



August 2024

Minister of Defence

## **DEFENCE AUDIT AND ASSESSMENT: AUDIT OF THE NZDF'S HAZARDOUS SUBSTANCE CONTROLS AND COMPLIANCE – PHASE 1**

### **Purpose**

1. This memorandum presents you with a summary of the key findings from the audit into the New Zealand Defence Force's (NZDF) management of hazardous substances at South Island locations.
2. Hazardous Substance audits are required as part of the Hazardous Substances and New Organisms (HSNO) Act 1996 and this audit is also part of the 2024 Defence Audit and Assessment Work Programme approved by you in April 2024.

### **Executive Summary**

3. The audit report acknowledged that compliance with the NZDF's hazardous substances code of practice was generally high, and is comparable with industry best practice.
4. However, the audit did identify several areas across the South Island sites that require urgent review and redress.
5. The NZDF have noted all of the observations and recommendations and are in the process of addressing the matters identified at each site with progress and/or completion reports due by 13 October 2024.
6. Phase 2 of the hazardous substances audit, which will cover camps and bases in the North Island, has been scheduled to be conducted between July 2024 and early 2025.

### **Background**

7. In accordance with section 3(6) of the Hazardous Substances and New Organisms (HSNO) Act 1996, the Secretary of Defence:

*"shall audit the Environmental Protection Authority (EPA) controls on hazardous substances under the control of the Minister of Defence, and report the results to the Minister for the Environment and the Minister of Defence"*

8. This audit has systematically evaluated the storage, usage, handling and disposal of hazardous substances under the care and management of the NZDF. The audit's objective was to evaluate whether the NZDF code of practice complied with the requirements under the HSNO Act 1996 and Health and Safety at Work (Hazardous Substances) Regulations 2017 (HSAW (HS)).
9. Since this audit required specialist knowledge and expertise on hazardous substances, the Ministry of Defence (MoD) engaged an external provider, Responsible Care New Zealand

(RCNZ), to undertake the audit. Their findings, as well as further findings generated by the MoD's Defence Assessment Team on the NZDF's information management and reporting of hazardous substances, are included in this memorandum.

10. The scope of this audit included Class 2-9 substances, which are flammable and corrosive substances that are harmful to people and the environment. Class 1 (Explosives) were excluded in this round of audit as it requires expertise that is not available in New Zealand. The MoD is working with the NZDF to organise subject matter experts from international Defence partners to undertake a Class 1 audit, which will be scheduled for the 2025 calendar year.
11. The NZDF adopts its own code of practice to manage hazardous substances which are prescribed under Defence Force Order (DFO) 41: Safe Management of Hazardous Substances, as secondary legislation. Where the HSNO Act 1996 and HSAW (HS) Regulations 2017 conflict with the NZDF code of practice, the former takes precedence.

### **HSNO Act 1996 applicability issue with the NZDF**

12. It is important to note that an issue of the applicability of the HSNO Act 1996 against the NZDF codes of practice was identified in 2019, and is yet to be resolved. In December 2017, the Defence requirements within the HSNO Act 1996 were reworded to state that the Secretary of Defence is required to audit the Environment Protection Authority (EPA) controls of hazardous substances under the control of the Minister of Defence. However, the controls related to substances controlled by the NZDF are imposed by the CDF, meaning controls imposed by the EPA do not apply. Crown Law's advice in 2020 was "*it is simply not possible to comply with this section (of the HSNO Act) as written*".
13. To address this, government agencies including Crown Law, have identified required amendments to the HSNO Act relating to NZDF compliance. While there are currently no legislative reform proposals in respect to the HSNO Act to address the issue, the Ministry for the Environment has confirmed they will look to make appropriate amendments at the next an opportunity to do so. In the meantime, it was agreed between the MoD, the NZDF, and the Ministry for the Environment, WorkSafe and the EPA that the pragmatic approach would be for the MoD to progress with an audit of NZDF's controls in a way that meets the spirit of the Act and Regulations.

