



## Army Aviation Centre Oakey

**Community Update** September 2022

Defence published its PFAS Management Area Plan in 2019 to provide a roadmap for management of PFAS contamination on and from Army Aviation Centre Oakey (AACO). This factsheet provides an update on where we are now in implementing the plan and our next steps.

### Remediation and management activities

Defence continues to implement remediation and other management activities at Oakey to remove PFAS from the environment, and to further minimise PFAS migration from AACO. While we have been remediating groundwater since 2017, our further studies support a strong focus on remediation of soil at source areas.

To determine the remedial solutions that will provide the most benefit, Defence has partnered with the CSIRO to assist in modelling the outcomes of different remedial options.

Modelling by CSIRO experts will be completed by early 2023 and will assist Defence in determining the areas to remediate that will provide the best groundwater impacts offsite in the long term.

### Former Fire Training Area

Remediation at the Former Fire Training Area (FFTA) was completed in October 2021.

Approximately 8,930 tonnes of soil was excavated from the area and treated.

Modelling indicates that the remedial works at the FFTA will prevent up to 200 grams of PFAS leaving the remediated area every year.

The overall Base wide mass flux assessment currently being conducted suggests that the FFTA was a very significant contributor to the total amount of PFAS leaving the Base.



**Image 1:** Remediation works at Former Fire Training Area

Defence will continue to monitor and compare surface water results at the FFTA to assess the long term effectiveness of the remediation works.

### Other Source Areas

In early 2022, remedial investigations at six remaining source areas were completed. Of these, two areas had low and isolated PFAS concentrations in the soil that do not require remediation.

The investigations and CSIRO modelling will determine which remaining source areas require remediation. These may include the Former Fire Station, Hot Refuel and AFFF Settling Tank, Former Fuel Compound and Hot Refuel Area and the AFFF Storage and Decanting Area.

A Soil Remediation Action Plan for the remaining source area is due for completion in late 2022 with remediation works expected to start in early 2023.



## Water Treatment Plant

Defence has upgraded the capacity of the water treatment plant at the current Fire Training Facility. This plant is now treating up to 4 litres per second, or 2.4 million litres per week.

As a result, the water treatment plant that was located at the Former Fire Station has been de-commissioned. The remaining water treatment plant is treating more PFAS impacted groundwater than was being treated by both plants, at a reduced cost.

## Ongoing Monitoring Plan

Defence’s PFAS Ongoing Monitoring Plan involves monitoring the concentration and geographical spread of per- and poly- fluoroalkyl substances (PFAS) to let us know of any changes in the concentration and distribution of PFAS contamination in the Management Area.

The monitoring plan is now under review to ensure we are monitoring at the right places and at the right frequency. Any changes will be made in consultation with the Queensland Department of Environment and Science.

Defence thanks property owners for their continued cooperation and participation in the monitoring plan by providing access for sampling.

## 2021 Sampling and analysis snapshot

|                      |                    |
|----------------------|--------------------|
| <b>Groundwater</b>   | <b>146 samples</b> |
| <b>Surface Water</b> | <b>21 samples</b>  |
| <b>Sediment</b>      | <b>22 samples</b>  |

## Annual Interpretive Report

The Annual Interpretive Report (AIR) is developed following analysis of groundwater, surface water and sediment samples to assess changes in PFAS during the 12-month monitoring period.

The 2021 Ongoing Monitoring Annual Interpretive Report will be made available at:

<https://defence.gov.au/Environment/PFAS/Oakey/>

The 2021 report identifies that the nature and extent of PFAS contamination during the monitoring period in the AACO Management Area is generally similar to previous results and that the conceptual site model does not require any changes.

Over time, the concentrations of PFAS in surface water and groundwater are expected to trend downwards. This is for two reasons. The first is that Defence has ceased using legacy fire fighting foams containing PFAS. The second will be the impacts of the soil and groundwater remediation works.

