# Fire and Rescue NSW

## Additional monitoring Deniliquin

## Deniliquin land and water use survey results

October 2019

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# 1. Introduction

## 1.1 Background and context

In 2016, Fire and Rescue NSW (FRNSW) commenced environmental investigations to understand the nature and extent of per- and polyfluoroalkyl substances (PFAS) presence on and near the FRNSW Training Facility located at Deniliquin airport off Cemetery Road, Deniliquin (Lots 48 & 50 DP 1189132). This included surface water and drainage lines that leave the site.

The investigations commenced as part of a review of a number of FRNSW sites across NSW where legacy aqueous film forming foams (AFFF) containing PFAS have been stored and used during fire-fighting training exercises, as is the case for this site. FRNSW is undertaking these investigations to assess potential risks to human and ecological health, including identifying pathways through which people may be exposed to these chemicals.

## 1.2 Project background

FRNSW engaged GHD Pty Ltd (GHD) to carry out further environmental investigations and supporting communication activities to address data gaps identified following the completion of previous investigation phases.

An additional water use survey of landowners within an area bounded by Cobb Highway to the east, Macknight Drive to the south, Cemetery Road to the west, and Mulwala Canal to the north (the investigation area), as identified in Figure 1 of Appendix C, was undertaken to update FRNSW's understanding of land and water use in the vicinity of the FRNSW Training Facility.

GHD also provided communication and stakeholder engagement services to facilitate the collection of additional sampling data, including surface water, groundwater and sediments from properties in the investigation area. This included the development of an updated project factsheet, presented in Appendix A, which provided further information about the project, PFAS, and work completed by FRNSW with regards to PFAS to date.

## 1.3 Purpose of this report

The purpose of this report is to summarise the communication activities carried out to support the collection of additional information relating to land and water use in the investigation area. This report also summarises the results from a land and water use survey that was distributed to a number of landowners within the investigation area. This survey was conducted to obtain information from local landowners and property users about water use at their properties, particularly in relation to agricultural and industrial water use. The results detailed in this report are intended to assist FRNSW in developing appropriate PFAS management strategies for the local area.

# 2. Water use survey

## 2.1 Purpose

GHD produced an updated land and water use survey, presented in Appendix B, to gather information about property owner's land and water use within the identified lot boundary, as indicated in Appendix C. The purpose of the survey was to build upon existing information about land and water use in vicinity of the FRNSW Training Facility. A similar survey was conducted with these properties in 2017. Since the distribution of this survey, further advice from the NSW Environmental Protection Authority (NSW EPA) has requested the survey gather more data about the land use and outputs within the investigation area. As a result, a new survey was developed to gather this information.

## 2.2 Stakeholder identification

The survey targeted a number of properties in the investigation area that were located to the north of the FRNSW Training Facility. The investigation area boundary is indicated in Figure 1 of Appendix C.

GHD used title searches to identify the zoning of the land within the investigation area, as well as the property owners. Within this survey boundary there are 35 properties, with 15 distinct land owners. All properties within the investigation area were zoned as either 'General Industrial (IN1)' or 'Infrastructure (SP2)'.

## 2.3 Methodology

The chosen survey method was a paper based questionnaire developed to acquire both qualitative and quantitative responses to 24 questions, and is provided in Appendix B. The survey was developed in consultation with FRNSW and the NSW EPA.

Questions were developed to determine whether the property had alternative water sources (such as a bore or tanks), or uses the land for livestock or farming purposes in order to assess potential source-pathway-receptor linkages.

The survey distribution method was targeted, to optimise the number of responses. See Appendix D for the survey distribution plan prepared to facilitate this process. Representatives of the GHD project team contacted property owners and businesses to arrange meetings to complete the surveys in person. GHD then visited the investigation area for two days to complete land and water use surveys with the property owners. The survey was also made available online via survey monkey for those who wished to complete the survey at an alternative time.

## 2.4 Survey results

### 2.4.1 Response rate

Out of the 35 properties within the investigation area, eight landowners completed a survey for 10 individual Lot and DP, as indicated in Appendix E.

In some cases, landowners owned two properties with differing locations and purposes. For this reason, two surveys were completed so more accurate data on their land and water use could be captured.

