Agenda – Katherine PFAS Community Consultation Group

Tuesday 6 February 2018

5:30pm – 7:30pm

Venue: Katherine Government Centre, Level 1 Conference Room

1	**Acknowledgement of Country**	
2	**Apologies and membership**	
3	**Confirmation of previous minutes**	
4	**Update on Action Items**	**10 min**
	4.1 Agenda Paper 1 – Responses from NTPASIASC	
	4.2 Agenda Paper 2 – Daly River fish PFAS test results	
5	**Department of Defence**	**10 min**
6	**Department of Health**	**10 min**
7	**Power and Water Corporation**	**10 min**
8	**NT PFAS Inter-Agency Steering Committee Chair**	**10 min**
9	**Information and messaging for community members**	**30 min**
	9.1 Agenda Paper 3 – Working Group Meeting Summary	
	9.2 Agenda Paper 4 – Commentary on information material	
	9.3 Agenda Paper 5 – Member initiated list of questions and responses	
10	**General Business**	**30 min**
	10.1 Agenda Paper 6 - Aboriginal Community Information and Awareness sessions	
	10.2 Agenda Paper 7 – Member request for discussion regarding	
	(a) Property Report Sheets and;	
	(b) KPCCG information dissemination	
11	**Next Meeting**: 20 March 2018	
	Meeting close	

DRAFT Minutes

Katherine PFAS Community Consultation Group

5:30pm, 5 December 2017

Katherine Government Centre

Attendees:	Errol Lawson	Community
	Kevin Grey	Community
	Natalie Ellis	Community
	Merlyn Smith	Community
	Meg Geritz	Community
	Allan Domaschenz	Community
	Chris Horton	PWC
	Chris Daly	DoH
	Tracy Ward	DoH
	Andrew Tatnell	RAAF
	Sara Richards	Coffey / DoD
	Steve Grzeskowiak	DoD
	Tony Hobbs	AG DoH
	Karen Vohland	DCM
	Jake Quinlivan – Chair	
	Nathanael Knapp – Secretariat	
Apologies:	Warren De With	Community
	Petrena Ariston	Community
	Sue Jones	Community
	Anthony Bartlett	Community
	Lisa Mumbin	Community
	Fay Miller	KTC
	Robert Jennings	KTC

Xavier Schobben	DoH
Matthew Clarke	DoD

Absent or no response:

Craig Stevens

1	**Acknowledgement of Country**	Chairperson
2	**Apologies and membership**	Chairperson
3	**Confirmation of previous minutes** Moved: MG Seconded: KG	All
4	**Update on Action Items** Refer to Action Register (Attachment A)	All

5 Department of Defence (DoD)

Steve Grzeskowiak

- Community engagement session held Monday 4 December

- Shopfront engagement 5 & 6 December 2017

  - Blood testing funded by DoD, run by Australian Government Department of Health
  - Presented initial findings from site investigation and interim Human Health Risk Assessment (HHRA)
  - Interim HHRA should ready in early January 2018 and available on website
  - Work continues taking samples for final report, possibly mid 2018
  - Blood testing has no bearing on HHRA, separate process
  - Continuing with rain tank installations, most to be completed before Christmas
  - Remediation of Tindal – have identified hotspots; exploring technology available to clean soil
  - Discussion regarding other possible investigation sites, not related to Defence. Investigation underway by NT EPA
  - Australian Government PFAS Task Force has been extended into 2018

5.1 Action: request response from NT PFASIASC in regards to NTG response to site remediation e.g. former fire station, training facilities etc

Responsibility: Secretariat

5.2 Action: request list of 67 sites identified by NTEPA

Responsibility: NTPFASIASC/Secretariat

5.3 Action: request deputation from Peter Vassel to explain what the NTEPA role is

Responsibility: NTPFASIASC/Secretariat

Australian Government Department of Health (AG DoH), Tony Hobbs, Deputy Chief Medical Officer

- Community support package announced Sunday 3 December 2017
- 3 parts to the Community Support Package;

Part 1 - Voluntary blood testing programme available to all people who live or have lived and work or have worked in the investigation zone. AG DoH have met with GP's and Primary Health Network to ensure that they understand what the blood testing program is about. The GP will explain what the test is about to the patient. The test will not tell the patient if any current illness' are related to the test results. There is a 10 day turnaround on test results and the patient will be required to undertake two visits to the GP. AG DoH would like GP's to invite patients to allow their results to be included in the epidemiological study being conducted by the Australian National University (ANU).

Part 2 - Epidemiologic study conducted by ANU. Results of the blood tests will not be provided to the Department of Defence or AG Department of Health but only to the ANU. The study by ANU will help to understand the Australian setting and context and will be used to explain precautionary human health based guidance values.

Part 3 - Extra counselling and mental health services. Counselling and Support services are now available through an organisation called Support Now. Support Now is a free telephone or video counselling service that has been established for current or past residents and community members of PFAS investigation areas. Individuals may contact this service anytime.

(Attachment B)

5.4 Action: email link of Coffey presentation to members

Responsibility: Secretariat

6 Department of Health

See Agenda Item 6 paper (Attachment C)

6.1 Action: request Department of Primary Industries and Resources fish test results taken from Daly River for release to the public.

Responsibility: DoH / NT PFASIASC

6.2 Action: request a response relating to NT cancer rates being higher than the national average

Responsibility: DoH

7 Power and Water Corporation

(Attachment D)

Water use continues to drop

6 attendees at open day

Business as usual; all information on website.

8 Additional information that needs to be captured to keep messaging accurate, relevant and consistent

Discussion regarding messaging around elevated levels of pfas detected in fish. How to deliver message to community?

8.1 Action: members to meet Monday 11 December, 1100, DCM Office to identify key topics for messaging through social media and Katherine Times. Info to be provided to broader group. Invite to be sent to all KPCCG members

Responsibility: Secretariat / DCM SCE

9 General Business All

9.1 Member request - Declare Contaminated Tindal Aquifer "National Disaster" - Relocate Tindal Air Base to one of the other standby bases available in Northern Territory. The contaminated site can then be locked down, contained and neutralized. The contaminated Tindal Aquifer holds parallel to major national emergencies such as Cyclones, Flood, Fires and Earthquakes but with a far greater time span

- Members discussed at length and concluded that this proposal should not be pursued any further.

9.2 Member request - PFAS BUDGET - Request discussion to access PFAS Budget Papers (approx 50 million dollars) and request detailed briefing.

- Deferred to next meeting

9.3 Member request – Population of Action Items List

9.4 Member request - Defence management and containment of PFAS on site at Tindal

- Addressed by DoD in item 5; to be addressed at future meetings

- Looking at options for remediation of Tindal Creek

11 **Next Meeting** Chairperson

Tuesday 6 February 2018, 5:30pm, Katherine Government Centre

Meeting close Chairperson

Meeting closed at 8:35pm

Response to item 8.2, 14 November 2017

8.2

Request a response, in writing, from the PFASIASC Chair, to the following:

a) identify each and every PFASIASC member; and

b) advise terms of agreement of each PFASIASC member.

c) request a member of the PFASIASC to attend the KPCCG meeting to be scheduled for late January 2018.

a)

Andy Cowan (Chair, Department of the Chief Minister)

David Willing (Department of the Chief Minister)

Paul Terawsky (Department of the Chief Minister)

Xavier Schobben (Department of Health)

Karen Vholand (Department of the Chief Minister)

Paul Purdon (Northern Territory Environmental Protection Agency)

Ian Curnow (Department of Primary Industries and Resources)

Mark Spain (Northern Territory Police Fire and Emergency Services)

Rob Brito (Power Water Corporation)

b) There is no term of agreement for the PFASIAC members, however, Terms of Reference can be found at Attachment A

c) Andy Cowan can attend the January meeting.

Terms of Reference – NT PFAS Interagency Steering Committee (PFASISC)

1 Background

Per- and poly-fluorinated alkyl substances (PFAS) have been used in a wide variety of industrial and commercial products, including textiles, food packaging, inks, paints, and sealants, floor waxes, cleaning products, pesticides and fire-fighting foams.

These chemicals have been identified worldwide as emerging contaminants of concern due to their toxicity, highly persistent nature, mobility in the environment and significant potential for bioaccumulation and biomagnification.

The PFAS Interagency Working Group (PFASIWG) was assembled in April 2016 as an initial response to community concerns from emerging contamination issues associated with the historical use of PFASs and an expectation from Government and the community that further actions be taken to address these concerns in the Northern Territory (NT).

In line with the Terms of Reference of the PFASIWG the membership and role was reviewed. This resulted in restructuring of the PFASIWG and the formation of the PFAS Interagency Steering Committee (PFASISC) with a stronger strategic focus and reduced membership in October 2017.

2 Role and Function

The major role of the PFASISC (the Steering Committee) is to lead the NT Government input into the Commonwealth led Inter Governmental Agreement (IGA) and the development and implementation of a strategy that will be used to manage PFAS-related issues in the NT.

The Steering Committee will coordinate responses and tasks for managing PFAS in the Northern Territory.

The Steering Committee may consider, but is not limited to, PFAS issues and effects including:

- Economic
- Social
- Community
- Commonwealth relations
- Response and recovery
- Investigations
- Health
- Environment

The Steering Committee may task actions to NT Government agencies and commission work.

The PFASIWG will continue as an information sharing group.

3. Communications Protocol

DCM (SCE) will co-ordinate, direct and approve the messaging, whole-of-government talking points, and other community information. Spokespeople will be largely subject matter experts. Key developments will be shared with colleagues nationally.