### **Audit findings**

14. Overall, the RCNZ report acknowledged that compliance with the NZDF's hazardous substances code of practice was generally high, and is comparable with industry best practice.
  - 14.1. The overarching comment related to the audit of RNZAF Base Woodbourne was:

*"The majority of RNZAF units and personnel have demonstrated a high level of compliance with the guidelines set forth in the Defence Force Order (DFO) 41 Safe Management of Hazardous Substances Class 2-9 and its accompanying Defence Force Instruction 41.2. There are some great initiatives currently being investigated and only minor to moderate considerations and recommendations needed."*
  - 14.2. While for Burnham Military Camp the overarching comment was:

*"Compliance with Defence Force Order (DFO) 41 Safe Management of Hazardous Substances Class 2-9 and its accompanying Defence Force Instruction (DFI) 41.2 regarding basic hazardous substance management in the units was found to be predominantly high, with minor adjustments needed for continuous improvement..."*
15. However, the RCNZ audit did identify several issues across the South Island sites that require urgent review and redress. This included the need to address working conditions that expose staff to hazardous materials, the absence of certification to store hazardous substances, insufficient engagement between NZDF and commercial leaseholders operating on NZDF land on hazardous substance practices, and the lack of awareness on hazardous substance guidelines by external contractors.

16. The audit report also outlined a number of examples that indicated NZDF personnel are finding it increasingly challenging to comply with hazardous substance requirements due to the deteriorating state of its infrastructure, and the lack of resources to meet the required safety standards.
17. RCNZ has produced a detailed report of each NZDF site which captures their observations and recommendations. Overall, RCNZ has made 190 recommendations which range from relatively minor actions, such as replacing faded hazardous signage that are illegible, through to much more significant actions, such as addressing ongoing lead exposure issues. Some of the observations are site specific, while others are systemic which impact all NZDF sites that store hazardous substances.
18. Appendix 1 of this memorandum reflects an executive summary of RCNZ's observations and recommendations. The full detailed site reports provided by RCNZ are available on request.
19. Further to RCNZ's audit, the MoD's Defence Assessment Team also generated their own recommendations to improve the NZDF's management of external contractors, and improve the effectiveness of information flow on hazardous substance matters to senior leaders.

### **NZDF response and remediation**

20. The observations and recommendations from RCNZ and the Defence Assessment Team were shared and tested with the NZDF's Defence Logistics Command throughout June and early July 2024.
21. The NZDF have noted all of the observations and recommendations and are in the process of addressing the matters identified at each site. To support this, Minutes from NZDF's Defence Logistics Command have been issued to each site command requesting that each recommendation is taken for action and that a progress and/or completion report is provided no later than 13 October 2024.
22. The NZDF's Defence Logistics Command will monitor the progress of the actions to ensure that they are addressed, and will prioritise actions that require the most attention first.

### **Next steps**

23. As per the 2024 Defence Audit and Assessment Work Programme, Phase 2 of the hazardous substances audit, which will cover camps and bases in the North Island, has been scheduled to be conducted between July 2024 and early 2025.
24. Phase 2 of the audit will enable RCNZ to check whether the observations and recommendations identified, particularly the systemic NZDF-wide recommendations, have been addressed and embedded in to the NZDF's practices at the North Island sites.
25. The final Phase 2 audit report, due to you in early 2025, will also include an overview on the progress made by the NZDF to address the recommendations in this Phase 1 audit.

## Recommendations

26. It is recommended that you:

- |  |          |
|--|----------|
| a) <b>Note</b> that section 3(6) of the HSNO Act 1996 requires the Secretary of Defence to audit Defence's controls on hazardous substances, and this audit was conducted as part of the 2024 Defence Audit and Assessment Work Programme approved by you in April 2024. | Noted    |
| b) <b>Note</b> the audit report acknowledged that compliance with the NZDF's hazardous substances code of practice was generally high, and is comparable with industry best practice.  | Noted    |
| c) <b>Note</b> the NZDF is in the process of addressing each recommendation with progress and/or completion reports due by 13 October 2024.  | Noted    |
| d) <b>Note</b> the final Phase 2 audit report, due to you in early 2025, will also include an overview on the progress made by the NZDF to address the recommendations in this Phase 1 audit.  | Noted    |
| e) <b>Refer</b> this memorandum to the Associate Minister of Defence, who has the delegated responsibility for Defence Estate.   | Yes / No |
| f) <b>Refer</b> this memorandum to the Minister for the Environment as required by the Hazardous Substances and New Organisms Act 1996.  | Yes / No |

s9(2)(k)