GHD attempted to contact all property owners within the survey boundary indicated in Appendix C. In some cases, contact was unsuccessful, however a site visit provided further information

about the properties and their potential land use. A summary of property ownership and contact attempts can be found in Appendix E.

### 2.4.2 Key findings

Table 1 provides a summary of the key findings from the survey, with raw survey results provided in Appendix F.

**Table 1 Survey results summary**

| Question focus | Summary of responses |
|---|---|
| Business type and activities | All responses received were from businesses on industrial properties.<br>Number of employees working at these businesses ranged between three and fifteen<br>Two businesses did not have any employees working at the premises<br>Business types included:<br>• Fertiliser manufacturing<br>• Storage<br>• Portable buildings manufacturing<br>• Transportation Engineering and sand blasting<br>• Fabrication |
| Water supply | One business was not connected to a water supply.<br>Of those that were connected, water was supplied through water mains.<br>None of the respondents used other water sources (bores, surface, tanks) |
| Water tanks | None of the respondents indicated having water tanks. |
| Surface water | Two of the respondents reported having surface water on their property.<br>One respondent indicated this surface water was water that ran off a shed and into the storm water system.<br>The other respondent indicated that the surface water was an existing and unused dam, adjacent to Mulwala Canal, from which no water is obtained. |
| Water bores/wells | None of the respondents had water bores or wells on their property. |
| Livestock | None of the respondents indicated having animals or livestock living on their property. |
| Irrigation | None of the respondents indicated having irrigated land. |
| PFAS products used | Of the respondents, four indicated there were no products on their property that may contain PFAS. Five were unsure. |

| Question focus | Summary of responses |
| --- | --- |
| Fire management | None of the respondents had a fire over the last 20 years.<br>Fire management approaches were:<br>• Four properties indicated having fire extinguishers onsite<br>• Two indicated having access to pressurised water<br>• One indicated having trucks with high-pressure water<br>• Three indicated having fire protection gear<br>• Two indicated having been trained by FRNSW – note these respondents were two separate site locations under the same property ownership.<br>• Two indicated relying solely on assistance from 000 and the fire brigade |

# 3. Conclusion

This water use survey was an extension to a similar survey conducted in May 2017 and summarised in survey results report dated October 2017[1] (GHD, 2017). Previous advice from NSW EPA and the conclusions from GHD (2017) had recommended that a more targeted water use survey to capture more information about land and water use in the vicinity of the FRNSW Training Facility would be required.

This water use survey has been designed to enhance understanding of the way both land and water are used in the local vicinity of the FRNSW Training Facility, including both current and historical use.

The information obtained during this survey will be incorporated into the conceptual site model for the FRNSW Training Facility which will be updated as part of the current stage of additional sampling for FRNSW (works currently in progress at the time of issuing this report).

This water use survey is a valuable tool to improve understanding of historical and present day water use for properties in the investigation area. Ultimately, the effectiveness of these environmental investigations is, to some extent, reliant upon local knowledge and understanding of historical use of water, and water sources.

Based on the findings of the land and water use survey, and the key findings outlined in Section 2.4.2 of this report, land and water use was consistent across respondents. All respondents who undertook this survey identified town water as their main water source, with no respondents identifying any historical or current use of bore, surface or dam water at their properties. All properties within the investigation area are zoned for industrial purposes.

All respondents identified that livestock were not grazed or kept at their properties. In addition, GHD did not observe any livestock (e.g. cattle, sheep) within the investigation area during the site visit.

[1] GHD Pty Ltd (2017) *Land and water use survey results report – Deniliquin*

# 4. Scope and Limitations

This report has been prepared by GHD for Fire and Rescue NSW and may only be used and relied on by Fire and Rescue NSW for the purpose agreed between GHD and the Fire and Rescue NSW as set out in this report.

GHD otherwise disclaims responsibility to any person other than Fire and Rescue NSW arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.

The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.

The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.

The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described throughout this report. GHD disclaims liability arising from any of the assumptions being incorrect.

It has been assumed that all information provided by external parties is correct unless otherwise stated. No responsibility is accepted by GHD for incomplete or inaccurate data supplied by others.