4 Term

The Terms of Reference are effective from 03 October 2017 and will be ongoing until terminated by agreement by members.

5 Meetings

Chair	DCM Deputy CEO
Frequency	Initially fortnightly and then monthly
Secretariat	DCM
Proxies	Accepted
Agenda and papers	Distributed at least one week prior to the meeting
Minutes and actions	Distributed at a maximum of one week following the meeting

6 Membership

The Steering Committee will comprise of the following members:

- Department of the Chief Minister (DCM) – Chair
- Department of the Chief Minister (SCE)
- NT Environment Protection Authority(NT EPA)
- Department of Health (DoH)
- Power and Water Corporation (PWC)
- Department of Primary Industry and Resources (DPIR)
- Police, Fire and Emergency Services (PFES)

This membership may change over time and others may be invited to attend as necessary.

7 Secretariat

Secretariat support will be provided by DCM. The Secretariat will be responsible for the preparation and circulation of the meeting agenda and minutes.

8. Minutes

Minutes of the previous meeting must be confirmed at the meeting along with a review of action items.

Minutes must be approved by the Chair of the meeting and once approved emailed to members.

9. Review

The effectiveness and membership of this Committee will be reviewed in 6 months.

Schedule 1:

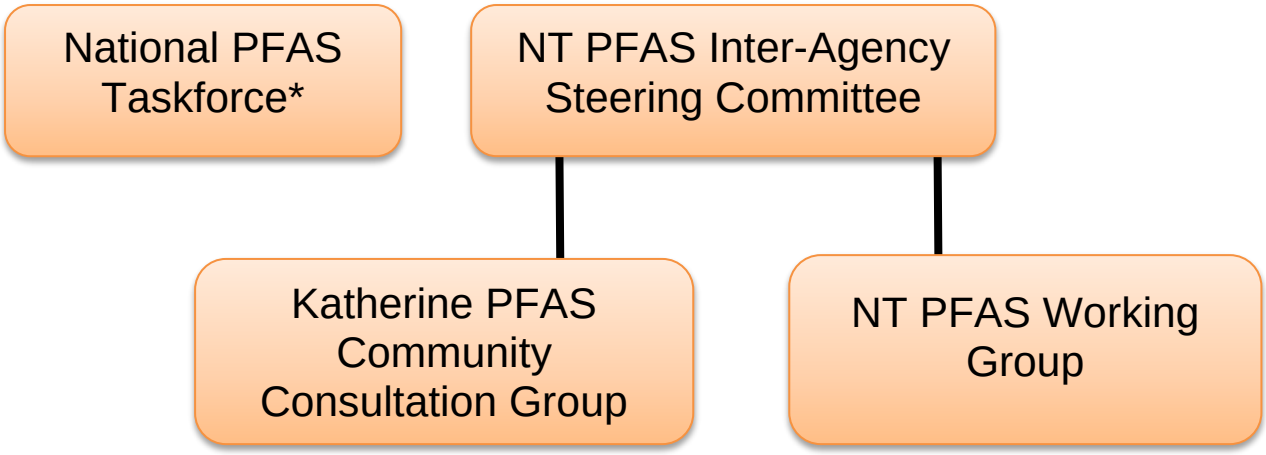
PFASISC MEMBERS

Name	Role	Organisation
Andy Cowan	Deputy CE	DCM (Chair)
Karen Vohland	Strategic Communications and Engagement (SCE)	DCM
Paul Purden	Executive Director Environment Protection	NT EPA
Xavier Schobben	Director Environmental Health	NT DoH
Rob Brito	Executive Director	Power Water Corporation
Ian Curnow	Deputy Chief Executive	NT DPIR
Mark Spain	Chief Fire Officer	NT PFES

NT PFAS Coordination Arrangements

Attachment A

The diagram below broadly depicts the relationship between the NT PFASIASC, Katherine Community Consultation Group and NT PFAS Working Group.



Note

1) The PFAS First Minister's Taskforce coordinated by the Department of Prime Minister and Cabinet is due to be wound up by the end of 2017. At the time of writing an alternate national coordination mechanism is yet to be determined.
2) The PFAS Interagency Steering Committee leads the development of strategies to manage PFAS related issues in the NT, and includes representation from:
   a) Department of the Chief Minister
   b) Environmental Protection
   c) Department of Health
   d) Power and Water Corporation
   e) Department of Primary Industry and Resources
   f) Police, Fire and Emergency Services
3) The role of the NT PFAS Working Group is to coordinate responses and tasks for managing PFAS in the NT, and includes representation from:
   a) NT Environment Protection Authority (NT EPA)
   b) NT Department of Health (DoH)
   c) NT Department of the Chief Minister (DCM)
   d) NT Department of Business (NT WorkSafe)
   e) NT Department of Primary Industry and Resources (NT DPIR)
   f) NT Department of Land Resource Management (NT DLRM)
   g) NT Police, Fire and Emergency Services (NT PFES)
   h) Northern Territory Airports Pty Ltd (Darwin International Airport)
   i) Commonwealth Department of Infrastructure and Regional Development (DIRD)
   j) Air Services Australia (ASA)
   k) Senior Australian Defence Force Officer – RAAF Base Darwin (SADFO)

Attachment B

The Support Now service is supported by funding from the Australian Government and delivered by On The Line.

Call 1300 096 257

www.supportnow.org.au

Support Now provides free phone and video counselling for anyone potentially affected by PFAS exposure

Telephone or video counselling can be an immediate, anonymous and confidential source of support.

What is Support Now?

Support Now is a free telephone or video counselling service that has been established for current or past residents and community members of the Williamtown, NSW and Oakey, QLD Investigation Areas, who have potentially been exposed to PFAS (or Per- and poly-fluoroalkyl substances). Individuals may contact this service any time.

Are you concerned about potential PFAS exposure?

If you or somebody you know are concerned about potential exposure to PFAS it is important to seek support. Talking to a professional counsellor may be helpful. Support Now is a free telephone and video counselling service which provides confidential and anonymous information and support.

What is PFAS?

PFAS or Per- and poly-fluoroalkyl substances are a group of manufactured chemicals that have been found to have contaminated sites where there has been historic use of fire-fighting foams that contained PFAS.

Free professional counselling, 24 hours a day, 7 days a week

Support Now

The Support Now service is supported by funding from the Australian Government and delivered by On The Line.

Call 1300 096 257

www.supportnow.org.au

Attachment C

Agenda Item 6.

Department of Health (DoH) Report for Katherine PFAS Community Consultation Group

Meeting 3: 5:30pm - 5 December 2017 at Katherine Government Centre,

Update on Action Items for DoH from Meeting 2.

***4.4** Action: Provide information related to contamination and spread of disease from bats.*

Responsibility: DoH

Xavier Schobben, Director Environmental Health sought advice from Dr Vicki Krause, Director Centre for Disease Control at the NT Department of Health on this issue.

Dr Krause advised that environmental contamination by infected animals is considered negligible and is based on the knowledge that the persistence of the classical rabies virus is fragile and does not survive for long outside the host. It is readily inactivated by heat and direct sunlight. Bats or other animals that have been dead for longer than 4 hours are also no longer considered infectious for lyssaviruses. Bat or other animal blood, urine, and faeces are also not considered to be infectious.

This information was taken from the Series of National Guidelines (SoNG) produced by Communicable Disease Network Australia and advice from the Australian Technical Advisory Group on Immunisation. The relevant SoNG is 'Rabies Virus and Other Lyssavirus (Including Australian Bat Lyssavirus) Exposures and Infections; which can be found at the following link. http://www.health.gov.au/cdnasongs

There is also no evidence to suggest that Australian bat lyssavirus (ABLV) could be contracted by eating fruit partially eaten by a bat. Any fruit however that has been partially eaten by any animal should not be eaten as it could be contaminated by a variety of other germs (Dec 2016).

https://www.business.qld.gov.au/industries/farms-fishing-forestry/agriculture/livestock/animal-welfare/pests-diseases-disorders/australian-bat-lyssavirus

***7.1** Action: Seek information regarding chlorination, fluoridation and PFAS cocktail in reticulated water supply and whether there have been any studies undertaken to establish whether this is safe for human consumption*

Responsibility: DoH

Currently there are no specific studies or information available on any synergistic effects of chlorine, fluoride and PFAS in water. This matter however has been referred to Water Research Australia with a request to provide further advice. Water Research Australia is holding a workshop on 18 December 2017 on research projects and this matter will be raised for consideration.

DEPARTMENT OF HEALT (DoH) OF HEALTH UPDATE

Expert Panel for PFAS

The Australian Government, Department of Health has established an Expert Panel for PFAS to advise on the potential health impacts associated with PFAS exposure and to identify priority areas for further research. The Expert Panel invited written submissions from the public.

The Panel will only consider priority research items and provide advice to the National Health and Medical Research Council on priorities for the federal $12.5M Research fund on PFAS and human health related issues.

Defence Interim Human Health Risk Assessment report

The DoH, along with NTG PFAS Interagency Steering Committee and the community is awaiting release of the interim human health risk assessment report which is expected to be released later this month which will guide the need for any further public health messaging.

The DoH, along with other government agencies has provided comments to Defence and Coffey on additional water bodies and biota species to be sampled and tested during the upcoming wet season and need for additional expert toxicological input, all for inclusion in the final human health risk assessment report expected to be released by April 2018.

