

## Defence Cultana Expansion Area (CEA) MLDP Environmental Reporting: Year 4, 2<sup>nd</sup> 5 year Report.

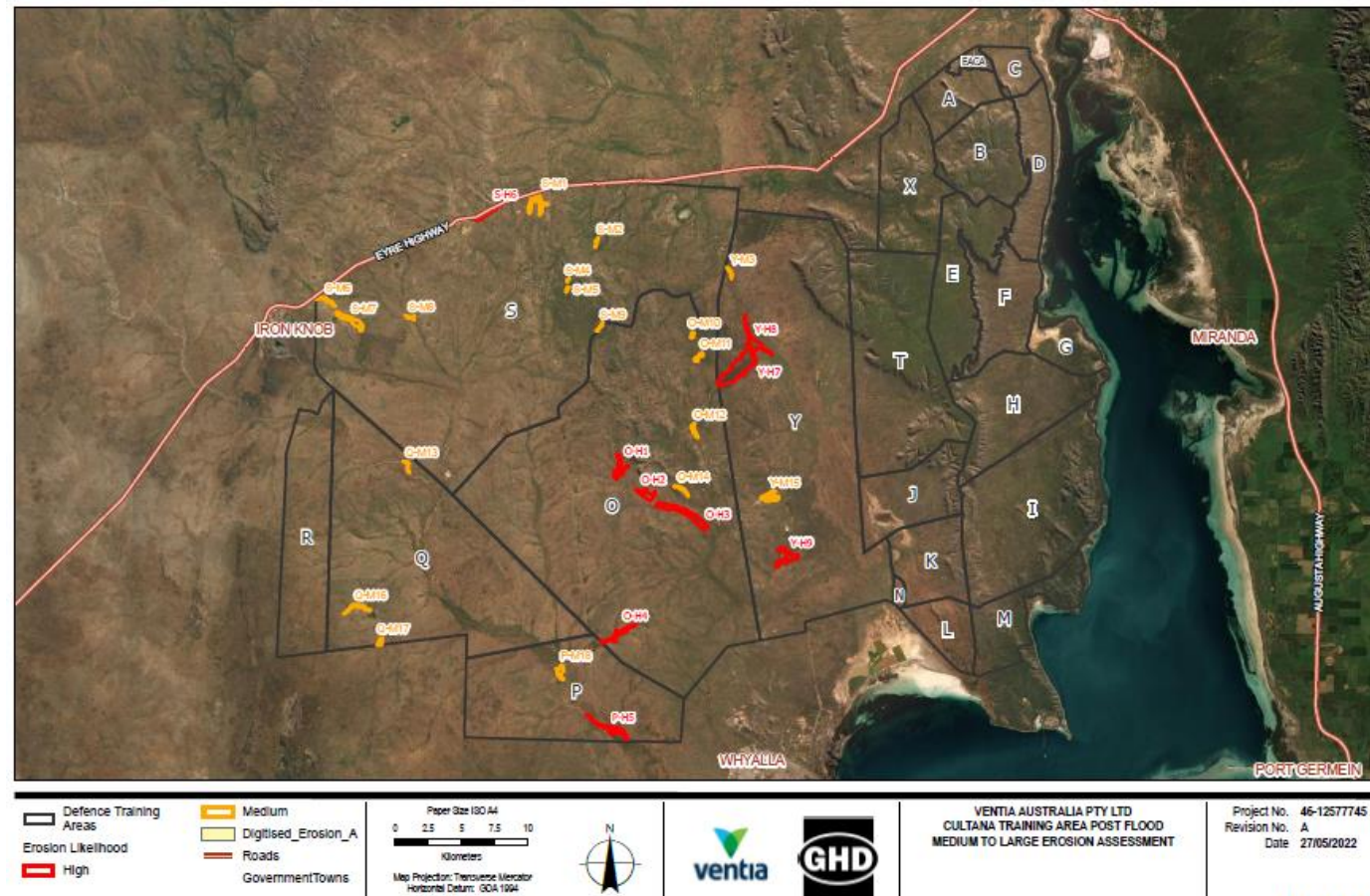
Report type	Year 4 (2 <sup>nd</sup> , 5-year period)			
Reporting year	2021 (July) to 2023 (June) (2-year period)			
Report collation	Department of Defence, SA Environment & Sustainability Team			
Report date	1/10/2023			
This report has been prepared to fulfil environmental reporting requirements by the Department of Defence (Lessee) as specified in the Miscellaneous Lease for Defence Purposes (MLDP) No. 53500 (20th June 2014).				
The MLDP requires a report be provided in writing to the Minister in relation to its performance against the Environmental Management Framework every second and fourth year within every five (5) year period. Department of Defence has developed an Environmental Management Framework and this report represents the second year report within the second five (5) year period against the Cultana Environmental Management System: (2) Environmental Management Plan (EMP) (2015). The EMP includes a Sustainability, Monitoring and Reporting Plan (SMRP) (Section 10) and indicates that SMRP reporting combines monitoring and reporting of all such key sustainability measures into a single snapshot of how Cultana is performing against standards and thresholds established in the EMP. The table below captures this required information.				
Reporting Theme	Reporting sub-theme	Reporting Criteria	Defence Response	Information Source
1. SOILS				
a. Erosion		Number of new erosion sites from Defence activities	Seven (7) new erosion sites were identified during the reporting period. See Map 1. Defence commissioned the Cultana Training Area Post Flood Medium to Large Scale Erosion Assessment (GHD May 2022) in response to a significant rainfall event in January 2022. Concerns regarding the potential for erosion along watercourses and low-lying areas triggered this desktop assessment. The assessment found that erosion was more under control than first assumed. Areas likely to experience medium erosion often occurred where bare earth already existed, and only had a small change to the total footprint of bare earth. The Normalised Difference Vegetation Index (NDVI), is a graphical indicator that assesses the presence of green vegetation, the NDVI seemed to increase within watercourses, which suggests vegetation regrowth post rainfall events.	Cultana Training Area Post Flood Medium to Large Scale Erosion Assessment (GHD May 2022)
b. Rehabilitation		Number of rehabilitation site works undertaken	No dams were decommissioned during the reporting period. Historically 18 priority dams (32 ha) have been closed and rehabilitated since the inception of the MLDP. 61 additional dams are pending further rehabilitation.	Dam closure report and EMOS rehabilitation reporting.