# Appendices

# **Appendix A** – Project Fact Sheet

FACT SHEET
July 2019

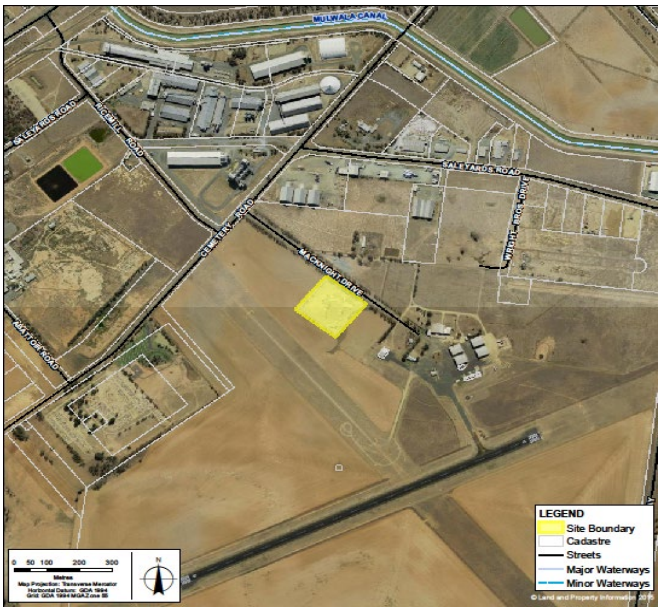
# Deniliquin Program Update Factsheet

## Project background

In 2016, Fire and Rescue NSW (FRNSW) commenced environmental investigations to understand the nature and extent of per- and polyfluoroalkyl substances (PFAS) presence on and near the FRNSW training facility (the site) located at Deniliquin airport. This included surface water and drainage lines that leave the site.

The investigations are a part of a review of a number of FRNSW sites across NSW where legacy aqueous film forming foams (AFFF) containing PFAS have been stored and used during fire-fighting training exercises, as is the case of this site. FRNSW is undertaking these investigations to assess potential risks to human and ecological health, including identifying pathways through which people may be exposed to these chemicals.

This factsheet summarises investigations completed to date, as well as the next steps in the investigation process.




*FRNSW Deniliquin Training Site (shaded in yellow), and surrounding community*

## Previous Investigations

FRNSW has engaged GHD since 2016 to undertake investigations at the site, as summarised below:

### Preliminary Site Investigation and Sampling & Analysis Quality Plan, August 2016

The preliminary investigation of the site was completed in August 2016. This included a review of site history, use of AFFF, identification of potential sources of PFAS, and identification of potential receptors. This phase also included development of a sampling and analysis quality plan (SAQP) to inform additional investigations.

### Environmental Site Assessment – PFAS, April 2017

An environmental assessment of the site and surrounding area was completed in April 2017. This included on- and offsite sampling and laboratory analysis of groundwater, surface water, soils and sediments to characterise the potential risk to human and environmental health.

### Phase 2 Environmental Site Assessment - PFAS, October 2017

A more detailed environmental assessment of the site and surrounding area was completed in October 2017, with additional on- and offsite sampling being conducted to better understand pathways for potential migration of PFAS from the site.

A community meeting and information session was held on 23 May 2017, and fact sheets were distributed within the community. During this phase, FRNSW asked 13 landowners surrounding the site to assist with the investigation by completing a water use survey identifying how local water was used.

### Deniliquin Training Facility, PFAS Management Options Assessment, December 2017

A management options assessment was prepared in December 2017 to provide a better understanding of the options for managing on- and offsite impacts in soil, groundwater and surface water from the use of legacy firefighting foam at the site.

## Project Update – June 2019

The objective of this phase of work is to address data gaps identified in the previous investigation phases. These will be addressed through collection of additional groundwater, surface water, and sediment samples from the vicinity of the site.

An additional water use survey of landowners near the site will also be undertaken to update FRNSW's understanding of water and land use in the area. The analytical and survey results will update and refine our understanding of potential sources and receptors for the area.

## Next steps

FRNSW is currently taking steps to engage a NSW Environment Protection Authority (EPA) accredited Site Auditor to provide independent technical review of the proposed additional investigations to be conducted at the site, with this phase of works expected to commence during Q3 of 2019.

## Further information

FRNSW is responding proactively to this matter and is working with state and local authorities in the conduct of its investigations.

Previous fact sheets for this site and copies of previous reports are available on the Deniliquin PFAS Investigation website:

https://www.fire.nsw.gov.au/page.php?id=9176.