The Department of Health has also advised Defence that as a precautionary approach to advise the public to avoid the consumption of fish from the Katherine River till the full HHRA is completed by April 2018 and more definitive guidance can be provided on fish serving consumption. Signs will be erected advising of such later this week as they are currently being fabricated.

Recent results of PFAS testing in barramundi samples taken from the Daly River by the Department of Primary Industry and Resources (DPIR) have returned results below health based guidance values. DPIR will advise further.

Environmental Health Standing Committee (enHealth)

Planning is underway for an enHealth meeting to be held in late January 2018 to review current national advice on PFAS and to consider any additional information to be included in updated fact sheets.

Katherine cancer rates

An assessment of Katherine cancer rates was distributed at the last meeting and identified that Katherine residents had rates no higher than the NT average.

The department's Health Gains Planning Branch can prepare an updated report upon request and will likely establish a Katherine cancer study similar to what they have done for the Kakadu region study relating to identifying any links of cancer to Uranium mining, which is currently being finalised.

Attachment D

Katherine PFAS Community Consultation Group Meeting

Power and Water update - 5 December 2017

Average test results to 31 October are on Power and Water's website – PFAS in the NT

November results will be available next week and are expected to be consistent with recent testing results.

		Average PFAS[1] Levels µg/L (ie micrograms per litre)	
Location	Description	ΣPFHxS and PFOS	PFOA
Reference value	**New FSANZ Health Based Guidance Values for drinking water quality[2]**	**0.07 µg/L**	**0.56 µg/L**
Katherine Reticulation	Reticulation (tap) water	0.01	<0.01
Katherine	Raw bore water	0.2	0.01
Katherine	Raw surface water	<0.01	<0.01

- Sampling continues to be carried out three times each week with the last end of month sample taken on 30 November. There is a three working day turnaround from when the samples are received at the lab interstate.
- Water use in Katherine is 2.6 million litres per day less than during October. (A consistent reduction of 20%)
- The new ECT2 treatment plant is producing 12.5 litres per second (1 million litres per day) of treated bore water with undetectable levels of PFAS. Samples are currently being taken daily.
- The amount of bore water used in the reticulated supply is capped at 10%.
- Water conservation measures remain in place to keep water demand down and manageable at the 90:10 blend ratios. Demand is expected to remain at current levels due to these measures and wet season rains.
- Power and Water will continue provide accurate information to the community about how we are responding to the PFAS situation.
- A community open day was held at the water treatment plant on Saturday 2 December for interested members of the community to see how the new plant works. Six people attended and were given a comprehensive tour of the plant.
- Power and Water is progressing continuing planning effort to identify long-term options to deliver the best solution for customers in Katherine. Options that are currently being considered include advanced water treatment technologies and/or new ground water sources. It is expected that once a permanent solution for the Katherine water supply system is identified, it could take between 12 and 30 months to implement.
- An application for an interim increase in river water extraction licence is in progress with the Department of Environment and Natural Resources. This is to ensure adequate water supply is available to manage town water demand while bore water use is capped at 10%. Appropriate environmental considerations are part of the process.

Agenda Item 4 - Update on Action Items – 6 February 2018

Date	Action	Responsibility	Status	Comments
5.12.17	5.1 Request a response from NT PFASIASC in regards to the NTG response to site remediation e.g. former fire station, training facilities etc	Secretariat	Complete	*See Agenda Paper 1 Item 4.1 – from 6 February 2018*
5.12.17	5.2 Request list of 67 sites identified by NTEPA	NTPFASIASC/ Secretariat	Complete	*See Agenda Paper 1 Item 4.1 – from 6 February 2018*
5.12.17	5.3 Request deputation from Peter Vasel to explain the role of the NTEPA	NTPFASIASC/ Secretariat	Complete	*See Agenda Paper 1 Item 4.1 – from 6 February 2018*
5.12.17	5.4 Email link of Coffey presentation to members	Secretariat	Complete	http://www.defence.gov.au/Environment/PFAS/docs/Tindal/Presentations/171204CommunityWalkinSessionPresentationDSIAndHHRA.pdf Emailed to members 6 December 2017.
5.12.17	6.1 Request Department of Primary Industries and Resources fish test results taken from Daly River for release to the public.	DoH / NT PFASIASC	Complete	*See Agenda Paper 2 Item 4.2 – from 6 February 2018*

5.12.17	6.2 Request a response relating to NT cancer rates being higher than the national average	DoH		
5.12.17	8.1 Members to meet Monday 11 December, 1100, DCM Office to identify key topics for messaging through social media and Katherine Times. Info to be provided to broader group. Invite to be sent to all KPCCG members.	Secretariat / DCM SCE	Complete	*See Agenda Paper 3, Item 9.1 – from 6 February 2018*
14.11.17	8.1 KG, MG and AD to draft a letter of support for residents directly affected by the detection of PFAS on their properties.	KPCCG members	In progress	
14.11.17	4.1 Amend terms of reference to reflect that membership will be revoked if absent without apology for three consecutive meetings.	Secretariat	Complete	
14.11.17	4.2 Offer vacant position to May Rosas as a representative of the Aboriginal community	DCM PFASIASC Chair	Complete	Offer accepted.
14.11.17	4.3 Follow up with Lisa Mumbin regarding appointment to KPCCG	KPCCG Chair	Complete	Offer accepted.
14.11.17	4.4 Provide information related to contamination and spread of disease from bats	DoH	Complete	See Agenda Paper Item 6 – from 5 December 2017

14.11.17	4.5 Seek information relating to concerns raised about current levels of PFAS in blood stored the blood bank.	MG/Australian Red Cross	Complete	Public policy available on Australian Red Cross website.
14.11.17	4.6 Action item 'Seek feedback on any additional information that needs to be captured to keep messaging accurate, relevant and consistent' to be moved to agenda as a standing item	Secretariat	Complete	Standing agenda item
14.11.17	7.1 Seek information regarding chlorination, fluorination and PFAS cocktail in reticulated water supply and whether there have been any studies undertaken to establish whether this is safe for human consumption	DoH	Complete	See Agenda Paper Item 6 from 5 December 2017
14.11.17	8.1.2 Follow up EASA regarding their capacity and capability to deal with PFAS related queries and requests for counselling	Secretariat	Complete	EASA services are available as per the usual panel contract arrangements. EASA operate a face to face service in Katherine on Tuesdays and Wednesdays and staff can call the head Office in Darwin and book and appointment. They can also book telephone or skype sessions if that suits better which will be serviced by clinicians from Darwin. Also if they visit Darwin they can book sessions at the head office in Stuart park

14.11.17	8.2 Request a response, in writing, from the PFASIASC Chair, to the following: a) identify each and every PFASIASC member; and b) advise terms of agreement of each PFASIASC member. c) request a member of the PFASIASC to attend the KPCCG meeting to be scheduled for late January 2018.	Secretariat	Complete	See response in Agenda from 5 December 2017
14.11.17	8.2.1 Invite Senator Nigel Scullion to attend a future meeting of the KPCCG with the intention that :- (a) that HON NIGEL SCULLION (PERSONALLY) provide and present a detailed briefing relative to Senate Inquiry into PFAS (b) that HON NIGEL SCULLION (PERSONALLY) provide and present a briefing relative to the PFAS effect on Katherine Aboriginal Community	Secretariat	Complete	Awaiting response
14.11.17	9.1 distribute member initiated Draft Katherine Region PFAS Information Management Plan to KPCCG members for consideration	Secretariat	Complete	
17.10.17	4.1 All agreed that a visual representation of the governance structure, relationship between KPCCG, PFASISC, PFAS Task Force and politicians needed to be developed.	DCM Strategic Communications and Engagement	Complete	

17.10.17	4.2 Recommendation to Chief Minister: All agreed that actions and information from KPCCG be disseminated to all politicians, independents and opposition.	DCM DepCE DCM Strategic Communications and Engagement	Complete	
17.10.17	4.3 & 4.4 Follow up with members who did not attend or respond to invitation to join KPCCG and enquire whether they wish to accept their offer of appointment or not. Discuss membership appointments at next meeting and seek recommendations for community representatives.	DCM RED BRR	Complete	Correspondence and invites sent to all members. Seeking advice from KPCCG members.
17.10.17	5.1 School Principals are seeking talking points and clear messaging suitable for inclusion in newsletters, around potable water supply.	DCM SCE in consultation with PWC and DoH	Complete	Updated messaging to be provided on an ongoing basis.
17.10.17	6.1 Members formally request that blood testing is made available as a priority to establish a baseline, particularly for those people living in a high risk area.	PFASISC Chair	Complete	Blood testing available
17.10.17	6.2 Members request that further investigation be undertaken into causal effects.	DoD, DoH	Complete	Expert PFAS panel established.
17.10.17	4.5 Establish mailing list for out of session information	DCM Secretariat	Complete	

	Chair discretion to call out of session meeting if required Add acknowledgement of country Amend Schedule 1, XS title from Dr to Mr			
17.10.17	5.2 Address concerns regarding the safety of water by providing and making available accurate and detailed information.	DoD	Complete	Results provided direct to PWC, KTC and residents.
17.10.17	7.1 Request to provide dates for when testing was conducted. Provide monthly statistics for tap and bore tests Use micro grams per litre instead of ppm as a unit of measurement to keep data consistent	PWC	Complete	Test results available on PWC website
17.10.17	7.2 Seek feedback on any additional information that needs to be captured to keep messaging accurate, relevant and consistent	KPCCG members	Complete	Moved to standing agenda item
17.10.17	8.1 Request to provide details on KTC pool filtration system to members Request to provide weekly updates on pool testing will be made available to the public	Katherine Town Council	Complete	Filtration system is sand. Pool to open Thursday 16 November 2017. Testing results available on KTC website as they are received
17.10.17	9.1 Chair requested that feedback on first meeting be emailed through to secretariat Chair requested that members consider providing suggestions on subject matter experts for presentations and priorities to the KPCCG.	KPCCG Chair & members	Complete	

	KPCCG members that didn't attend or respond to invitation to be contacted to gauge their level of interest and participation in the group			

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 1 – Item 4

Response to Action Items from Meeting 3, 5 December 2017

Action Item 5.1: *Request a response from NT PFASIASC in regards to the NTG response to site remediation e.g. former fire station, training facilities etc.*

Response: Site assessments are currently being undertaken and are not completed yet.