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## MAP 1:

Erosion areas post heavy rainfall event and flooding.

Source: Cultana Training Area Post Flood Medium to Large Scale Erosion Assessment (GHD May 2022)



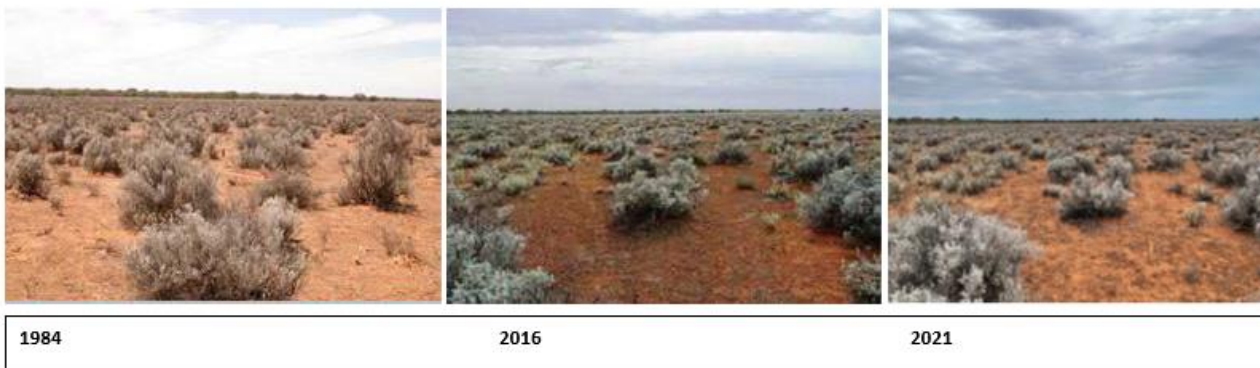
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<b>2. BIODIVERSITY</b>				
<b>a. Vegetation</b>	<b>Density (Saltbush, Bluebush and perennial shrubs)</b>	<b>Number of threshold exceptions based on Jessup transects</b>	<p><b>Jessup transects are due every 5 years, the next Jessup transect is due to be delivered in 2026</b></p> <ul style="list-style-type: none"> <li>- 16 Jessup transects exceeded upper Bluebush threshold (mean density) in 2021.</li> <li>- 10 Jessup transects exceeded upper Saltbush threshold (mean density) in 2021.</li> <li>- 22 Jessup transects exceeded upper Perennial shrub threshold (mean density) in 2021.</li> </ul> <p>These breaches of thresholds do not require any vegetation management, rather the thresholds within the Cultana EMP should be reviewed.</p>	Photopoint Monitoring and Jessup Transects - Cultana Training Area 2021 (AECOM, May 2021)
	<b>Cover</b>	<b>Number of threshold exceptions based on reactive step-point transects</b>	No step-point transect data collected during this reporting period. There was no identified need to establish specific step-point transects in addition to current monitoring (including Jessup survey and aerial imagery analysis). This reflects the relatively low impact of exercises in the training area during this reporting period.	Nil
		<b>Number of temporary area closures (TACs)</b>	TAC review completed by E&S (2023) Three (3) TACs currently in place within the CEA. These are for weed management outcomes (Carrion Flower). Remaining TACs in place are permanent (Environmental Offset in Sector R) or relate to numerous heritage sites (cultural and historic).	TASO RA map
		<b>Number of rest areas</b>	Nil rest areas currently in place within the CEA.	TASO RA map
	<b>Condition</b>	<b>Change in juvenile : adult ratio on Jessup transects</b>	<p>Results of Juvenile to Adult ratio data in 2021 were similar to that in 2015/16, with results showing large variation between the ratio of juveniles to adults.</p> <p>In 2021 all but 2 sites were below the lower threshold ratio, indicating fewer juveniles were present compared with adults.</p>	Photopoint Monitoring and Jessup Transects - Cultana Training Area 2021 (AECOM, May 2021)

