

# UXO Land Survey and Clearance



Geomines provides end-to-end services for unexploded ordnance (UXO) and Unexploded Bombs (UXBs) clearance: survey, identify, clear, mitigate, train on land, in France and abroad. Our clients come from various sectors of activity: construction, transport, oil and gas, defense, public organizations and worldwide armed forces.



## Our UXO/UXB land services:

- ▶ Non-Technical Survey
- ▶ Technical Survey
- ▶ Clearance
- ▶ Other pyrotechnic safety services for construction sites

## Non-Technical Survey

Non-technical surveys assess the level of explosive ordnance risk in a specific area, without the use of technical interventions, by:

- Identifying all recorded accidents linked to UXOs or UXBs;
- Assessing the nature and gravity of the risks faced by local communities.



## Technical Survey

Non-technical surveys are followed by technical surveys which enable the detection, characterization and data analysis to discriminate and select anomalies similar to ammunition likely to be found on the right-of-way.

By scanning and probing the terrain to assess if there is any unexploded material embedded in the ground of the site, this process ensures that any planned construction works can be carried out as scheduled with the minimum amount of risk to those involved.

Advanced software analysis with geophysical techniques are used to establish a geophysical picture of the entire right-of-way, in 2D or 3D, on a map or in section.

## Our equipment

Geomines deploys a variety of survey systems to achieve the required level of detection depending upon the type of UXO, likely depth and ground condition:

- ▶ Magnetometric detection (Magnex 120, 3 to 8 probes, caesium vapor...)
- ▶ Electromagnetic detection (UPEX 740M, Minelab F3, EM61 MK2...)
- ▶ GeoRadar (SIR 3000 mono antenna and Stream X multi antennas).



## UXO Land Clearance

The clearance of unexploded ordnance, or UXO, refers to the safe removal or destruction in situ of explosive remnants of war. Geomines' teams work on clearing landmines and explosive ordnance from buildable land, civil, industrial or military sites, airports, railway stations and pipelines.

The operations are carried out using detection tools and specific equipment for each location.

Geomines also provide commercial well drilling and boreholes services.

**Geomines' teams can draw on their solid experience within French armed forces and full command over the skill-sets required for technical survey and landmine and explosive ordnance clearance activities.**

## Clearance services provided by Geomines:

- Manual mine clearance
- Mechanical clearance
- Battle area clearance
- Explosive ordnance disposal consultancy and support
- Route assessment and surveys
- EOD and IEDD training



### Our added value in UXO land clearance

- ▶ Continuous training of Geomines teams on safety, regulations and equipment.
- ▶ Internal and external quality control
- ▶ Many overseas references include Morocco, Iraq, Taiwan, Angola, Jordan, Cameroon, Kurdistan, Uganda, Ghana, Ivory Coast, Qatar etc.
- ▶ Although active for close to 20 years in a field of activity known to be risky, Geomines' teams can boast on their accident-free records, both during mine clearance works and after clearance of the sites
- ▶ Efficient processes certified ISO 9001



**GEOMINES**

Founded in 2002, Geomines is a french mine-clearance company specialized in geophysical survey and UXO clearance. We support our customers for the full range of UXO clearance-related needs, in France and abroad: land and underwater survey, land clearance, underwater clearance, excavation and drilling security, ammunitions stockpile management.

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