From: [redacted]
To: IPCN Enquiries Mailbox
Subject: Cabbage Tree Sand Quarry - contamination maps
Date: Thursday, 15 March 2018 4:30:20 PM
Attachments: 20171205ESAFindings.pdf
20171205OffSiteHHRAFindings.pdf
180122 Updated map with property boundry from Enviro Minister.pdf

---

Good Afternoon Commissioners,

Thank you for your time on Monday.

Attached are four documents and please bare with me as it is hard to convey this information over an email rather than face to face with the documents and maps.

On Monday you heard the reality of our local residents and what they have had to endure over the last three years, not only with the sand mine but the devastating RAAF contamination.

Attached are two fact sheets from defence with Maps of the PFAS exposure risk zones and a map which includes the current ground water plums. I note this plum is constantly moving in ground water and also with the surface water at locations where there is interplay between the ground and surface water sources.

It is imperative to note, that in both of the Defence Maps from Aecom that the majority of the sand mine area is affected by the contamination, most importantly is the map which outlines the underwater detects which are extremely close to the boundary of the site. What wasn't included was results of PFOA, this map is only PFHxS and PFOS, I also note that at our property [redacted] Cabbage Tree Road, we have had a detect of PFOA, which wasn't included in the study as the results came through afterwards. if you would like these result I am more than happy to send them through.

You heard all of our concerns on Monday and these resources highlight the reality of the contamination. I note that all residents moved into the area with no idea of the risks the would face, therefore no level of contamination is acceptable.

From memory the only maps and resources that the department used when referring to the contamination was the EPA maps, which when you compare to the defence maps, it only raises more questions as to why an area that should be included wasn't. Sepecifially the two lots that make part of the proposed site that site behind our property and the ten properties along the road to the east.

I hope this makes sense, I am sure you will understand when you really look at the Defence map of the extent of PFOS and PFHxS in Groundwater.

We truly hope that you make the right decision.

Should you have any questions, please do not hesitate to contact us.

Kind Regards

Rhianna and Cain
[redacted]

RAAF Base Williamtown Stage 2B Environmental Investigation

2017 Off-Site Human Health Risk Assessment

The 2017 Off-Site Human Health Risk Assessment (HHRA) assessed the exposure risks to per- and poly-fluoroalkyl substances (PFAS) for people living, working and undertaking recreation activities within the New South Wales (NSW) Environment Protection Authority (EPA) Investigation Area. Specifically, the HHRA considered exposure via PFAS-impacted soil, groundwater, surface water, sediment, home grown fruit and vegetables, red meat, poultry eggs, milk and seafood from local waterways. It builds on previous risk assessments completed and is part of the phased approach to the assessment of risks, adopted in consultation with the NSW Government and NSW EPA Accredited Site Auditor.

The updates to the 2017 HHRA were based on:

- Additional data collected as part of the 2017 Stage 2B Environmental Investigation (2017 Stage 2B EI).
  This included analysis of PFAS in samples of:
  - Sediment, surface water samples from drains, open channels, creeks and marine waters
  - Soil and groundwater samples
  - Residential bore, tank and pool water samples
  - Home grown fruit, and finfish, prawns and crabs from local waterways.
- Adopting the Health Based Guidance Values and Tolerable Daily Intake (TDI) developed by Food Standards Australia New Zealand (FSANZ) and released by the Commonwealth Department of Health in April 2017.
- Identifying groups of people in the Williamtown community who may be exposed to PFAS in the environment.
- Information obtained from community surveys to identify potential ways people could be exposed to PFAS in the environment (exposure pathways).

Overall, the HHRA characterises potential risk by comparing the estimated PFAS intake levels experienced by people in the NSW EPA Investigation Area with the TDI developed by FSANZ and released by the Commonwealth Department of Health in April 2017.

A TDI represents a level of a substance that a person can be exposed to every day of their entire lifetime with appreciable risk to their health. The TDI is based on toxicological studies and incorporates safety factors to account for uncertainty. TDI were only published by FSANZ for perfluorooctane sulfonate (PFOS), perfluorooctanic acid (PFOA), and perfluorohexane sulfonate (PFHxS). The HHRA also assessed potential exposure to perfluorohexanoic acid (PFHxA) based on a TDI derived by ToxConsult (2016). There is currently insufficient data available to derive reliable TDI values for other types of PFAS.

The phrase 'low and acceptable' risk appears throughout the report and is standard terminology used in HHRA completed in accordance with the *National Environment Protection (Assessment of Site Contamination) Measure 1999*, as amended 2013. This phrase refers to circumstances where the exposure is estimated to be below the TDI, which is a threshold that is expected to be associated with no adverse health effects.

There is currently no consistent evidence that exposure to PFOS and PFOA causes adverse human health effects, and exceeding the TDI does not mean that health effects will necessarily occur. The HHRA identifies individual activities where PFAS exposures are "elevated" and have the potential to approach or exceed the TDI. These pathways may contribute most significantly to overall PFAS exposure and should be managed to most effectively minimise future exposure to PFAS present in the environment (as per NSW Government advice).

2017 HHRA Key Findings

The concentrations of PFAS in groundwater and surface water vary within the NSW EPA Investigation Area. Concentrations of PFAS reported in additional groundwater samples collected during 2017 have been used to refine the boundaries of the groundwater areas defined in the 2016 HHRA. Surface water and sediment data collected during 2017 has also allowed for refinement of the assessment of land-based exposure to users of the creeks and drains within the NSW EPA Investigation Area. Inclusion of the additional groundwater and surface water data collected in 2017, has refined the 2017 Stage 2B EI Investigation Area into key Risk Zones.

The following classifications have been identified to communicate the key activities within each of these zones that have the potential to result in elevated exposure to PFAS and the ways people can manage future PFAS exposure:

- **Risk Zone A (Southern Area):** the area identified as including the Southern Area, first defined in the 2016 HHRA, is referred to as **Risk Zone A**. This zone is located immediately to the south of the base and the boundaries have been refined, compared to the 2016 HHRA. It has the highest level of PFAS concentrations in groundwater compared to the broader NSW EPA Investigation Area.
- **Risk Zone B (Eastern):** additional groundwater data collected as part of 2017 Stage 2B EI, combined with data from 2015 Stage 2A and 2016 Stage 2B, has allowed for the identification of a second groundwater area. This area follows interpreted groundwater impacts from infiltration of surface water east of the Base, as well as the interpreted plume originating from areas where fire fighting foams were used on-Base, or 200 metres from the **Risk Zone A** boundary, whichever is greater. **Risk Zone B** has lower soil and groundwater PFAS concentrations than **Risk Zone A**, but generally higher PFAS concentrations than the broader NSW EPA Investigation Area.
- **Risk Zone C (Part of the Remainder of the Investigation Area):** additional data collected as part of 2017 Stage 2B EI has allowed for the identification of an area referred to as **Risk Zone C.** This includes the area east of the Base, which generally follows Moors Drain and discharges at the tidal portion of Tilligerry Creek, and some of the surface water drainage network south of the Base, which predominantly discharges at Fullerton Cove. **Risk Zone C** extends outside the NSW EPA Investigation Area to the south along the eastern shoreline of Fullerton Cove.
- **Risk Zone D (Part of the Remainder of the Investigation Area):** additional data collected as part of 2017 Stage 2B EI has allowed for the identification of an area referred to as **Risk Zone D**. This includes the area south-east of the Base, which generally follows Tilligerry Creek to where is discharges in the tidal portion of Tilligerry Creek.