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	<b>Condition</b>	<b>Number of sites recorded with low shooting on mature plans (greater than 30cm above ground)</b>	In 2021 eight (8) Jessup transect sites were recorded as having low shooting on at least one of the target plant species.	Photopoint Monitoring and Jessup Transects - (AECOM, May 2021)
	<b>Condition</b>	<b>Number of sites recorded with recruitment</b>	In 2021, 20 out of 30 Jessup transects were recorded with plant recruitment, with plant recruitment ranging from 0 to 151 juveniles from varying species. Most common juveniles were <i>Atriplex vesicaria</i> (Bladder Saltbush) and <i>Ptilotus obovatus</i> (Silver Mulla Mulla). In 2021 numerous perennial plant species were recorded as fruiting at multiple sites.	Photopoint Monitoring and Jessup Transects - Cultana Training Area 2021 (AECOM, May 2021)
	<b>Sandalwood</b>	<b>Change in key sandalwood population</b>	No recruitment data collected during this reporting period. None of the Jessup transects monitored are located within the main Sandalwood population. Additional transects would need to be established to monitor this in the future.	Nil
<b>b. Protection of biodiversity</b>		<b>Number of incidents involving damage to flora and fauna</b>	One (1) report of vegetation damage: Unauthorised vegetation clearance as part of mine rehabilitation project EST03393-comprehensive rehabilitation plan implemented (Reported Feb 2022)	Defence incident management system (DIMS)

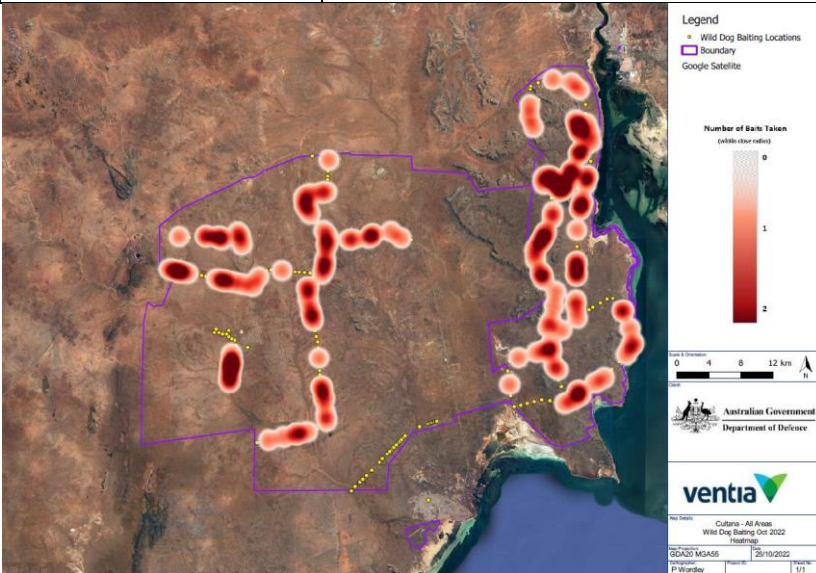
**Example of Photopoint Source: Photopoint Monitoring and Jessup Transects - Cultana Training Area 2021 (AECOM, May 2021)**



