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Defence Support and Reform Group

**Community Information Session**

**Tuesday 10 December 2013**



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## Recap – groundwater investigation

- Fire fighting training activities commenced in 1970s
- Defence proactively undertake regular assessment of groundwater
- Recent results identified AFFF impacts in groundwater on base



# Recap – groundwater investigation

- **Perfluorinated Chemicals (PFC's)**
  - Component of **Aqueous Film Forming Foams (AFFF)**
- **Perfluorooctane Sulphonate (PFOS) and Perfluorooctanoic Acid (PFOA)**
  - Man-made fluorinated chemicals
  - Resistant to biological, thermal and chemical degradation



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## Recap – groundwater investigation

- PFC products have been used for decades
  - Found in ‘scotch guard’, ‘teflon’, ‘gore-tex’ and other common household cleaning products





## Investigation results

- Results from 2012 and 2013 were assessed for risks:
  - from swimming in pools filled with groundwater;  
and
  - from incidental exposure during irrigation
- Risks to human health as a result of these exposures are low and acceptable
- Further testing is required

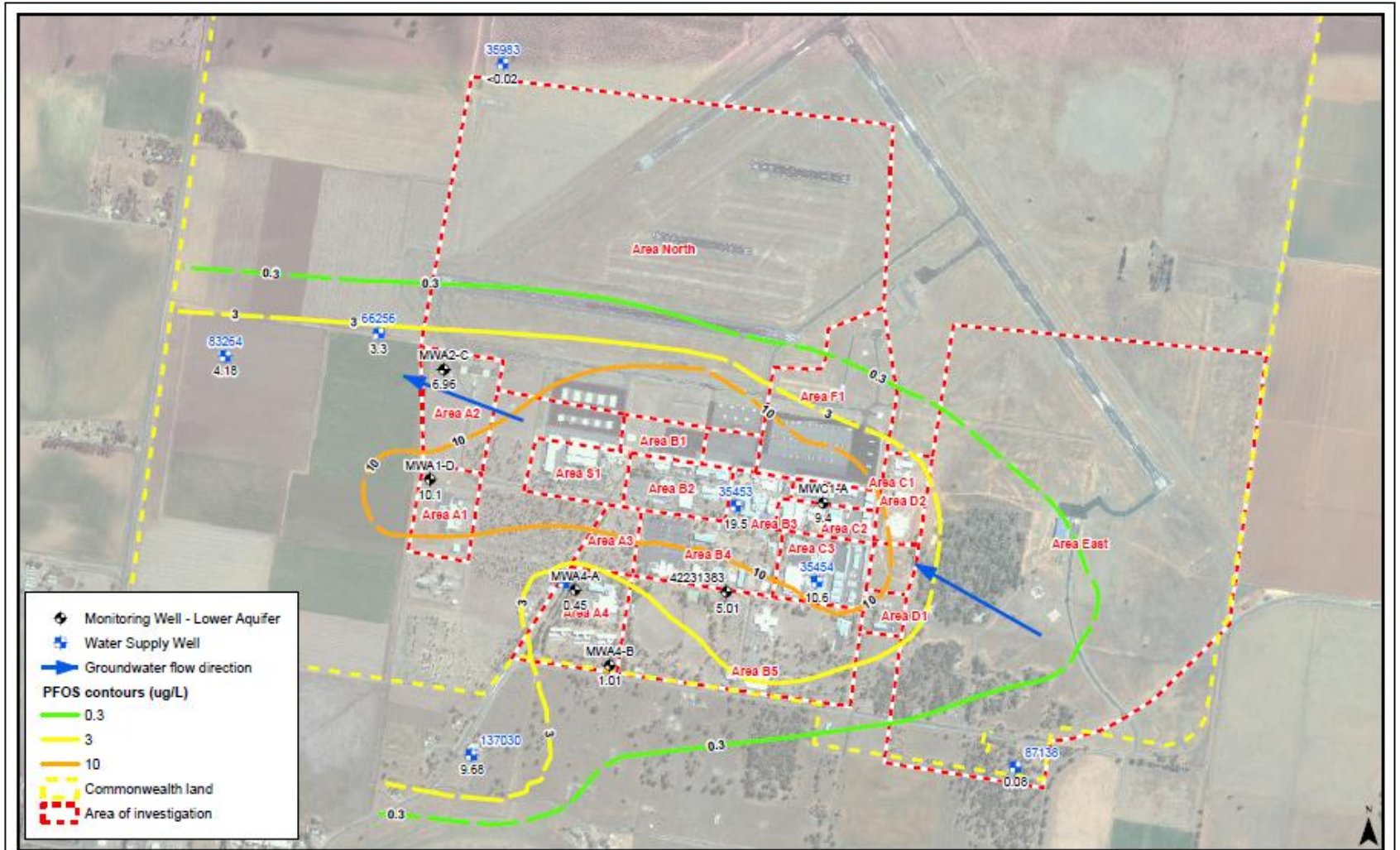


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# Inferred PFOS Concentration Contours Groundwater – Lower Alluvial Aquifer, AACO



Data Source: Google Earth 8/22/2009  
 PB data: groundwater analysis from 9/12 to 12/12  
 Well Location: 137030 was sampled from a tap on 15 January 2013  
 Locations 35983, 66256, 83284, MWA-6-B sampled between 7/21/13 and 8/21/13

Drawing No: 21713744\_G10\_F029\_A5  
 Author: WK Date: 10/01/2013  
 Editor: WK Print Date: 10/05/2013  
 Revison: A4 Review: DH