The extent of these Risk Zones may change following the collection of additional data during ongoing monitoring or as a result of groundwater movement over time. These Risk Zones are shown on the map over the page.

Overall Risk Summary

The 2017 HHRA separately assessed potential PFAS exposure in each of the four Risk Zones. "Typical" and "upper range" exposure scenarios were modelled for each Risk Zone. Typical scenarios are intended to represent the average person in Williamtown, based on average duration/ frequency of activities reported in community surveys or Australian statistical data. Upper range scenarios are considered to only apply to a small number of people in the community. Both scenarios were coupled with representative concentrations of PFAS in groundwater, soil, sediment, surface water and estimated home grown produce concentrations in each Risk Zone to provide an overall conservative estimate of PFAS exposure. The highest levels of PFAS exposure are associated with the pathways that NSW Government has previously advised should be avoided or minimised.

The most effective way for all people in the Risk Zones to minimise future PFAS exposure is to follow NSW Government advice to not drink groundwater. The 2017 HHRA also identifies which other aspects of the general precautionary advice published by NSW Government may be followed by people in each Risk Zone to most effectively minimise future PFAS exposure, as discussed below.

Activities with Elevated PFAS Exposure

In some of the Risk Zones, elevated exposure to PFAS in comparison to the TDI may occur under specific circumstances, for example if a person is exposed to elevated levels of PFAS in multiple ways. The highest levels of PFAS exposure in each Risk Zone are associated with the activities shown with a dot in the table below. NSW Government has previously advised that for residents living in or near an area contaminated by PFAS these activities should be avoided or minimised.

The potential exposures to PFAS through the following activities are considered to be elevated (i.e. approach or exceed the TDI):

	Risk Zones			
	A	B	C	D
Drinking groundwater with detectable PFAS or using it in cooking	•	•		
Drinking groundwater where the average PFAS concentration exceeds the drinking water guidelines (FSANZ 2017)			•	•
Unintentionally ingesting groundwater when used indoors for showering or bathing	•			
Unintentionally ingesting groundwater when used outdoors (filling swimming pools and children's wading pools, and sprinkler play (Zone A only))	•	•		
Unintentionally ingesting surface water during recreational activities (swimming in creeks)	•	•	•	
Eating home grown vegetables	•	•		
Eating home grown beef	•	•	•	•
Eating eggs from backyard poultry. Where exposure to PFAS-impacted groundwater, soil or feed can be prevented, it is estimated that PFAS would reduce to less than the laboratory limit of reporting (LOR) in eggs after 100 days	•	•	•	•
Eating high quantities of locally sourced finfish	•	•	•	•
Drinking milk from home grown cattle or using it in cooking	•	•	•	•

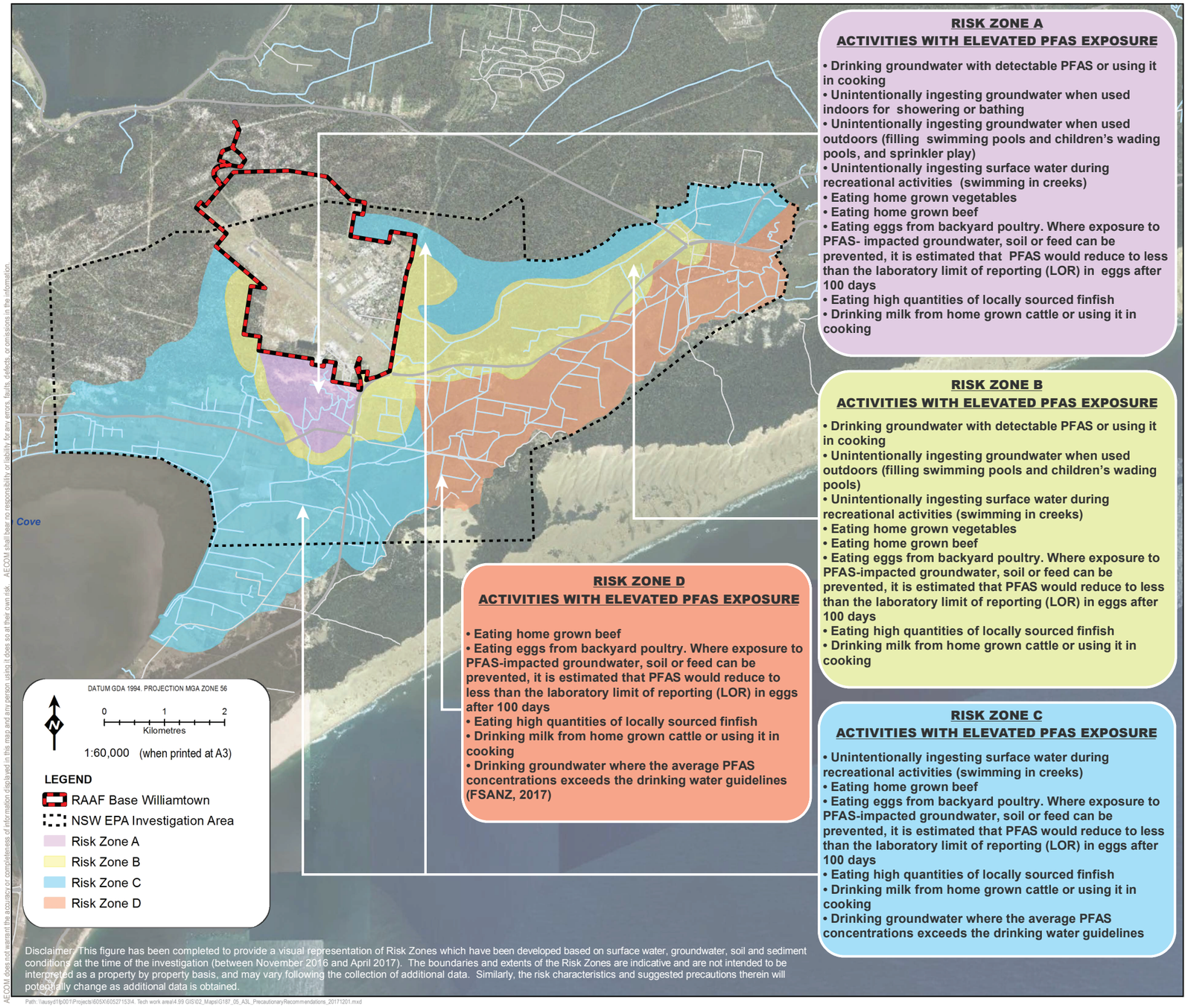
• *Indicates activities with potential PFAS exposure approaching, or greater than, the TDI*