For further information or enquiries, please refer to the following contacts:

### Media

Media enquiries should be directed to the FRNSW media unit on (02) 9265 2907 or email media@fire.nsw.gov.au.

### NSW Environment Protection Authority

Further information on PFAS and the NSW EPA PFAS investigation program can be found on the EPA website at

www.epa.nsw.gov.au/Mediainformation/pfasinvestigation.htm.

If you would like to talk to the NSW EPA please call the Environment Line on 131 555 or email info@epa.nsw.gov.au.

## Contact the Project Team

For more information or to provide feedback please contact the FRNSW PFAS Project Team:

**1800 316 663**

**www.fire.nsw.gov.au/pfas**

**pfasinvestigation@fire.nsw.gov.au**

**Fire & Rescue NSW**
**PFAS Environmental Investigation Project Team**
**PO Box A249**
**Sydney South**
**NSW 1232**

# **Appendix B** – Land and water use survey

# Land and Water Use Survey – Deniliquin

This information is being collected by GHD on behalf of the Fire and Rescue NSW (FRNSW).

FRNSW has appointed GHD to carry out environmental investigations near the FRNSW training facility at Deniliquin Airport to understand the nature and extent of historical use of fire-fighting foams in the area, and the current use of groundwater, surface water and land nearby.

We request your help to answer survey questions about water and land use on your property, and the quantity and type of local foods and other products that are produced on the property that are consumed or distributed. The information provided by you as part of this survey is an important and critical step of the investigation works and it is greatly appreciated by the FRNSW investigation team. For more information regarding this investigation, you can contact FRNSW on **1800 316 663** or by email. **pfasinvestigation@fire.nsw.gov.au**

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Your participation in this survey is voluntary and you do not have to provide an answer to each question if you choose not to. However, every response provided will greatly contribute to the successful completion of this investigation.

Your response will inform the investigation of the environmental conditions in the Deniliquin area. For more information about the investigation go to **https://www.fire.nsw.gov.au/-page.php?id=9176** or contact us through the telephone or email address provided above.

The information you provide may be shared with entities directly involved in the environmental assessment program.

# General property information

| | |
|---|---|
| **Date:** | / / |
| **Name:** | |
| **Organisation (if applicable)** | |
| **Title/role** | |
| **Property address:** | |
| **Postal address:** | |
| **Phone numbers:** | |
| **Email address:** | |
| **Preferred contact method:** | |

**1.** What type of property are you responding on behalf of? (if your property is used for more than one use, please select multiple answers)

- ☐ Private residential – owned
- ☐ Private residential – rented
- ☐ Other (please specify)
- ☐ Business – rented land
- ☐ Business – owned land

**2. If the property is a business, please describe the business type and activities.**

**3. How many people usually live/work at this property/business?**

**4. How long has this business been in operation (if applicable)?**

5. **How long have you lived/worked at this property/business?**

| |
|---|
| |

6. **How is water currently supplied to this property? Please select more than one answer if applicable.**

- ☐ Mains water
- ☐ Rain water
- ☐ Bore water
- ☐ Canal water
- ☐ Other (please specify)

# Water use on the property

This section is looking to understand how different sources of water is used on the property and the purposes for this use.

| Activity | Water Source (Other than mains water) | If water source is not used for this activity | Frequency | | | | | | Time Period |
|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | Weekly | Monthly | Occasionally | Never | Historical /previous use | Years of use |
| Drinking | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Cooking | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Other indoor use (e.g. showering, washing up) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Watering fruit / vegetable garden | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| Activity | Water Source (Other than mains water) | If water source is not used for this activity | Frequency | | | | | | Time Period |
|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | Weekly | Monthly | Occasionally | Never | Historical /previous use | Years of use |
| Lawn Watering | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Dust suppression (commercial sites) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Fire-fighting water (commercial sites) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Watering for livestock (drinking or irrigation of feed) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| Activity | Water Source (Other than mains water) | If water source is not used for this activity | Frequency | | | | | | Time Period |
|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | Weekly | Monthly | Occasionally | Never | Historical /previous use | Years of use |
| Watering for poultry (drinking or irrigation of feed) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Irrigation of commercial horticulture / crops | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Aquaculture (growing fish) (private or commercial) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| Other outdoor use (e.g. washing vehicles ) | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

| Activity | Water Source (Other than mains water) | If water source is not used for this activity | Frequency | | | | | | Time Period |
|---|---|---|---|---|---|---|---|---|---|
| | | | Daily | Weekly | Monthly | Occasionally | Never | Historical /previous use | Years of use |
| Other uses (please specify | Bore Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Tank Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |
| | Surface Water ☐ | ☐ N/A | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | |

# Water tanks

*This section of the survey will help us understand how tank water is used on the property. A water tank can be used to store either bore water or rain water for other household or property functions. This can include outdoor uses such as watering gardens, or for internal purposes such as flushing toilets.*

**7. Are there water tanks on the property?**

☐ Yes ☐ No

*If there are no water tanks on the property, please go to Question 13.*

**8. How many water tanks are on the property and what material are they made from (e.g. concrete, iron, poly, fibreglass)? What is their volume?**

**9. Are the water tanks above or below ground?**

**10. Have the water tanks contained bore water either currently or in the past? Please select more than one answer if required.**

☐ No

☐ Yes – the water tank/s are currently mixed with bore water

☐ Yes – in the past the rain water tank/s were mixed with bore water

☐ Bore water is used / has been used to clean the rain water tanks

How often do you clean the tanks with bore water? _____

**11. Is the water tank used for storage or mixing of other products or materials other than water? (e.g. fertiliser, fuel, biosolids, herbicides/pesticides)**

☐ No – the water tank/s are only used to store water

☐ Yes – in the past the water tank/s were used for storing other products or materials

☐ Yes –the water tank/s are currently used for storing other products or materials

If you answered yes, please specify the products or materials stored in the tank/s and their use.

_____

**12. Is there any surface water on the property?**

| | | |
|---|---|---|
| ☐ Dam | ☐ Creek | ☐ Pond |
| ☐ Wetland | ☐ Surface drain | ☐ Canal |
| ☐ Other | ☐ None | |

If yes – please specify and outline any uses of surface water that you may be aware of (i.e. watering gardens, drinking, irrigation, stock watering or recreational activities such as swimming)

# Water bore/well (groundwater, wells, etc)

*This section of the survey is used to find out more information about ground water use. It will ask questions about the property's ground water use through water bores or wells. Bore water is groundwater that has been accessed by drilling a bore into underground aquifers and pumping it to the surface.*

**13. Do you have any water bores/wells on the property? (active or inactive)**

- ☐ Yes – there are water bores on my property (either active or inactive)
- ☐ No – there are no water bores on my property
- ☐ Not sure

*If there is no water bore on your property, please go to Question 16.*

**14. How many water bores do you have on the property?**

Active water bores _____

Inactive water bores _____

**15. Please provide further details about the water bore(s) if known.**

What is / are the depth(s) of the water bore(s)?

When were the water bores installed?

Has the water quality of the water bore ever been tested? If yes, are you able to provide the results?

How much water is extracted from the water bore in a year?

Do you take water from the water bore and store it on site (in dams, tanks etc.)?

- ☐ Yes
- ☐ No

If yes - please specify how many dams / tanks and their capacity

If bore water is extracted and stored on site, what is that water generally used for?

16. **Please indicate below what types of animals you currently have or previously had on your property (livestock / pets / fish), what produce is consumed (e.g. meat / milk / eggs / offal) and who consumes it**

| Type of animal OR produce | Quantity | Consumer | Frequency (daily, weekly, monthly or rarely) |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |
| | | | |

17. **If you indicated you have livestock on the property, does this livestock have access to land for grazing?**

☐ Yes

Please describe the location _____

☐ No

18. **Does the livestock have access to water bodies?**

☐ Yes

Please describe the location _____

☐ No

19. **Is your land irrigated?**

☐ Yes

Please describe the location _____

☐ No

**20. If you answered yes to question 19, please indicate what source of water you use for irrigation**

- ☐ Bore water
- ☐ Tank water
- ☐ Dam water
- ☐ Canal water
- ☐ Other (please specify)

# Other information

*In this section, we would like to find out about any other causes for PFAS to be located on the property as a result of the use of products containing PFAS.* ***This is usually applicable to commercial and industrial properties.*** *Please refer to the program update factsheet for more information on PFAS.*