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3. BIOSECURITY AND OVER ABUNDANT NATIVE SPECIES (BONS)				
<b>a. Pest animals</b>				
	<b>Goats</b>	<b>Number of goats removed</b>	A total of 1306 goats were removed during this reporting period. 1076 were removed July 2021-June 2022 230 were removed Oct 2022- June 2023	LMMS Feral Animal Control Reports
		<b>Population distribution change over 3 year reporting period</b>	Goat removal data indicated that goats were removed from 4 different locations - Mt Whyalla, Fitzgerald Bay, Bluff, Red Rock The current data does not allow for an understanding of change in population distribution, rather it demonstrates the effort to remove goats from the site.	LMMS Feral Animal Control Reports
		<b>Number of goat incursion events at Gilmore Well</b>	No goats were reported to have been removed from Gilmore Well during the reporting period.  During this reporting period, the paddock fence that surrounds the Gilmore Well site has been upgraded and is now an electrified fence. This was done with the intent to keep goats out of the general area. Since the fence improvement, goats have not been found within the area.	LMMS Feral Animal Control Reports
		<b>Number of goat incursion events at water points</b>	The goat control report did not provide a breakdown of goat incursions at water points.	LMMS Feral Animal Control Reports
	<b>Foxes</b>	<b>Bait uptake</b>	There are now four (4) Felixer units deployed at CUTA to improve Defence's ability to manage foxes and cats. In establishing the units, functionality problems were identified and Defence has been informing the manufacturers, who in turn have been working to identify/fix the problem. The units are a valuable component of the Integrated Pest Management approach to fox and cat management in a remote landscape.	LMMS Feral Animal Control Reports

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	<b>Wild Dog</b>	<b>Bait uptake</b>	<p>304 baits taken 2020 496 baits taken 2021-2022 343 baits taken 2022-2023</p> <p>Attached, as Map 2 is the Wild dog bait, uptake data summary. Bait uptake is not solely a measure of Wild Dog density as other species including foxes and feral cats are target species.</p>	LMMS Feral Animal Control Reports
<p><b>MAP 2:</b></p> <p>Wild Dog baiting locations and bait uptake data for the Cultana Training Area.</p> <p>Source: LMMS Feral Animal Control Reports (Ventia, 2022)</p>				
	<b>Feral Cats</b>	<b>Control measures</b>	<p>There are now four (4) Felixer units deployed at CUTA to improve Defence's ability to manage foxes and cats. In establishing the units, functionality problems were identified and Defence has been informing the manufacturers, who in turn have been working to identify/fix the problem.</p> <p>The units are a valuable component of the Integrated Pest Management approach to fox and cat management in a remote landscape.</p>	