Pathways with Low and Acceptable PFAS Exposure

Some of the key activities that have been identified to present a low potential risk to residents from exposure to PFAS are listed below:

	Risk Zones			
	A	B	C	D
Eating low quantities of locally sourced finfish or crustaceans	***Low and acceptable***			
Unintentional ingestion of groundwater used for household cleaning, laundry, washing vehicles or washing pets	***Low and acceptable***			
Skin contact with soil, sediment, groundwater, surface water during domestic or recreational activities	***Low and acceptable***			
Inhaling dust as a result of outdoor domestic or recreational activities or dust tracked back into the home	***Low and acceptable***			
Unintentional ingestion of soil or sediment during domestic or recreational activities	***Low and acceptable***			
Unintentional ingestion of surface water during boating or fishing activities	***Low and acceptable***			

Activities with Elevated PFAS Exposure in each Risk Zone



NSW EPA Management Area

On 19 November 2017, the NSW PFAS Expert Panel, led by NSW Chief Scientist and Engineer Professor Mary O'Kane AC, recommended changes to the NSW EPA Investigation Area and precautionary advice based on the data presented in the 2017 HHRA.

The NSW Government has refined the boundary of the Investigation Area, originally determined in late 2015. The overall investigation area will now be called the 'Management Area', and comprises three zones:

- Primary Management Zone – this area has significantly higher levels of PFAS detected and therefore, the strongest advice applies.
- Secondary Management Zone – this area has some detected levels of PFAS.
- Broader Management Zone – the topography and hydrology of the area means PFAS detections could occur now and into the future.

Each zone has tailored precautionary advice for residents to minimise exposure to PFAS originating from the RAAF Base Williamtown.

For more information about the NSW EPA Management Area and precautionary recommendations, contact 131 555 or visit http://www.epa.nsw.gov.au.

Next Steps

2017 Ecological Risk Assessment

The updated 2017 Ecological Risk Assessment will be published in early 2018 and will assess the potential risks of PFAS contamination to wild animals inhabiting the Base and surrounding area. The updated ERA will also assess the potential for impacts to the wider ecosystem from accumulation of PFAS in plants and animals.

The updated ERA will utilise data from the 2016 and 2017 Environmental Investigations.

It will include outcomes of an ecological survey and investigation of Ramsar Wetlands around Fullerton Cove.

Strategic Management Plan and Ongoing Monitoring Plan

The Strategic Management Plan will identify and prioritise all PFAS response management actions planned for the Base and surrounding area. Some of these actions are already underway as explained in the Response Management Activities factsheet.

The Strategic Management Plan will include an Ongoing Monitoring Plan which will detail the ongoing environmental monitoring and residential sampling programs to be conducted within the NSW EPA Investigation Area. The Ongoing Monitoring Plan will define where to collect samples from key locations within the NSW EPA Investigation Area. The data collected will be used to understand changes in the distribution of PFAS in the environment over time and as a result of seasonal changes. Data from the Ongoing Monitoring Plan will be used to regularly review and where necessary, re-prioritise the response management actions at the Base and surrounding area.

Keeping the Community Informed

Defence is committed to regularly updating the community on ongoing monitoring. Updates will be provided through the project website, community information sessions, direct mail and information sheets as new information becomes available.

Contact the project team

Phone: 1800 011 443 freecall (business hours)
Web: http://www.defence.gov.au/environment/pfas/Williamtown/
Email: Williamtown.defence@aecom.com
Post: RAAF Base Williamtown Stage 2
Environmental Investigation Project
C/AECOM Australia Pty Ltd
PO Box 1307
Fortitude Valley Qld 4006

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

Government Agencies

Defence is cooperating in the investigation and management OF PFAS contamination with a number of Government agencies. These agencies include:

- Commonwealth Department of Health: 1800 941 180
- NSW Health: 1300 066 055
- NSW EPA: 131 555
- NSW Department of Primary Industries:
  - Fisheries: 1300 550 474
  - Agriculture: 1800 808 095
- NSW Food Authority Helpline: 1300 552 406
- Commonwealth Department of Human Services: 02 4936 7160
- Hunter Water: 1300 657 657
- Rural Financial Counselling Service (NSW Northern Region): 02 6662 5055.

RAAF Base Williamtown Stage 2B Environmental Investigation

2017 Environmental Site Assessment

About the Investigation

The Department of Defence (Defence) is finalising a detailed environmental investigation, to better understand the nature and extent of per- and poly-fluoroalkyl substances (PFAS), resulting from historical use of fire fighting foams on, and in the vicinity of, the RAAF Base Williamtown (Base).

In 2016, AECOM Australia Pty Ltd (AECOM), an independent environmental consultant, completed three assessments as part of the Stage 2B Environmental Investigation:

1. A detailed Environmental Site Assessment (ESA);
2. A Human Health Risk Assessment (HHRA); and
3. A Preliminary Ecological Risk Assessment (ERA).

Since completion of the 2016 assessments, further works have been conducted to address data gaps and uncertainties regarding the extent of contamination in some areas. The 2017 ESA and 2017 HHRA reports have now been completed. Defence anticipates that the 2017 ERA report will be completed in late 2017.

2017 Environmental Site Assessment Objectives

The 2017 ESA builds on the findings collected from the previous investigation stages. The objectives of the assessment included refining the understanding of:

- The extent of elevated PFAS concentrations in groundwater in the area south of the Base (the 'Southern Area');
- The extent of PFAS within the broader NSW EPA Investigation Area, and connectivity between groundwater and surface water;
- The movement of PFAS through surface water in drains, and how this may interact with groundwater;
- Other non-PFAS substances present in the environment, that may impact PFAS remediation options;
- The flow of groundwater east of the Base, towards Salt Ash;
- The interaction between surface water, groundwater and sediment, including PFAS transport mechanisms and migration pathways; and
- Isolated PFAS detections in groundwater and surface water outside the New South Wales (NSW) Environment Protection Authority (EPA) Investigation Area, and whether they are connected to the broader groundwater impacts originating from the Base.