**RICHARD SCHMIDT**  
Secretary of Defence (Acting)

Date: 7/8/24

cc **TONY DAVIES**  
Air Marshal  
Chief of Defence Force

Date:

15 July 2024

s9(2)(g)(i)

Director Defence Assessment  
Ministry of Defence

Dear s9(2)(g)(i)

### NZDF Hazardous Substances Management Assessment: Phase One

- Reference**
- A RCNZ Assessment RNZAF Base Woodbourne
  - B RCNZ Assessment Burnham Army Base
  - C RCNZ Assessment Kensington Army/RNZN Dunedin
  - D Defence Force Order 41
  - E Defence Force Instruction 41.2

Responsible Care NZ was engaged to review and report on the extent to which hazardous substances are managed throughout New Zealand Defence Force's major facilities. Phase One included three South Island sites and the reports (References A, B and C) are enclosed.

The assessment revealed the complexity of policy and process pathways when collaborating between military units and contractors in achieving the specified outcomes. Additionally, compliance with Defence Force Orders (Reference D) and Instructions (Reference E) was examined in detail to evaluate the relationship between local commanders and major contractors situated on Defence property.

Examples of unsafe workplaces and hazardous substance storage facilities in Burnham Camp and Dunedin were revealed, putting personnel at risk and calling into question compliance certifications. This includes the poor condition of estate infrastructure housing hazardous substances. The NZDF Principal Advisor Hazardous Substances Assurance has been notified.

### Key Findings: Phase One

- Major contractors operating hazardous facilities are not effectively liaising with Base Command, resulting in a lack of understanding about the need to comply with hazardous substances regulations and NZDF Standard Operating Procedures. Contractors are following company procedures which do not include integration of emergency plans or regular meetings with their hosts to confirm contract performance, and importantly, impact on nearby operations. Failure to co-ordinate and integrate emergency plans within the site undermines the appropriate response.
- Examples of non-compliance include Contractors not competently assessing gas supply systems and failing to ensure compliant fire extinguishers, compounded by not being accompanied by a knowledgeable NZDF Compliance Officer, as required in Reference D. The continuing loss of experienced personnel undermines personal safety, leaving both Services and Contractors struggling to ensure compliance.
- Contractors are not being comprehensively briefed on MoD and NZDF expectations regarding collaboration and performance. It is likely the fault lies in the detail of contracts, some of which may be routinely re-costed and rolled over despite not including hazardous substances management. Sample contracts have been requested to evaluate this assumption.
- Efficient Base administration of contractors requires regular meetings with stakeholders in order to determine progress with deliverables and ensure compliance with regulatory and military performance standards.
- Base and Camp security and access procedures, while thorough, do not address hazardous substances being brought onto site.
- The scope for the remaining assessments is to focus on Contractor Management including emergency preparedness and how this might be improved in a mutually beneficial process.

s9(2)(k)

Barry S Dyer  
Chief Executive

Attached: RCNZ Assessment Reports: Burnham, Dunedin, Woodbourne (3)

## RNZAF Base Woodbourne

### Command Level Summary

The Ministry of Defence Hazardous Substances Management Audit was conducted at RNZAF Base Woodbourne from 16 - 17 April 2024. The audit was carried out by two Responsible Care NZ (RCNZ) assessors, accompanied by a member of the NZDF Hazardous Substances Assurance Office (HSAO).

The areas visited include:

- Technical Training Squadron
- Nelso/Marlborough Institute of Technology School of Aviation
- Hanger #5
- Logistics Squadron and Armoury
- Ground Support Equipment Garage
- Aeronautical Engineering Fundamental Unit
- Non-Public Funds
- Ground Avionics Maintenance Section
- General Barracks and Social Areas
- Command Training and Recruit Training Squadron
- Base Fire Station
- Defence Health Centre
- Airbus office, Airbus Hanger #2, Airbus Electroplating Bay, Airbus Prop Shop, Airbus Mobile Engine Test Stand
- Coal Boiler House
- Base Steam Boiler.

The majority of RNZAF units and personnel have demonstrated a high level of compliance with the guidelines set forth in the Defence Force Order (DFO) 41 Safe Management of Hazardous Substances Class 2-9 and its accompanying Defence Force Instruction 41.2. There are some great initiatives currently being investigated and only minor to moderate considerations and recommendations needed.