Scale: 1:15,000  
 0 150 300 metres  
 Projection: Transverse Mercator  
 Coordinate System: GDA 1984 MGA Zone 88  
 Scale coordinates printed at 88 Longitude

## AACO Groundwater Monitoring Event 2012, February 2013 Addendum

Figure 3  
Lower Alluvial Aquifer PFOS Contour Map - Feb 2013

**PARSONS  
BRINCKERHOFF**



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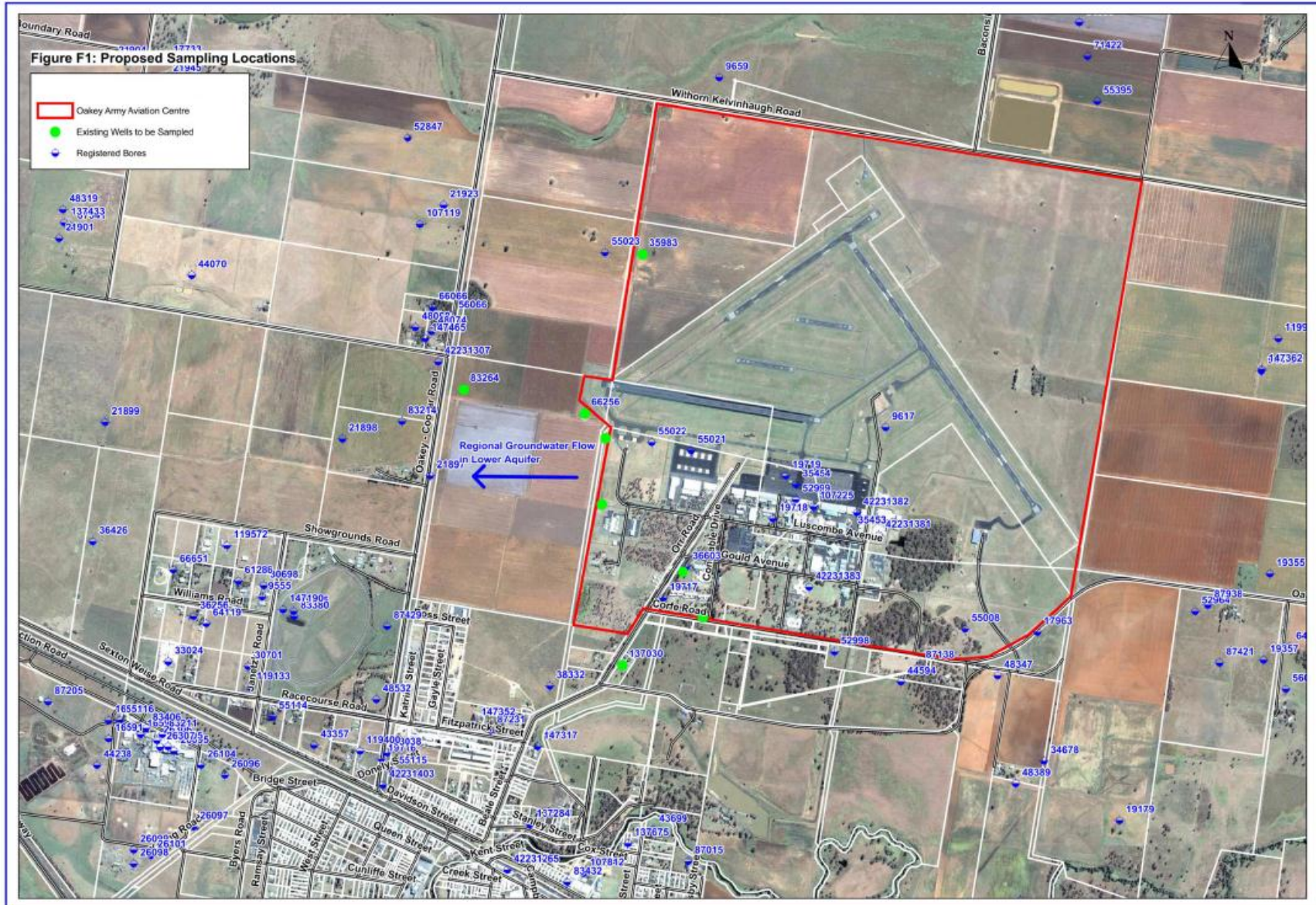
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## What happens next?

- Defence want to proactively undertake investigations further afield
  - Test groundwater sources at existing and new bore locations
  - Confirm previous results
  - Assess extent of the impact
  - Undertake further risk assessments (potential health impacts)
  - Provide recommendations
- Ecological assessments will not be undertaken



# Locations of existing and new bores







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# What does this mean?

- Sampling of existing bores is underway
  - Further targeted sampling between December 2013 and early 2014
  - May include groundwater bores on private property



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# What if I have questions?

- Defence want to keep you informed
- Project information line (Monday to Friday, 8.30am to 5pm)

Phone: 1800 136 129

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



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# Further Information

Please direct further enquires to:

## **Project team**

Phone: 1800 136 129

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or

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Thank you  
Any questions?



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# What does this mean?

- Uncertainty surrounding the potential toxicity of PFC compounds in humans.
- Drinking water guidelines from the USA are based on a toxicological study conducted in monkeys.
- Assumes people are drinking 2 - 3 L of water per day for 27 years.
- More data is needed to make a further determination about the potential for risks to human health.