

2.2 Previously raised items to be addressed

- The Board of Wreck Bay Aboriginal Community Council (WBACC) was briefed on 11 Apr 2017 to seek agreement to access aboriginal lands for the PFAS investigation. The Board stated that no access to aboriginal lands will be granted, prior to appointment of independent expert to advise WBACC. This directly impacts the DSI works for the '403 land' and the Booderee National Park.
- As a result of the delay associated with accessing aboriginal land (expected to be 3 months or greater) the Detailed Site Investigation (DSI) has at this time been undertaken on Defence land only. The DSI for non-Defence land will commence when approval from WBACC is provided. It is anticipated review of SAQP Rev 2 by the WBACC board or independent adviser may trigger approval to commence off site investigation.

3.0 Project progress

- The following items have been completed this reporting period:
 - Sampling and Factual reports of sampling results:
 - Jervis Bay water treatment plant, raw water inlet and potable water tanks.
 - SSSS closed loop water tank S440
 - Lakes Windermere and McKenzie
 - Completion of Water Use Survey and associated community barbeques to foster collaboration.
 - Issue of Draft water use survey report to Defence.

3.1 Project impacts

- Identification of WBACC independent adviser and approval to conduct investigation on aboriginal lands.
- Requirement to conduct the Groundwater numerical modelling and Human Health risk Assessment (HHRA).
- Outcomes of the investigation into the sewerage system at JBRF and treated effluent water distribution.
- Issue of SAQP Rev 2 and associated reviews.

3.2 Project meetings

Project meetings held this reporting period are presented in Table 1.

Table 1: Summary of meetings held during the June reporting period

Meeting date	Meeting title	Participants	Minutes circulated
18 July 2017	PCG No 5	PCG members	Yes
Recurring Wednesday's	Weekly meetings	JBRF project team – Defence, GHD & Site auditor	Yes

3.3 Project deliverables submitted this period

Project deliverables submitted during this reporting period are presented in Table 2.

Table 2: Project deliverables submitted during the June reporting period

Document status	Title	Date submitted
Final	Factual Memorandum of JBRF sampling results No. 5	11 July 2017
Draft	Water Use Survey report	31 July 2017

3.4 Project Milestones

The following project milestone were achieved in the June reporting period:

- Completion of the Water use survey and issue of Draft report.

4.0 Project Forecast

The project schedule is presented in the enclosed project schedule, dated 18 July 2017

4.1 Schedule tracking forecast

- The development and finalisation of the SAQP has been impacted by access to the Wreck Bay community and land and therefore has been delayed.
- SAQP (Rev 2) is under development to include:
 - Response to Rev 1 agency comments (where required)
 - Incorporation of water use survey community information
 - Biota sampling.

4.2 Project deliverables expected next period

- Issue of SAQP Rev 2
- Recommendation for HHERA and Groundwater numerical modelling

4.3 Technical Advisor forecast

The Technical Advisor's achievements and planned activities are presented in Table 3.

Table 3: Technical Advisor achievements and key activities during the July reporting period

Scope item	Achieved to date	Planned for next month

5.0 Community enquiries

In this reporting period:

- No community independent enquiries were received via the Community Hotline (1800 987 618) and email (Jervisbay@ghd.com.au)
- Responses to communications with WBACC CEO received.
- There are 0 outstanding stakeholder enquires

6.0 Interaction with Government

Meetings and communications with Government stakeholders are summarised in Table 4.

Table 4: Summary of interactions with Government during the June reporting period

Meeting date	Meeting title	Participants	Minutes circulated
18 July 2017	PCG No 5	NSW & ACT Agencies	Yes

9.0 Requests for information from Defence

- All relevant historical reports associated with JBRF environmental assessments and contamination investigations have been provided to GHD by Defence.

10.0 Other Matters

- Nil

Yours sincerely

[REDACTED]
[REDACTED]
[REDACTED]

CC:

Enclosures: Project Milestones - Dated 18/07/2011

Table 1 - JBRF Environmental Investigation Key Milestone summary July 2017

Item	Start	Finish	
SAQP	30/03/2017	15/09/2017	
Defence, Auditor and Agency review of SAQP Rev 1	04/05/2017	18/05/2017	Defence/Auditor/ACT & NSW Agencies
Finalise SAQP Rev 1	19/05/2017	26/05/2017	GHD
Approval to conduct Water use survey	19/06/2017	07/07/2017	WBACC
Conduct WBAC water use survey	19/06/2017	11/07/2017	GHD/WBACC
Update of SAQP (REV 2) to incorporate water use survey results and Biota sampling – Draft SAQP REV 2	12/07/2017	18/08/2017	GHD
Defence and Auditor review of Draft SAQP Rev 2	21/08/2017	12/09/2017	Defence/Auditor
Defence, Auditor and GHD Draft SAQP Rev 2 Workshop	14/09/2017	14/09/2017	GHD/Defence/Auditor
WBACC, ACT & NSW Agencies review of Draft SAQP Rev 2	20/09/2017	15/09/2017	WBACC/ACT & NSW Agencies
Finalise SAQP	18/09/2017	30/09/2017	GHD
Off Site Access	30/09/2017	TBA	WBACC/Booderee
Appointment of WBACC independent Adviser	11/04/2017	TBA	WBACC
Approval to conduct Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling	11/07/1017	TBA	WBACC
DSI	5/04/2017	28/08/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1).	5/04/2017	09/05/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2).	TBA	TBA	GHD
Factual reports of On-Site sampling results	09/05/2017	11/08/2017	GHD
Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1)	TBA	TBA	GHD

Item	Start	Finish	
Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2)	TBA	TBA	GHD
Factual report of Off Site sampling results	TBA	TBA	GHD
DSI Reporting	11/05/2017	14/02/2018	
Defence and Auditor review of Draft DSI Report	16/11/2017	26/11/2017	Defence/Auditor
Update of Draft DSI Report	26/11/2017	28/11/2017	GHD
ACT & NSW State Agency review of draft DSI Report	28/11/2017	22/12/2017	Defence/Auditor/ACT & NSW Agencies
Finalise DSI Report	10/01/2018	14/01/2018	GHD
Final DSI Report approved	15/01/2018	15/01/2018	Defence
Community Information Session	18/01/2018	14/02/2018	GHD/Defence/Agency
Human Health and ecological risk assessment	24/08/2017	25/05/2018	
HHERA Recommendation	18/07/2017	21/07/2017	GHD
HHERA Methodology preparation	24/08/2017	06/09/2017	GHD
Review of Draft HHERA Methodology	07/09/2017	20/09/2017	Defence/Auditor/ACT & NSW Agencies
Implementation	21/09/2017	21/12/2017	GHD
Draft Reporting	05/01/2018	15/03//2018	GHD
ACT & NSW State Agency review of draft HHERA	16/03//2018	26/04/2018	Defence/Auditor/ACT & NSW Agencies
Finalise HHERA Report	27/04/2018	27/04/2018	GHD
Final HHERA report approved	27/04/2018	27/04/2018	Defence
Community Information Session	30/04/2018	25/05/2018	GHD/Defence/Agency



Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Environmental Investigation – Jervis Bay Range Facility
PROJECT CONTROL GROUP MEETING # 6

Administrative Details	
Date	Tuesday 15 August 2017
Time	14:00 – 14:45
Venue	Teleconference
Dial-in Details	Toll ----- [REDACTED] Toll-free ----- [REDACTED] Participant PIN: [REDACTED]
Chair	[REDACTED]
Minutes	Taken by [REDACTED]

ATTENDEES	
Defence	
[REDACTED]	Project Director, Environmental Investigations
[REDACTED]	Project Manager
[REDACTED]	Project Manager
[REDACTED]	Commanding Officer HMAS Creswell
[REDACTED]	Base Support Manager – Shoalhaven
Lead Contractor (LC), GHD	
[REDACTED]	Service Line Leader - LC Project Director
[REDACTED]	Principal Environmental Consultant
[REDACTED]	Stakeholder Engagement
[REDACTED]	Project Manager
[REDACTED]	Principal – Stakeholder Engagement
Site Auditor (SA), AECOM	
[REDACTED]	Te [REDACTED] peer [REDACTED]
Agencies	
Mr David Clapham (DC2)	ACT Senior Policy Officer - Intergovernmental Relations
Mr Heath Chester (HC)	ACT Construction, Environment and Workplace Protection
[REDACTED]	Jervis Bay Territory Administration
[REDACTED]	NSW EPA
[REDACTED]	NSW EPA
[REDACTED]	Illawarra Health