Sampling and Fieldwork

Fieldwork undertaken as part of the 2017 ESA involved:

- Installing 134 new groundwater monitoring wells on public and private land
- Completing 22 'slug' tests and one pump test to observe changes to groundwater levels and pressure
- Installing 11 water level loggers in drains
- Collecting samples of land plant species and water-based animals, including seafood
- Collecting the following samples:

SAMPLE TYPE	SAMPLES COLLECTED
Groundwater	638
Soil	243
Sediment	181
Surface Water	428
Residential tank water	230
Other residential samples (eg. surface water and pool water)	28
Fruit from fruit and vegetable study and tree crops	351
Aquatic animals (School prawns, mulloway, luderick, flathead, silver biddy, mud crab, other aquatic plants and animals	34
Total Samples Collected	**4.646**

The types of PFAS targeted in the sampling program were:

- Perfluorooctanesulfonic acid (PFOS),
- Perfluorooctanoic acid (PFOA),
- Perfluorohexane sulfonate (PFHxS), and
- Perfluorohexanoic acid (PFHxA).

2017 Environmental Site Assessment Key Findings

Surface water impacts

The understanding of how PFAS concentrations vary over time in surface water has been improved with additional data, including weather event based data, and data from 2015 to 2017. The lateral extent of PFAS concentrations in surface water has also been refined and was generally found to be consistent with 2016 investigation results and model outcomes.

Modelling Update

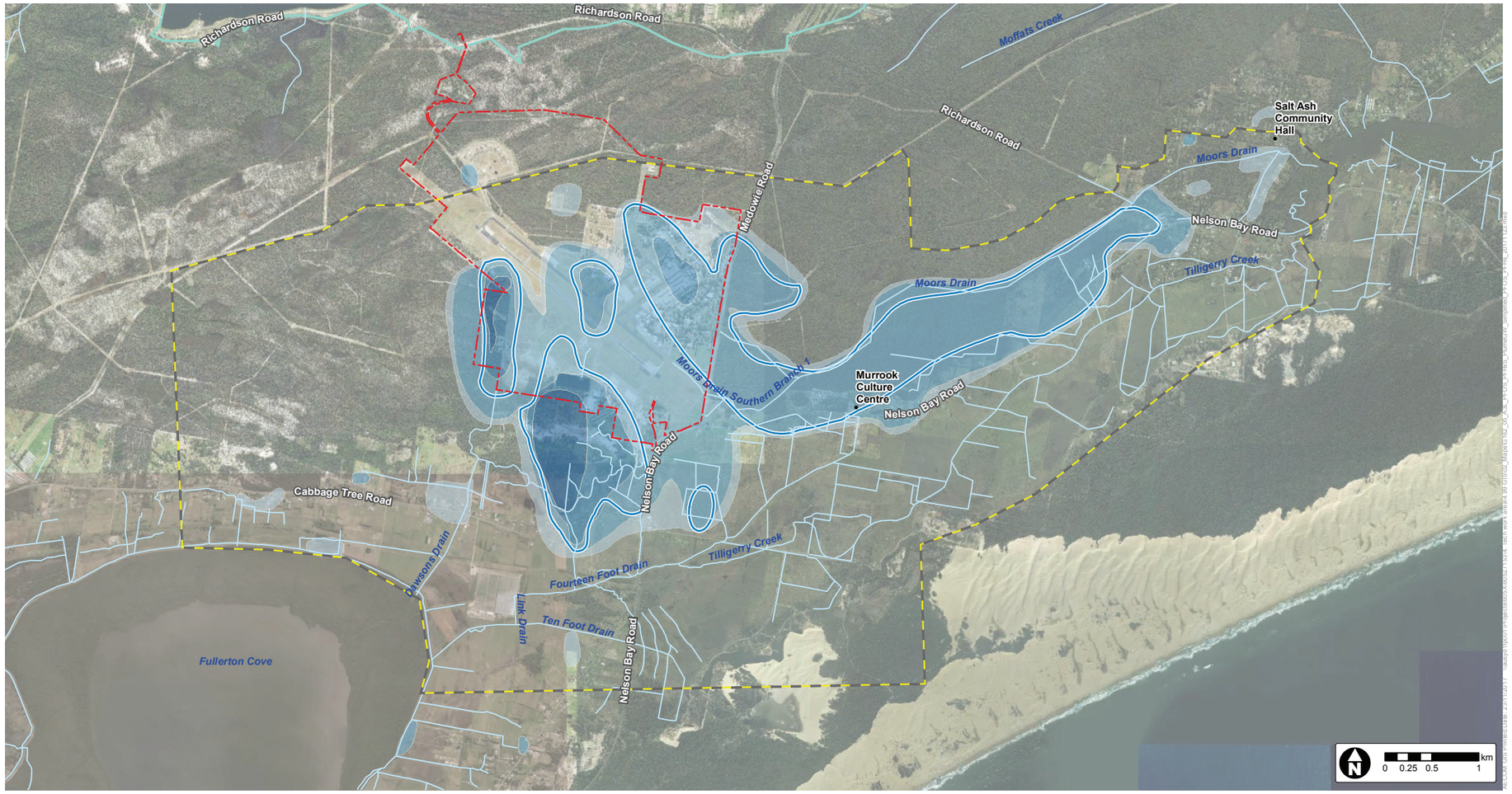
The 2017 investigation data has been used to refine and improve the understanding of the extent of PFAS impacts in groundwater. The 2017 groundwater maps show the understood extent of PFOS + PFHxS based on available data, the current understanding of the hydrogeology of the area and the results of updated groundwater modelling. Previously, the 2016 groundwater maps showed only PFOS concentrations with limited interpretation of extent between sampling locations.

The map shows the understood extent of PFOS + PFHxS in groundwater on and around RAAF Base Williamtown.

Overall key findings

- The extent of PFAS to the east has been confirmed to be continuous between the Base and Salt Ash and is inferred to be associated with migration in Moors Drain.
- The southern extent of PFAS detections has been refined with additional data in the vicinity of Fourteen Foot Drain and Ten Foot Drain. The distribution of PFAS in the extent of the “Southern Area” has also been refined with new wells.
- The PFAS plumes originating from the primary sources on-base are merging and moving southward, including towards and through the ‘Southern Area’.
- The isolated detections of PFOS in areas away from the groundwater plume are likely a result of flooding and overbank flow away from the drainage network, or an unidentified source.
- Sorption-desorption and the transfer of PFAS through both groundwater and surface water are significant processes, and need to be considered for future management.

