Protection: The Australian Army Combat Engineer Regiment Approach

By Major Peter J. Witcomb

The contents of this article do not represent the official views of, nor are they endorsed by, the U.S. Army, the Department of Defense, or the U.S. government.

This article was edited with the assistance of AI tools, and subsequently reviewed and edited by relevant Department of Defense (DOD) personnel to ensure accuracy, clarity, and compliance with DOD policies and guidance.

Introduction

The protection warfighting function safeguards mission-related personnel (military and civilian), equipment, facilities, information, and infrastructure, ensuring their survivability and effectiveness within and outside operational areas. Often underappreciated compared to other warfighting functions, protection is crucial for mission success.[1] This article examines the warfighting function of protection through the lens of the Australian Army Combat Engineer Regiment (CER). It first elucidates the distinctive roles and tasks of CERs, providing crucial organizational context. Then, it compares CER tasks against applicable primary protection tasks from Army doctrine publication (ADP) 3-37, *Protection*. Finally, a vignette vividly illustrates the importance of protection, focusing on CER contributions to establishing anti-access/area denial (A2/AD) positions in the Indo-Pacific. This analysis aims to enhance understanding of protection and contribute to developing a more resilient and effective force.

The Combat Engineer Regiment

The Australian Army prepares land power for competition and conflict, with the division as the unit of action for achieving national objectives. The 1st Australian Division (1 [AS] Div) focuses on deploying and sustaining forces in large-scale combat operations.[2] 1 AS Div consists of three combat brigades—littoral, armored, and motorized—each organized similarly to a U.S. Army brigade combat team (BCT). Within these brigades, CERs enable maneuver and survivability through combat engineering capabilities.[3] This support concentrates on delivering mobility, countermobility, and survivability tasks, as well as limited sustainability support when required.

A typical CER includes—

- A headquarters for regiment and brigade planning,
- Two combat engineer squadrons focused on supporting maneuver battalions.
- A support engineer squadron for specialized functions in support of the brigade.
- A logistics squadron providing specialized engineer materieal and equipment.[4]

Primary Protection Tasks Conducted by Combat Engineer Regiments

While U.S. Army engineer battalions at brigade and division level share similarities with CERs, key differences exist in their structure, focus, and doctrinal employment.[5] The tasks undertaken by the CER, cross-referenced with the primary protection tasks detailed in ADP 3-37, reveal that CERs directly support only four of the 16 primary protection tasks.[6] This highlights that protection extends beyond the development of survivability positions and physical force protection.

By examining this comparison, U.S. Army engineer battalions can better understand how their tasks align with broader protection efforts, even if the organizational structures slightly differ. This improved understanding is fundamental in multinational operations, where effective communication and a shared operational picture are essential for success. Furthermore, recognizing these similarities and differences allows U.S. Army engineers to better integrate with CERs during combined operations, maximizing the effectiveness of both organizations and contributing to a unified approach to battlefield protection.

CER Support to A2/AD Establishment in the Indo-Pacific

The following fictitious vignette showcases the warfighting function of protection in establishing A2/AD within the Indo-Pacific, highlighting the contributions of a CER to a combat brigade. Their actions across strategically vital

Primary Protection Task	CER Tasks	Sub Task
Conduct Survivability Operations	Physical Force Protection	• Basic Field Defences • Field Defences for Artillery and Vehicles • Urban Fortification • Structural Protection
	Combined Arms Route and Area Clearance	• Route Clearance • Area Clearance
	Combat Engineer Diving	• Bridge Protection Systems • Battlefield Clearance • Protection from Natural Forces
Conduct CBRN Operations	Conduct CBRN-D	• Detection and Identification • Warning and Reporting
	Physical Force Protection	• Physical Protection
	Emergency Response	• Hazard Management • Hazardous Materials Incident Response
Provide EOD Support	Engineer Search	• Gain Intelligence • Gain Evidence for Prosecution
	Explosive Hazard Reduction	• Explosive device disposal (within restrictions) • Battlefield Clearance of unexploded ordnance • Explosive reduction of enemy caches and stores
	Combat Engineer Diving	• Underwater Obstacle Reduction
Conduct Personnel Recovery	Emergency Response	• Personnel Rescue

Primary protection tasks cross-referenced with CER tasks

islands were essential for enhancing sea control and enabling military aircraft overflight.

On one island, a combat engineer squadron, reinforced by engineer support elements and secured by an infantry company, executed survivability operations for critical long-range radar and air defense systems. Using bulldozers and excavators, they shaped the terrain to create defensive positions and constructed reinforced concrete bunkers, while also hardening existing infrastructure, such as power generators and communication hubs against attack and sabotage. Later, when adversary forces launched a limited strike targeting the radar site with cruise missiles, the hardened positions and redundant systems minimized damage, ensuring continued radar functionality and early warning capability.