Action Item 5.2: *Request list of 67 sites identified by NTEPA.*

Response: Site assessments are currently being undertaken and are confidential at this stage.

Action Item 5.3: *Request deputation from Peter Vassel to explain the role of the NTEPA.*

Response: Suggestion that Paul Purdon, Executive Director NTEPA may be more appropriate. To be arranged for future KPCCG meeting.

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 2 - Item 4

Response to Action Item 6.1, Meeting 3, 5 December 2017

Action Item 6.1: Request Department of Primary Industries and Resources fish test results taken from Daly River for release to the public.

Response: link emailed to members on 22 December 2017

http://mediareleases.nt.gov.au/mediaRelease/24092

22 December 2017 - The Northern Territory Government has released the results of testing of fish from the Daly River for per- and poly-fluoroalkylated substances (PFAS).The test results were sent to Food Standards Australia New Zealand (FSANZ) to analyse 12 fish samples from the Daly River in response to concerns that fish may migrate downstream from the Katherine investigative area. This initial analysis is based on a small number of samples. FSANZ has reviewed results and analysed this data against the Health Based Guidance Values (HBGVs), results indicate that under normal patterns of consumption the HBGV is unlikely to be exceeded for overall consumption of a range of fish species over time. The report found that consumption of barramundi, catfish and mullet species caught in the Daly River are unlikely to present a public health and safety concern. Fish and other aquatic species are highly nutritious foods and a source of protein, omega-3 fatty acids, vitamins and minerals and should be eaten as part of a varied and balanced diet. However overconsumption of fish and other seafood is not recommended because it may lead to potentially higher intake of harmful substances such as mercury. These PFAS test results do not alter the recommended maximum fish consumption for a healthy diet (an average of three, 150 gram serves of these foods per week for an adult and two serves for an expectant or pregnant woman or a child). People are reminded to adhere to the fish consumption guidelines published by FSANZ. The **FSANZ Comparison of Daly River fish samples with PFAS trigger levels report** is available from the NT Environment Protection Authority website (127.9 kb).As part of its detailed environmental evaluation, the Australian Defence Department will ensure sufficient testing is conducted to provide Katherine residents with a complete picture of potential impacts on aquatic life downstream from the PFAS contamination at Tindal. These results will be included in the final Human Health Risk Assessment report, which is expected to be released in April 2018.

Comparison of Daly River fish samples with PFAS trigger levels

1. Background

The Northern Territory Department of Primary Industry and Resources (DPIR) has requested that Food Standards Australia New Zealand (FSANZ) review per- and poly-fluoroalkylated substances (PFAS) analytical data for 12 fish samples caught in the Daly River and compare these data to the trigger levels proposed by FSANZ.

In April 2017 the Department of Health published FSANZ's recommendations on appropriate tolerable daily intakes (TDIs) for PFOS and PFOA. In addition FSANZ proposed 'trigger levels' for a range of foods which indicate concentrations above which further consideration may be warranted by regulatory agencies. These reports were published on the Department of Health website[1].

2. Analytical data

PFAS analytical data were provided for 12 fish caught in the Daly River in November 2017. Three species of fish were analysed (barramundi, catfish and mullet). Fish flesh was analysed for all 12 samples as well as 5 barramundi liver samples.

Data provided indicated that PFOS was detected at levels greater than the level of reporting (LOR) of 0.3 µg/kg in all samples of flesh and liver except one fish flesh sample. PFAS concentrations in all fish flesh and liver samples were <LOR of 0.3 µg/kg for PFHxS, and <LOR of 0.5 µg/kg for all other PFAS congeners analysed, including PFOA.

Summary data for PFOS, PFOA, PFHxS and PFOS+PFHxS combined are provided in Table 1, with Table 2 providing summary PFOS + PFHxS combined summary data for each individual fish species analysed.

Table 1 Summary concentration data (µg/kg) for Daly River fish analysed for PFAS

Fish Matrix	Chemical	Count	Count of <LOR	Minimum	Maximum	Mean**	Median**
Flesh*	PFHxS	12	12	<LOR	<LOR	<LOR	<LOR
	PFOA	12	12	<LOR	<LOR	<LOR	<LOR
	PFOS	12	1	<LOR	62	10.1	3.8
	PFOS+PFHxS	12	1	<LOR	62	10.7	4.3
Liver	PFHxS	5	5	<LOR	<LOR	<LOR	<LOR
	PFOA	5	5	<LOR	<LOR	<LOR	<LOR
	PFOS	5	0	4.1	37	18.4	17
	PFOS+PFHxS	5	0	4.1	37	18.9	17.5

* All species combined.
** Upper bound mean and median derived where not detected results are assigned a concentration equal to LOR.

[1] See Department of Health: Health Based Guidance Values for Per- and Poly Fluoroalkyl Substances http://www.health.gov.au/internet/main/publishing.nsf/Content/ohp-pfas-hbgv.htm

Table 2 Summary PFOS + PFHxS concentration data (µg/kg) for different species of Daly River fish analysed

Fish matrix	Fish species	Count	Count of <LOR	Minimum	Maximum	Mean**	Median**
Flesh	Barramundi	5	1	<LOR	3.4	2.2	2
	Catfish	2	0	0.8	4.1	3	3
	Mullet	5	0	4.7	62	22.2	9.7
	All fish	12	1	<LOR	62	10.7	4.3
Liver	Barramundi	5	0	4.1	37	18.9	17.5

** Upper bound mean and median derived where not detected results are assigned a concentration equal to LOR.

3. Comparison with trigger levels proposed by FSANZ

3.1. Fish flesh

Trigger levels developed by FSANZ are provided at Attachment 1. Trigger levels of 5.2 µg/kg for PFOS+PFHxS combined and 41 µg/kg for PFOA were proposed for all finfish. This is a conservative value based on high (90th percentile) consumption of all diadromous, freshwater and marine fish by children aged 2-6 years.

All fish flesh analysed had concentrations of PFOA <LOR of 0.5 µg/kg and therefore were well below the PFOA trigger level of 41 µg/kg.

Levels of PFOS and PFOS+PFHxS combined were below the finfish trigger level of 5.2 µg/kg for all barramundi and catfish analysed. This indicates that consumption of these fish species caught in the Daly River are unlikely to present a public health and safety concern. However it should be noted that this conclusion is based on a limited number of analytical samples, especially for catfish.

Levels of PFOS and PFOS+PFHxS combined exceeded the finfish trigger level of 5.2 µg/kg for 4 of the 5 mullet samples analysed. Mean and median concentrations for mullet also exceeded the trigger value. This indicates that further investigation or risk management action may be required in relation to this fish species.

When all fish species analysed were considered together the median[2] PFOS+PFHxS combined concentration is 4.3 µg/kg, less than the trigger level of 5.2 µg/kg. This indicates that, overall, consumption of a range of these fish species over time is unlikely to present a public health and safety concern.

3.2. Fish liver

All barramundi liver analysed had concentrations of PFOA <LOR of 0.5 µg/kg, and therefore were well below the PFOA trigger level for fish liver of 2240 µg/kg.

Levels of PFOS and PFOS + PFHxS combined were well below the trigger level of 280 µg/kg for liver for all five barramundi samples, indicating that consumption of liver from barramundi caught in the Daly River is unlikely to present a public health and safety concern.

[2] The use of the median concentration level reflects that there will always be a distribution of the contaminant in the foods eaten over time. It is unrealistic to expect each food item consumed to be contaminated at the highest reported concentration on every eating occasion.

However, there is no data for concentrations of PFAS in the liver of other fish species. Given that higher concentrations of PFOS are found in liver compared to flesh, further analysis of mullet liver may be warranted, as analytical data for this species shows much higher concentrations of PFOS in the flesh compared to barramundi and catfish.

4. Serves of fish to reach the health based guidance value for PFOS

To provide additional context, tables 3 and 4 below provide an indication of the approximate number of serves of fish flesh and liver with median PFOS+PFHxS combined concentrations that can be consumed by the whole population and children aged 2-6 years before reaching the TDI for PFOS of 0.02 µg/kg bw/day.

5. Conclusion

On the basis of the very limited data provided, it is concluded that overall, exposure to PFAS from consumption of a range of Daly River barramundi, catfish and mullet over time is unlikely to present a public health and safety concern. Given the low number of fish sampled, further monitoring may be required. In particular, given the higher concentrations of PFOS in mullet, further investigation of this species may be warranted, particularly concentrations of PFOS in the liver.

