

Response provided to journalist  
24 July 2018

### **Question**

I noticed an article from The Chronicle yesterday about the success of the water treatment plant at the Oakey Army Base. Am I able to have a copy of that information? Is there any actual figures to go with it?

Also, is it believed that the movement of the chemical in the aquifer (estimated by AECOM) will be (or has been) reduced or stopped completely? And does Defence hope that in the future all detectable levels of the PFAS chemical in the aquifer will be removed?

### **Response**

To clarify recent reporting, Defence has not advised that the aquifer has been treated to below recommended health guidelines.

Defence has installed a water treatment plant at the Army Aviation Centre Oakey to treat some per- and poly-fluoroalkyl substances (PFAS) source areas on base. The plant extracts contaminated groundwater from a bore near the former fire station and filters this water through a regenerable synthetic resin with ion exchange functionality. The treated water is then reinjected into the aquifer to reduce the amount of contamination leaving the Base. This process has been endorsed by the Queensland Department of Environment and Science.

The plant has been operating since September 2017 and, as of Wednesday 11 July, has treated 26,205,000 litres of water. There is currently no planned end date for operations.

Health-based guidance values—developed by the Federal Department of Health from Food Standards Australia New Zealand tolerable daily intakes—have only been applied to three types of PFAS - perfluorooctane sulfonate (PFOS), perfluorooctanoic acid (PFOA) and perfluorohexane sulfonate (PFHxS). The water treatment plant has extracted PFOS, PFOA and PFHxS to below the limit of reporting, this means that, if any of these substances remain in the treated water, the concentration is too small to be reliably detected by laboratories. The limit of reporting is well below the Health-based guidance values for drinking and recreational water use. For reference, the drinking Health-based guidance values for PFOS is 0.07 µg /L (0.07 parts per billion).

The 2017 Environmental Site Assessment Report, provided by the Defence consultant AECOM, summarised the output of the groundwater model for the Oakey Management Area and included an indication of the future movement of the plume (body of contaminated water). The modelled outputs are conservative as they do not take into account any remediation or management activities on the PFAS source area located on the Base for the 100 year period.

The predicted plume extent after 100 years - assuming no remediation activities - shows PFAS migration approximately 6 kilometres to the west, in the direction of groundwater flow. The regional groundwater flow direction beneath the Base is from

east to west and PFAS present in groundwater beneath the Base is predicted to be transported towards the west.

Defence is currently developing a PFAS Management Area Plan based on the findings of the Oakey PFAS Environmental Investigation. As part of the Plan, an Ongoing Monitoring Plan is also being developed to specify the collection of groundwater samples for PFAS analysis from locations across the Management Area including the area to the south-east. Implementation of the Ongoing Monitoring Plan will provide information on the distribution of PFAS contamination in groundwater in the Management Area to inform Defence and the public of the effectiveness of management actions to mitigate the plume's movement. The PFAS Management Area Plan and Ongoing Monitoring Plan are expected to be complete and presented to the community by the end of 2018.

Defence is committed to reducing the exposure pathways from PFAS to affected communities and will continue to engage with the community about PFAS management activities.