## Groundwater

There were some minor changes in concentrations in local areas to the west and southwest of the Base which may be due to seasonal fluctuations and analytical variability.

## Surface Water and Sediment

Since 2019, lower PFAS concentrations have been reported in sediment samples from on-Base drainage channels. This is attributed to the excavation of sediment in the drainage channels in 2018 and cessation of use of PFAS containing firefighting foams.

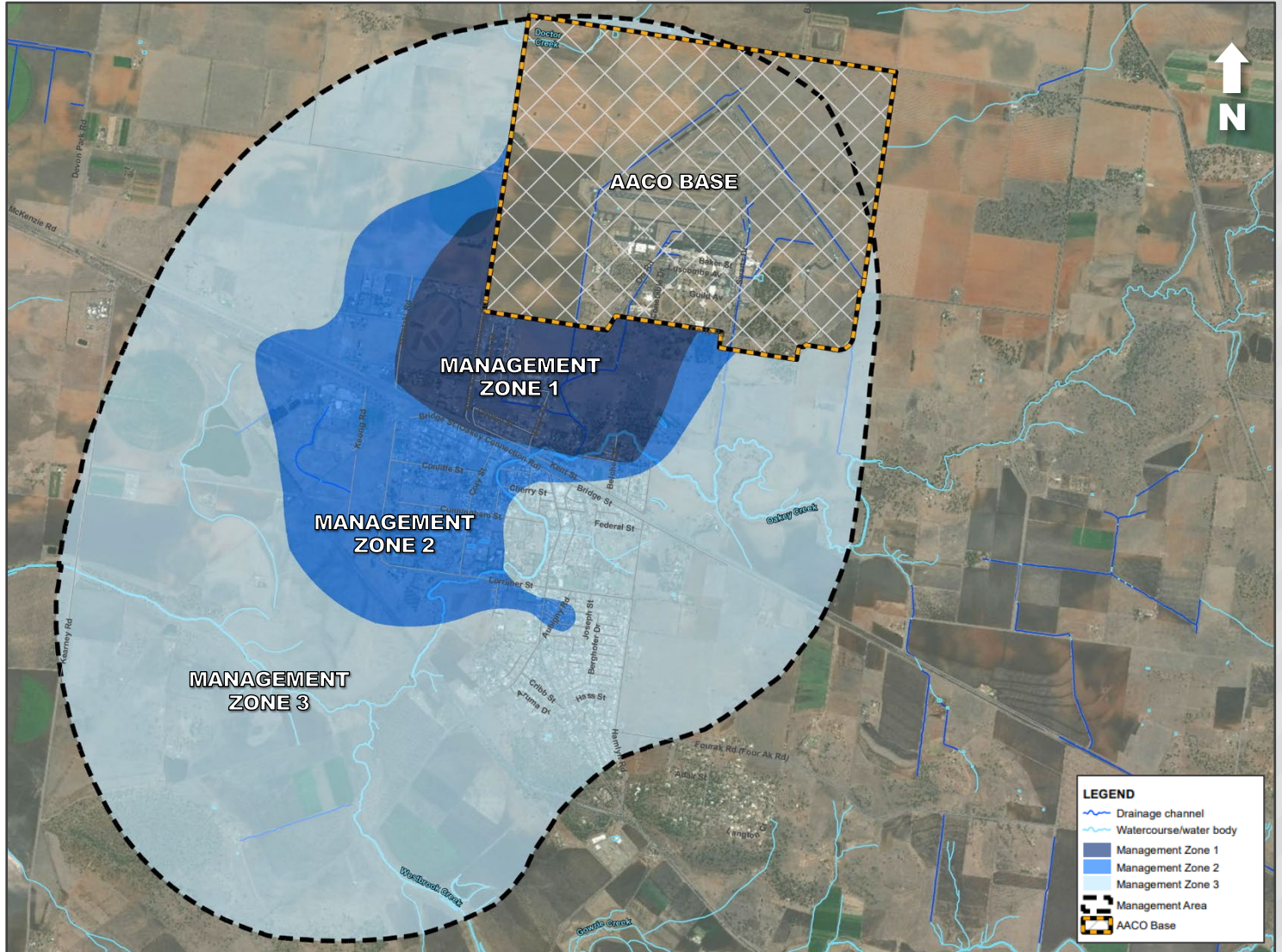
At Brymaroo, monitoring results indicated PFAS concentrations in groundwater were similar to historical results.