Meanwhile, on a neighboring atoll, another engineer squadron established a subterranean command post for the brigade headquarters, enhancing its survivability and securing the logistics echelon by developing field defenses. However, unexploded ordnance (UXO) from past conflicts complicated this task. The squadron conducted thorough area search and route clearance, identifying and neutralizing UXO to ensure the unimpeded flow of personnel and materiel. When opposing forces attempted to disrupt logistics with special forces operating from small boats, the established field defenses and cleared routes enabled rapid response and interdiction, preserving the sustainment of the brigade.

Across the operational area, the CER Combat Engineer Divers conducted underwater battlefield clearance in maritime chokepoints, removing debris and obstructions from shipping lanes to guarantee resupply vessel access. They also implemented underwater bridge protection systems at a critical inland overpass, safeguarding infrastructure against sabotage and damage and preserving the operational mobility of the brigade. An attempt by enemy divers to plant limpet mines on the bridge was thwarted by the installed protection systems and regular patrols, ensuring uninterrupted lines of communication.

The CER headquarters provided engineer intelligence and planning (including chemical, biological, radiological, and nuclear [CBRN] threat assessments and terrain analysis) to the brigade headquarters, enabling informed decision making and risk mitigation. Their expertise was invaluable in understanding the complex environment, and their flood risk analysis proved essential for establishing the logistics echelon on higher ground. This foresight prevented significant disruption when a heavy storm caused localized flooding, demonstrating the value of proactive planning.

The contributions of the CER were indispensable to the success of the A2/AD operation. By engineering a robust defense network, securing logistics hubs, and maintaining freedom of movement, they provided the bedrock for mission success. While adversary actions tested the defenses of the brigade, the proactive protection measures of the CER significantly reduced their impact, ensuring sustained projection of combat power in the challenging littoral environment of the Indo-Pacific.

Conclusion

The Australian Army CERs, and their counterparts in the U.S. Army BEBs, play a vital role in the protection warfighting function. While the CER contributions extend beyond physical force protection—encompassing tasks such as CBRN defense, explosive hazard reduction, and personnel recovery—their core function lies in enabling maneuver and survivability.

The vignette depicting CER support to A2/AD establishment in the Indo-Pacific underscores their importance in

Sappers from the 3rd Combat Engineer Regiment conduct a route search.

Sappers from the 1st Combat Engineer Regiment transit from a parent craft to an island to conduct area clearance prior to disembarking plant equipment to develop survivability positions.

creating robust defenses, securing critical infrastructure, and maintaining freedom of movement. By shaping terrain, hardening positions, clearing routes, and providing expert engineer intelligence, CERs empower the brigade to project combat power effectively. Ultimately, their proactive approach to protection, as demonstrated in the vignette, minimizes the impact of adversary actions and ensures mission success in complex operational environments. This analysis highlights the crucial contribution of CERs to a resilient and effective force, emphasizing the need for continued development and understanding of their diverse capabilities.

Endnotes:

[1]Department of The Army, FM 3-0: *Operations*, IV.

[2]Department of Defence, *ADF Land Power*, 34; Australian Army, 'The Australian Army Contribution to the NDS', 1, 16.

[3]Australian Army, LWP-CA (ENGR) 1-2-1 - *Engineer Operations*, 1–2.

[4]Squadron = Company

[5]Department of The Army, ADP 3-37 - *Protection*, tbls. 1–1; Centre for Army Lessons Learned, *The BEB - A Leader's Guide*.

[6]Australian Army, LWP-G 3-6-12, *Combined Arms Route and Area Clearance*; Australian Army, LWP-CA (ENGR) 2-8-1, *Combat Engineer Diving*; Australian Army, LWP 3-9-7 *Operations in a CBRN Environment*; Australian Army, *LWP-CA (ENGR)* 2-6-1, *Engineer Search*; Australian Army, LWP-G 3-6-5, *Mines, Threat Devices and Explosive Hazard Reduction*; Australian Army, LWP-G 3-6-10, *Protection from Fire and Other Emergencies*; Australian Army, LWP-G 3-6-4, *Physical Force Protection*.

Major Witcomb is currently the Division Chief of the Engineer Captains Career Course at the U.S. Army Engineer School, Fort Leonard Wood, Missouri. He holds masters' degrees in project management from University of New South Wales, Sydney, Australia, and in military and defence studies from Deakin University.