Welcome and Conduct of PCG Meetings	
	Defence PFAS -Welcomed attendees to the JBRF PFAS Investigation meeting.
Investigation Progress Detailed Site Investigation	
1.	(GHD) Provided an overview of the investigation: <ol style="list-style-type: none"> Surface water sampling of lakes Windermere and McKenzie occurred to support testing of the potable water supply at the water treatment plant. Seven surface water samples were taken with no PFAS detected in any sample above the limit of reporting of 0.01µg/L , which is consistent with the “no detect” results obtained from the water treatment plant. No detect results in these areas suggests that PFAS is less likely to be migrating to the West. This assumption will be confirmed by the planned installation of ground water wells in the lakes area. GHD are continuing to investigate and define the sources of PFAS on site. An investigation is underway to confirm any connectivity between the sewerage network and groundwater and the ability of the sewer system to act as a conduit for PFAS migration. Additional investigation of the closed loop water systems at the School of SSSS is planned, to identify any risk of ground water connectivity with the recycled water used on site to support training activities. Land and water use community surveys have been completed, enabling an update of the conceptual site model, which forms the basis of the Sampling Analysis Quality Plan (SAQP) Rev2 . SAQP Rev 2 will identify the on site and off site sampling including biota sampling and is scheduled for delivery to Defence 18 August for review. GHD have received the Defence instruction to proceed with the development of the numerical ground water model,. Development of the model includes a review of the conceptual site model, hydrogeology and hydrology, which will assist to interpret the key pathways for the transmission of PFAS throughout JBRF.
2.	Requested Comments: <ol style="list-style-type: none"> enquired if Wreck Bay have been provided with the potable water testing results identified the results will be provided along with a formal cover letter from Defence. Will WBACC be provided with the data results for the potable water testing. (DC) advised that a Defence covering letter will be provided to explain the results along with certificates of analysis including laboratory results. noted the format might require some change in the future for ease of presentation of bulk sample results. Enquired if permission to conduct investigation on 403 land had been provided. Permission to access WBACC land has not been provided at this stage and communications are ongoing with the council to progress the investigation.
SAQP and Conceptual Site Model	
3.	SAQP Rev 2 to be issued by GHD to Defence and site auditor on the 18 August for initial review. On completion of the initial review, SAQP Rev 2 will be provided to the PCG and WBACC for review and comment.
Future Stages - Human Health and Ecological Risk Assessment (HHERA)	
4.	Human Health and Ecological Risk Assessment (HHERA) will be informed by the information collected during on and off site investigation and considers various exposure scenarios and impacts to the food chain and ecosystem. As the timing for offsite investigation is unknown the HHERA will be issued in the months following receipt of offsite results.
5.	requested Comments: <ol style="list-style-type: none"> enquired if Wreck Bay interviews are complete. advised that the survey is complete with 23 interviews undertaken.
Site Auditor Update	
6.	Site auditor update, AECOM have good visibility of the investigation with nothing to report at this time and are waiting for issue of SAQP Rev 2 to review and provide comment to Defence.

Stakeholder Engagement

7. [REDACTED] has responded to enquiries from [REDACTED] [REDACTED] WBACC CEO regarding:
 - a. Site auditors role and qualifications provided to WBACC.
 - b. Investigation program dates, GHD advised that the investigation would recommence upon receiving approval to access off site locations.
 - c. Key events -
 - i. SAQP Rev 2 to include water use survey and review process by Defence, Auditor, PCG and WBACC identified.
 - ii. Dry and Wet weather investigation phases identified.
 - iii. Cultural supervision requirements for sampling team discussed.
 - d. WBACC meeting dates and presentation of water use survey report to the board arranged.
8. [REDACTED] Water use survey was completed by the GHD team based from JBTA offices and Wreck Bay hall with 23 interviewees responding. Two community barbeques were also hosted to encourage participation and response to the water use survey.
9. [REDACTED] Water use survey summary:
 - a. Jervis Bay Primary School, has rainwater tanks that are used to flush some of the toilets, and to water the school vegetable garden. Town water is used for all other purposes.
 - b. Seven respondents (30%) reported that after wet weather events, water pooled on their property and did not quickly drain away.
 - c. Eighteen respondents (78%) regularly swim (or used to swim, when younger) in the oceans in Jervis Bay Territory.
 - d. Thirteen respondents (57%) regularly swim (or used to swim, when younger) in the rivers or creeks in Jervis Bay Territory.
 - e. Sixteen respondents (70%) regularly fish (or used to fish, or used to fish when younger) from the oceans in Jervis Bay Territory.
 - f. Eight respondents (35%) regularly fish (or used to fish, when younger) from the rivers or creeks in Jervis Bay Territory.
 - g. Nineteen respondents (83%) have consumed or continue to consume flora/vegetation collected from within the investigation area.
 - h. Seventeen of the respondents (74%) have, at some point, used or consumed clay collected from within the investigation area on a regular basis.
10. [REDACTED] Traditional survey methods of completing paper-based questionnaires were unsuccessful. Instead large maps with coloured pins available and personal interviews were utilised with success. Community barbeques encouraged participation from both younger and older residents.
11. [REDACTED] requested Comments:
 - a. [REDACTED] enquired if Wreck Bay are concerned about PFAS. [REDACTED] Some members of the community are very concerned with broad range of historic and current contamination issues. Identifying their concern has stopped the consumption of food from some of the local creeks and areas. [REDACTED] Feedback received from the community that some residents would exclude themselves as they did not trust the investigation process.

Community Enquiries

12. No 1800 or public email enquiries received in the past month.
13. Correspondence with Mal Hansen identified paragraph 7

Risks and Issues

14. [REDACTED] requested key risks:
 - a. [REDACTED] Community trust and communication.
 - b. [REDACTED] Identified 'aboriginal land grant negotiations which may affect the PFAS investigation project, as indemnity for contaminates forms part of the commonwealth negotiation process. December timeline for potential title transfer of property within Jervis bay Territory.

PFAS investigation results		
15. ■■■ A meeting is arranged with WBACC to present water use survey report. The results summary (negative PFAS result) from the potable water testing conducted at the water treatment plant will be presented to the board. Future groundwater wells in the lake area may potentially identify PFAS concentrations, which would not be favourably received by the community.		
Other Business		
Nil		
Meeting Close - 14:45 PM		
Actions		
Item	Owner	Due date
Nil		

[REDACTED]	[REDACTED] 1
[REDACTED]	[REDACTED] 1
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED] 1
[REDACTED]	[REDACTED] 2 [REDACTED]
[REDACTED]	[REDACTED] 2 [REDACTED]
[REDACTED]	[REDACTED] 1 [REDACTED]
[REDACTED]	[REDACTED]
Agenda	
Introductions	
Investigation Progress (DSI scope and schedule)	<ul style="list-style-type: none"> - Detailed Site Investigation (DSI) - SAQP & Conceptual Site Model (CSM) - Factual memorandums
Future Stages (schedule)	<ul style="list-style-type: none"> - Human Health and Ecological Risk Assessment (HHERA) - Numerical Groundwater Model
Site Auditor	<ul style="list-style-type: none"> - Update from site auditor
Stakeholder Engagement	<ul style="list-style-type: none"> - Meetings and briefs - Community Info Sessions - Community enquiries
Risks and Issues	
Other Business	
Close	



Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Investigation and Management
Monthly Report- Jervis Bay Range Facility

6 09 2017

BP3-02-B091

26 Brindabella Circuit
Brindabella Business Park
PO Box 7925 Canberra BC 2610

Re: Jervis Bay Range Facility Environmental Investigation – Progress Report August 2017

1.0 Introduction

The following progress report has been prepared by GHD Pty Ltd to provide a summary of activities for the Comprehensive Investigation of PFC Site Conditions at Jervis Bay Range Facility, HMAS Creswell and surrounds for the period between 31 July 2017 and 31 August 2017

2.0 Critical items

2.1 New items

- GHD development and issue of SAQP Rev 2 to Defence and Site Auditor, with initial comments received.
- GHD and Defence have agreed on a proposal to investigate PFAS levels within the Jervis Bay Territory and Defence sewerage network to address levels of PFAS identified in sampling results received from the testing of the sewerage treatment plant and a treated effluent water dam located at HMAS Creswell. Preliminary investigations identify:
 - Raw water directly from the HMAS Creswell treated effluent dam is used to irrigate, without further treatment, the golf course and other grassed areas at HMAS Creswell.
 - Raw water from the treated effluent dam is extracted and further treated using a sand filter, UV Disinfection & Chlorine dosing prior to use for watering of the entire Quarter Deck area (Parade Ground) of HMAS Creswell.
 - The precise layout of the sewerage network and branch connections is unknown with Defence and JBTA records missing or inaccurate in some instances.
 - Initial inspection of some Defence sewerage infrastructure manholes identifies numerous areas of potential ground water ingress and tree root infestation.
 - A CCTV inspection report July 2017 provided by JBTA identifies priority areas where maintenance is required to reduce ground water inflow into the sewer system.