**21. Are any products used on your property that may contain PFAS (e.g. Ansulite, 3M Lightwater)?**

- ☐ Yes – I currently use products on the property that may contain PFAS (please specify)
- ☐ Yes – I have historically used products on the property that may contain PFAS (please specify the product and the period of use)
- ☐ No
- ☐ Not sure

**22. How does your property manage a fire emergency?**

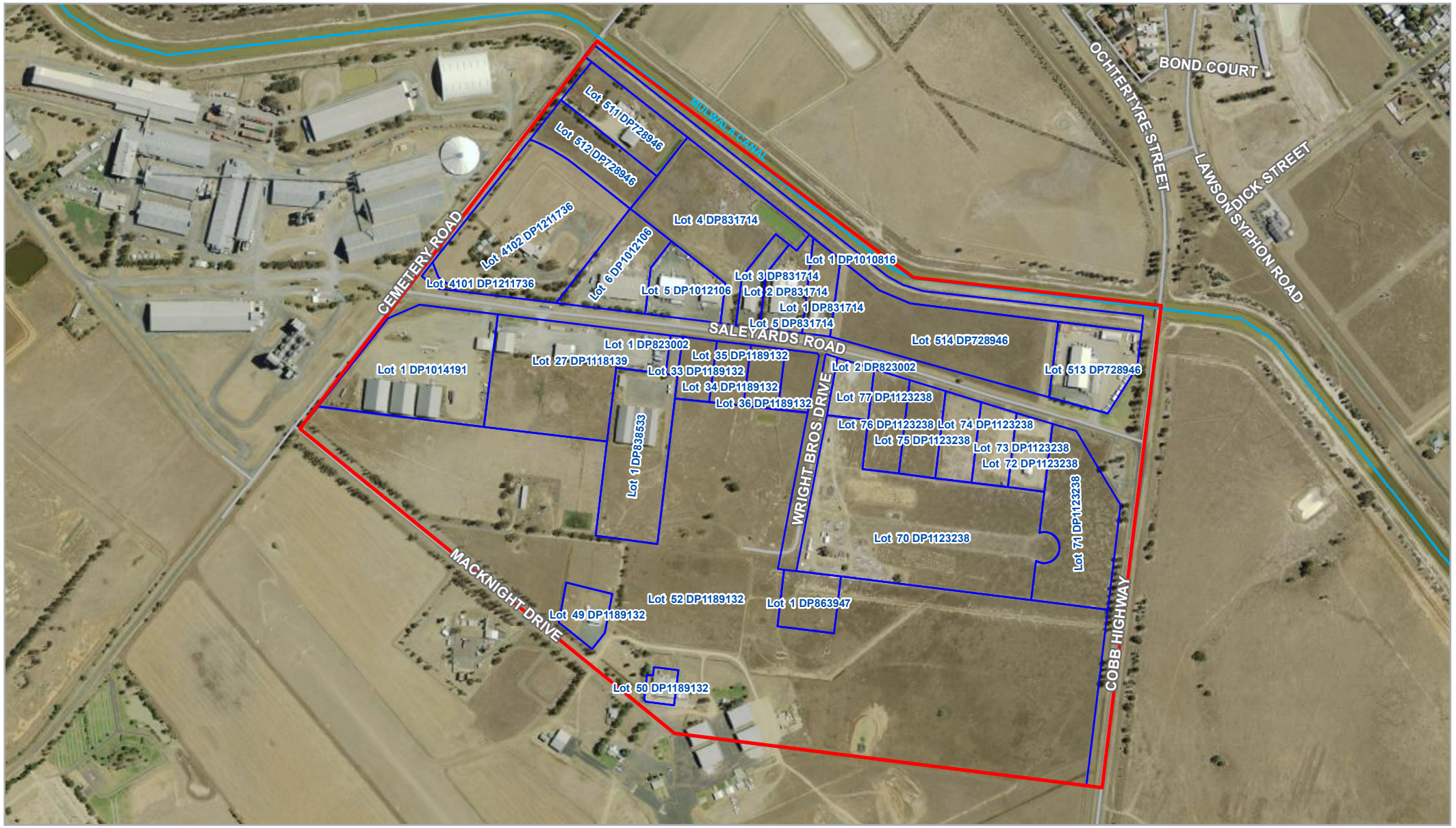
**23. Have you had a fire at your property in the last 20 years? If so, how was this responded to?**