Extent of PFOS + PFHxS in Groundwater



KEY

- RAAF Base Williamtown
- NSW EPA Investigation Area
- Grahamstown Dam - surface water catchment
- Drainage

Interpreted PFOS + PFHxS Concentration Ranges (µg/L)

- >50
- >10 - 50
- >0.07 - 10
- >LOR to 0.07

- Interpreted PFOS + PFHXs Concentration Range 0.7 – 10 ug/L

SCALE 1:40,000 | SIZE A3
SHEET 1 of 1 | COORDINATE SYSTEM GDA 1994 MGA Zone 56
TITLE Interpreted Extent of Groundwater Impact - PFOS+PFHxS
PROJECT RAAF BASE WILLIAMTOWN STAGE 2B ENVIRONMENTAL INVESTIGATION OFF-SITE HUMAN HEALTH RISK ASSESSMENT - 2017
CLIENT DEPARTMENT OF DEFENCE

Note: The greatest reported PFOS +PFHxS concentration from the 2017 Stage 2B EI is presented at each sampling point. This figure has been compiled to provide a visual representation of contoured PFOS +PFHxS concentrations in sampled monitoring well bores, residential bores, and surface water sample locations, and does not represent the full nature and extent of water impacts in the area, nor does it represent inferred aquifer conditions. The shading provided on this figure represents the area over which PFOS +PFHxS has been detected at various concentration intervals (refer to legend) in groundwater. This figure is not intended to be used for the purpose of understanding the full extent of bore water and/or aquifer impacts, but provides a visual indication of potential exposure point concentrations. This figure should be used for preliminary indicative purposes only and will be subject to change as additional data is collected. Not all available data is presented herein. For privacy reasons, selected sample points have been removed under advice from private property owners.

Next steps

2017 Ecological Risk Assessment

The updated 2017 Ecological Risk Assessment will be published in early 2018 and will assess the potential risks of PFAS contamination to wild animals inhabiting the Base and surrounding area. The updated ERA will also assessthe potential for impacts to the wider ecosystem from accumulation of PFAS in plants and animals.

The updated ERA will utilise data from the 2016 and 2017 Environmental Investigations.

It will include outcomes of an ecological survey and investigation of Ramsar Wetlands around Fullerton Cove.

Strategic Management Plan and Ongoing Monitoring Plan

The Strategic Management Plan will identify and prioritise all PFAS response management actions planned for the Base and surrounding area. Some of these actions are already underway as explained in the Response Management Activities factsheet.

The Strategic Management Plan will include an Ongoing Monitoring Plan which will detail the ongoing environmental monitoring and residential sampling programs to be conducted within the NSW EPA Investigation Area. The Ongoing Monitoring Plan will define where to collect samples from key locations within the NSW EPA Investigation Area. The data collected will be used to understand changes in the distribution of PFAS in the environment over time and as a result of seasonal changes. Data from the Ongoing Monitoring Plan will be used to regularly review and where necessary, re-prioritise the response management actions at the Base and surrounding area.

Keeping the Community Informed

Defence is committed to regularly updating the community about ongoing monitoring. Updates will be provided through the project website, community information sessions, direct mail and information sheets as new information becomes available.

Contact the project team

Phone: 1800 011 443 freecall (business hours)

Web: http://www.defence.gov.au/environment/pfas/Williamtown/

Email: Williamtown.defence@aecom.com

Post: RAAF Base Williamtown Stage 2
Environmental Investigation Project

C/AECOM Australia Pty Ltd

PO Box 1307

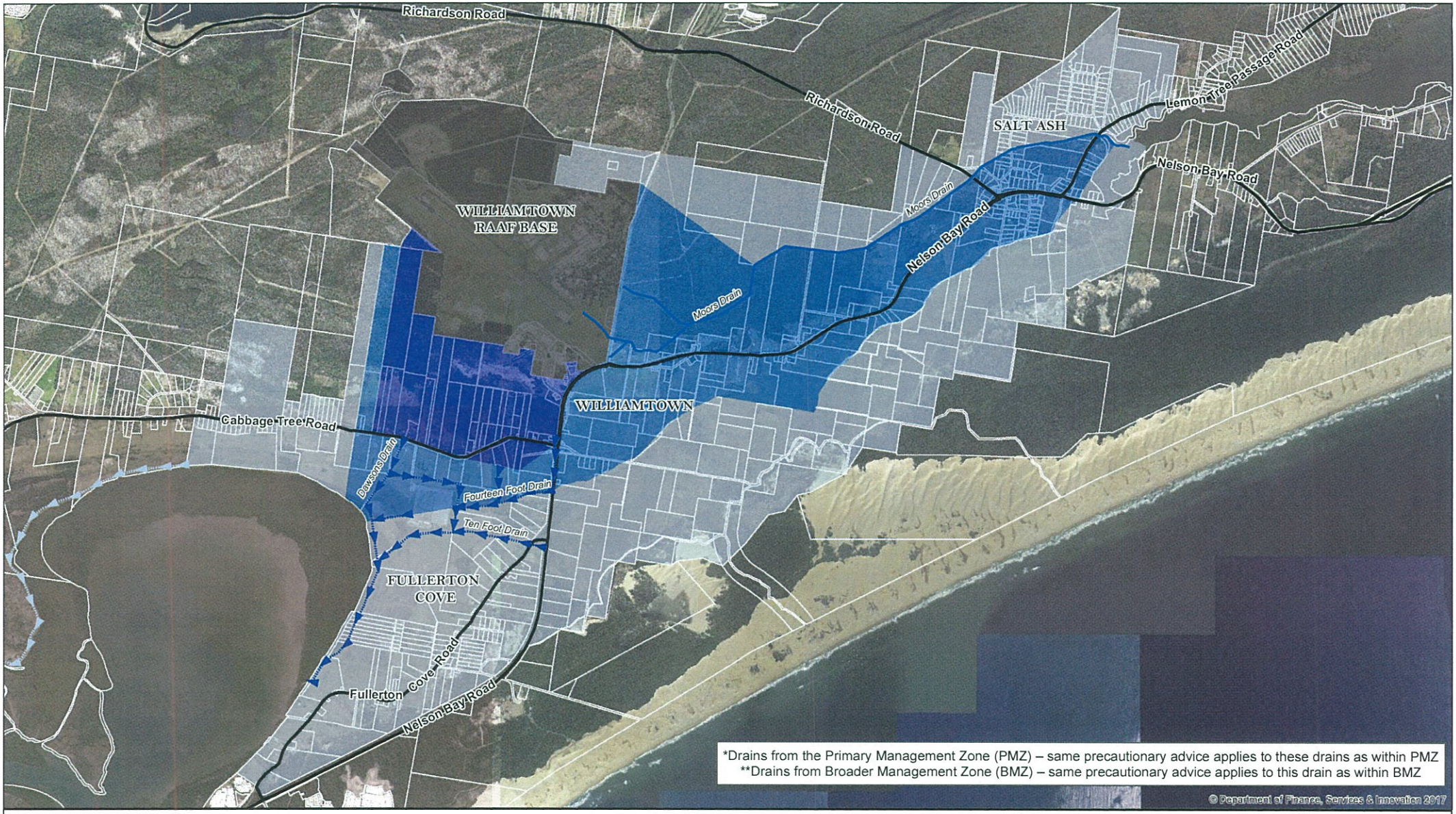
Fortitude Valley Qld 4006

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

Government Agencies

Defence is cooperating in the investigation and management of PFAS contamination with a number Government agencies. These agencies include:

- Commonwealth Department of Health: 1800 941 180
- NSW Health: 1300 066 055
- NSW Environment Protection Authority: 131 555
- NSW Department of Primary Industries:
  - Fisheries: 1300 550 474
  - Agriculture: 1800 808 095
- NSW Food Authority Helpline: 1300 552 406
- Commonwealth Department of Human Services: 02 4936 7160
- Hunter Water: 1300 657 657
- Rural Financial Counselling Service (NSW Northern Region): 02 6662 5055.