- Resampling and analysis of Lakes Windermere and McKenzie was conducted 25/08/17 to reconfirm initial testing results. Results received were consistent with initial testing with no detection recorded.
- A WBACC board meeting was held on 22/08/17, attended by CMDR [REDACTED], [REDACTED], [REDACTED], [REDACTED]. With the following key points addressed:
 - Water use survey report presented and accepted by the board with no specific comments received.
 - Wreck Bay Community Engagement Plan:
 - Defence confirmed with WBACC that the engagement plan was not legally binding.
 - WBACC requested that the employment opportunity role field hand be changed to field assistant.
 - SAQP Rev 2
 - WBACC requested a cover letter by the independent auditor (site auditor) endorsing the SAQP.
 - Testing methodology was presented by GHD.
 - Qualifications and EPA requirements of independent auditor were explained by GHD.
 - WBACC enquired of SAQP Rev 2 issue date. Review process identified with no formal date of issue provided.
 - Potable water testing figure and supporting letter including certificates of analysis presented and provided to WBACC.
- Post the Board meeting, the Defence Project Director requested GHD to develop a visual flow chart detailing the key investigation steps for WBACC.

2.2 Previously raised items to be addressed

- The Board of Wreck Bay Aboriginal Community Council (WBACC) was briefed on 11 Apr 2017 to seek agreement to access aboriginal lands for the PFAS investigation. The Board stated that no access to aboriginal lands will be granted, prior to appointment of independent expert to advise WBACC. This directly impacts the DSI works for the '403 land' and the Booderee National Park.
- As a result of the delay associated with accessing aboriginal land (expected to be 3 months or greater) the Detailed Site Investigation (DSI) has at this time been undertaken at potable water sources and on Defence land only. The DSI for non-Defence land will commence when approval from WBACC is provided. It is anticipated review of SAQP Rev 2 by the WBACC board or independent adviser will likely trigger approval to commence the off site phase of the investigation.

3.0 Project progress

- The following items have been completed this reporting period:
 - Issue of SAQP Rev 2 to Defence and Site Auditor with initial comments received.
 - Further sampling of Lakes Windermere and McKenzie
 - Presentation of Water Use Survey and potable water results. Preliminary investigations and interviews to support sewerage infrastructure investigation.

3.1 Project impacts

- Identification of WBACC independent adviser and approval to conduct investigation on aboriginal lands.
- Requirement to conduct the Groundwater Numerical Modelling and Human Health Ecological Risk Assessment (HHERA).
- Outcomes of the investigation into the sewerage system at JBRF and treated effluent water distribution.
- SAQP Rev 2 and associated reviews.

3.2 Project meetings

Project meetings held this reporting period are presented in Table 1.

Table 1: Summary of meetings held during the August reporting period

Meeting date	Meeting title	Participants	Minutes circulated
15 August 2017	PCG No 6	PCG members	Yes
Recurring Wednesday's	Weekly meetings	JBRF project team – Defence, GHD & Site Auditor	No
22/08/17	WBACC board meeting	Guests - Defence, GHD, JBTA	No

3.3 Project deliverables submitted this period

Project deliverables submitted during this reporting period are presented in Table 2.

Table 2: Project deliverables submitted during the August reporting period

Document status	Title	Date submitted
Final	Potable water testing results figure and certificates	22/08/17
Draft	SAQP Rev 2	18 August 2017
Final	July monthly report	29 Aug 2017
Final	PCG minutes	29 Aug 2017

3.4 Project Milestones

The following project milestone were achieved in the August reporting period:

- Development and issue of SAQP Rev 2 to Defence and Auditor.

4.0 Project Forecast

The project schedule is presented in the enclosed project schedule, dated 18 July 2017

4.1 Schedule tracking forecast

- SAQP (Rev 2) issued for Defence and Site Auditor comment, with workshop scheduled for 14 August 2017 to discuss and finalise the plan.
- HHERA plan has been developed by GHD for issue to Defence and auditor for comment.
- Groundwater numerical modelling plan is under development by GHD for issue to Defence and auditor for comment.
- The project schedule is impacted by the inability to access the Wreck Bay community land. Ongoing negotiations with WBACC are positive, with access to conduct sampling and investigation expected on completion of WBACC review of SAQP Rev 2

4.2 Project deliverables expected next period

- Issue of HHERA Plan Rev 0
- Issue of Numerical Groundwater Modelling Plan
- Update of SAQP Rev 2 to incorporate Defence and Auditor comments
- Issue of SAQP Rev 2 to PCG and WBACC for review

4.3 Technical Advisor forecast

The Technical Advisor's achievements and planned activities are presented in Table 3.

Table 3: Technical Advisor achievements and key activities during the August reporting period

Scope item	Achieved to date	Planned for next month
Monitor Project progress and provide comment	Yes	ongoing
Attend project and PCG meetings	Yes	ongoing

5.0 Community enquiries

In this reporting period:

- No community independent enquiries were received via the Community Hotline (1800 987 618) and email (Jervisbay@ghd.com.au)
- Responses to communications with WBACC CEO received.
- There are 0 outstanding stakeholder enquires

6.0 Interaction with Government

Meetings and communications with Government stakeholders are summarised in Table 4.

Table 4: Summary of interactions with Government during the August reporting period

Meeting date	Meeting title	Participants	Minutes circulated
15 August 2017	PCG No 6	NSW & ACT Agencies	Yes

9.0 Requests for information from Defence

- All relevant historical reports associated with JBRF environmental assessments and contamination investigations have been provided to GHD by Defence.
 - Communication received from Defence regarding impact of Technical Memorandum on PFAS-TOPA and TOF Analysis

10.0 Other Matters

- Nil

Yours sincerely



[REDACTED]

CC:

Enclosures: Project Milestones - Dated 18/07/2011

Table 1 - JBRF Environmental Investigation Key Milestone summary July 2017

Item	Start	Finish	
SAQP	30/03/2017	15/09/2017	
Defence, Auditor and Agency review of SAQP Rev 1	04/05/2017	18/05/2017	Defence/Auditor/ACT & NSW Agencies
Finalise SAQP Rev 1	19/05/2017	26/05/2017	GHD
Approval to conduct Water use survey	19/06/2017	07/07/2017	WBACC
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Defence, Auditor and GHD Draft SAQP Rev 2 Workshop	14/09/2017	14/09/2017	GHD/Defence/Auditor
WBACC, ACT & NSW Agencies review of Draft SAQP Rev 2	09/10/2017	23/10/2017	WBACC & Agencies
Presentation of SAQP Rev 2 at WBACC board meeting	10/10/17	10/10/17	Defence/Auditor/GHD
Finalise SAQP	24/10/2017	30/10/2017	GHD
Off Site Access	TBA	TBA	WBACC/Booderee
Appointment of WBACC independent Adviser (If required)	11/04/2017	TBA	WBACC
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DSI	5/04/2017	28/08/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1).	5/04/2017	09/05/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2).	TBA	TBA	GHD
On-Site additional investigations sewer, Soil, and Sediment sampling.	12/09/17	TBA	GHD
Factual reports of On-Site sampling results	09/05/2017	11/08/2017	GHD

Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1)	TBA	TBA	GHD
Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2)	TBA	TBA	GHD
Factual report of Off Site sampling results	TBA	TBA	GHD
DSI Reporting	11/05/2017	14/02/2018	
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Community Information Session	30/04/2018	25/05/2018	GHD/Defence/Agencies

Regards,

[Redacted]

GHD

[Redacted]

Level 2, 57 Graham Street (PO Box 621) Nowra NSW 2541 Australia | <http://www.ghd.com/>
Water | Energy & Resources | Environment | Property & Buildings | Transportation

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Stedman, Andrew (Health)

From: files@ghd.sendthisfile.com
Sent: Wednesday, 4 October 2017 4:49 PM
To: Stedman, Andrew (Health)
Subject: GHD file(s) . . .



Sender: [REDACTED]
Recipient: [REDACTED]
Andrew.Stedman@act.gov.au; [REDACTED]; Lyndell.Hudson@act.gov.au; [REDACTED];
Upload Date: 2017-10-04 00:47:24.0

Subject: GHD file(s) . . .

Message: Dear JBRF PCG,

Please utilise the link below to download the JBRF PFAS investigation Sampling Analysis Quality Plan (SAQP Rev 2).

Comments are requested within in 10 business days and should be addressed to the PFAS investigation branch.

Please contact me if you have trouble downloading or any questions.

regards,

[REDACTED]

Use the following links to download your file(s).

<https://ghd.sendthisfile.com/2cQkXxkA6BYJRKmtUhSSY3Uz>

Note: These files will expire in 14 days from the time this email was generated.

Stedman, Andrew (Health)

From: [REDACTED]
Sent: Wednesday, 4 October 2017 4:55 PM
To: [REDACTED];
[REDACTED];
[REDACTED];
[REDACTED]; Helen Milne; [REDACTED];
[REDACTED]; [REDACTED].au; sheryl.klaffer@infrastructure.gov.au;
Chris.baseler@infrastructure.gov.au; Clapham, David; Chester, Heath;
[REDACTED]; [REDACTED]; Stedman,
Andrew (Health); [REDACTED];
[REDACTED];
Cc: PFASIM Jervis Bay
Subject: JBRF PFAS investigation SAQP Rev 2
Follow Up Flag: Follow up
Flag Status: Flagged

Dear JBRF PCG,

I have sent a large file transfer link (below) to allow download of the JBRF PFAS investigation Sampling Analysis Quality Plan (SAQP Rev 2).