**24. Please provide any additional comments here.**

*Thank you for completing this questionnaire.*

*If you have any questions, please contact FRNSW :*
*email:* pfasinvestigation@fire.nsw.gov.au *or phone 1800 316 663*

# **Appendix C** – Figures




**Legend**

- Lots and DP boundaries
- Investigation area
- Roads
- Major Waterways

Paper Size ISO A4

0 50 100 150 200

Meters

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

GHD

**Fire and Rescue NSW**
**Additional Monitoring Deniliquin**

Project No. **21-28370**
Revision No. **A**
Date **18/ 10/ 2019**

## Investigation Area

# FIGURE 1

G:\21\28370\GIS\Maps\Deliverables\21_28370_Deniliquin_Property_ownership.mxd
Print date: 18 Oct 2019 - 15:02

Data source: Aerial imagery SIXmaps, 2019; Streets, Waterways, NSW LPI 2015 DTDB. Cadastre - NSW LPI DCDC 2015 . Created by: dbbanatin

# **Appendix D** – Survey distribution action plan

# Water use survey – implementation plan

This document provides an action plan to facilitate the implementation of the FRNSW land and water use survey in the Deniliquin area.

## Survey area and stakeholders

The survey area includes properties to the north of the FRNSW training facility. The boundaries include Machnight drive to the South, Cemetary Road to the West, Cobb Highway to the East and the Canal to the north. Figure 1 indicates a map of the survey boundary.

Within this survey boundary, there are 35 individual properties owned by 16 distinct landowners. All properties are zoned as either *general industrial* or *infrastructure*. There are only two leased properties in this area, both of which are owned by Edward River Council. One of these is the FRNSW site and the other is the airport.