Primary Management Zone
Secondary Management Zone
Broader Management Zone
Williamtown RAAF Base
Property Boundary
Roads
Moors Drain
Drains from Primary Management Zone*
Drains from Broader Management Zone**

Williamtown Management Area

Map Created: 19/12/2017

Base imagery: Nearmap 17 November 2017

N

0 1,000 2,000 Metres

Coordinate System: GDA 1994 MGA Zone 56

NSW GOVERNMENT

Roads

Drains from Primary Management Zone*

Broader Management Zone

Property Boundaries

Williamtown Management Area: Fullerton Cove

Map Created: 19/12/2017

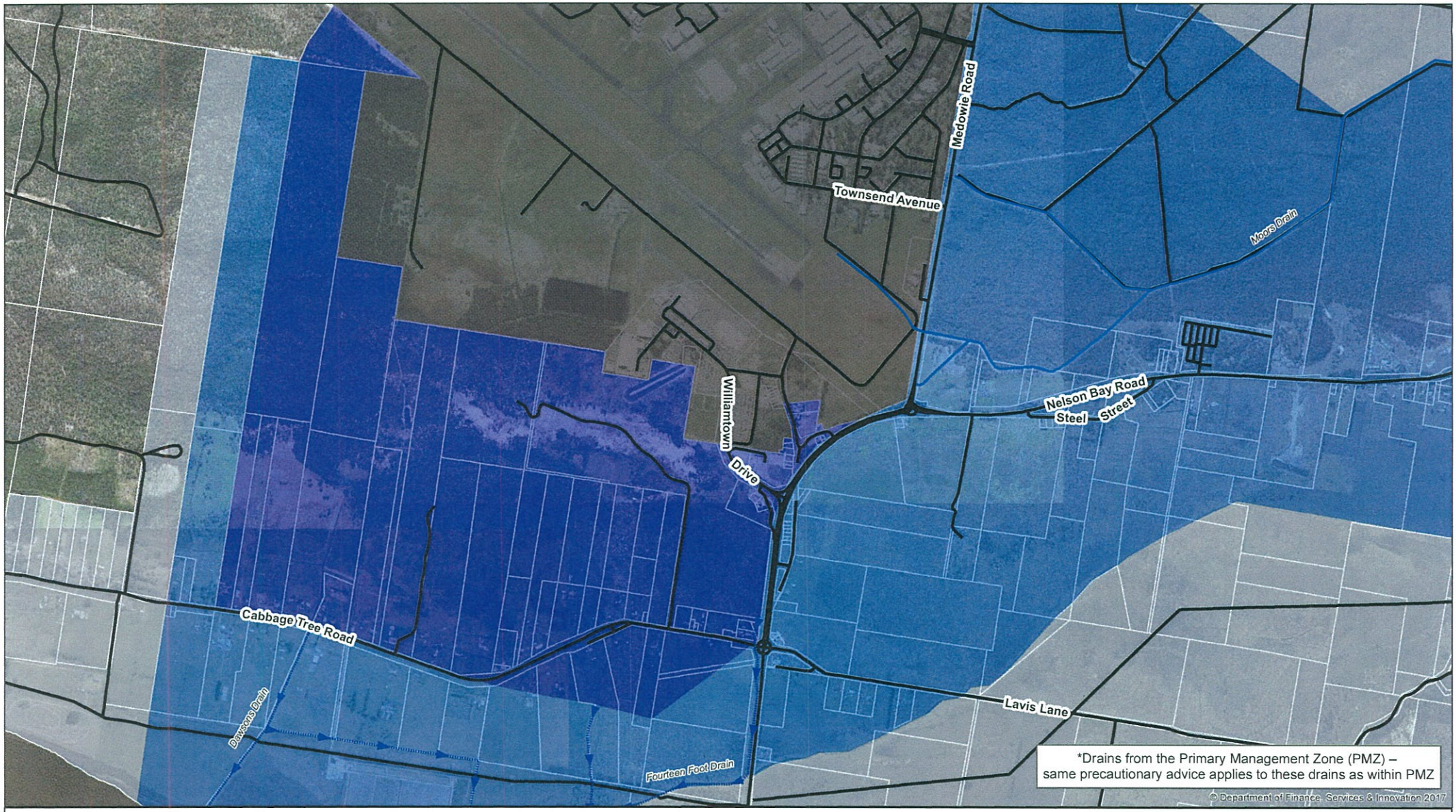
Base imagery: Nearmap 17 November 2017

N

0 500 1,000 Metres

Coordinate System: GDA 1994 MGA Zone 56

NSW GOVERNMENT



Primary Management Zone
Secondary Management Zone
Broader Management Zone
Williamtown RAAF Base
Property Boundary
Roads
Moors Drain
Drains from Primary Management Zone*

