibit XXX

⁵⁵ Exhibit C

⁵⁶ Witness 5, Reconvening Interview Page 11 Lines 13-18

⁵⁷ Exhibit TTT

Note: These guidelines use the terms qualification, accreditation and certification interchangeably when referring to the ADAS certification. The ADAS organisation uses the term Certification. It is recommended that the use of the terms is clarified.

40. Whilst the Court was not directed to consider Ship Diver qualifications more widely, the Court is concerned at the understanding of requirements for the WorksafeNZ CoC for Ships Divers and how these are being monitored. The degree of systemic issues raised in this addendum suggests it is likely similar issues may be a problem across all Units with requirements for levels of diver competency. The Court recommends an entire check of source documents against system data.

CONCLUSIONS

41. The conclusions in this addendum do not change the findings of the main Court of Inquiry report in particular, it does not change the primal causal, aggravating or contributing factors.

42. The Court was reconvened to specifically investigate further the qualifications and certification of the instructors in attendance at the accident on 25 March 2019. The Court will also make general observations on attempts to rectify this area with the intent to raise more holistic concerns that the organisation needs to address, test and prove.

Diver Status of WorksafeNZ CoC

43. ADR Yarwood was recorded as holding Occupational Diver Part 1 on SAP HRMIS. DDSS advises he was not required to hold a WorksafeNZ CoC as he was undertraining. The Court found that there is a conflict between NZBR 37 and this advice. The Dive Supervisor 'in-date' status was outlined in the main report⁵⁸ and this addendum advised he held an in date WorksafeNZ CoC. The Standby diver 'in date' status was outlined at the main report and this addendum advised his WorksafeNZ CoC lapsed in May 2018 and was therefore not in date for this certification at the time of the incident. All parties involved in approving or undertaking the role of the standby diver believed that he was in date.

Understanding of Diver qualification and competency

44. The level of understanding of the requirements of Diver qualifications and competency was highlighted as being "haphazard" in the main report⁵⁹. This was again the case with the Court finding the level of understanding in the organisation generally low. Commanders with personnel involved in Diving were largely unaware of the requirement for a WorkSafeNZ CoC until recently. They were also largely unaware that this is different than the recorded Occupation Diving qualifications and ADAS certifications. This lack of understanding has made it challenging for the Court to draw a definitive conclusion on every issue in this area.

⁵⁸ COI Into the death of ADR YARWOOD [REDACTED] on 25 March 2019. Para 42.a

⁵⁹ COI Into the death of ADR YARWOOD [REDACTED] on 25 March 2019. Para 47

45. Further investigations on reconvening the court have shown that the diver course requirements, qualifications and certifications are confusing and have not been laid out clearly in NZBR 45. This includes a lack of clarity on the different WorkSafeNZ endorsements required at different levels, for different equipment, and when these should be applied for. There is no outline of the minimum required qualification and WorkSafeNZ CoC (and endorsements). NZBR 37 does outline some of these but the Court found, at least one occasion where this information is possibly incorrect: The prerequisite for Able Diver Course being a WorkSafeNZ CoC: Occupational Diver Part 1.

46. This leaves the RNZN exposed as there is no framework in RNZN policy that clearly explains how Military dive courses, Medical competencies, ADAS qualification and the WorkSafeNZ competencies work together. With each of the different variables all with different expiries, a robust system of tracking, notification and monitoring to keep on top of the requirements is essential.

Recording of Diver qualification and competency

47. The Court heard the WorksafeNZ CoCs across the organisation for Divers had not been loaded on to SAP. Therefore assumptions these were being tracked were recently found to be incorrect. Furthermore, the Court heard there had recently been work completed to ensure this was rectified by recording the WorksafeNZ CoC (either Part 1, 2 or 3) on SAP field Occupational Diver (Part 1, 2 or 3). The Court believes this field is being used inconsistently, in some cases used for recording the ADAS certification and more recently, possibly, the WorksafeNZ CoC.

48. The Court notes in one of the reports provided, a field exists called 'CCOD', this shows no data been loaded in this field for the Unit concerned.⁶⁰ The Court suspects CCOD stands for Certificate of Competency Occupational Diver and it is possible this is the intended position to load the WorksafeNZ CoC. However, with only one field it would not be able to show endorsements hence the Occupational Diver (Part 1, 2, 3) may have been used instead in some cases.

49. The Court is not convinced the management and recording on the HRMIS system has been fully resolved – meaning tested, proven that the source data is correct. Furthermore, it is not evident a framework, reflective of the qualification and certification requirements, exists and that a common understanding exists across the organisation. Finally, the Court believes there is likely data integrity issues with the data currently recorded against the Occupational Diver fields in HRMIS.