For Defence personal, Mr [REDACTED] will provide an objective link to the file once loaded to Defence systems.

Any comments are requested within in 10 business days and should be addressed to the PFAS investigation branch. Please contact me if you have trouble downloading or any questions.

Use the following links to download your file(s).

Use the following links to download your file(s).

<https://ghd.sendthisfile.com/pmtu8DjCKgKsiwsvomBX0iKL>

Note: These files will expire in 14 days from the time this email was generated.

Regards,

GHD

[REDACTED] | E [REDACTED].com
Level 2, 57 Graham Street (PO Box 621) Nowra NSW 2541 Australia | <http://www.ghd.com/>
Water | Energy & Resources | Environment | Property & Buildings | Transportation

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Stedman, Andrew (Health)

From: [REDACTED] h>
Sent: Thursday, 12 October 2017 2:53 PM
To: [REDACTED]; Helen Milne; [REDACTED]; Clapham, David; Chester, Heath; [REDACTED]; Andrew (Health); [REDACTED]; Stedman, [REDACTED]; Hudson, Lyndell (Health); [REDACTED]
Cc: PFASIM Jervis Bay
Subject: JBRF PCG meeting minutes
Attachments: JBRF-PGC Meeting Minutes No 7 - Sep 17.pdf

Good afternoon JBRF PCG,

Attached are the meeting minutes from our last meeting held on the 19th Sep 2017.

Our next meeting is scheduled for next Tuesday the 17th at 14:00

A community information session is planned for the 6 November to be held at HMAS Creswell, Jervis Bay School and Wreck Bay Community Hall.

Regards,

[REDACTED]

GHD

[REDACTED] | E [REDACTED] com
Level 2, 57 Graham Street (PO Box 621) Nowra NSW 2541 Australia | <http://www.ghd.com/>
[Water](#) | [Energy & Resources](#) | [Environment](#) | [Property & Buildings](#) | [Transportation](#)

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Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Environmental Investigation – Jervis Bay Range Facility
PROJECT CONTROL GROUP MEETING # 7

Administrative Details	
Date	Tuesday 19 September 2017
Time	14:00 – 14:45
Venue	Teleconference
Dial-in Details	Toll ----- [REDACTED] Toll-free ----- [REDACTED] Participant PIN: [REDACTED]
Chair	[REDACTED], Defence Project Director
Minutes	Taken by [REDACTED]

ATTENDEES	
Defence	
[REDACTED]	Project Director, Environmental Investigations
[REDACTED]	Project Manager
[REDACTED]	Project Manager
[REDACTED]	Commanding Officer HMAS Creswell
[REDACTED]	Base Support Manager – Shoalhaven
[REDACTED]	Assistant Director PFAS Environmental Management
[REDACTED]	Commanding Officer HMAS Creswell
[REDACTED]	Base Support Manager – Shoalhaven
[REDACTED]	Regional Public Affairs Manager
[REDACTED]	Spotless Environmental Manager
Lead Contractor (LC), GHD	
[REDACTED]	Service Line Leader - LC Project Director
[REDACTED]	Principal Environmental Consultant
[REDACTED]	Stakeholder Engagement
[REDACTED]	Project Manager
[REDACTED]	Principal Environmental Consultant
[REDACTED]	Principal – Stakeholder Engagement
Site Auditor (SA), AECOM	
[REDACTED]	Environment Defence appointed peer review
Agencies	
Mr David Clapham (DC2)	ACT Senior Policy Officer - Intergovernmental Relations

██████████	NSW Health
██████████	Jervis Bay Territory Administration
██████████	NSW EPA
Welcome and Conduct of PCG Meetings	
██████████ Defence PFAS - Welcomed attendees to the JBRF PFAS Investigation meeting.	
Investigation Progress Detailed Site Investigation	
1. ██████████ (GHD) Provided an overview of the investigation: <ol style="list-style-type: none"> a. GHD have issued the draft Numerical Groundwater modelling plan to Defence and auditor for comment, which includes a review of the conceptual site model, hydrogeology and hydrology, which will assist to interpret the key pathways for the transmission of PFAS throughout JBRF. b. Additional investigation of the closed loop water systems at the RAN School of SSSS is included in SAQP Rev 2 to identify any risk of ground water connectivity with the recycled water used on site to support training activities. c. GHD have commenced investigation of the Jervis Bay sewerage network to identify if the system provides a conduit for PFAS migration. Results of sampling will be made available when received. 	
2. ██████████) Requested Comments: Nil	
SAQP and Conceptual Site Model	
3. ██████████ GHD have issued SAQP Rev 2 to Defence and Auditor for comment, which includes water use survey data and biota sampling. A workshop was held on 14 September between GHD, Defence and Auditor to discuss and work through the SAQP methodology. The actions arising from the workshop will be incorporated into the SAQP prior to issue to the PCG agencies and WBACC for comment.	
Future Stages - Human Health and Ecological Risk Assessment (HHERA)	
4. ██████████ GHD have issued the HHERA plan to Defence and auditor. The plan was also considered at the SAQP workshop and will be updated prior to issue to the PCG agencies and WBACC for comment.	
5. Human Health and Ecological Risk Assessment (HHERA) will be informed by the information collected during on and off site investigation and considers various exposure scenarios and impacts to the food chain and ecosystem.	
6. ██████████) requested Comments: <ol style="list-style-type: none"> a. (RK) enquired how long have we known about PFAS. (LG) PFAS is an emerging contaminate worldwide, which is currently being investigated and better understood. 	
Site Auditor Update	
7. ██████████ Site auditor update, AECOM are working with GHD and Defence to review and issue SAQP and HHERA plan.	
Stakeholder Engagement	

8. [REDACTED] provided summary of stakeholder activity:
- a. The WBACC board meeting held on 22/08/17 was attended by, [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] [REDACTED] at which the following items were presented:
 - i. Potable water testing figure and supporting letter including certificates of analysis.
 - ii. Water use survey report and Wreck Bay Community Engagement Plan
 - iii. Defence confirmed that the Community engagement plan was not legally binding.
 - iv. WBACC requested change the term field hand to field assistant.
 - v. Testing methodology and SAQP explained by [REDACTED]
 - vi. WBACC requested a cover letter endorsed by the independent auditor, detailing the key investigation steps.
 - vii. Qualifications and EPA requirements of independent auditor explained by (AK).
 - viii. WBACC identified potential for blood testing, testing of animals (Kangaroo).
 - b. WBACC enquired of SAQP Rev 2 issue date.
 - c. [REDACTED] requested Comments:
 - a.

Community Enquiries

9. No activity or calls to the Community Hotline or email inbox.
10. Emails from WBACC in response to arrangements for board meeting attendance.

Risks and Issues

11. [REDACTED] requested key risks and issues:
- a. [REDACTED] JBTA - the summer cloud fire clean up will impact the area for some time.
 - b. [REDACTED] JBTA – WPS contamination investigation (which does not include PFAS) may impact proposed land title transfers.
 - c. [REDACTED] Defence - Maintaining schedule and community engagement are key issues.
 - d. [REDACTED] GHD Site access and working with community.

PFAS investigation results

12. [REDACTED] All investigation results have been provided to PCG via factual memorandums to date, with exception of the sewerage system investigation sampled on the 12/09/17.
13. Secondary surface water sampling of lakes Windermere and McKenzie occurred to confirm initial laboratory results anomaly's with no PFAS detected in any sample above the limit of reporting of 0.02µg/L, which is consistent with the "no detect" results obtained originally.
14. [REDACTED] requested copies of previous minutes and memorandum.

Other Business - JBTA Fires

15. [REDACTED] [REDACTED] provided an overview of a secondary fire to the Summercloud fire, believed to be deliberately lit on Defence land, Sunday 17/09/17. The fire burnt a large area of Defence land in the South Eastern corner of Jervis Bay airfield. During containment operations, Defence staff were authorised to release 120 L of Ansulite 6% AFFF to control the fire. The use of AFFF was approved in this area as the extreme weather conditions supported spread of the fire and access to the area was restricted due to the presence of asbestos.
16. [REDACTED] Identified the Summercloud fire which started on 12/09/17 has burnt approximately 47% of Jervis Bay Territory, with significant damage to electrical supply infrastructure. The water treatment plant is currently powered by a transportable generator. [REDACTED] confirmed the School of SSS also supplied by generators.