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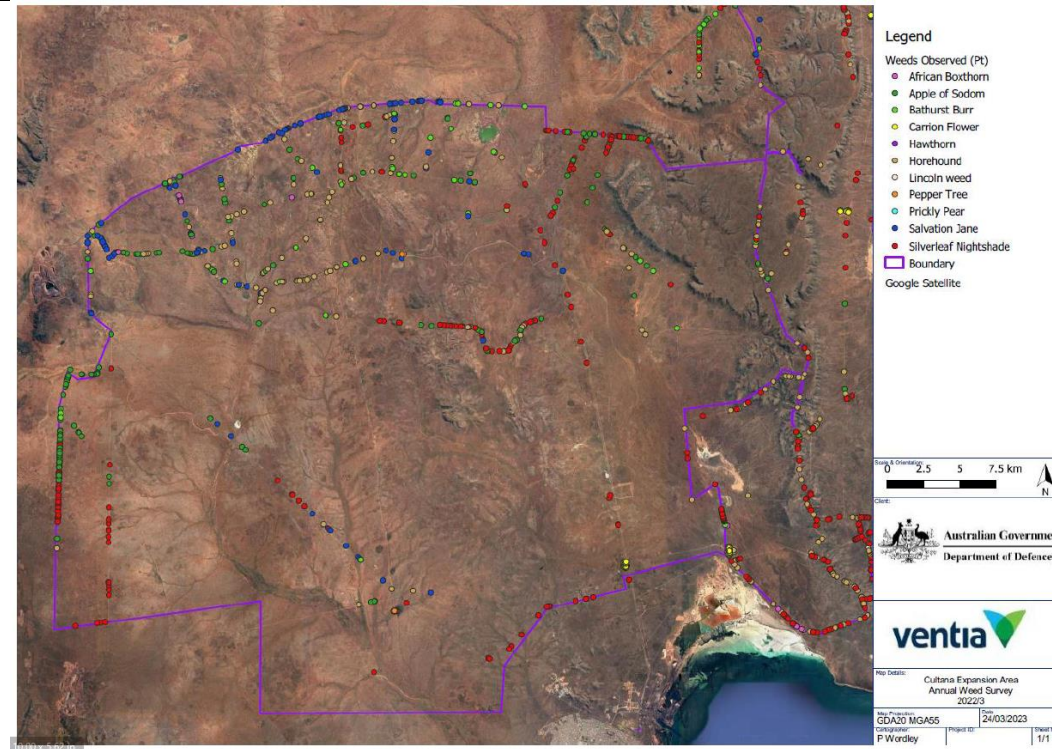
	<b>Rabbits</b>	<b>Population distribution change over 3 reporting period</b>	No change detected in the distribution of rabbits. Annual monitoring has determined that rabbit numbers have been below control threshold through the reporting period and hence no management actions have been undertaken. Anecdotal reports that Rabbit Haemorrhagic Disease Virus (RHDV) has contributed to low rabbit numbers.	LMMS Feral Animal Survey Reports
<b>b. Weeds</b>				
	<b>Carrion Flower (<i>Orbea variegata</i>)</b>	<b>Number / size of new infestations and infestation treated</b>	Three (3) new Carrion flower infestations identified, approximately 54ha. Seven (7) site infestations treated (44.9 ha) over this reporting period. Four (4) sites are now free from Carrion Flower plants (23.9ha) and are available for full site use.	Weed Distribution Surveys and Specific Control Reports CUTA Carrion Control May 2023 (Creation Care)
	<b>African Boxthorn (<i>Lycium ferocissimum</i>)</b>	<b>Number / size of new infestations and infestation treated</b>	Nil new African boxthorn infestations (0 ha) identified and 0 infestations (0 ha) treated over the reporting period.	Weed Distribution Surveys and Specific Control Reports
	<b>Opuntoid Cacti (<i>Opuntia sp</i>)</b>	<b>Number / size of new infestations and infestation treated</b>	One (1) Juvenile Opuntia located in Sector O in 2023. Scheduled for control.	Weed Distribution Surveys and Specific Control Reports
	<b>Prickly Acacia</b>	<b>Number / size of new infestations and infestation treated</b>	Nil new prickly acacia infestations (0 ha) identified and 0 infestations (0 ha) treated over the reporting period.	Weed Distribution Surveys and Specific Control Reports
	<b>Athel pine (<i>Tamarix aphylla</i>)</b>	<b>Number / size of new infestations and infestation treated</b>	Nil new athel pine infestations (0 ha) identified and nil infestations (0 ha) treated over the reporting period.	Weed Distribution Surveys and Specific Control Reports
	<b>Buffel grass (<i>Cenchrus ciliaris</i>)</b>	<b>Number / size of new infestations and infestation treated</b>	Nil new Buffel grass (0 ha) identified and nil infestations (0 ha) treated over the reporting period.	Weed Distribution Surveys and Specific Control Reports

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### MAP 3:

Weed distribution across  
Cultana Training Area

Source: LMMS Weed  
Control Reports (Ventia,  
2022)



<b>c. Over abundant native animals</b>	<b>Native animals</b>			
	<b>Kangaroos</b>	<b>Number of kangaroo's lethally controlled</b>	<p>3011 kangaroos have been removed during the reporting period.</p> <p>July 2021 - June 2022: 1640</p> <p>July 2022 - June 2023: 1371 kangaroos</p> <p>Lethal control of Kangaroos did not exceed limits recommended via DEW aerial transect density during the reporting period.</p>	LMMS Kangaroo control reports.



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4. BUSHFIRE				
	<b>Modification of vegetation through burning</b>	<b>Area of site burnt more than once in past five years (July 2016 to June 2021)</b>	Nil sites were burnt more than once in the 5 year reporting period (0 ha).	TASMIS
		<b>Area of site burnt at least once in this 5 year period and the previous 5 years period</b>	Three (3) fire incident were reported and 50ha were burnt in total in Sector O in the previous 5 years.	TASMIS
	<b>Fire frequency and size</b>	<b>Number of fires</b>	Nil bushfires were notified during the reporting period.	TASMIS
		<b>Number of fires greater than 100ha</b>	Nil fires greater than 100ha were notified during the reporting period.	TASMIS