⁶⁰ Exhibit B1

RECOMMENDATIONS

50. This recommendations in this addendum does not change the recommendations of the main report but do add to these. The following recommendations are made:

Certification and Qualification Monitoring

- i. Audit current qualifications and certifications - ensure they are recorded in the correct SAP fields (using original NZWorkSafe cards as source documents).
- ii. Clarify WorksafeNZ CoC requirements for Ships Divers – if required confirmed responsibilities for monitoring of Ship Diver WorksafeNZ CoC renewals.
- iii. Simplify and document the qualification requirements for Divers at different levels, for different roles and equipment types.
- iv. Clarify requirements to hold a WorksafeNZ CoC as prerequisite for Able Diver course as shown in NZBR 37.
- v. Clearly document qualifications and certifications and map these to how they are to be recorded in HRMIS SAP (exactly).
- vi. Create and document the processes associated with data collection and recording of qualifications and certification onto HRMIS.
- vii. Prove the robustness of the system by auditing the processes that exist for data collection and loading data into the system.
- viii. Clarify responsibilities for raising and checking certification renewal documentation when new qualifications change the endorsement type or when certification is due to expire – remove onus on solely individual responsibility.

NZBR 45.

- i. Confirm NZBR 45 has being reviewed by the NZDF Legal Services for areas that have legislative implications.
- ii. Outline the process for qualification upload and monitoring for Dive School.
- iii. Amend RNZN 260 - Implement a check on the Dive Authorisation that requires a check that the Certificate of

Competency is held for the appropriate diving, for the diving role to be undertaken, type of diving to be conducted and equipment used.

- iv. Create policy outlining process on loss of log book.

General/Assurance.

- i. Review consistency/align terminology used to refer for the WorkSafeNZ CoC and qualifications across policy in NZBR 45 and NZBR 37.
- ii. Engage with WorkSafeNZ to clarify CoC requirements for rebreather operations – document requirements.
- iii. Create a process of periodic audit/spot check by Navy Directorate of Safety on NZ WorkSafeNZ legislative requirements.
- iv. Consider conducting a review of the level of proof required to close Seaworthiness Corrective Action Reports and Court of Inquiry actions (the Court suggests this should be at proof of concept not initial implementation of any action).
- v. Ascertain if the LAR7000 train the trainer certification has an expiry and/or periodicity of refresher training and recertification.

49. From the recommendations advised in the main report, and this addendum, the Court recommends focusing on the following immediately:

- a. Greater level of governance at the Dive School,
- b. Implementation of internal control and assurance activities on the Dive School, and
- c. More effective underwater controls for students undergoing rebreather training operations.

Dated at HMNZS PHILOMEL on 26 November 2019.

President



Members



COMMENTS BY ASSEMBLING AUTHORITY

Dated at Wellington on 2nd day of March 2020

The Court of Inquiry report dated 3 Sep 19 was reviewed over Sep 19. While considering the findings of the Court, I became aware there were further areas within the diving system that I required more detail to be provided. As such, on 04 Oct 19, I directed the Court to reconvene to collect more evidence. The court submitted the addendum to the original report on 26 Nov 19. The original report and addendum were reviewed together and considered by me over the period Dec 19 – Feb 20.

I am satisfied that the Court has properly completed its collection of evidence and reporting, including the additional addendum, into the tragic accident that resulted in the death of ADR Z.C. YARWOOD [REDACTED]. I note the conclusion of the main report that states a procedural violation was the primary causal factor for this fatal accident. Additionally, I agree with the Court's findings, in both the main report and the addendum, that there were a number of systemic level factors within the NZDF's overall dive training system which contributed to this outcome. Further, and beyond the commentary of the Court, I observe that many of the findings and recommendations should be considered relevant right across the NZDF diving system, not just in the training environment.

I highlight the following areas for specific comment:

Governance - Authorisation For Diving. The Governance for the Dive Training School is unclear and levels of authorisation for dive training activity is delegated too low within the system. Greater independent scrutiny is required for the planning, conduct and authorisation of dive training activity undertaken by the Dive Training School including the need to verify an individual's readiness to undertake a dive. I understand that extant policy is that Diving activity requires the approval of a Commanding Officer, this may in itself represent suitable independence, albeit the Commanding Officer will necessarily require a certain level of competence to appropriately execute their approval function.

Governance – 2180 Process. The use of a 2180 process for the introduction of new diving equipment into service in the training environment is to be reviewed and fully assessed within the specific training context. To ensure a robust risk assessment, a separate 2180 is to be conducted for the dive training environment taking into account the experience levels of the trainees.

Policy. Specific to dive training, the NZBR 45 policy relating to dive training requires review and refinement to articulate clear lines of responsibility and accountability, individual and staff competency requirements, and alignment to the RNZN training manual, NZBR 37 and any other manuals related to dive training in the NZDF. Further, I note a requirement to review NZBR 45 in light of the overall findings of the Court, not just the recommendations, and consider how the findings relate to policy and the overall NZDF diving system.