Meeting Close - 14:45 PM

Actions

Item	Owner	Due date
Provide (RK) copies of previous minutes and factual memorandums	(DH)	20/09/17

Stedman, Andrew (Health)

From: [Redacted] >
Sent: Monday, 16 October 2017, 3:33 PM
To: [Redacted]

Cc: PFASIM Jervis Bay
Subject: JBRF PCG Meeting No 8 14:00 Tuesday 17 October - Agenda
Attachments: JBRF PCG_MEETING08_AGENDA.pdf

Dear JBRF PCG,
Please see attached agenda for tomorrow afternoons JBRF Project Control Group meeting

Regards,

[Redacted Signature]

GHD [Redacted] 13100 542 [Redacted] pm
Level 2, 57 Graham Street (PO Box 621) North Sydney NSW 2541 Australia | <http://www.ghd.com/>
Water | [Energy & Resources](#) | [Environment](#) | [Property & Buildings](#) | [Transportation](#)

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Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Environmental Management Program
Monthly PCG Meeting (o8) – JBRF

Administrative Details	
Date	17 October 2017
Time	14:00hrs (AEDST)
Venue	Teleconference
Dial-in Details	[REDACTED] Australia Toll free Access code: [REDACTED]
Chair	[REDACTED]
Minutes	GHD
Attendees	
[REDACTED]	[REDACTED]@au
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED].e
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED].e
[REDACTED]	[REDACTED].e
[REDACTED]	[REDACTED]u
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]a
[REDACTED]	[REDACTED].e
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]u
Stedman Andrew	<u>Andrew.Stedman@act.gov.au</u>
[REDACTED]	[REDACTED]
Radomir Krsteski	<u>radomir.krsteski@act.gov.au</u>
Heath Chester	<u>heath.chester@act.gov.au</u>
David Clapham	<u>David.Clapham@act.gov.au</u>
[REDACTED]	[REDACTED]@
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]u
[REDACTED]	[REDACTED]
Lyndell Hudson	<u>Lyndell.Hudson@act.gov.au</u>
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
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[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]

Agenda

Introductions	
Investigation Progress (DSI scope and schedule)	<ul style="list-style-type: none"> - Update on Investigation Works. - SAQP & Conceptual Site Model (CSM) - Factual memorandums
Future Stages (schedule)	<ul style="list-style-type: none"> - Human Health and Ecological Risk Assessment (HHERA) - Numerical Groundwater Model
Site Auditor	<ul style="list-style-type: none"> - Update from site auditor
Stakeholder Engagement	<ul style="list-style-type: none"> - WBACC Engagement - Community Info Sessions - Community enquiries
Risks and Issues	
Other Business	
Close	

Stedman, Andrew (Health)

From: [REDACTED]
Sent: Thursday, 19 October 2017 11:29 AM
To: [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]; [REDACTED]; Clapham, David; Chester, Heath; [REDACTED]; [REDACTED]; [REDACTED]; Lauren Bourke; Stedman, Andrew (Health); [REDACTED]; Hudson, Lyndell (Health);
Cc: PFASIM Jervis Bay
Subject: JBRF PFAS Investigation - Sampling Analysis Quality Plan (SAQP Rev2.1)

Good morning Ladies and gentleman,

I provided a large file transfer link to the JBRF PFAS Investigation - Sampling Analysis Quality Plan (SAQP Rev2.1) on 04/10/17.

This document has also been provided in hard and soft copy to the board of Wreck Bay Aboriginal Community Council (WBACC).

Please advise me if you require a copy of this document.

Any comments to SAQP Rev 2.1 are requested prior to 20/10/17.

Please provide any formal comments directly to Defence or contact Mr [REDACTED] to discuss your review as required.

T: [REDACTED]
E: [REDACTED]

Please advise If no comments are intended to be issued by your department, to assist in finalising the investigation plan in a timely manner.

Regards,

[REDACTED]

GHD

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Stedman, Andrew (Health)

From: [REDACTED]
Sent: Tuesday, 31 October 2017 1:16 PM
To: [REDACTED];
David; Chester, Heath; [REDACTED]; [REDACTED];
[REDACTED]; Hudson, Lyndell (Health);
Cc: PFASIM Jervis Bay
Subject: JBRF Community Information walk in session - Graphics
Attachments: 21_26171_Z021_A0_StakeholderSampleLocations.pdf

Dear JBRF PCG,

Attached is Graphic 1 of 2, which is intended to be printed to A0 size and displayed as a talking point at the community walk in sessions.

There are no formal presentations intended for the sessions scheduled for 6/11/17 rather an informal walk in session detailing the investigation so far and responding to any community questions as required.

Please comment on the graphic's if required.

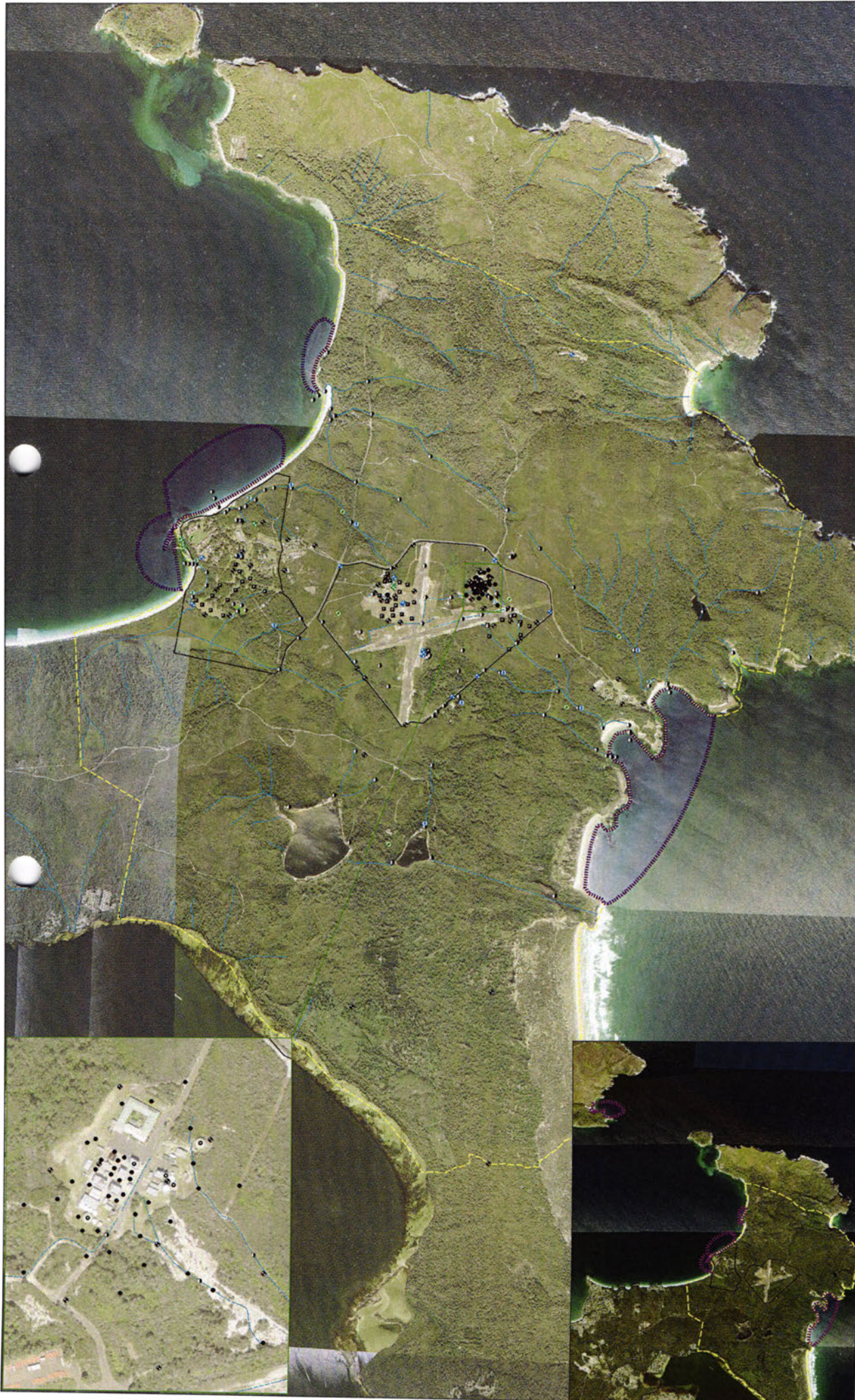
Regards,

[REDACTED]

GHD

Level 2, 57 Graham Street (PO Box 621) Nowra NSW 2541 Australia | <http://www.ghd.com/>
[Water](#) | [Energy & Resources](#) | [Environment](#) | [Property & Buildings](#) | [Transportation](#)

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Job Number 21-06171
 Revision A
 Date 30 Oct 2017

Department of Defence



- LEGEND**
- Investigation Area Extent
 - James Bay Range Facility
 - HMAS Creswell
 - Major Waterways
 - Minor Waterways / Drainage Lines
 - MARSA
 - Marine Species Sampling Area (Aggregations)
 - Estuarine Species Sampling Location
 - Freshwater Species Sampling Location
 - Treated Surface Water Sampling Location
 - Proposed Benthic Trapping Location
 - Proposed Towed Light Location
 - Proposed Soil Bore Location
 - Proposed Groundwater Well
 - Proposed Surface Water & Sediment Sample
 - Water Tank Sample
 - Existing Groundwater Well (To Be Demolished)
 - Existing Groundwater Well (Not Sampling)

Scale: 0 0.15 0.3 0.6 0.9 1.2 Kilometres

Map Produced by: GHD
 Horizontal Datum: GDA 1984
 GHD: GDA 1984 MGA Zone 55

North Arrow

Figure 1
 Sample Locations

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Stedman, Andrew (Health)

From: [REDACTED]
 Sent: Tuesday, 31 October 2017 1:21 PM
 To: [REDACTED]; Chester, Heath; [REDACTED]; Stedman, Andrew (Health); [REDACTED]; Hudson, Lyndell (Health);
 Cc: PFASIM Jervis Bay
 Subject: RE: JBRF Community Information walk in session - Graphics
 Attachments: 21_26171_Z022_A0_StakeholderResults.pdf

Dear JBRF PCG,

Attached is Graphic 2 of 2, which is intended to be printed to A0 size and displayed as a talking point at the community walk in sessions.