While this report details that many serves of Daly River fish can be consumed before reaching the TDI for PFOS, FSANZ nonetheless recommends that due to health concerns regarding naturally occurring mercury levels in fish, that people limit their consumption of fish to a few serves a week for the adult population and less serves for children and pregnant women in accordance with national fish consumption advice produced by FSANZ in Attachment 1 and which can also be downloaded at: http://www.foodstandards.gov.au/consumer/chemicals/mercury/documents/mif%20brochure.pdf

Table 3 Amount of food (grams/day, serves/day^ and frequency of consumption) at median PFOS+PFHxS combined concentration that can be consumed every day over a lifetime before reaching the TDI* for the population aged 2+ years

Fish Matrix	Fish species	Amount of food that can be consumed before reaching PFOS+PFHxS TDI			Actual food consumption~ (grams/day)	
		Grams/day	Serves of foods /day	Approximate frequency of consumption	P90 (consumers only)	Mean (consumers only)
Flesh	Barramundi	700	Approx 4½ fillet/cutlets (1 fillet/cutlet = 150 g)	About 32 serves of barramundi per week	143	56
	Catfish	475	Approx 3 fillet/cutlets (1 fillet/cutlet = 150 g)	About 22 serves of catfish per week		
	Mullet	144	Approx 1 fillet/cutlets (1 fillet/cutlet = 150 g)	About 7 serves of mullet a week		
	Fish - all	330	Approx 2 fillets/cutlets (1 fillet/cutlet = 150 g)	About 15 serves of fish per week		
Liver	Barramundi	80	16 livers (one liver = 5 grams)	About 110 livers		5[#]

^ Measures taken from AUSNUT 2011-12 Measures File AUSNUT Food Measures File
* Tolerable daily intake for PFOS and PFOS+PFHxS combined is 0.02 µg/kg body weight/day
~ Actual food consumption for all fish as reported in the 2011-12 Australian National Nutrition and Physical Activity Survey
[#] no food consumption data available, Population 2+ years, median consumption assumed to be 5 g (weight of one liver). Source: FSANZ report on Edith River, Northern Territory 2013, https://dpir.nt.gov.au/__data/assets/pdf_file/0006/260187/TraceElementsNTFish.pdf

Table 4 Amount of food (grams/day, serves/day^ and frequency of consumption) at median PFOS+PFHxS combined concentration that can be consumed every day over a lifetime before reaching the TDI* for the population aged 2-6 years

Fish Matrix	Fish species	Amount of food that can be consumed before reaching PFOS+PFHxS TDI			Actual food consumption~ (grams/day)	
		Grams/day	Serves of foods /day	Approximate frequency of consumption	P90 (consumers only)	Mean (consumers only)
Flesh	Barramundi	190	Approx 2½ fillet/cutlets (1 fillet/cutlet = 75 g)	About 18 serves of barramundi per week	73	24
	Catfish	129	Approx 1½ fillet/cutlets (1 fillet/cutlet = 75 g)	About 12 serves of catfish per week		
	Mullet	39	Approx ½ fillet/cutlet (1 fillet/cutlet = 75 g)	About 4 serves of mullet a week		
	Fish - all	89	Approx 1 fillets/cutlets (1 fillet/cutlet = 75 g)	About 7½ serves of fish per week		
Liver	Barramundi	22	Approx 4½ livers (one liver = 5 grams)	About 30 livers per week		5[#]

^ Measures taken from AUSNUT 2011-12 Measures File AUSNUT Food Measures File
* Tolerable daily intake for PFOS and PFOS+PFHxS combined is 0.02 µg/kg body weight/day
~ Actual food consumption for all fish as reported in the 2011-12 Australian National Nutrition and Physical Activity Survey
[#] no food consumption data available, Population 2+ years, median consumption assumed to be 5 g (weight of one liver). Source: FSANZ report on Edith River, Northern Territory 2013, https://dpir.nt.gov.au/__data/assets/pdf_file/0006/260187/TraceElementsNTFish.pdf

Attachment 1

Table 1. Proposed trigger points for investigation

Food	Food classification	Proposed trigger points for investigation (µg/kg) PFOS, PFOS+ PFHxS combined	PFOA	Derivation
Fish and Seafood	Crustaceans and Molluscs[#]	65	520	Children 2-6 years, median consumption
	Finfish (all)	5.2	41	Children 2-6 years, P90 consumption
	Fish liver[#]	280	2240	Population 2+ years, median consumption assumed to be 5 g (weight of one liver)*
Animal Products	Meat mammalian	3.5	28	Children 2-6 years, P90 consumption
	Milk	0.4 or LOD if higher	2.8	Children 2-6 years, P90 consumption
	Honey	33	264	Children 2-6 years, P90 consumption
	Offal mammalian[#]	96	765	Population 2+ years, median consumption
	Poultry eggs	11	85	Children 2-6 years, P90 consumption
Fruits and vegetables	Fruit (all)	0.6 or LOD if higher	5.1	Children 2-6 years, P90 consumption
	Vegetables (all)	1.1 or LOD if higher	8.8	Children 2-6 years, P90 consumption

#occasionally consumed food, trigger points for investigation for crustaceans applied to molluscs due to small number of consumers of molluscs.
* no food consumption data available, source: FSANZ report on Edith River, Northern Territory 2013, https://dpir.nt.gov.au/__data/assets/pdf_file/0006/260187/TraceElementsNTFish.pdf

Department of Health Report for Katherine PFAS Community Consultation Group

Meeting 4: 5:30pm - 6 February 2018 at Katherine Government Centre

Update on Action Items for Department of Health from Meeting 3 and answers to questions and out of session community enquiries.

Queries from Merlyn Smith

Responsibility: Xavier Schobben, Director Environmental Health, NT Department of Health

1. *Can we have a definition of what the Department of Defence or Department of Health consider short term or long term exposure and what is (high risk or low risk scenarios).*

    - Short term exposure is not defined and is really related to a tolerable daily intake.
    - Long term exposure is considered whole of life i.e. 80 years.
    - High risk exposure of PFAS is to firefighters or people that manufacture the PFAS chemicals. Australia has never manufactured PFAS so the latter is not an issue, unlike overseas where they actually manufactured PFAS, such as the U.S.A
    - Next high risk group is people on bore water only in investigation area.
    - Low risk exposure is considered to be Katherine residents on town water supply.

2. *How can we believe this level is safe when it's an industrial chemical proven to have adverse health effects in lab animals and Humans (please consider the ongoing lawsuits involving 3M and DuPont (the original manufacturing companies for how harmful these compounds are PFCs, PFAS).*

    - National authorities use the best available science and use of safety factors (uncertainty factors). 3M and Dupont are being sued over the production of PFOA related to Teflon production; 'Scotchguard'; and waterproofing agents. The NT and Australia don't have a PFOA problem as much as have a PFOS problem, which is mainly related to use of Aqueous Film Forming Foams (firefighting foams) released into the environment.
    - In laboratory experiments overseas, researchers fed enormous quantities of PFOA and PFOS to laboratory animals (usually rats) to cause them to develop tumours. Humans and rodents however react differently to PFOA and PFOS, and not all of the effects observed in rats and mice may occur in people.

3. *I was unable to find any comfort or expertise via the hotline available for PFAS information. I have no clear answers to give other mums around Katherine worried about safety of breastfeeding when some children have been exposed to unregulated levels of this in their drinking water prior to April this year. What current advice is for Breastfeeding or pregnant*

women who think they may have high levels already so the safety recommendation of below 0.07 may actually not be as precautionary as suggested.

- The Australian Health Protection Principal Committee (AHPPC), Chaired by the Commonwealth Chief Medical Officer and comprised of Chief Health Officers from all States and Territories has advised that the benefits of breastfeeding far outweigh any issues associated with PFAS. Breastfeeding mothers are encouraged to drink bottled water if they are concerned.

- This is one of the issues being referred to the PFAS Expert Panel for conducting human health impacts research.

- If a mother feels that bottled water is best, then we would certainly suggest using it. For further information please see page 4 on the AHPPC Fact Sheet at this weblink: http://www.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/$File/PFAS-factsheet-15June2016.pdf

4. *Given the uncertainty surrounding the harm of these chemicals in drinking water for long periods will the Department of Health recommend alternate water to those within the investigation area until safety can be guaranteed (while further investigation and risk assessments are conducted).*

    - No.

    - As long as public water supplies continue to have test results identifying levels of PFAS below national health based guidance value for drinking water i.e. 0.07ug/L released by the Australian Government on 3 April 2017, then the department is satisfied that the water is safe to drink.

5. *Can it be included in general information that boiling the water will not reduce or remove PFAS*
    - Yes, that is a good idea. It has been added to the Katherine Frequently Asked Questions (FAQ) fact sheet.

Queries from community members in consultations undertaken with local Aboriginal communities in 19-22 December 2017

Responsibility: Xavier Schobben, Director Environmental Health, NT Department of Health

Officers from the Department of the Chief Minister; Department of Health; and Department Housing and Community Development undertook community consultations with local Aboriginal communities in late December 2017.

The queries arising from these consultations and responses by the department to these are detailed below and contained in a separate Katherine FAQ fact sheet – Aboriginal Communities.

1. *Can I still fish?*

It is advised that you limit your fish consumption till the Defence report is completed in April 2018.

2. *Am I going to die from eating fish?"*

No. While the Department of Health is concerned about PFAS levels in fish, it is more concerned about the level of heavy metals in fish, including cadmium, lead and mercury, as these substances are known to definitely affect the health of people. That's why it is recommended to only eat three serves of fish per week for adults and two or less serves for pregnant women and children.

3. *Are police going to lock me up if I keep fishing?*

No. The police won't lock you up as it is just cautionary advice from the Department of Health.

