



## PFAS Management Area Plan completion and next steps Singleton Military Area

### KEY POINTS

- **All actions within the PFAS Management Area Plan for Singleton Military Area have been addressed or actioned.**
- **A site audit was conducted by a contaminated land site auditor accredited by the NSW Environment Protection Authority.**
- **The Site Audit Report and Site Audit Statement document the independent assessment by the auditor that the works completed suitably address the actions within the PFAS Management Area Plan.**
- **Defence will continue to monitor PFAS on and around Singleton Military Area, and take further action if required.**
- **The outcomes of the 2021 Human Health Risk Assessment remain current.**
- **All plans and reports are published on the Defence website.**

### What is a PFAS Management Area Plan?

The PFAS Management Area Plan (PMAP) sets out Defence's activities to manage the risks from per- and poly- fluoroalkyl substances (PFAS) contamination on and around Singleton Military Area.

### What is a Site Audit Report and Site Audit Statement?

The Site Audit Report and Site Audit Statement provide an independent assessment of whether Defence has suitably addressed the PFAS management actions detailed in the latest PMAP.

Site auditors are approved by the NSW Environment Protection Authority to undertake a review of Defence's actions to date and verify if remediation has been completed to the extent practicable.

### Background

Most PFAS are found in areas where firefighting foams were previously used and stored. These are called source areas. PFAS moves from soil in these areas into surface water and groundwater, and can then move off the base into the wider environment.

In December 2021, Defence completed detailed environmental investigations into PFAS contamination on and around Singleton Military Area. These investigations looked at which areas were impacted by PFAS contamination and whether people may be exposed to PFAS contamination. People can be exposed through drinking water or eating food such as red meat, milk and eggs. The Defence website has a 2021 factsheet that summarises these risks.

The Human Health and Ecological Assessment factsheet and the PMAP are available on the Defence website at: [www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area](http://www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area).

Defence continues to undertake routine monitoring of groundwater, surface water and sediment to observe changes to PFAS concentrations on and around the base.

### Precautionary advice

While Defence has addressed all the actions in the PMAP, PFAS will remain in the environment on and around Singleton Military Area as the total removal of PFAS from the environment is not possible. However, concentrations will decrease over time. Until then, the outcomes of the Human Health Risk Assessment remain current.

Where a potentially elevated exposure risk has been identified, residents should follow to the Australian Government advice about reducing exposure to PFAS. If you have any concerns about your dietary intake, please contact the NSW Environment Protection Authority by calling 131 555 or emailing [info@epa.nsw.gov.au](mailto:info@epa.nsw.gov.au).

### Summary of exposure pathways and potential risks for residents

Low and acceptable risk	<b>Incidental ingestion of soil</b> during outdoor activities	Potentially elevated exposure risk	<b>Eating large quantities of home-grown red meat</b> from sheep or cattle that have consumed water containing PFAS, or have grazed in areas irrigated or flooded with water containing PFAS
	<b>Dermal (skin) contact with soil</b> during outdoor activities		<b>Consuming large quantities of home-grown milk</b> from cows that have consumed water containing PFAS, or have grazed in areas irrigated or flooded with water containing PFAS
	<b>Inhalation of dust</b> during outdoor activities or dust tracked into the home		
	<b>Eating eggs</b> from home-grown backyard poultry (that have grazed in areas irrigated or flooded with water containing PFAS)		<b>Cumulative ingestion of home-grown red meat, milk and eggs</b> from backyard poultry that have consumed water containing PFAS, or have grazed/roamed in areas irrigated or flooded with water containing PFAS.
	<b>Eating home-grown green vegetables</b> that have been irrigated with water containing PFAS, or grown in soil irrigated or flooded with water containing PFAS.		



## Site Audit Report and Site Audit Statement

The NSW contaminated site auditor scheme provides a pool of accredited experts who can be engaged to review investigation and remediation work undertaken by contaminated land consultants.

Site Auditor, Andrew Lau from environmental consultancy firm JBS&G, was appointed to review the actions in the PMAP for Singleton Military Area. The auditor prepared a Site Audit Report and Site Audit Statement detailing the status of the actions against the PMAP requirements. The determinations are summarised below. A full copy of the Report and the Statement are available on the Defence website at: [www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area](http://www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area).