There are no formal presentations intended for the sessions scheduled for 6/11/17 rather an informal walk in session detailing the investigation so far and responding to any community questions as required.

Please comment on the graphic's if required.

Regards,

[REDACTED]

GHD

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Job Number 21-26171
 Revision A
 Date 30 Oct 2017

Department of Defence



PFAS Concentrations (sum PFHxS and PFOS) in Surface Water and Groundwater

Hazwood Drive (off Lightbulb Circuit) Morwell VIC 3642 Australia T 61 3 5318 5800 F 61 3 5318 5888 E mma@ghd.com W www.ghd.com

Figure 2

- LEGEND**
- Investigation Area Boundaries
 - Potential Groundwater Flow Pathways (Above Limit of Detection)
 - Potential Surface Water Flow Pathways (Above Limit of Detection)
 - Major Waterways
 - Above Human Health Drinking Water Guidelines
 - Above Human Health Recreational Water Guidelines
 - Above Human Health Drinking Water Guidelines
 - Below Limit of Detection
 - Groundwater sample
 - Surface Water sample
 - PFAS Concentrations
 - Air Force Range Facility
 - MAAFLC Channel
 - PFAS Concentrations
 - PFAS Concentrations

Paper Size A0
 0 0.0750.15 0.3 0.45 0.6
 6000000
 Map Projection: Transverse Mercator
 Horizontal Datum: GDA 1984
 Grid: GDA 1984 MGA, Zone 55

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Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Environmental Investigation – Jervis Bay Range Facility
PROJECT CONTROL GROUP MEETING # 8

Administrative Details	
Date	Tuesday 17 October 2017
Time	14:00 – 14:45
Venue	Teleconference
Dial-in Details	Toll ----- [REDACTED] Toll-free ----- [REDACTED] Participant PIN: [REDACTED]
Chair	[REDACTED] Defence Project Director
Minutes	Taken by [REDACTED]

ATTENDEES	
Defence	
[REDACTED]	Project Manager
[REDACTED]	Project Manager
[REDACTED]	
[REDACTED]	Assistant Director PFAS Environmental Management
[REDACTED]	Commanding Officer HMAS Creswell
Lead Contractor ([REDACTED]), GHD	
[REDACTED]	Service Line Leader - LC Project Director
[REDACTED]	Principal Environmental Consultant
[REDACTED]	Stakeholder Engagement
[REDACTED]	Project Manager
[REDACTED]	Principal Environmental Consultant
[REDACTED]	Principal – Stakeholder Engagement
Site Auditor (SA), AECOM	
[REDACTED]	Environment Defence appointed peer review
Agencies	
Mr David Clapham (DC2) lyndall act health	ACT Senior Policy Officer - Intergovernmental Relations
Ms Lyndell Hudson	ACT Health
[REDACTED]	NSW Health
[REDACTED] (L)	Illawarra Health
[REDACTED] ley [REDACTED]	Illawarra Health
[REDACTED]	NSW EPA

Welcome and Conduct of PCG Meetings
<p>█ Defence PFAS -Welcomed attendees to the JBRF PFAS Investigation meeting.</p>
Investigation Progress Detailed Site Investigation
<p>1. █ (GHD) Provided an overview of the investigation: GHD are continuing to investigate the Sewerage treatment system as a potential pathway of contamination across the site. Activities include sampling of a series of sewer locations across JBRF and HMAS Creswell with results suggesting the highest concentrations of PFAS entering the system are from the School of SSS location, with significantly lower concentrations potentially entering the system from other locations. The focus of the sewer investigation going forward is to understand the flux of contamination at the school and identify source of lower levels entering the system. Approximate concentrations of 10µg/L of PFOS recorded at School of SSS with other areas recording <0.5 µg/L. The results suggest there is hydraulic connectivity between the Groundwater at School SSS and the sewer system, which is under investigation. Other sampling activities include:</p> <ul style="list-style-type: none"> (a) Block 151 Village road, with five soil samples and a groundwater sample taken from a sump beneath the police station. (b) Sampling of the closed loop recycled water systems that are used to conduct training activities at the school of SSS. <p>Results for the sampling will be provided when received from the laboratory.</p> <p>2. █ Requested Comments:</p> <ul style="list-style-type: none"> (a) █ is the hydraulic connectivity between the Groundwater and sewer from cracked pipes? (b) █ response to █ Yes, most sewerage systems installed within shallow groundwater areas like the JBRF site are expected to have groundwater ingress and are never completely sealed even when new. With the age and deterioration, the inflow increases especially in old terracotta pipework like that in use on site. Some sampling of the system was conducted at 04:00 when the sewer system was not in use and the inflow of groundwater was evident in some areas.
SAQP and Conceptual Site Model
<p>3. █) GHD have issued SAQP Rev 2.1 to Defence, Auditor, Agencies and WBACC on 04 October for comment, which includes water use survey data and detailed biota sampling plan. The SAQP incorporates feedback from the auditor from workshops and reviews. No comments have been received for SAQP Rev 2.1 at this time.</p> <p>4. █ NSW EPA have prepared comments which are currently being reviewed internally and will be released to Defence in the near future.</p>
Future Stages - Human Health and Ecological Risk Assessment (HHERA)
<p>5. █ GHD have issued the HHERA plan and Groundwater modelling plan to Defence and auditor. The plans was also considered at the SAQP workshop and will be updated prior to issue to the PCG agencies and WBACC for comment.</p>
Site Auditor Update
<p>6. █ Site auditor update, AECOM have nothing significant to report. Comments have been provided to the groundwater modelling plan with comments for the HHERA plan expected to be released to Defence in near future.</p> <p>7. █ █ – Site auditor has contacted WBACC to introduce herself and offer to meet the council if required.</p> <p>8. █ As background information to the PCG, WBACC have expressed an interest in the independent site auditors role, which has been satisfied by providing Amanda's contact details and credentials. WBACC have also been provided with copies of the SAQP along with a cover letter from the site auditor. Defence is standing back from any Site auditor and WBACC engagement, to allow the site auditors role to remain independent.</p>
Stakeholder Engagement

9. [REDACTED] provided summary of stakeholder activity:
- a. GHD and Defence are in the process of planning for the next community engagement event scheduled for the 06 Nov 2017. The information sessions include a base briefing, a session at Jervis bay School hall and a session at WBACC hall.
 - b. Information on the water use survey and investigation update will be provided to the community at these events.
 - c. GHD is working with WBACC to finalise the finer details for the recruitment process for the employment opportunities that have been created to support the investigation.
 - d. All indicators are positive and suggest we are moving towards receiving permission to conduct the investigation off site.
10. [REDACTED] It has been a long time since we have engaged the community in March this year and even though progress offsite has been stalled, the investigation has still progressed on site and achieved results that can be reported to the community.
11. [REDACTED] Review of all flyers and media is required to ensure Jervis Bay Territory is reflected and not ACT.
12. [REDACTED] Will we have a position on community employment opportunities prior to the meeting, if not all attending the community meetings need to be updated prior to ensure a common message is transmitted to the community.

Community Enquiries

13. No activity or calls to the Community Hotline or email inbox.
14. Emails from WBACC in response to communications arranging community employment opportunities, board meeting attendance and provision of SAQP.

Risks and Issues

15. [REDACTED] requested key risks and issues:
 - a. (Defence) [REDACTED] Timing associated with receiving approval to conduct sampling at off site areas.

PFAS investigation results

16. [REDACTED] All investigation results have been provided to PCG via factual memorandums to date, with exception of the sewerage system investigation sampled on the 12/09/17.