Contractor awareness and access to NZDF hazardous substances regulations appear to be limited, or in some cases absent. Preliminary Provisions of DFO 41 require contractors to act in accordance with this order and this should be included as part of any contact. Lack of contractor awareness suggests that this may not be the case. The audit team are unable to confirm such inclusions, as to date no contracts have been provided for review.

Areas for a recommended review specifically for RNZAF Base Woodbourne include:

1. NMIT and Airbus hazardous substances management and procedures.
2. Reviewing liquid oxygen management plans.
3. Integration of unit Emergency Response Plans (ERPs) and Base Fire Station.
4. The lack of compliance certification regarding:
  - a. The waste oil tank at the Ground Support Equipment Garage.
  - b. The Non-Public Funds Boatshed.
  - c. The two Baltur burners at the Steam Boiler Room

Due to time constraints during the Electroplating Bay visit and the omission of several other areas of interest, the audit team will require a re-visit.

A comprehensive breakdown of audit findings, including recommendations for improvement follows.

**Commercial in Confidence**

**Burnham Military Camp Report**

**Command Level Summary**

The Ministry of Defence Hazardous Substances Management Audit was conducted at Burnham Military Camp from 01 – 03 May 2024. The audit was carried out by two Responsible Care NZ (RCNZ) assessors, accompanied by a member of the NZDF Hazardous Substances Assurance Office (HSAO).

The auditors were well-received by all, with open engagement from all Defence Force staff. The areas visited included 3 CSS Battalion, WO's and SNCO's Mess, 3 Transport Company, Workshops, 2<sup>nd</sup> Engineering Regiment, Burnham Camp Fire Station, 5 Signal Squadron, 2/1 RNZIR, Lockheed Martin Office and Workshop, Challenge Petrol Station, Burnham Golf Course, Burnham Camp Water Treatment Plant, West Melton and 2/4 Battalion.

Compliance with Defence Force Order (DFO) 41 Safe Management of Hazardous Substances Class 2-9 and its accompanying Defence Force Instruction (DFI) 41.2 regarding basic hazardous substance management in the units was found to be predominantly high, with minor adjustments needed for continuous improvement, however, several areas that require urgent review and redress:

1. Issues of concern at 3 CSS Battalion include lead exposure, compromised ventilation systems and workplace congestion resulting in unsafe practices.
2. The uncertified water treatment plant and associated risks, such as chlorine gas.
3. Lack of engagement with leaseholders using NZDF land.
4. Insufficient integration of unit Emergency Response Plans (ERPs) and Burnham Fire Station
5. Significant contractor and sub-contractor management issues and infrastructure limitations requiring higher-level review.
6. Inadequate fire extinguisher maintenance.

A comprehensive breakdown of audit findings follows, including recommendations for improvement.

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## 2/4 RNZIR Kensington Army Hall & HMNZS Toroa

### Command Level Summary

The Ministry of Defence Hazardous Substances Management Audit was conducted in Dunedin at two NZDF locations: 2/4 RNZIR Kensington Army Hall on 06 May 2024 and HMNZS Toroa on 10 May 2024 by a Responsible Care NZ assessor and a member of the NZDF Hazardous Substances Assurance Office.

The aim of the audit was to establish whether hazardous substance management compliance and practices at satellite Territorial Force (TF) locations are consistent with the guidelines outlined in Defence Force Order (DFO) 41 Safe Management of Hazardous Substances Class 2-9 and its accompanying Defence Force Instruction (DFI) 41.2. While the efforts of the attending staff are to be commended, it is evident that both satellite units require further support from their respective Headquarters.

Whilst this audit specifically targets the stewardship of hazardous substances within the NZDF, the findings extend beyond hazardous substances management to include the structure for managing contracted undertakings. Contractor activity outcomes do not appear to be meeting minimum standards.

A comprehensive breakdown of audit findings follows, including recommendations for improvement; however we have listed the areas requiring urgent review and redress:

1. The LPG installation at HMNZS Toroa is unsafe and requires an immediate review, including Compliance Certification and general installation set-up.
2. Ensure all fire extinguishers at HMNZS Toroa have undergone five-yearly hydraulic pressure testing.
3. Ensure all AFFF fire extinguishers at HMNZS Toroa are replaced with compliant models.

**Note:** It is acknowledged that both NZDF TF units reviewed during this audit will relocate to a new joint premises in June 2025.