



Australian Government  
Department of Defence  
Estate and Infrastructure Group

# Community Information Session

Army Aviation Centre Oakey

2017 Environmental Site Assessment and Human Health Risk Assessment

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**First Assistant Secretary Infrastructure**  
**Department of Defence**

**December 2017**

Defending Australia and its National Interests  
[www.defence.gov.au](http://www.defence.gov.au)



# Acknowledgment of country

We would like to respectfully acknowledge the Jarrowair and Giabul people, the traditional custodians of the land on which this meeting takes place, and also pay respect to Elders both past and present.

# Welcome

## Presentation outline:

- Investigation Update
- 2017 Environmental Site Assessment
- 2017 Human Health Risk Assessment
- Next Steps and Management Actions
- Questions



### Community Walk In Sessions:


Thursday 7 December 2017

Oakey RSL

9.00am – 12.00pm (morning)

2.00pm – 6.00pm (afternoon)

# Investigation Update

<b>Session Focus</b> 	<b>2017</b>	<b>Data Gap Analysis</b>	<b>Updated Human Health Risk and Environmental Site Assessments</b>
	2017	Food Standards Australia New Zealand Health Based Guidance Values	Human Health Risk Assessment Sensitivity Assessment
	2016	Stage 2C	Environmental Site Assessment Human Health Risk Assessment Preliminary Ecological Risk Assessment
	2015	Stage 2B	Environmental Site Assessment

# 2017 Environmental Site Assessment

Have a  
question?

To discuss any questions about your specific circumstances, please attend the community walk-in sessions tomorrow at Oakey RSL.



## Field Investigations (January – June 2017)

Sample type	Samples collected
<b>Total samples collected</b>	<b>2,618</b>
Groundwater	173
Soil	581
Sediment	128
Surface water	62
Residential tank water	19
Other residential samples (e.g. soil, plants, animals, tap water)	75
Eggs - chicken egg study and backyard	1,354
Fruit and vegetables	75
Grass	28
Aquatic animals (yabbies, mussels, fish)	92
Other animals (rabbits, hares and worms)	31

**1,223 samples collected previously during the Stage 2C Environmental Investigation**



## Outcomes – 2017 Environmental Site Assessment

- Refined the understanding of the extent of PFAS in the groundwater
- Improved understanding of source areas and influence of drainage channels
- Data collected informed the Human Health Risk Assessment



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## The Broader Context – Available Advice

Australian  
Department  
of Health

- **General advice**
- No consistent evidence that exposure to PFOS and PFOA causes adverse human health effects
- PFAS are persistent in humans and the environment
- Minimise exposure as a precaution
- FSANZ (2017) Health Based Guidance Values (HBGV) – thresholds at which no human health effect is expected

Department  
of Defence

- **Site-specific assessment**
- Human health risk assessments use site-specific information to:
  - assess potential PFAS exposure from a range of possible pathways
  - identify how to minimise future PFAS exposure

Queensland  
Department of  
Health

- **General advice**
- The most important thing to do for residents that live in or near a contaminated area is to reduce exposure to PFAS
- This can be done by:
  - Not drinking or cooking with PFAS impacted water
  - Not consuming animal or vegetable food products grown/ produced with PFAS impacted water
  - Not bathing, swimming or sprinkler play in PFAS impacted water



## The Broader Context – Other Government Programs

- **Australian Government**
  - Epidemiological Study
  - Voluntary Blood Testing Program
  - Expert Health Panel for PFAS
  - Mental Health and Counselling Services
  - Wellness Program
- **Toowoomba Regional Council**
  - Town water connections

# 2017 Human Health Risk Assessment

Have a  
question?

To discuss any questions about your specific circumstances, please attend the community walk-in sessions tomorrow at Oakey RSL.



## Objectives – 2017 Human Health Risk Assessment

- Further assess activities which have the potential to expose people to PFAS
- Identify how PFAS exposure can be minimised

## 2017 Human Health Risk Assessment

### ✓ What it can tell us

- Activities to avoid to minimise PFAS exposure (as per Queensland Health advice)
- Activities where no adverse health effects are likely
- Cumulative exposure from multiple activities
- Inform future management actions

### X What it can't tell us

- Potential future health effects for individuals
- Whether existing health effects for individuals are associated with past exposure
- Medical advice




# Activities - Elevated PFAS Exposure



	Management Zones		
	1	2	3
<i>Drinking groundwater</i> or using it in cooking	●	●	●
<i>Unintentionally ingesting groundwater</i> when used indoors for showering or bathing; or outdoors for filling swimming pools and children's wading pools, and sprinkler play	●	●	
<i>Eating home grown leafy green vegetables</i>	●	●	
<i>Eating home grown red meat and/or offal</i>	●	●	
<i>Eating eggs from backyard poultry</i>	●	●	
<i>Eating fish from Oakey Creek</i>	●	●	●
<i>Drinking home grown milk</i>	●		

● Indicates activities with potential PFAS exposure approaching, or greater than, the Tolerable Daily Intake

# Activities - Low and Acceptable Risk

		Management Zones		
		1	2	3
	<b>Eating home grown fruit, or eating yabbies from Oakey Creek</b>	<i>Low and acceptable</i>		
	<b>Unintentionally ingesting groundwater</b> used for household cleaning, laundry, washing vehicles or washing pets	<i>Low and acceptable</i>		
	<b>Unintentionally ingesting soil or sediment</b> during domestic or recreational activities	<i>Low and acceptable</i>		
	<b>Unintentionally ingesting surface water or skin contact with surface water</b> during recreational activities such as swimming, boating or fishing	<i>Low and acceptable</i>		
	<b>Skin contact with soil, sediment, groundwater or surface water</b> during domestic, work or recreational activities	<i>Low and acceptable</i>		
	<b>Inhaling dust</b> as a result of outdoor activities (e.g. lawn mowing) or dust tracked back into the home or workplace	<i>Low and acceptable</i>		





# Management Actions Next Steps



# PFAS Response Management Activities at Oakey

- Connecting homes to town water
- Established a Water Treatment Plant
- Excavation and reinstatement of affected on-site drains
- Removing on-Base PFAS source areas
- Ongoing water quality monitoring



# Ongoing Activities

- Finalise and release investigation and other reports
- Community information sessions and updates
- Alternative water supply
- Environmental monitoring
- Working and collaborating with the Queensland State Government and Toowoomba Regional Council
- Liaising with regulatory and industry professionals, nationally and internationally

# Further Information

- Project website - [www.defence.gov.au/Environment/PFAS/Oakey/](http://www.defence.gov.au/Environment/PFAS/Oakey/)
- Community walk-in sessions

## Need help interpreting the reports?

- Attend the community walk-in sessions
- Take home the ESA and HHRA factsheets today
- Contact the project team on 1800 136 129 or [defence.oakey@aecom.com](mailto:defence.oakey@aecom.com)



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# Thank you

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## Contact us



**Phone:** 1800 136 129 free call (*business hours*)



**Email:** [defence.oakey@aecom.com](mailto:defence.oakey@aecom.com)



**Website:** [www.defence.gov.au/Environment/PFAS/Oakey/](http://www.defence.gov.au/Environment/PFAS/Oakey/)



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