Other Business

Meeting Close - 14:45 PM

Actions

Item	Owner	Due date

Stedman, Andrew (Health)

From:**Sent:****To:**

Monday, 20 November 2017 11:21 AM

Clapham, David; Chester, Heath;

Andrew (Health)

Stedman,

Hudson, Lyndell (Health);

Cc:**Subject:****Attachments:**

PFASIM Jervis Bay

JBRF PCG Agenda and monthly reports

JBRF PCG_MEETING09_AGENDA.pdf; 2126171_REP_October PCG Monthly Report.pdf; 2126171_REP_September PCG Monthly Report.pdf

Dear JBRF PCG,

Please see attached agenda for JBRF PFAS Investigation project control group meeting scheduled for tomorrow @ 14:00 Tuesday 21st November.

Also attached is the monthly reports for September and October.

Regards,

GHD

Level 2, 57 Graham Street (PO Box 621) Nowra NSW 2541 Australia | <http://www.ghd.com/>
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[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
[REDACTED]	[REDACTED]
Agenda	
Introductions	
Investigation Progress (DSI scope and schedule)	<ul style="list-style-type: none"> - Detailed Site Investigation (DSI) - SAQP & Conceptual Site Model (CSM) - Factual memorandums
Future Stages (schedule)	<ul style="list-style-type: none"> - Human Health and Ecological Risk Assessment (HHERA) - Numerical Groundwater Model
Site Auditor	<ul style="list-style-type: none"> - Update from site auditor
Stakeholder Engagement	<ul style="list-style-type: none"> - Meetings and briefs - Community Info Sessions - Community enquiries
Risks and Issues	
Other Business	
Close	



Australian Government
Department of Defence
Estate and Infrastructure Group

PFAS Investigation and Management
Monthly Report- Jervis Bay Range Facility

10 10 2017

BP3-02-B091

26 Brindabella Circuit
 Brindabella Business Park
 PO Box 7925 Canberra BC 2610

Re: Jervis Bay Range Facility Environmental Investigation – Progress Report September 2017

1.0 Introduction

The following progress report has been prepared by GHD Pty Ltd to provide a summary of activities for the Comprehensive Investigation of PFAS Site Conditions at Jervis Bay Range facility, HMAS Creswell and surrounds for the period between 31 August 2017 and 30 September 2017.

2.0 Critical items

2.1 New items

- GHD development and issue of HHERA Plan Rev 0 to Defence and auditor.
- GHD development and issue of Draft Groundwater modelling Plan Rev 0 to Defence and auditor.
- GHD, Defence and Auditor attend workshop in Canberra 14/09/17 to develop SAQP Rev 2.1 and review HHERA Plan.
- GHD development and issue of SAQP Rev 2.1 and issue to Defence and auditor.
- Issue of secondary sampling result for Lake Windermere and McKenzie “No Detect” at LOR 0.02. Factual Letter 7_ 11 Sep 2017.
- Round 1 STP sampling event conducted 04:00 – 14:00 12/09/17.
- Request received from Defence/JBTA for priority PFAS sampling of block 151.
- Jervis Bay investigation area impacted both on and off site areas by multiple bushfires starting 12/09/17. Electrical grid infrastructure severely impacted with School of SSS and JBTA water treatment plant operating on electrical generators to continue operations.
- HMAS Creswell staff confirmed authorised use of 120 litres of Ansulite 6% AFFF to control fires burning in a asbestos containment area to the north west of the School of SSS on 24/09/17. Previously unknown areas of asbestos contamination identified in fire cleared areas adjacent School SSS.

- Rural fire service use of aerial and ground based fire suppressants to control fires on site and off site including phos-chek and thermos-gel.
- GHD sample of the foam concentrate tank from the fire truck used to control fires at School of SSS.
- Round 1 STP sampling event conducted 12/09/17 with factual report 8 issued identifying:
 - higher levels of PFAS/PFOS detected in manhole receiving School of SSS's effluent.
 - WB septic tank and MH 81 require further investigation to identify potential sources of PFAS.
 - Preliminary results suggest the main Northern Creswell branch into the STP has lower levels of PFAS/PFOS.
- GHD has prepared job specifications and identified the recruitment process to engage WBACC Cultural Adviser, Field Assistant and Administration Support roles for advertisement and distribution through the WBACC Community bulletin.
- GHD is preparing an infographic around the consultation process and opportunities for stronger engagement with regard to WBACC community. It will highlight what has been completed to date, and proposed next steps in a simplified manner for ease of understanding.

2.2 Previously raised items to be addressed

- The Board of Wreck Bay Aboriginal Community Council (WBACC) was briefed on 11 Apr 2017 to seek agreement to access aboriginal lands for the PFAS investigation. The Board stated that no access to aboriginal lands will be granted, prior to appointment of independent expert to advise WBACC. This directly impacts the DSI works for the '403 land' and the Booderee National Park.
- As a result of the delay associated with accessing aboriginal land (expected to be 3 months or greater) the Detailed Site Investigation (DSI) has at this time been undertaken at potable water sources and defence land only. The DSI for non-defence land will commence when approval from WBACC is provided. It is anticipated the review of SAQP Rev 2.1 by the WBACC board or an independent adviser may trigger approval to commence off site investigation.

3.0 Project progress

- The following items have been completed this reporting period:
 - Issue of SAQP Rev 2.1 to Defence and auditor.
 - Issue of HHERA Plan Rev 0 to Defence and auditor.
 - Issue of Groundwater Modelling Plan Rev 0 to Defence and auditor.
 - Issue of Factual memorandums 7 & 8 reporting Potable water and sewerage system results.
 - Preliminary investigations and sampling to support sewerage infrastructure investigation.

3.1 Project impacts

- Identification of WBACC independent adviser and approval to conduct investigation on aboriginal lands.

- Requirement to conduct Numerical Groundwater Modelling and a Human Health & Ecological Risk Assessment (HHERA).
- Outcomes of the investigation into the sewerage system at JBRF and treated effluent water distribution.
- SAQP Rev 2.1 and HHERA Plan reviews.

3.2 Project meetings

Project meetings held this reporting period are presented in Table 1.

Table 1: Summary of meetings held during the September reporting period

Meeting date	Meeting title	Participants	Minutes circulated
19 September 2017	PCG No 7	PCG members	Yes
Recurring Wednesday's	Weekly meetings	JBRF project team – Defence, GHD & Site auditor	Yes

3.3 Project deliverables submitted this period

Project deliverables submitted during this reporting period are presented in Table 2.

Table 2: Project deliverables submitted during the September reporting period

Document status	Title	Date submitted
Final	Factual memorandum 7 - Potable water testing results	11/09/17
Final	Factual memorandum 8 – Sewer water testing results	27/09/17
Final	SAQP Rev 2.1	27 September 2017
Draft	HHERA Rev 0	01 September 2017
Draft	Groundwater Modelling Plan Rev 0	13 September 2017
Final	August report	20 September 2017
Final	PCG minutes	29 September 2017

3.4 Project Milestones

The following project milestones were achieved in the September reporting period:

- Development and issue of SAQP Rev 2.1 (Final) to Defence and Auditor.
- Commencement of Sewerage treatment system investigation
- Development of HHERA and Groundwater Modelling plans

4.0 Project Forecast

The project schedule is presented in the enclosed project schedule, dated 3 August 2017

4.1 Schedule tracking forecast

- SAQP (Rev 2.1) issued for Defence and auditor comment and is expected to be finalised post agency review.
- Draft HHERA plan has been developed by GHD and issued to Defence and auditor for comment.
- Draft Groundwater numerical modelling plan has been developed by GHD and issued to Defence and auditor for comment.
- The project schedule is impacted by the inability to access the Wreck Bay community land. Ongoing negotiations with WBACC are positive, with access to conduct sampling and investigation expected on completion of WBACC review of SAQP Rev 2.1

4.2 Project deliverables expected next period

- Issue of HHERA Plan Rev 0.1
- Update of Groundwater numerical modelling plan
- Issue of SAQP Rev 2.1 to PCG and WBACC for review

4.3 Technical Advisor forecast

The Technical Advisor's achievements and planned activities are presented in Table 3.

Table 3: Technical Advisor achievements and key activities during the August reporting period

Scope item	Achieved to date	Planned for next month
Monitor Project progress and provide comment	Yes	ongoing
Attend project and PCG meetings	Yes	ongoing
Review SAQP Rev 2 and provide comment	Yes	ongoing
Review SAQP Rev 2.1 and provide comment	Yes	
Review HHERA plan and provide comment	Yes	
Review Groundwater model plan and provide comment	No	Complete

5.0 Community enquiries

In this reporting period:

- No community independent enquiries were received via the Community Hotline (1800 987 618) and email (Jervisbay@ghd.com.au)
- Responses to communications with WBACC CEO received.
- There are 0 outstanding stakeholder enquires

6.0 Interaction with Government

Meetings and communications with Government stakeholders are summarised in Table 4.

Table 4: Summary of interactions with Government during the September reporting period

Meeting date	Meeting title	Participants	Minutes circulated
19 September 2017	PCG No 7	NSW & ACT Agencies	Yes

9.0 Requests for information from Defence

- All relevant historical reports associated with JBRF environmental assessments and contamination investigations have been provided to GHD by Defence.