## How did we complete the PFAS Management Area Plan

- **Action 1 – Data Gap Investigation at the former cantonment fire station (a PFAS source area)**
  - The former fire station was demolished around 2022, in accordance to the PMAP recommendation.
  - Further investigations determined there was only very low concentrations of PFAS across the area and further action was not warranted.
  - The Site Auditor is satisfied that no further works are required at the former cantonment fire station.
- **Action 2 – Review of works planned at the Defence National Storage and Distribution Centre (DNSDC) as part of a Mid Term Refresh project (a PFAS source area)**
  - The planned base wide Mid-Term Refresh project did not proceed.
  - The Site Auditor considers that the Defence Construction and Maintenance Framework will be applied to control PFAS impacted soil and water excavated during any future base project works.
- **Action 3 – Undertake a PFAS movement assessment**
  - PFAS movement assessments are a way of measuring how PFAS leaves the base in surface water and groundwater. They assess the significance of contamination and help to target specific areas for remediation.
  - In 2024, a PFAS movement assessment was completed. The total amount of PFAS leaving the base in the main drain was very low compared to other Defence bases.
- **Action 4 – Implement the Ongoing Monitoring Plan**
  - Ongoing monitoring has been occurring on and around Singleton Military Area since 2021.
  - More than 300 samples have been collected.
  - The Ongoing Monitoring Plan is available on the Defence website at: [www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area](http://www.defence.gov.au/about/locations-property/pfas/pfas-management-sites/singleton-military-area).
- **Action 5 – Work with NSW Government and other stakeholders**
  - The Site Audit Report and Site Audit Statement have been provided to the NSW Environment Protection Authority.
  - Defence will continue to provide the NSW Environment Protection Authority with Ongoing Monitoring Reports. The Site Audit Report and Site Audit Statement have been provided to them.
  - Landowners will continue to receive individual results letters where their land is sampled under the ongoing monitoring program.
  - The site auditor is satisfied with Defence's commitment to ongoing engagement with the community and NSW Government.

## Next steps

Defence will:

- continue routine monitoring of surface water, groundwater and sediment on and around Singleton Military Area, and
- continue to publish monitoring results on the Defence website and provide results letters to property owners where sampling is undertaken on their land.

The Site Auditor has endorsed these actions, and the NSW Environment Protection Authority has been consulted in the preparation of the Site Audit Report and Site Audit Statement.

If future monitoring indicates changes to Defence's understanding of PFAS on and around the base, Defence will respond and take appropriate action.



## Frequently Asked Questions

The following information is provided to assist with addressing commonly asked questions and to clarify where to seek further guidance if required.

### Are PFAS still leaving the base and is there a risk to people who live nearby?

It is unfeasible to remove PFAS from the environment entirely. A small amount of PFAS remains on and still leaves Singleton Military Area mostly via surface water. There are currently no practical remediation techniques that would reduce this further.

The 2022 – 2023 Ongoing Monitoring Report found the overall human health risk to the community is low.

## Health

### What are the human health impacts from PFAS exposure?

Research on the health effects of PFAS in Australia and internationally is continuously evolving and health guidelines for PFAS differ around the world. The Department of Health and Aged Care is the leading agency responsible for Australian health guidance on PFAS. Information about health impacts from PFAS exposure is available online: [www.health.gov.au/topics/environmental-health/about/environmental-toxins-and-contaminants/pfas](http://www.health.gov.au/topics/environmental-health/about/environmental-toxins-and-contaminants/pfas)

### Is blood testing offered to residents living near Defence bases?

No, Defence does not offer a blood testing program for residents living near Defence bases. All Australians are expected to have detectable levels of PFAS in their blood owing to its use in many commonly used products. The Department of Health and Aged Care's enHealth Guidance Statement provides advice on blood testing for PFAS contamination:

[www.health.gov.au/resources/publications/enhealth-guidance-statement-per-and-polyfluoroalkyl-substances-pfas](http://www.health.gov.au/resources/publications/enhealth-guidance-statement-per-and-polyfluoroalkyl-substances-pfas)

## Precautionary Advice

The NSW Environment Protection Authority may continue to contact property owners that require specific precautionary dietary advice. As a precaution, the Australian Government recommends minimising exposure to PFAS where possible. More information is available on the Department of Health and Aged Care website at: [www.health.gov.au/topics/environmental-health/about/environmental-toxins-and-contaminants/pfas](http://www.health.gov.au/topics/environmental-health/about/environmental-toxins-and-contaminants/pfas)

## Defence

### Who has Defence consulted with throughout the PFAS Investigation and Management Program?

Responding to PFAS contamination is a complex issue. Since the program was established in 2015, Defence has continuously supported and collaborated on a wide range of research projects with government, industry, academia, and other research partners.

All sampling implemented as part of the ongoing monitoring program is undertaken by independent and accredited laboratories and the results have been shared with the NSW Environment Protection Authority.

### What ongoing support will Defence provide to the community?

Defence's priority is to support communities impacted by PFAS contamination on and around Defence bases by reducing their exposure risk. Ongoing monitoring of Singleton Military Area will continue to monitor the long term effectiveness of the PMAP actions that have been addressed and as agreed to by the technical adviser. Monitoring results will continue to be provided to the environmental regulator and be published on the Defence website.

## Supporting ADF Personnel

The health and safety of our personnel, both current and former, is a primary concern for Defence, and for the Australian Government. Defence and the Department of Veterans' Affairs have a number of services available to support Defence personnel in relation to PFAS exposure. Current and former personnel who suspect that they have been exposed to PFAS as a result of their employment with Defence are encouraged to call 1800 333 362 for more information about the support services available.

## Contact Us



1800 333 362



[pfas.enquiry@defence.gov.au](mailto:pfas.enquiry@defence.gov.au)

Scan the QR code to find out more about Defence's  
PFAS Investigation and Management Program.