4. *Am I going to die from drinking the water?"*

No, not at all, but the river water really needs be treated before you have a drink. Drinking from a tap that is connected to the town water supply is fine.

5. *When will the water be proper clean?*

The Australian Department of Defence is working on it with Power and Water, but it could take up to 2 years to fix the problem so that there is no PFAS at all in the water.

6. *People are saying that they have been told that they can't drink the water at all anymore.*

The public water supply is safe to drink. People can drink the water.

7. *There may be questions around what people are seeing and hearing on social media particularly on Facebook. How am I gonna be fixed?*

The Northern Territory Government is waiting on the final report in April 2018 from Defence and more information will be provided then.

8. *What about my kids, will they be right?*

Yes. Defence is also organising blood tests and being part of a national *PFAS Health Study* to check on your health and the health of your kids too.

9. *There may also be questions around health concerns particularly cancer, as this is what has been heard from social media, which in turn has caused the 'grape vine' effect and has generated some angst and anxiety in the community.*

The Northern Territory Department of Health is working on a Katherine cancer study, but so far data on the rates of cancer in Katherine identify that they are no different than anywhere else in the Northern Territory.

10. *People will probably ask about the blood tests, when they will get them and what they should do if they have been diagnosed as having a high level of PFAS in their bodies.*

Further advice will be given when we know more from Defence in April 2018.

The Australian Department of Health is also working on this issue and will advise more soon about blood testing and being part of a national PFAS study.

11. *People may even ask about compensation and what government is going to do to assist in fixing the problem.*

Defence has admitted that it caused the pollution from RAAF Base Tindal and is working hard with Northern Territory Government agencies and Katherine Town Council to fix the problem.

Defence Interim Human Health Risk Assessment report

The Australian Department of Defence released the interim human health risk assessment report on 5 January 2018. The Department of Health previously provided comments to Defence and its consultant, Coffey, on additional water bodies and biota species to be sampled and tested during the upcoming wet season and need for additional expert toxicological input, all for inclusion in the final human health risk assessment report expected to be released by April 2018.

The Department of Health has also advised the public to avoid the consumption of fish from the Katherine River till the full human health risk assessment is completed and released in April 2018 and more definitive guidance can be provided on fish serving consumption. Signs have been erected at various access points along the Katherine River and Tindal Creek advising of such.

Recent results of PFAS testing in barramundi samples taken from the Daly River by the Department of Primary Industry and Resources (DPIR) have returned results below health based guidance values. The department requested that Food Standards Australia New Zealand provide a report on the results, which has been completed and has been placed on the NT EPA website at: https://ntepa.nt.gov.au/__data/assets/pdf_file/0011/473492/pfas_fish_report.pdf

Environmental Health Standing Committee (enHealth)

enHealth is meeting in March to review and potentially update public information on PFAS.

Katherine cancer rates

The department's Health Gains Planning Branch has been requested to prepare an updated report on a Katherine cancer study to be available in April 2018.

Katherine Epidemiological Study (PFAS Health Study)

The Australian Government Department of Health has commissioned the Australian National University (ANU) to undertake the **PFAS Health Study**, which has five main parts:

1. A systematic review of the published literature on the health effects of PFAS.
2. A focus group study to determine the concerns of individuals living in the vicinity of Williamtown and Oakey have in relation to exposure to PFAS and their health.
3. A blood serum study to define the serum concentrations (mean and range) of PFAS in Williamtown and Oakey residents living in the Investigation Areas and to compare the levels to those of people residing in non-contaminated areas in the townships and surrounding areas.
4. A cross sectional survey to investigate the exposure and risk factors for high serum PFAS levels, including sociodemographic (e.g. age, sex, location) and other factors (e.g. duration of residence in the area, water source), and associations of high serum PFAS levels with common symptoms, signs and diagnosed illnesses in the Williamtown and Oakey communities.
5. A data linkage study to examine whether sex-specific age adjusted rates of diseases potentially associated with PFAS are higher among people who have lived in the Investigation Areas of Williamtown and Oakey compared to those living outside the Investigation Areas and in the general Australian population.

The Australian Government advised on 4 December 2017 that Katherine residents will also be eligible for voluntary blood testing; health counselling; and being part of this epidemiological study.

The Australian Department of Health is currently in negotiation with the Australian National University to include Katherine people in this **PFAS Health Study.** The Australian Government is expected to advise shortly on the rollout of these services in Katherine.

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 3 – Item 9.1

Request for out of session member Working Group meeting to identify key topics for messaging through social media and Katherine Times Newspaper.

Following the KPCCG meeting of 5 December 2017 and a commitment from the Department of Defence to provide ongoing funding for publication of a half page newspaper advertisement, an invitation was extended to all members to convene an out of session working group meeting.

Monday 11 December 2017, 11am, DCM Regional Office

Attendees: Errol Lawson, Fay Miller, Jake Quinlivan, Meg Geritz, Merlyn Smith, Nathanael Knapp, Robert Jennings

Discussion was focused on the information, fact sheets and brochures distributed by Department of Defence at the shop front, open forum and available on the Tindal PFAS website, and how the information contained in the fact sheets could be better presented or communicated to the broader community.

Members agreed that while the information was relevant and well-presented, feedback from community members indicated that it was a lot of information to take in and would be a good starting point for the group to consider identifying priority topics and/or information for distribution via the newspaper advertisement.

Priority information, identified by the group, that could be published in the advertisement included:

- Tindal community update insert
- IHHRA Fact Sheet
- Suggestion for a youtube type video to explain the pamphlets and fact sheets

Phone and website contact details for:

- Water Eligibility Hotline: 1800 316 813
- Department of Defence
- Department of Health
- Power and Water Corporation
- NT EPA
- Katherine Town Council

Members undertook to provide further input for discussion at the next KPCCG meeting scheduled for 6 February 2018. This has been included in separate meeting papers.

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 4 – Item 9.2

Robert Jennings commentary on information material Released by Department of Defence

17 December 2017

Reading through the methodical and necessarily technical information sheets that have been released by Defence, I can see the cautious beginnings of a process of investigation that will take some years to unravel.

It is a complex puzzle that has been pushed onto all of us and one that is difficult to comprehend – we are dealing with something that we cannot see with our eyes, something that the scientific world is on a learning curve to understand and that has the potential to impact our health, our food, our environment, our custodianship of the land and our economy. There is also the unfortunate aspect that the problem has originated from our own RAAF Defence base, whose stated purpose (and genuinely in the hearts of those who serve there) is to 'defend Australia and its national interests'.

All the details of the process that has been put in place, what has been determined so far (including key risks) and what is planned next are identified in these documents and are essential reading for all of us. It is not a problem we face alone, and indeed, most of the developed world will be impacted from many different sources. Some of the best minds that the Northern Territory and Australia have to offer are working to find the solution for the PFAS problem, but I see other fundamental factors at play that will equally shape our future, just as much as the important technical processes.

For us to arrive at a destination that we would all prefer it will take a listening leadership approach, partnerships (with integrity) across all levels of government and our community as well as responsible actions. We will all have to demonstrate these qualities as a united PFAS-busting team. Without this constant and respectful alignment of ourselves and others to these virtues, we will easily miss our destination and hand over a poorer inheritance to the next generation of Katherinites.

Fortunately, I have been privileged enough to have met many of the people trying to solve the problem in Katherine, the Territory and in Canberra. I have seen leadership from Senator Marise Payne and our local MLA, partnership across government and community in the Katherine PFAS Community Group as well as responsible actions in the installation of the interim PFAS water treatment plant. Most importantly, I see good intent.

I am however under no illusion that this will be an easy journey and I know that there will be many technical and relationship challenges to test our unity over the following years. But I also strongly believe that Katherine is an amazing community with a bright future and that perhaps we can all deliver on a vision of enriching our shared future by working together with integrity.

Regards

Robert Jennings B Econs, B App Sc, B Arch (Hons), Dip Bus, MIPAA (VIC), FAIM, RA (non-practicing)

Chief Executive Officer,

Katherine Town Council

Agenda Paper 5 – Item 9.3

Member initiated list of questions received from Merlyn Smith and distributed to all members on 18 December 2017.

Suggested Agenda items for Feb 6 2018 KPCCG meeting

Katherine Town Council

- What criteria was used to select the GWMB sites (is it crown land or council zone?)
- What is being done to contain the use of toxic level bores identified in the investigation some of which are the highest tested at various parks and playgrounds around town.
- KTC said on the 8th of NOV that where "any detectable levels are found council will identify and implement measures to reduce potential expose of the water to the community as a matter of priority "- what is being done?
- Given that nearly a million litres of contaminated water was disposed of via our sewage systems what's being done to immobilise or contain it at the sites of the waste/sewage ponds. (Won't this further contaminate our river system)
- Are signs being placed at recreational facilities or hot springs to inform the public PFAS is present(albeit at below guideline levels)

Department of Defence/RAAF

- How often was 3M light water used for training purposes at Tindal RAAF Base?
- When did ansulite replace 3M Lightwater?
- When did RAAF Base Tindal cease using it for training I.e. restricted to just for emergencies, replacing training with an enviro friendly solution to replicate the Firefighting foam.
- Have other remote training sites within the Katherine Region been identified also that may require decontamination i.e Delamere Weapons Training Range? In order to prevent further leaching of harming chemicals or are the tests specific to PFAS compound.

DOD

- What experience at conducting health studies/health surveys and long term exposure health consultations does Coffey Consultancy have?
- Are the water use surveys designed by Coffey or by University Departments of Health and Science?