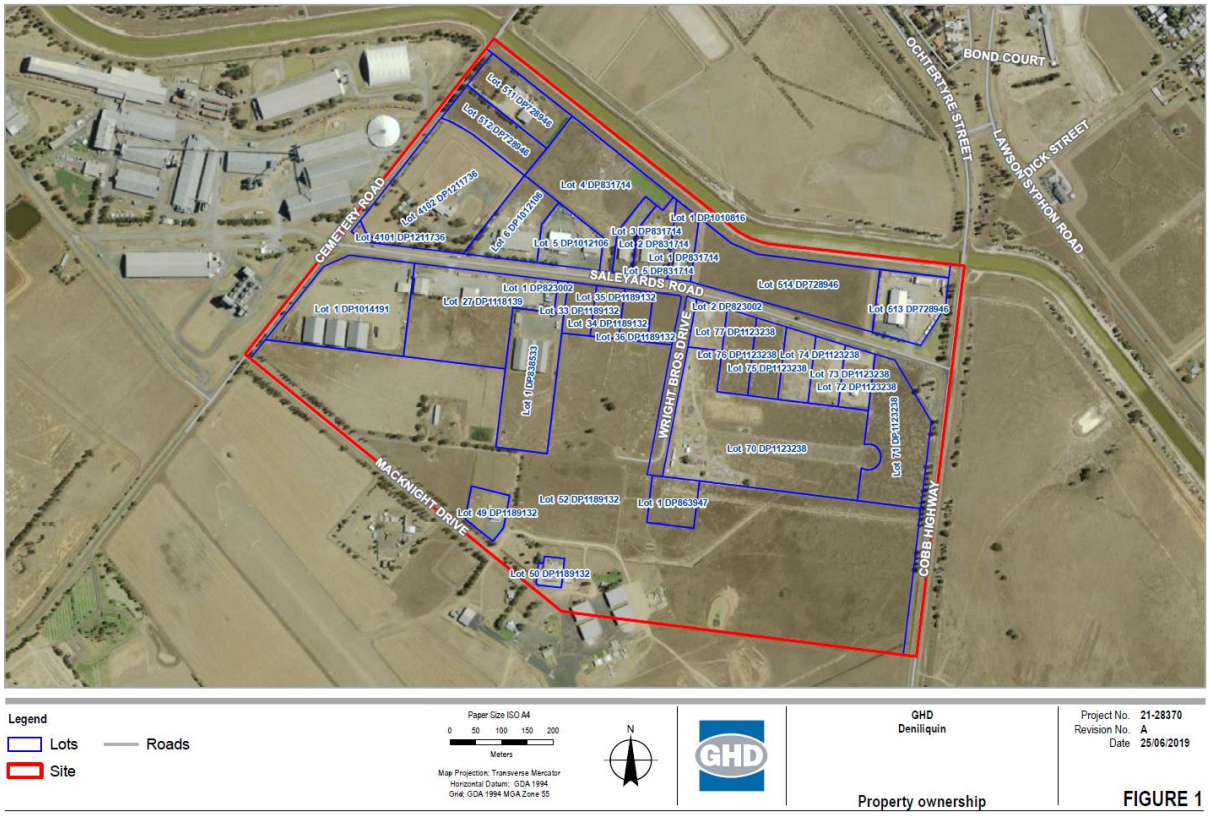



**Figure 1 Survey boundary - Deniliquin**

## Survey implementation plan

In order to implement this survey, we will utilize the following tools.

- Phone contact
- Survey monkey
- Face to face meetings

The table below provides a summary of the implementation tools and their timing.

**Table 1**

| Date | Tool | Activities |
|---|---|---|
| 4 July 2019 | Draft FAQs and telephone script | Prepare FAQs and telephone script to manage phone calls to property owners |
| 4 July 2019 | Property scheduling and information table | Set up a database to capture the following information<br>• Owner (and tenant if applicable)<br>• Property type<br>• Sample required (and type)<br>• Meeting date/time<br>• Contact attempts<br>• Notes |
| 8 July 2019 – 12 July 2019 | Phone calls<br>Emails | Contact property owners and set up a meeting to discuss the land and water use survey.<br>Discuss sampling program to those who have sampling locations on their property. |
| 15 July 2019 – 16 July 2019 | Meetings with landowners | Meet with landowner (or representative) to complete the water use surveys |
| *Activities to be completed if limited numbers received* | | |
| 22 July 2019 – 26 July 2019 | Phone calls<br>Emails | Follow up phone calls and emails to property owners who have not responded to complete the survey over the phone, or provide a link to complete the survey online via survey monkey. |
| 26 July 2019 | Survey close | Survey close and analysis and reporting to commence |

## Phone script

*Good morning/afternoon, my name is Carla.*

*I am calling on behalf of Fire and Rescue NSW. We are looking to undertake further environmental investigations to understand the presence of PFAS Contamination in the vicinity of our training site in Deniliquin.*

*Part of this work is to understand the way property owners use their land and water. We are conducting a survey and undertaking additional sampling of water and soil in the area to do this.*

*Could I please speak to the property owner or an associated manager to discuss this program of work?*

*~if they are the property owner/manager~*

*We will be in Deniliquin to meet with landowners to complete this water use survey. I was wondering if you would be available for approximately 30 mins on either Monday or Tuesday next week?*

*~if they are not the property owner/manager~*

*We will be in Deniliquin to meet with landowners to complete a water use survey and to take samples in the area. Can you please pass on my contact information so I can set up a time to meet with them? Can you please also advise a contact email address?*

*~if the property is required for sampling~*

*Whilst we are in Deniliquin, we would like to take additional samples of <insert sample type here> on your property. We have previously taken samples at this location for an earlier program of works. We would like to take additional samples for ongoing monitoring purposes. This process should only take 20-30 minutes.*

*If yes – please take note of any site access requirements (i.e. gates, safety, access points etc)*

*If no – make a note and thank them for their time*

# **Appendix E** – Table of responses and contact

*This appendix has been intentionally removed from this report as it contained personal details from survey respondents*

# **Appendix F** – Raw results table

*This appendix has been intentionally removed from this report as it contained personal details from survey respondents*

GHD

Level 15
133 Castlereagh Street
T: 61 2 9239 7100  F: 61 2 9239 7199  E: sydmail@ghd.com



2128370-61713/https://projects.ghd.com/oc/sydney3/frnswadditionalmonit/Delivery/Documents/2128370-RPT_Water use survey outcomes report_Deniliquin.docx

Document Status

| Revision | Author | Reviewer | | Approved for Issue | | |
|---|---|---|---|---|---|---|
| | | Name | Signature | Name | Signature | Date |
| DraftA | C Pignatelli | M Lander | | | | |
| Rev0 | E Cooke | J Hallchurch |  | J Hallchurch |  | 18/10/2019 |
| | | | | | | |

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