UXO Detection

- Unexploded ordnance (UXO) is extremely hazardous and must be removed before land can be reclaimed for civilian purposes. Gap EOD is proud to offer specialist services that can improve the welfare of people around the world.

- Gap EOD personnel have over 25 years of experience in advanced equipment design, soil mitigation techniques, and development of sophisticated processing and interpretation software. This experience, coupled with our strong record in survey execution around the world of sites, makes us a worldwide leader in UXO detection solutions.

- Gap EOD is also at the forefront of Research and Development efforts; in recent years Gap EOD Director Dr. Stephen Billings has been Principal Investigator on twelve R&D projects sponsored by the Strategic Environmental Research and Development Program (SERDP) and the Environmental Security Technology Certification Program (ESTCP) in the United States.

UXO Detection Services

- Gap EOD’s services are based on innovative geophysical technologies such as the multi-component UltraTEM system and the highly sensitive UltraMAG system.
- Based on these sensor systems, Gap EOD operates a range of multi-sensor acquisition platforms for ultra-high definition digital mapping with high efficiency.
- These platforms include person-carried and vehicle-towed single-, quad-, and octo-sensor systems, as well as a marine/subaqueous acquisition ROV in development.

The broad expertise across Gap EOD and Gap Geophysics Australia enables us to design the most cost effective and best performing UXO detection solutions for complex environments, such as:

- urban development sites
- geologically hostile terrain with magnetic rocks or soils
- deep-search projects
- offshore detection problems
Deep Bomb Detection

Gap EOD
Explosive Ordnance Detection

- Gap EOD's Ultra Deep UXO detection system builds on our significant past experience with deep bomb detection.
- It combines a rugged, fast-switching transmitter (Gap GeoPak MLTX-200) with a powerful custom designed generator (Gap GeoPak DC10LV) and one to fifteen three-component receiver coils that collect time-domain electromagnetic induction data across a wide time-range.
- The roving receiver array is operated inside a fixed loop of shielded copper cable that ranges from 30-150 m long to 5-50 m wide.
- The large size of the transmitter loop results in a slow fall-off in the primary field with depth and effective excitation of deep buried bombs. It has the added benefit of efficient data collection and limited moves of the fixed loop.
- The use of active and high-powered transmitters enables the system to work effectively in areas of magnetic geology that render passive magnetometers and standard EM equipment unusable.

Capabilities and Performance

- Distinguish closely spaced individual targets
- Accurate details on object position & depth
- Auditable digital recording of all data
- Imaging depth: >3 m in magnetic SE Asia soils
- Daily coverage: up to 7,500 m²; 22,500 m³

The system has been extensively tested during feasibility trials with blind seeded targets and is currently in operation for production surveys at sites in southeast Asia and Australia.