Department of Health / and Or Department of Defence

- Can we have a definition of what the Department of Defence or Department of Health consider short term or long term exposure and what is (high risk or low risk scenarios)

- How can we believe this level is safe when its an industrial chemical proven to have adverse health effects in lab animals And Humans (please consider the ongoing lawsuits involving 3M and DuPont (the original manufacturing companies for how harmful these compounds are PFCs, PFAS))

- I was unable to find any comfort or expertise via the hotline available for PFAS information. I have no clear answers to give other mums around Katherine worried about safety of breastfeeding when some children have been exposed to unregulated levels of this in their drinking water prior to April this year. What current advise is for Breastfeeding or pregnant women who think they may have high levels all ready so the safety recommendation of below 0.07 may actually no be as precautionary as suggested. Given the uncertainty surrounding the harm of this in drinking water for long periods will the Department of Health recommend alternate water to those within the investigation area until safety can be guaranteed (while further investigation and risk assessments are conducted)

- Can it be included in general information that boiling the water will not reduce or remove PFAS

KPCCG

- Will the KPCCG consider recommending to DOD and DOH rolling out a Clean Water Task Force to ensure all people have access to clean water to truly act in a precautionary manner until safety can be absolutely agreed on.

- Can we suggest as a method of 'containing and immobilizing' PFAS compounds that all residents be supplied filters for Point Of Use installation to ensure fluctuating levels are prevented when the wet season is over. (A majority of people continue to buy water while others can afford the POU filters and this does not seem fair) I suggest 'equivalent protection for all' as the PFAS NEMP states. (As apposed to only those who are aware of the PFAS contamination and know what number to call having access to clean alternate water)

Power and Water

- If your online links say your providing monthly averages of PFAS Testing, can we please have the monthly averages in detail? Several community members have expressed dissatisfaction when trying to access a clear average per month (can we have access to a break down of July, August, September, October , November)

- If the interim treatment plant does 10% of our water are we simply relying on rainfall to dilute the levels?, what's going to happen when the wet season ends? (Do you agree that POU filters could reduce any potential for fluctuating levels beyond the wet season)

- Are we permitted to know the status of the request for 30% more water from the Katherine River.

Department of the Chief Ministers Office

- Clearly define Local, State and Federal Responsibility as this can differ from State to Territory in regards to PFAS contamination

- How can this 'situation' be addressed nationally and consistently when its not being referred to as a emergency contamination crisis in order for Local, State and Federal Government to respond to this crisis and the other 59 locations around Australia (as identified on November 16th) in the most effective best practice means necessary.

Responses received to date (30 January 2018) have been included below.

Katherine Town Council response

- **What criteria was used to select the GWMB sites (is it crown land or council zone?)**

A number of Council owned bores were tested as part of the investigation into the nature and extent of PFAS around RAAF Base Tindal. Details about tested Council bores can be found under the Water Resources tab on the Katherine Town Council website. Katherine Town Council was not involved in the selection of the bores for ground water monitoring purposes, however we made sure that these bores were available when access was requested.

- **What is being done to contain the use of toxic level bores identified in the investigation some of which are the highest tested at various parks and playgrounds around town.**

Council are working with the experts engaged by the Department of Defence who are leading the process for the whole township to determine what should be done in the immediate and long term futures.

- **KTC said on the 8th of NOV that where "any detectable levels are found council will identify and implement measures to reduce potential expose of the water to the community as a matter of priority "- what is being done?**

Katherine Town Council has implemented a number of measures to restrict potential community exposure to bore irrigation water. Firstly, the continued implementation of our GALCON water management system means that we can identify water efficiencies and control watering programs remotely, automatically notify and log issues and respond to any conflict between watering regime and community use instantly. Secondly, we have expanded our bore capacity at the sportsgrounds. This will allow us to complete a greater portion of the watering during the night, when the risk of human contact is low, however there are not enough night hours to complete all watering activities. Finally, we have installed signage to alert members of the community where bore water is used to irrigate the parks and gardens. This is a prudent measure as bore water from urban areas should generally be avoided, even if the risk of PFAS exposure was not present due to the potential for other contamination issues.

- **Given that nearly a million litres of contaminated water was disposed of via our sewage systems what's being done to immobilise or contain it at the sites of the waste/sewage ponds. (Won't this further contaminate our river system)**

Questions requiring specific details about waste water treatment should be directed to Power and Water Corporation, as the body responsible for the management of Katherine's sewage system. However the following general information can be provided.

After water testing on the 28th of September that showed PFAS levels at the Katherine Aquatic Centre were above Health Based Guideline Values a management plan was developed with approval from relevant parties including the Northern Territory Environmental Protection Agency, the Department of Health and Power and Water Corporation (PWC). The plan involved approximately 900,000L of water from the pool being drained into a nearby sewage inlet. As part of the planning process PWC investigated the impact that the PFAS in the pool water would have on the treated effluent at the Katherine Waste Stabilisation Ponds. The determination was that there would be no material impact as the PFAS in the pool waster represented less than 3% of the annual load received for treatment via the sewage system. The draining of pool water was then carried out as per the direction of PWC.

- **Are signs being placed at recreational facilities or hot springs to inform the public PFAS is present (albeit at below guideline levels)**

As part of the ongoing communication and advocacy for our community, Council provides results from PFAS testing at both recreational swimming sites which we are responsible for, the Aquatic Centre and Katherine Hot Springs, on our website. We also provide links that concerned members of the community can follow to access further information about PFAS contamination. As mentioned previously signage regarding the use of bore water has been installed in parks, however additional signage for sites within Health Based Guidance Values has not been an issue considered by Council.

Department of Defence Response

• *How often was 3M light water used for training purposes at Tindal RAAF Base?*

RAAF Base Tindal commenced operations as a main operating base from October 1988 and likely commenced Airfield Rescue and Fire Fighting (ARFF) operations from that time. Delivery of ARFF services is required under international conventions and requires a number of capabilities to be delivered to be considered appropriate. Training with Aqueous Film Forming Foam (AFFF) was a routine activity that would have occurred twice monthly from 1988 until the Mid-1990s when it ceased completely.

• *When did ansulite replace 3M Lightwater?*

The 3M Company ceased production of Light Water AFFF in 2002-03, at that time no suitable alternative was available[1]. By 2004 Ansulite was being trialled by Defence as an alternative[2]. From 2004, Defence transitioned to Ansulite for use across the Defence Estate in replacement of 3M Lightwater. Defence commissioned a study in 2006[3] to understand the environmental effects of available products of the time.

• *When did RAAF Base Tindal cease using it for training i.e. restricted to just for emergencies, replacing training with an enviro friendly solution to replicate the Firefighting foam.*

Defence began phasing out the use of 3M Light Water AFFF from 2004 and by 2011 had fully transitioned to Ansulite[4]. Delivery of training foam did not occur until recently and commissioned into use in 2013-14 across Air Force. It is likely Air Force ceased using 3M Light Water AFFF from April 2004 for training[5].

• *Have other remote training sites within the Katherine Region been identified also that may require decontamination i.e. Delamere Weapons Training Range? In order to prevent further leaching of harming chemicals or are the tests specific to PFAS compound. DOD.*

Defence has been proactive in initiating an environmental program to identify the nature and extent of PFAS on and around Defence sites.

After a review of historical legacy firefighting foam use across the Defence Estate, Defence has determined there is a low risk of significant PFAS contamination issues at Delamere Air Weapons Range or surrounding properties in the NT. As a result, a detailed environmental investigation into PFAS is not required at this time.

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[1] Colville and McCarron, Environmental Issues Associated with Defence Use of Aqueous Film Forming Foams. CSIG May 2003. p.iv

[2] The Senate. Foreign Affairs, Defence and Trade Reference Committee. Inquiry into firefighting foam contamination Part A – RAAF Base Williamtown Feb 16, p. 8

[3] Mallavarapu Et Al. Project Report: Environmental Fate of New Fire Suppressing Products (Ansulite AFFF & 3M RF) compared to Light Water: A verification of Manufacturer's claims. University of South Australia, 04 Apr 06.

[4] Senate Inquiry into the Contamination of Australia's Defence Force facilities and other Commonwealth, state and territory sites in Australia, Defence Submission Part A, 18 Dec 15. p.4

[5] Senate Inquiry into the Contamination of Australia's Defence Force facilities and other Commonwealth, state and territory sites in Australia, Defence Submission Part A, 18 Dec 15. p.14

Defence will continue to assess potential risks associated with PFAS contamination at Delamere Air Weapons Range (and other properties in the NT), including through routine water quality monitoring.

Defence is committed to engaging with the relevant authorities and local communities with respect to PFAS investigation and will engage with the community if further investigations into PFAS at other NT sites are deemed to be required.

• *What experience at conducting health studies/health surveys and long term exposure health consultations does Coffey Consultancy have?*

Defence conducted an open and competitive tender procurement to identify companies with relevant experience, skills and capability in conducting detailed environmental investigations that are focussed on characterising sources of contamination and possible connections between potential contamination to humans, the human food chain or ecology.

Coffey were selected to conduct the RAAF Base Tindal PFAS investigation and subsequent analysis of the potential exposure risks of PFAS on the Katherine community, including the Human Health Risk Assessments (HHRA,) because of their experience and expertise.

The HHRA requires careful interpretation of primary literature on toxicology, environmental fate and ecotoxicology. The chemicals of interest include bioaccumulative chemicals that are not well characterised in the NEPM. It therefore requires a team that includes technical direction by appropriately qualified and experienced health risk assessors with expertise or access to expertise in human health toxicology and ecotoxicology.