Williamtown Management Area: Williamtown

Map Created: 19/12/2017

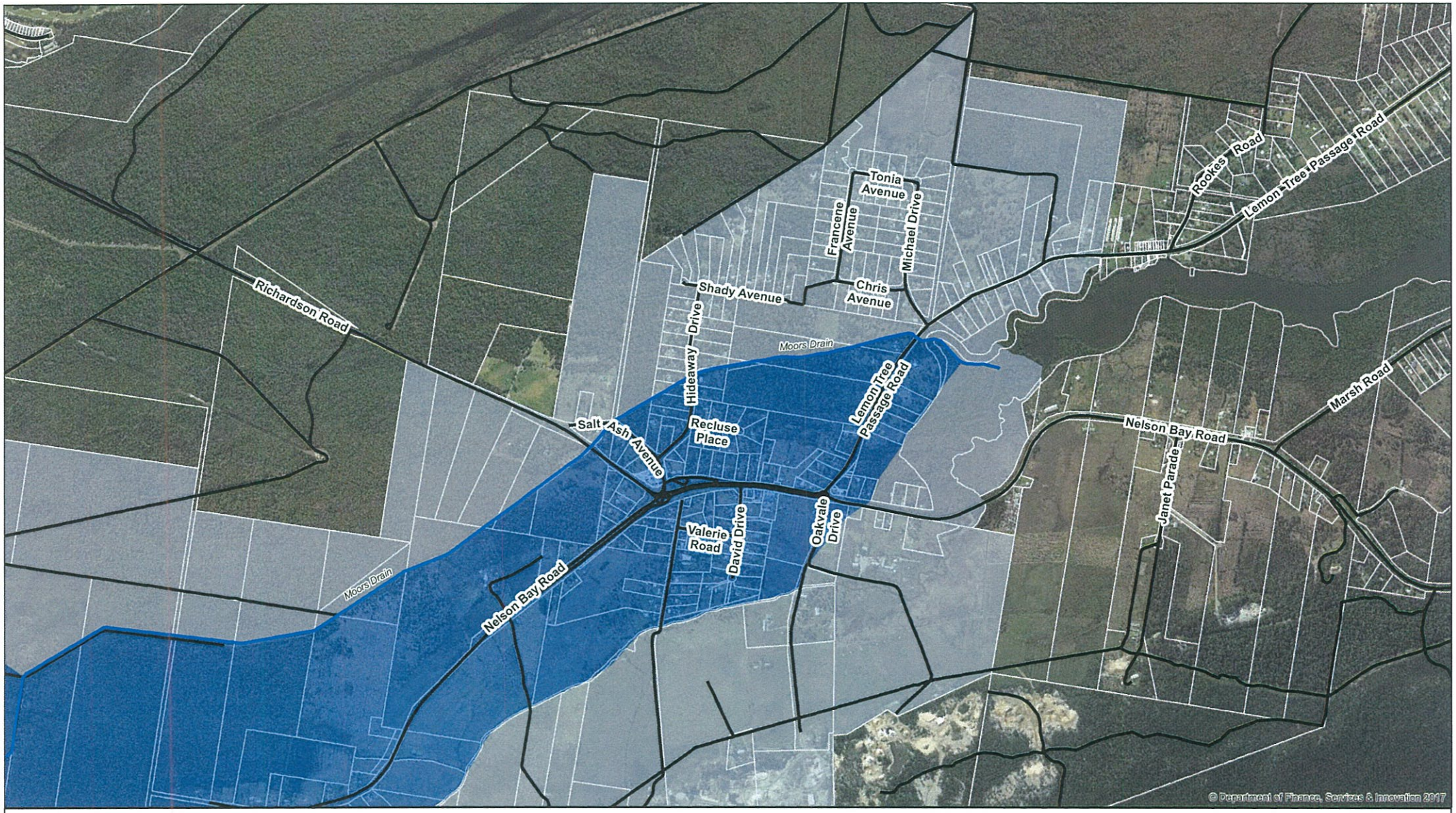
Base imagery: Nearmap 17 November 2017

N

0 500 1,000 Metres

Coordinate System: GDA 1994 MGA Zone 56

NSW GOVERNMENT



Roads

Moors Drain

Secondary Management Zone

Broader Management Zone

Property Boundaries

Williamtown Management Area: Salt Ash

Map Created: 19/12/2017

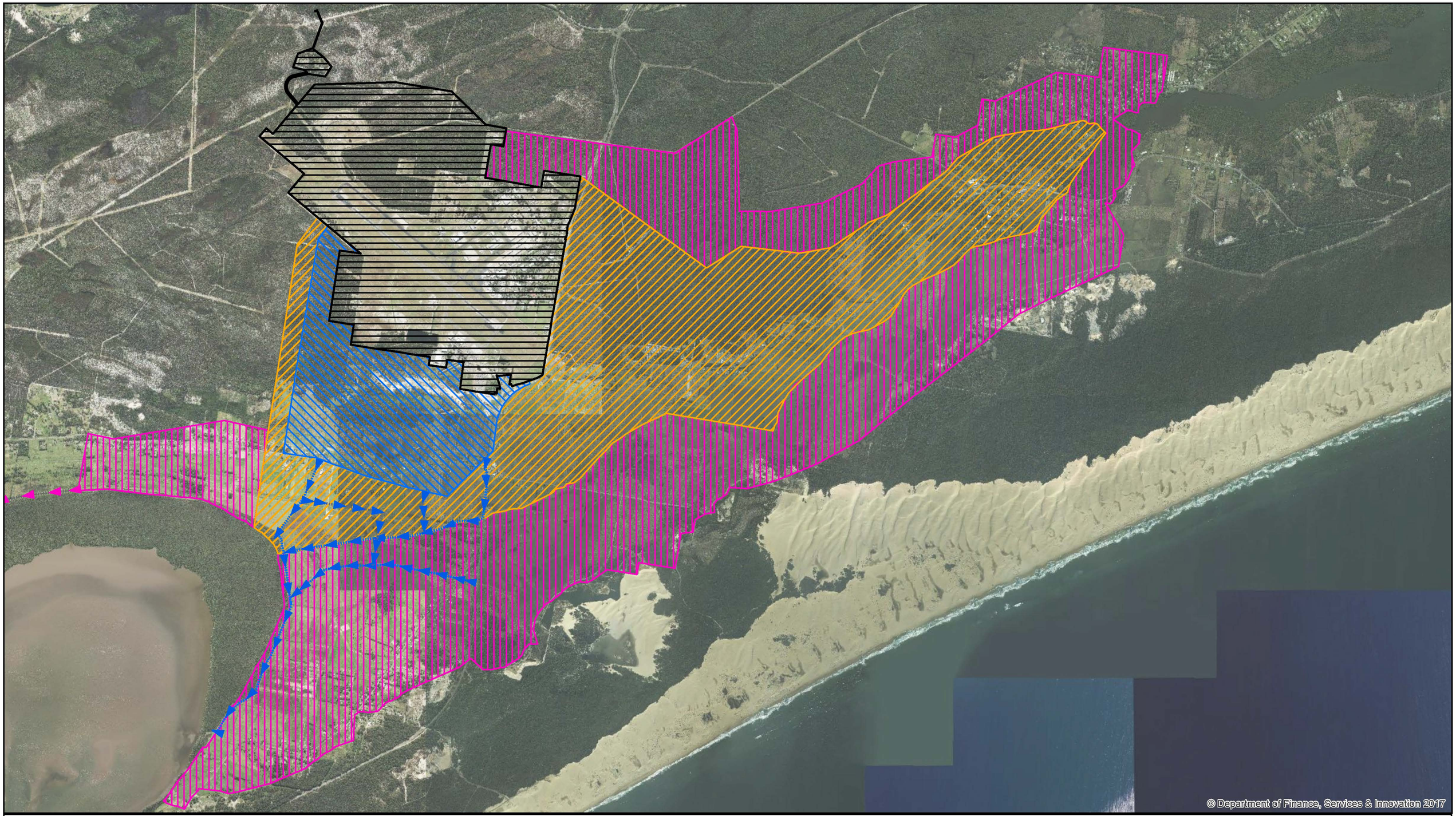
Base imagery: Nearmap 17 November 2017

N

0 500 1,000 Metres

Coordinate System: GDA 1994 MGA Zone 56

NSW GOVERNMENT



Drains
Drains
W'town RAAF Base
Primary Management Zone
Secondary Management Zone
Broader Management Zone

Williamtown Management Area

N

0 1,500 3,000 Meters

Coordinate System: GDA 1994 MGA Zone 56

Base imagery: Nearmap 17 November 2017

NSW EPA

From: [redacted]
To: IPCN Enquiries Mailbox
Subject: RACP Submission
Date: Monday, 19 March 2018 10:56:09 AM

Good Morning,

Hope you had a good weekend, this morning Cain sent the new Herald Articles regarding the GP fraternity slamming the Governments stance on PFAS.