5. POLLUTION				
<b>a. Noise and vibration</b>		<b>Number of Defence activity noise / vibration complaints received</b>	Nil complaints received during the reporting period.	DOTAM and Defence Incident Management System (DIMS)
		<b>Threshold exceptions and actions</b>	Nil.	DOTAM and DIMS
		<b>Number of cases of verified structural damage / other impacts from Defence activity noise / vibration</b>	Nil verified cases known during the reporting period.	DOTAM and DIMS
<b>b. Light</b>		<b>Number of Defence activity light pollution complaints received</b>	Nil complaints received during the reporting period.	DOTAM and DIMS
		<b>Threshold exceptions and actions</b>	Nil.	DOTAM and DIMS

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<b>c. Dust</b>		<b>Number of Defence activity dust complaints received that had civilian health impacts</b>	Nil complaints received during the reporting period.	DOTAM and DIMS
		<b>Number of Defence activity dust complaints received where dust obscured Highway</b>	Nil complaints received during the reporting period.	DOTAM and DIMS
<b>d. Pollution prevention</b>		<b>Number of incident reports involving discharge to the environment</b>	<p>Four (4) reports discharge to the environment:</p> <ol style="list-style-type: none"> <li>1. Hydraulic Oil spill (Minor) to surrounding soil - Caused by contractor delivery vehicle. Spill cleaned up. October 2022.</li> <li>2. Hydraulic Oil spill 200ml (minor). Spill cleaned up March 2023.</li> <li>3. Hydraulic Oil spill (minor). Spill cleaned up May 2023.</li> <li>4. Fuel Spill (moderate). Punctured fuel tank during exercise resulting in 300L of fuel entering the environment. Advice received from expert contamination team that remediation would likely cause more damage to the soil/soil crust and native vegetation and spill was not cleaned up. Site being monitored.</li> </ol>	DOTAM and DIMS

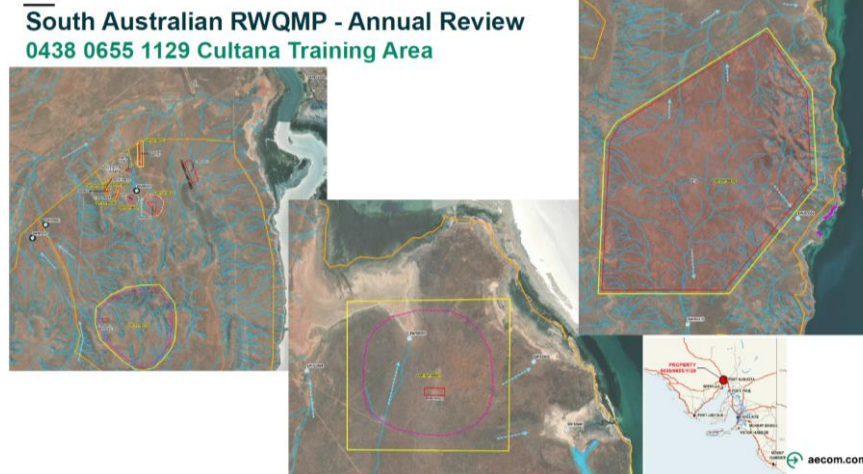
<b>6. WATER</b>				
<b>a. water quality</b>		<b>Change in water quality at monitoring sites</b>	<p>Routine water quality monitoring has not been conducted at Cultana Training Area within the reporting period.</p> <p>Recommendations from RWQMP in Year 2 (Oct 2021 Sept 2022) identified that Cultana Training Area is required to be included in the RWQMP due to the presence of live firing ranges where surface water runoff may be occurring and presenting a pollution risk. In late 2023 Ten (10) surface water and sediment sampling locations for metals and explosives residue targeting runoff from target areas will be implemented. See Map 4 for locations.</p>	Routine Water Quality Monitoring Plan (RWQMP), SA Defence Estate. (AECOM, 2023).
		<b>Change in water quality at sensitive receptor</b>	Nil water quality monitoring data collected during this reporting period.	
<b>b. Discharge</b>		<b>Number of notified occurrence of discharge to aquatic or marine system</b>	Nil notified occurrences of discharge during the reporting period.	DIMS

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### MAP 4:

Locations of surface water and sediment sampling in CUTA.

Source: Routine Water Quality Monitoring Plan (RWQMP), SA Defence Estate. (AECOM, 2023).



## 7. HERITAGE

a. Damage		Number of known aboriginal sites damaged during the reporting period	Nil notified occurrences of site damage during the reporting period.	DIMS
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