The Coffey team has completed numerous risk assessments on the potential exposure of humans to a wide variety of unusual chemicals associated with contaminated soil, groundwater and air. The Coffey team have experience in assessing and managing environmental and health risks associated with contaminated sites and industrial facilities, chemical toxicity assessment, chemical fate and transport modelling (involving all media: soil, water and air), environmental and occupational risk assessment and management and regulatory compliance. Coffey staff are highly qualified and experienced in the provision of analysis on potential health risks associated with chemical contamination.

International peer review has also been incorporated into the team, leveraging the PFAS investigation experience of Coffey personnel in the USA. The Coffey team completing the HHRA also includes the Australian representative on the Coffey global PFAS working group.
Defence is also working closely with the NT and Commonwealth Departments of Health to ensure the HHRA is robust.

• *Are the water use surveys designed by Coffey or by University Departments of Health and Science?*

The water use survey has been designed by Defence and Coffey to collect information about water supply and use on properties in the vicinity of RAAF Base Tindal to inform the Human Health Risk Assessment. The Community Survey aims to collect a broader range of information about water and land use than the Water Use Survey. The Community Survey looks at additional topics including land use and edible produce.

Department of Health response

1. ***Can we have a definition of what the Department of Defence or Department of Health consider short term or long term exposure and what is (high risk or low risk scenarios).***

    - Short term exposure is not defined and is really related to a tolerable daily intake.
    - Long term exposure is considered whole of life i.e. 80 years.
    - High risk exposure of PFAS is to firefighters or people that manufacture the PFAS chemicals. Australia has never manufactured PFAS so the latter is not an issue, unlike overseas where they actually manufactured PFAS, such as the U.S.A
    - Next high risk group is people on bore water only in investigation area.
    - Low risk exposure is considered to be Katherine residents on town water supply.

2. ***How can we believe this level is safe when it's an industrial chemical proven to have adverse health effects in lab animals and Humans (please consider the ongoing lawsuits involving 3M and DuPont (the original manufacturing companies for how harmful these compounds are PFCs, PFAS).***

    - National authorities use the best available science and use of safety factors (uncertainty factors). 3M and Dupont are being sued over the production of PFOA related to Teflon production; 'Scotchguard'; and waterproofing agents. The NT and Australia don't have a PFOA problem as much as have a PFOS problem, which is mainly related to use of Aqueous Film Forming Foams (firefighting foams) released into the environment.
    - In laboratory experiments overseas, researchers fed enormous quantities of PFOA and PFOS to laboratory animals (usually rats) to cause them to develop tumours. Humans and rodents however react differently to PFOA and PFOS, and not all of the effects observed in rats and mice may occur in people.

3. ***I was unable to find any comfort or expertise via the hotline available for PFAS information. I have no clear answers to give other mums around Katherine worried about safety of breastfeeding when some children have been exposed to unregulated levels of this in their drinking water prior to April this year. What current advice is for Breastfeeding or pregnant women who think they may have high levels already so the safety recommendation of below 0.07 may actually not be as precautionary as suggested.***

- The Australian Health Protection Principal Committee (AHPPC), Chaired by the Commonwealth Chief Medical Officer and comprised of Chief Health Officers from all States and Territories has advised that the benefits of breastfeeding far outweigh any issues associated with PFAS. Breastfeeding mothers are encouraged to drink bottled water if they are concerned.
- This is one of the issues being referred to the PFAS Expert Panel for conducting human health impacts research.
- If a mother feels that bottled water is best, then we would certainly suggest using it. For further information please see page 4 on the AHPPC Fact Sheet at this weblink: http://www.health.gov.au/internet/main/publishing.nsf/Content/A12B57E41EC9F326CA257BF0001F9E7D/$File/PFAS-factsheet-15June2016.pdf

4. ***Given the uncertainty surrounding the harm of these chemicals in drinking water for long periods will the Department of Health recommend alternate water to those within the investigation area until safety can be guaranteed (while further investigation and risk assessments are conducted).***

    - No.
    - As long as public water supplies continue to have test results identifying levels of PFAS below national health based guidance value for drinking water i.e. 0.07ug/L released by the Australian Government on 3 April 2017, then the department is satisfied that the water is safe to drink.

5. ***Can it be included in general information that boiling the water will not reduce or remove PFAS***
    - Yes, that is a good idea. It has been added to the Katherine Frequently Asked Questions (FAQ) fact sheet.

Department of the Chief Minister

- **Clearly define Local, State and Federal Responsibility as this can differ from State to Territory in regards to PFAS contamination**

The PFAS Contamination Response Protoco is a quick-reference tool to help governments work together to respond rapidly and effectively to PFAS contamination. It outlines high-level information about government roles and processes and directs the user to more detailed, specifically relevant guidance materials. It aims to assist government agencies to collaborate more effectively, respond more consistently, and provide clear information to communities and industry on what they can expect from governments in Australia on PFAS contamination.

- **How can this 'situation' be addressed nationally and consistently when it's not being referred to as an emergency contamination crisis in order for Local, State and Federal Government to respond to this crisis and the other 59 locations around Australia (as identified on November 16th) in the most effective best practice means necessary.**

An intergovernmental agreement is currently being developed by the commonwealth for states and territories to sign in conjunction with the PFAS National Environmental Management Plan (NEMP). The PFAS NEMP seeks to build a nationally collaborative approach and national consistency in priority areas, allowing for the implementation of actions in a way that becomes 'business as usual'. The Plan is being developed by all jurisdictions and recognises the need for implementation of best practice regulation through individual jurisdictional mechanisms.

The PFAS NEMP is expected to be a reference on the state of knowledge related to the environmental regulation of PFAS. The plan will also represent a how-to guide for the investigation and management of PFAS contamination and waste management, including best practice approaches, which will be called upon to inform actions by EPAs.

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 6 – Item 10.1

Aboriginal Community Information and Awareness sessions

Following the first meeting of the Katherine PFAS Community Consultation Group (KPCCG) in October 2017, representatives from the Department of the Chief Minister (DCM), and the Department of Defence (DoD) with assistance from Aboriginal Interpreters from the Department of Housing and Community Development's (DHCD) Aboriginal Interpreter Service (AIS), facilitated the delivery of community information and awareness sessions for Katherine Aboriginal community residents of Rockhole, Myalli Brumby, Binjari and Geyulkgan Ngurra.

In-principle and in-kind support for the delivery of these sessions was sought and subsequently provided by the Kalano Community Association (KCA), Binjari Community Aboriginal Corporation (BCAC) and the Northern land Council (NLC).

Initial community information and awareness sessions were held at Rockhole on 28 November, Myalli Brumby on 29 November, Binjari and Geyulkgan Ngurra on 30 November 2017 with a number of interested residents attending and taking the opportunity to ask questions. DoD contractor, Coffeys, also took water samples from various points throughout the communities and undertook to return with sample results once available in early 2018.

Following the PFAS Investigation & Management Program Community Information Session regarding findings from the interim Human Health Risk Assessment held at Knott's Crossing on 4 December 2017, the NT Department of Health (DoH) issued a precautionary health advice regarding the consumption of fish and shellfish from the Katherine River and Tindal Creek.

In order to provide Aboriginal community residents of Katherine with information to enable them to make informed decisions, a second series of information sessions was delivered to individual houses at each of the Aboriginal town camps, in addition to the Salvation Army Katherine Doorways Hub clients, during the week of 18 December 2017. KCA, BCAC and the NLC Katherine Regional office were consulted and endorsed this NTG community engagement activity. Staff from the DoH Environmental Health Branch, DHCD Local Government and Community Development and the Aboriginal Interpreter Service worked collaboratively with DCM to deliver information sessions to a total of 103 houses. On average, NTG staff had individual discussions with at least 80 people. The 'NTG PFAS Frequently Asked Questions' information sheet was left at the Salvation Army Katherine Doorways Hub and handed to tenants or left at each house if the tenants were not present at the time of visit by NTG staff.

On 10 January 2018, the Big Rivers Regional office were advised by the DoD that the result letters of the water samples collected during the visit to Rockhole, Myalli Brumby, Binjari and Geyulkgan-Ngurra in November 2017 were completed. An offer was extended to have formal meetings with the Chief Executive Officer and Board of Directors of KCA, BCAC and staff from the Northern Land Council Katherine office during the week of 22 January 2018. All test results for PFAS levels in water samples collected are below the limit of reporting, and formal correspondence from DoD has been provided to KCA, BCAC and the NLC.

Katherine PFAS Community Consultation Group – Meeting 4, 6 February 2018

Agenda Paper 7 – Item 10.2

Request from Allan Domaschenz for discussion regarding:

(a) Property Report Sheets

There has been concern expressed with the RAAF Tindal Environmental Investigation Property Report Sheets being returned to property owners not carrying Defence Identification:- the Water Test Results and Biota / Soil Test Results do not carry a specific Defence File Number - because of this omission concern has been expressed that future access / referral and or re - issue of these individual documents could be quite difficult.

(b) KPCCG information dissemination

Due to the close similarities relative to PFAS contamination on the Tindal RAAF Base and Williamtown RAAF Base and the surrounding effected properties of each location, discussion is requested to consider extending as per 17/10/17 (4.2) "All agreed that actions and information from KPCCG be disseminated to all Politicians, Independents and Opposition" - to be amended to also include the community of Williamtown (NSW) and surrounding effected areas.