## Human health and the environment

The AIR findings do not suggest a change in risk to human health or the environment, as outlined in the risk assessment available on the project website <https://defence.gov.au/Environment/PFAS/Oakey/>



## Army Aviation Centre Oakey PFAS Management Area



### MANAGEMENT ZONE 1

ACTIVITIES WITH ELEVATED PFAS EXPOSURE

- Drinking groundwater or using it in cooking
- Unintentionally ingesting groundwater when used indoors for showering or bathing or outdoors for filling swimming pools and children's wading pools, and sprinkler play
- Eating home grown leafy green vegetables
- Eating home grown red meat and/or offal
- Eating eggs from backyard poultry. Where exposure to PFAS-impacted groundwater, soil or feed can be prevented, it is estimated that PFAS would reduce to less than the laboratory limit of reporting (LOR) in eggs after 100 days
- Eating fish from Oakey Creek
- Drinking home grown milk

### MANAGEMENT ZONE 2

ACTIVITIES WITH ELEVATED PFAS EXPOSURE

- Drinking groundwater or using it in cooking
- Unintentionally ingesting groundwater when used indoors for showering or bathing or outdoors for filling swimming pools and children's wading pools, and sprinkler play
- Eating home grown leafy green vegetables
- Eating home grown red meat and/or offal
- Eating eggs from backyard poultry. Where exposure to PFAS-impacted groundwater, soil or feed can be prevented, it is estimated that PFAS would reduce to less than the laboratory limit of reporting (LOR) in eggs after 100 days
- Eating fish from Oakey Creek

### MANAGEMENT ZONE 3

ACTIVITIES WITH ELEVATED PFAS EXPOSURE

- Drinking groundwater or using it in cooking
- Eating fish from Oakey Creek



## Water assistance

Defence continues to ensure eligible Oakey residents have a sustainable drinking water supply.

Under the Oakey Reticulated Town Water Connections Program, Defence funded Toowoomba Regional Council (TRC) to connect 36 eligible properties in the Oakey PFAS Management Area to town water.

To support property owners in the Management Area that could not be connected to the TRC water supply network, Defence is delivering the Rainwater Tank Upgrade program. This involves assessing, upgrading, and installing rainwater tanks to assure the long term drinking water needs for eligible property owners. Installation works started in July 2022 and are expected to be completed by late 2022.

In May 2022, the Australian Government extended Defence's payment of TRC water rate notices for eligible properties in the Management Area for an additional 24 months.

This brings the total period of Defence payment of TRC water rate notices to 6 years.

## Next steps

Defence will be progressing with:

- Finalising and implementing the Remediation Action Plan for the remaining source areas
- Continuing with remediating groundwater, using our upgraded water treatment plant
- Continuing with the Ongoing Monitoring Plan to understand what is changing with PFAS contamination in the Management Area, and
- Reviewing the Ongoing Monitoring Plan and PFAS Management Area Plan to ensure they remain up to date.

## Contact us

For further information on Defence's response to PFAS contamination at Army Aviation Centre Oakey, including detailed reports, the PFAS Management Area Plan and factsheets, please visit:

[www.defence.gov.au/environment/pfas/Oakey/](http://www.defence.gov.au/environment/pfas/Oakey/)

Alternatively, you can contact:



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[www.defence.gov.au/environment/pfas/Oakey/](http://www.defence.gov.au/environment/pfas/Oakey/)

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