Background
In October 2017, the Department of Defence commenced a detailed environmental investigation to better understand the nature and extent of per- and poly-fluoroalkyl substances (PFAS) on, and in the vicinity of, Lavarack Barracks (the Base), resulting from the historical use of firefighting foams.

Detailed Site Investigation
As part of the environmental investigation, a Detailed Site Investigation (DSI) has been undertaken and a report is expected to be finalised in December 2019.

The DSI included the installation of monitoring wells, as well as sampling and analysis of soil, sediment, surface water, groundwater and biota (plants and animals) on and off the Base. Over 700 samples were collected as part of this phase of the investigation.

The DSI found potential exposure scenarios for people who consume fish and shellfish from the Ross River. In order to further assess these exposure scenarios, Defence conducted a Seafood Human Health Risk Assessment. These findings will be discussed in this newsletter.

Seafood Human Health Risk Assessment (HHRA)
The Seafood HHRA assessed potential PFAS exposure-risks to people from consuming seafood caught through recreational fishing and shellfish harvesting in the Ross River, Northview Lake and Fairfield Lake.

Different exposure scenarios were assessed as part of the Seafood HHRA. The exposure scenarios considered the consumption of different fish species caught from the locations shown in Figure 1 (over the page).

The findings of the Seafood HHRA confirm that there is no increased exposure-risk due to the presence of PFAS from occasional consumption of fish from these areas.

The Seafood HHRA is available to view at www.defence.gov.au/environment/pfas/lavarack

*Dates may be subject to rescheduling
How are PFAS exposure risks assessed?

Food Standards Australia New Zealand have determined how much PFAS a person can be exposed to every day of their life without long-term risk to their health. This is known as the Tolerable Daily Intake (TDI).

Risks are assessed by calculating how much PFAS people are likely to be exposed to each day. This is based on the PFAS detected in soil, water, seafood or vegetables. This figure is compared to the TDI to identify a specific risk rating.

Where exposure is lower than the TDI, the level of exposure-risk is considered ‘low and acceptable’. Where exposure is higher than the TDI, the level of exposure-risk is considered ‘elevated’. An elevated exposure-risk does not mean that a person’s health will be affected, but action to reduce the risk may be required.

The Seafood HHRA found that the exposure risk is low and acceptable for consumption of shellfish and up to three serves of fish per week from the assessed areas, except for milk fish from Fairfield Lake and eel within the reach of the Ross River directly Upstream of Aplin’s Weir, which presented an elevated exposure risk.

Queensland Health Advice

In 2018, Queensland Health assessed results from fish tested from the Ross River and found that the levels of perfluorooctane sulfonate PFOS and perfluorohexane sulfonate PFHxS in the Investigation Area would not change the standard fish consumption advice issued by Food Standards Australia and New Zealand (FSANZ) to limit consumption of most fish species to 2 to 3 serves per week from a range of sources. Precautionary advice was provided to not consume fish from the lakes in Idalia, but anyone that has occasionally consumed fish from the lakes in the past should not be concerned about their exposure to PFAS from the fish. Queensland Health did not recommend any restrictions for consumption of eel because eel from the Ross River is unlikely to be regularly consumed in Townsville. The precautionary advice not to consume fish from Idalia Lakes remains in place and can be found via the following link: https://www.qld.gov.au/environment/pollution/management/disasters/investigation-pfas/sites/defence-sites/townsville

The FSANZ advice on fish consumption can be found on the food standards website at: www.foodstandards.gov.au/consumer/chemicals/mercury/
Next Steps

A comprehensive Human Health Risk Assessment (HHRA) is being developed.

This HHRA will consider other potential exposure pathways in the Investigation Area. These include consuming produce grown in PFAS impacted soils and using public open space areas for recreation.

The HHRA is expected to be completed in December 2019.

In addition to the HHRA, Defence is conducting an Ecological Risk Assessment to assess PFAS exposure risk to plants and animals. This assessment is expected to be completed in the second-quarter of 2020.

Keeping the community informed

Defence is committed to regularly updating the community during this investigation. As well as Community Walk-in Sessions, updates are provided on the project website, and through direct mail and information sheets.

The next Community Walk-in Session is expected to be held in December 2019.

Contact Information

Lavarack Barracks Investigation Team

Phone: 1800 436 688
Web: www.defence.gov.au/environment/pfas/lavarack/
Email: lavarack.defence@rpsgroup.com.au

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

EnHealth Advice

The Environmental Health Standing Committee (enHealth) of the Australian Health Protection Principal Committee (AHPPC) has released guidance to help assess public health risks when PFAS have been released into the environment. In July 2019, the statements were updated to reflect the most current evidence relating to PFAS.

The Expert Health Panel for PFAS found that although the scientific evidence in humans is limited, reviews and scientific research to date have provided fairly consistent reports of an association with several health effects. The health effects reported in these associations are generally small and within normal ranges for the whole population.

There is also limited to no evidence of human disease or other clinically significant harm resulting from PFAS exposure at this time.

As a precaution, enHealth recommends exposure to PFAS be minimised wherever possible while further research is undertaken on the potential health effects of PFAS exposure. If you live or work in a PFAS contaminated area, your state or territory health department can provide you with local advice on how to minimise PFAS exposure.

For more information, contact the Commonwealth Department of Health:

Phone: 1800 941 180
Web: www.health.gov.au/pfas