



### Background

RAAF Base Darwin (the base) is a joint civil-military airfield located 6.5 kilometres North-East of Darwin city centre. It covers an area of 1278 hectares and is considered to be a manned Forward Operating Base with year round activity. The Base is home to a range of administrative, residential, recreational and operational support facilities, as well as technical workshops, aircraft hardstands, taxiways and ordnance loading and storage areas. The original buildings were constructed pre World War 2 and many of these buildings remain in use and have historical and heritage value.

The base has a history of using legacy Aqueous Film Forming Foam (AFFF) for emergency fire fighting situations and for fire fighter training. In 2004 Defence commenced phasing out its use of legacy AFFF containing perfluorooctane sulfonate (PFOS) and perfluorooctanoic acid (PFOA) as active ingredients. Perfluorohexane sulfonate (PFHxS) was also commonly found in the legacy AFFFs as an impurity in the manufacturing process. The AFFF now used by Defence is a more environmentally safe product.

### About per- and poly-fluoroalkyl substances (PFAS)

PFOS, PFOA and PFHxS belong to a group of chemicals known as per- and poly-fluoroalkyl substances (PFAS).

AFFF containing PFOS and PFOA as active ingredients were once used extensively worldwide and within Australia because of their effectiveness in fighting liquid fuel fires.

PFAS were also used across Australia and internationally in a range of common household products and specialty applications, including in the manufacture of non-stick cookware; fabric, furniture and carpet stain protection applications; food packaging and in some industrial processes. As a result, most people living in the developed world will have levels of PFAS in their body.

PFAS are emerging as a concern around the world because they are persistent in the environment.

The Environmental Health Standing Committee (enHealth) of the Australian Health Protection Principal Committee (AHPPC) has released guidance statements relating to human health.

According to enHealth, there is currently no consistent evidence that exposure to PFOS and PFOA causes adverse human health effects. However, because these substances persist in humans and the environment, enHealth recommends that human exposure is minimised as a precaution.

### What has Defence done?

Defence has commenced a national program to review its estate and implement a comprehensive approach to manage the impacts of PFAS resulting from the historical use of legacy fire fighting foams.

As well as a number of detailed environmental investigations already underway, Defence has undertaken a preliminary sampling program at a number of sites including RAAF Base Darwin. Based on the outcome of this preliminary sampling program it has been determined that RAAF Base Darwin will be subject to a detailed environmental investigation. The Preliminary Sampling Program Report is available on the national Defence PFAS Environmental Program website at:

<http://www.defence.gov.au/id/DefenceSitesPending.asp>

### About detailed environmental investigations

The detailed environmental investigation will determine the nature and extent of PFAS on, and in the vicinity of, the base. The investigation commenced in March 2017 and will take approximately 12 months to complete. The national Defence PFAS website will be updated as new information becomes available.

Detailed environmental investigations are undertaken by independent and experienced environmental services providers and are undertaken in accordance with the National Environmental Protection (Assessment of Site Contamination) Measure (NEPM) framework. Detailed environmental investigations include:

- reviewing the historical use, storage and management of AFFF to identify potential sources of PFAS;
- sampling soil, sediment, surface water and groundwater on and off the base to identify PFAS exposure in the vicinity;
- identifying pathways and receptors for the potential migration of PFAS. A 'receptor' is a person or thing (e.g. plant or animal) that can be exposed to these compounds. A 'pathway' is the way in which they can be exposed (e.g. drinking water or eating food containing these compounds);
- community and stakeholder engagement, including a water-use survey; and
- a Human Health and Ecological Risk Assessment (if required), which will evaluate potential risks to the human population and ecology, and inform future action to mitigate risks.





### Investigation outcomes

When detailed environmental investigation reports are finalised and publicly released, Defence will consult with residents, businesses and local stakeholders on the findings.

Defence provides the environmental investigation reports to relevant government stakeholders. This ensures they have current information on which to inform their management decisions.

Defence takes detailed environmental investigations very seriously and is committed to implementing appropriate management responses based on the advice of independent scientific experts in this field.

### Community consultation

Defence will continue to engage with the community throughout the detailed investigation via a number of print and online avenues, including a dedicated project website, direct mail and factsheets.

### Support

The provision of public health advice is the role of the respective Australian Government, State/Territory and local health authorities and practitioners.

The Commonwealth Department of Health released final Health Based Guidance Values (HBGVs) for PFAS on 3 April 2017. The HBGVs were developed by FSANZ at the request of the Department of Health and replace the interim enHealth guidelines released in June 2016.

Defence will adopt the final HBGVs in all its environmental investigations including at RAAF Base Darwin.

Defence relies on the enHealth Guidance Statements available on the Department of Health website:  
[www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-publicat-environ.htm](http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-publicat-environ.htm).

Accordingly, Defence has adopted a precautionary approach and is providing alternative sources of drinking water to eligible residents located in close proximity to the base that do not have a town water connection, and rely on the use of a bore for drinking water.

Defence will also provide water to residents if drinking water is sourced from a tank that contains, or has in the past contained, bore water. Defence may also provide drinking water to residents in other exceptional circumstances.

Residents are welcome to contact the hotline by phone or email to discuss eligibility for water assistance and possible management strategies. Each household's drinking water requirements will be assessed on a case-by-case basis.

### Useful links

- Defence is not an authority on human health. The Australian Government Department of Health has established a PFAS webpage:  
<http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas.htm>
- The *Guidance Statements on Per- and Poly-fluoroalkyl Substances* and the *Per-and Poly-Fluoroalkyl Substances Factsheet*, prepared by enHealth and the AHPPC can be accessed at the following link:  
[www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-publicat-environ.htm](http://www.health.gov.au/internet/main/publishing.nsf/content/health-pubhlth-publicat-environ.htm)
- Northern Territory Environment Protection Authority:  
[ntepa.nt.gov.au](http://ntepa.nt.gov.au)
- The Northern Territory Department of Health:  
<http://www.health.nt.gov.au/>
- City of Darwin Council: [www.darwin.nt.gov.au](http://www.darwin.nt.gov.au)

### Where can I get more information?

**Web:** Information about the Darwin PFAS Investigation is available at <http://www.defence.gov.au/ID/Darwin/>

**RAAF Base Darwin Hotline:** 1800 316 812 freecall (business hours)

**Email:** [PFAS.RAABaseDarwin@coffey.com](mailto:PFAS.RAABaseDarwin@coffey.com)

**Media enquiries:** should be directed to Defence Media on (02) 6127 1999 or [media@defence.gov.au](mailto:media@defence.gov.au)