Please find below the detailed submission from RACP.

Kind Regards

Rhianna

RACP submission dated Nov 2017 - https://www.racp.edu.au/docs/default-source/advocacy-library/submission-to-the-department-of-health-s-expert-health-panel-for-per--and-poly--fluor.pdf

Submission to the Department of Health's Expert Health ...

www.racp.edu.au

The Policy and Advocacy Committees of the Australasian Faculty of Public Health Medicine (AFPHM) and the Australasian Faculty of Occupational and Environmental ...

F om [redacted]
To
Su j ct Ca ba e T ee oad p p s d sa d m ne
Da e W d e day 4 Ma ch 018 6 0 58 M
A t chme ts Im ge 7 p g

Good af e oon omm s one s

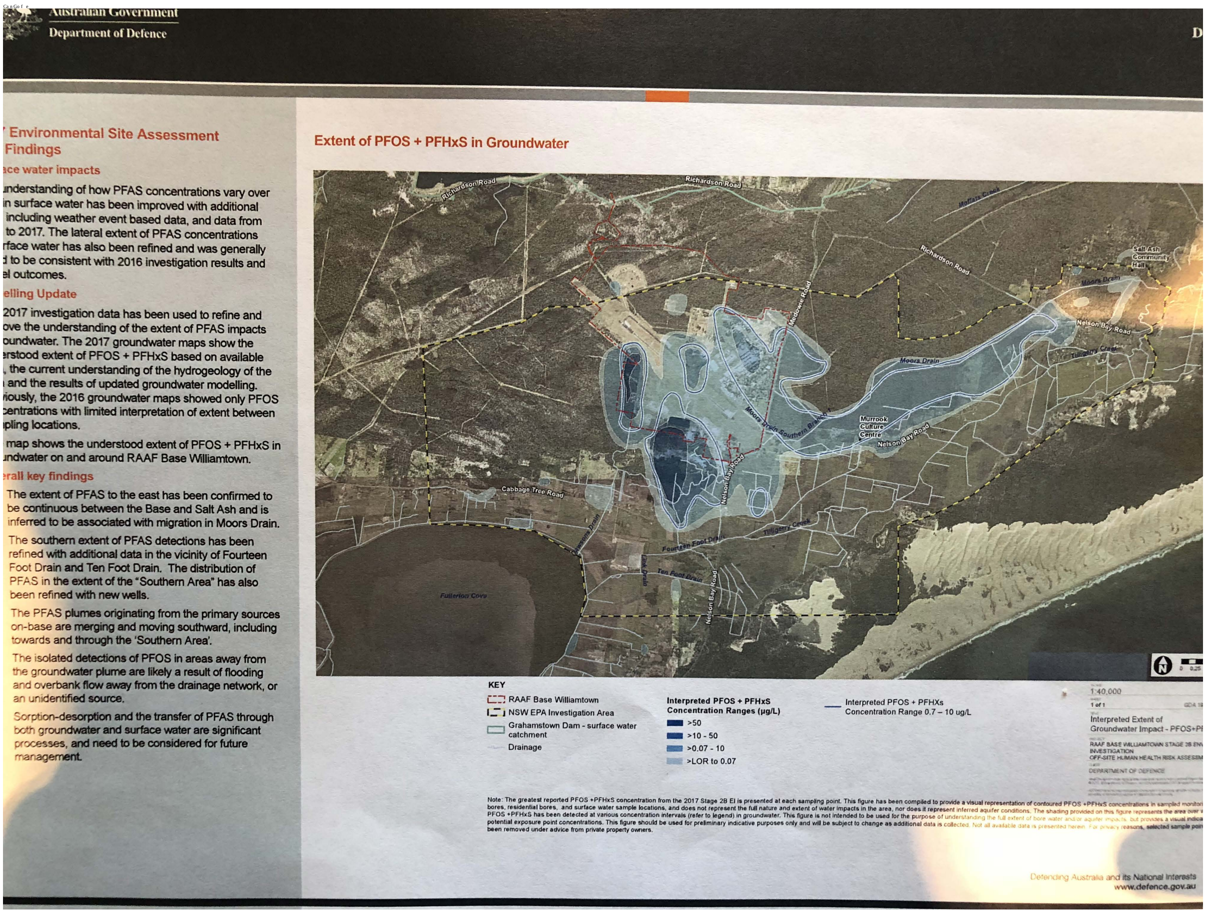
P ease s e t ached t e Aust a an Gove nment Depa tment of De ence R k Zone M p You w c ea y see unde the Commonwea th s m p the e t e p op sed s te s ts w h n sk zone c

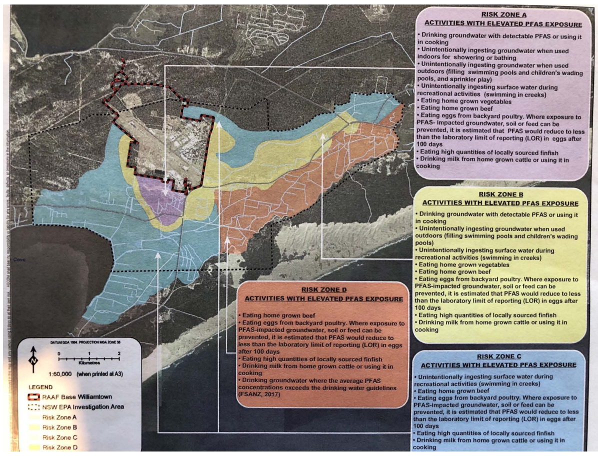
You w a so no e w th te est n he sec nd map e tent f PFOS and PFHXS n g undwate seve a d te ts a ong C bbage T ee Road wh ch boa de he p opo ed s e t s a so of note o ment on hat t e e have be n mo e g ound w te nd u ace w te d te ts s nce the pub at on of th se ma s

P ease co s de th s n o mat on w en mak ng you dec s on

K nd ga s

Ca n Go f e





Get Outlook fo OS