10.0 Other Matters

- Nil

Yours sincerely

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CC:

Enclosures: Project Milestone Schedule - Dated 03/08/2017

JBRF Environmental Investigation Key Milestone summary August 2017

Item	Start	Finish	
SAQP	30/03/2017	15/09/2017	
Defence, Auditor and Agency review of SAQP Rev 1	04/05/2017	18/05/2017	Defence/Auditor/ACT & NSW Agencies
Finalise SAQP Rev 1	19/05/2017	26/05/2017	GHD
Approval to conduct Water use survey	19/06/2017	07/07/2017	WBACC
Conduct WBAC water use survey	19/06/2017	11/07/2017	GHD/WBACC
Update of SAQP (REV 2) to incorporate water use survey results and Biota sampling – Draft SAQP REV 2	12/07/2017	18/08/2017	GHD
Defence and Auditor review of Draft SAQP Rev 2	21/08/2017	12/09/2017	Defence/Auditor
Defence, Auditor and GHD Draft SAQP Rev 2 Workshop	14/09/2017	14/09/2017	GHD/Defence/Auditor
WBACC, ACT & NSW Agencies review of Draft SAQP Rev 2	04/10/2017	18/10/2017	WBACC & Agencies
Presentation of SAQP Rev 2 at WBACC board meeting	6/11/2017	6/11/2017	Defence/Auditor/GHD
Finalise SAQP	10/11/2017	10/11/2017	GHD
Off Site Access	20/11/2017	TBA	WBACC/Booderee
Appointment of WBACC independent Adviser (If required)	11/04/2017	TBA	WBACC
Approval to conduct Off-Site Groundwater Bore Installation, Soil, Sediment, surface water & Biota sampling	20/11/2017	TBA	WBACC
DSI	5/04/2017	28/08/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1).	5/04/2017	09/05/2017	GHD
On-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2).	TBA	TBA	GHD (rain event required)
On-Site additional investigations effluent water sampling.	12/09/17	TBA	GHD (rain event required)
Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 1)	20/11/2017	01/03/2018	GHD

Off-Site Groundwater Bore Installation, Soil, Sediment and surface water sampling (Round 2)	20/11/2017	01/03/2018	GHD (rain event required)
Biota sampling	20/11/2017	01/03/2018	GHD
DSI Reporting	01/02/2018	15/07/2018	GHD
Defence and Auditor review of Draft DSI Report	30/03/2018	30/04/2018	Defence/Auditor
Update of Draft DSI Report	30/04/2018	15/05/2018	GHD
ACT & NSW State Agency review of draft DSI Report	15/05/2018	15/06/2018	WBACC & Agency
Finalise DSI Report	15/06/2018	30/06/2018	Defence/Auditor/GHD
Human Health and ecological risk assessment	24/08/2017	30/09/2018	
HHERA Recommendation	18/07/2017	21/07/2017	GHD
HHERA Plan draft	24/08/2017	01/09/2017	GHD
Defence and Auditor review of Draft HHERA Plan	01/09/2017	15/10/2017	Defence/Auditor
ACT & NSW State Agency review of HHERA Plan	15/10/2017	30/10/2017	Agency
HHERA Implementation and Draft report	10/11/2017	30/05/2018	GHD
Defence and Auditor review of Draft HHERA report	01/06//2018	30/06/2018	Defence/Auditor
Update of Draft HHERA report	30/06/2018	15/07/2018	GHD
ACT & NSW State Agency review of HHERA	15/07/2018	30/07/2018	Agency
Finalise HHERA Report	15/08/2018	30/08/2018	GHD
Final HHERA report review and approval	30/08/2018	30/09/2018	Defence/Auditor/GHD
Community Information Sessions	21/03/2017	25/05/2018	
Community Information Session 1	21/03/2017	21/03/2017	GHD/Defence/Agency/Community
Community Information Session 2	06/11/2017	06/11/2017	GHD/Defence/Agency/Community
Community Information Session 3			GHD/Defence/Agency/Community
Community Information Session 4			GHD/Defence/Agency/Community
WBACC Board Information Session 1	11/04/2017	11/04/2017	GHD/Defence/Agency/Community
Wreck Bay Community Barbeque	02/07/2017	04/072017	GHD/Defence/Agency/Community
WBACC Board Information Session 2	22/09/2017	22/09/2017	GHD/Defence/Agency/Community
WBACC Board Information Session 3	06/11/2017	06/11/2017	GHD/Defence/Agency/Community



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1.0 Introduction

The following progress report has been prepared by GHD Pty Ltd to provide a summary of activities for the Comprehensive Investigation of PFAS Site Conditions at Jervis Bay Range Facility, HMAS Creswell and surrounds for the period between 31 August 2017 and 30 October 2017.

2.0 Critical items

2.1 New items

- WBACC have advised on a new permit requirement to conduct sampling on 403 land. The permit is being drafted by WBACC will likely include similar conditions to National Parks land access permits.. Permit conditions include the requirement for Traditional owner to inspect sample sites and monitor permit conditions.
- Request received from Defence/JBTA for priority PFAS sampling of block 151. Sampling of Block 151 was conducted 13/10/17 included five soil surface samples and one groundwater sample (assumed) which was sourced from the existing sump below the police station. The sump installed in the police station basement (5M below ground level) removes any ground and surface water from the building foundation area and discharges to rainwater downpipe. The water filling the sump at time of sample is assumed to be groundwater, as very dry weather conditions existed with no other source of water apparent. Feasibility for this sampling was influenced by SAQP feedback that surface water flow from the direction of HMAS Creswell has often been observed during rain periods.
- GHD Sampling of School of SSS closed loop water system tanks 13/10/17.
- GHD conduct sampling of the two Wreck Bay sewerage pump stations 23/10/17
- GHD issue of SAQP Rev 2.1 incorporating Defence, GHD and AECOM workshop comments to PCG 04/10/2017.
- GHD issue of SAQP Rev 2.1 hardcopies x 2, Auditors endorsement letter and electronic file to WBACC board 05/10/2017.
- GHD issue of HHERA plan Rev 0.1 incorporating Defence, GHD and AECOM workshop comments, with associated change log.

- Receipt of auditor comments to HHERA plan Rev 0.1 11/10/17.
- GHD issue of Groundwater modelling plan Rev 1 incorporating Defence and AECOM comments 06/10/17.
- GHD has prepared a Draft infographic around the consultation process and opportunities for stronger engagement with regard to WBACC community and issued to Defence for comment.
- GHD conduct inspection of HMAS Creswell Manhole 81 sewer branch to identify as built connections and suitable sample locations.
- GHD conduct sampling of HMAS Creswell Manhole 81 sewer branch and effluent sprinkler on 26/10/17 and identify the following areas requiring further consideration:
 - Fire station hardstand, surface water connection to sewer via an oil separator.
 - Treated effluent pond emergency overflow system connection to Flatrock Creek head waters
- GHD conduct sampling of HMAS Creswell Firetruck Ansulite tanks and storage drums 26/10/17
- GHD development and delivery of Community Walk in session flyers to Creswell post office for distribution to WB, Village Road and Creswell residents. Flyer distributed by email through JBTA.
- SAQP Rev 2.1 issue to PCG and WBACC with comment received from NSW EPA 25/10/17. Advice received David Clapham 20/10/17 – “Nil Comment from ACT government”
- Sampling of closed loop water systems at school of SSS identifies high levels of PFAS in all closed loop water systems. Discussion required regarding the use of the water within these systems by Defence personnel.
- GHD and Defence preparation of factsheets, presentations and graphics for Community walk in Session scheduled for 6/11/17
- DPI approval for offsite sampling received.

2.2 Previously raised items to be addressed

- The Board of Wreck Bay Aboriginal Community Council (WBACC) was briefed on 11 Apr 2017 to seek agreement to access aboriginal lands for the PFAS investigation. The Board stated that no access to aboriginal lands will be granted, prior to appointment of independent expert to advise WBACC and interpret the sampling plan (SAQP Rev 2.1). This directly impacts the DSI works for the ‘403 land’ and the Booderee National Park.
- As a result of the delay associated with accessing aboriginal land (expected to be 3 months or greater) the Detailed Site Investigation (DSI) has at this time been undertaken at Potable water sources and Defence land only. The DSI for non-Defence land will commence when approval from WBACC is provided. It is anticipated review of SAQP Rev 2.1 by the WBACC board or independent adviser may trigger approval to commence off site investigation.

3.0 Project progress

- The following items have been completed this reporting period:
 - Issue of SAQP Rev 2.1 to PCG and WBACC.
 - Issue of HHERA Plan Rev 0.1 to Defence and auditor.
 - Issue of Groundwater Modelling Plan Rev 1 to Defence and auditor.
 - Additional off peak sampling to support sewerage infrastructure investigation.