Culture. It is evident that the pressure applied to the students by the instructors to increase their underwater endurance throughout the course contributed to the



unorthodox behaviours of applying the "gas switch trick". It is evident also that a number of ADR 19/02 students did not fully understand the risks associated with this behaviour when using a re-breather diving set and chose to use this procedure, without their supervisor's knowledge for this dive, to ensure they continued to meet their instructor's expectations for the course. This drive to build underwater resilience in the students is considered a significant contributing factor.

In considering the report, I question the need to force a requirement to build underwater endurance in the dive training environment and am concerned with a first and foremost priority placed on "physical prowess". The RNZN diving culture needs to be adjusted. Perhaps a culture more aligned to dive professionalism, humility, and, mission achievement today and tomorrow, would be more appropriate.

Risk Management. The 2019 Seaworthiness Board for NZDF Diving considered the NZDF's Risk Appetite for all Diving. Risks assessed as medium and above require deliberate consideration. The risk management approach and controls used in the dive training activity for ADR 19/02 were not effective and need to be improved.

It is my expectation that a review of the training risk management process be undertaken. All personnel involved in the planning and conduct of dive training, including trainees, are to be trained on this revised risk management process to ensure understanding of the risks involved in dive training activities.

In addition to the report's recommendations on risk management, I consider it imperative to be able to understand the state of health of the dive trainee during the training course. Thus my expectation is that in addition to individual self-assessment of health and wellness to dive, an independent monitoring system for trainees is introduced. A very clear and deliberate approach to fatigue management is expected to be a feature.

Internal and External Audits. I direct that internal Control Checks are to be established for the Dive Training School, and all NZDF units that authorise diving activities, to ensure compliance with policy and agreed certification requirements for personnel within the dive system. External organisational audits of dive training and operational diving across the NZDF system are to be undertaken by the Office of Fleet Operational Readiness in conjunction with the Technical Seaworthiness Authority at least biennially to assess the overall health of the diving system to ensure consistency with best practice. The results of these audits are to be reported to the Maritime Regulator.

Additionally, I remind all senior commanders of my expectation that they will on occasion personally undertake independent audit and inspection of compliance with policy in the diving system.

Training. Recommendations 208 (d) and (f) are agreed. FPTO are to incorporate these key recommendations into the existing review of the ADR Course and have the course syllabus verified independently by DDSS prior to the re-commencement of ADR training in 2020.



Records. In considering the addendum to the report, additional concerns have been raised by the Court as to the accuracy of records which capture competency requirements for all personnel involved in the wider diving system. Fully understanding the current state of certification within the diving system is a high priority and is to be investigated and addressed by the Assistant Chief of Navy Personnel and Training.

The loss of a sailor, soldier or airman, or any associated harm to a serviceperson during a dive training activity is not acceptable. This tragic accident has highlighted that the dive training system, and wider NZDF diving system, requires corrective actions to be undertaken to ensure that the lessons from this accident are addressed in a timely matter. It is my expectation that the Deputy Chief of Navy and Maritime Component Commander, will actively drive the NZDF to address the Court's findings and recommendations with a high priority and that swift actions will be taken to improve the dive training and wider diving system.

Acknowledging the importance of a co-ordinated action plan across a number of portfolio areas, I note that Commodore Mathew Williams, MNZM, RNZN, has been assigned as the Champion of the Littoral Warfare Force Regeneration programme. As such, I expect him to take a personal interest in implementing the recommendations of the Court. In executing this function, he will need to co-ordinate across the maritime system, both in Navy and wider across the NZDF, to progress my direction and the Court's recommendations. I expect an over-arching implementation plan, including clear assignment of tasks will be developed within one month of the date of my assembling authorities comments.

Commodore Williams is to provide a quarterly written update as to progress against the recommendations of the Court to the Naval Leadership Board. Separately, he is to provide a monthly verbal update to me on progress of the Littoral Warfare Force Regeneration programme which includes improvements in the dive training system and wider NZDF diving system.

The Inspector General (Maritime) is to monitor the progress of the delivery of the implementation plan through the NSMG and NLB forums.

The Maritime Regulator is to review the Court's recommendations relating to regulatory compliance and diving standards and re-assess the outcome and associated corrective actions of the 2019 NZDF Diving Seaworthiness Board to ensure alignment. An updated assessment is to be advised to all stakeholders in the Seaworthiness Assurance Group once the review is completed.

For transparency, I record that I shared the report and addendum, not the exhibits, with a number of senior personnel involved in the Maritime Worthiness and dive systems prior to me completing these assembling authority comments. The report and addendum were shared, with a verbal brief by me, to assist them in understanding the immediate need for enhanced oversight and audit of the dive system, pending the deliberate implementation of my direction and the recommendations of this Court of Inquiry.



The Chief of Navy Secretary is to forward the original copy of the completed Record of Proceedings to HQNZDF in accordance with DM 69 (2ed) para 11.2.75.



D.C. PROCTOR

Rear Admiral

Chief of Navy

Headquarters New Zealand Defence Force (Navy)

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