



#### **UNEXPLODED ORDNANCE RISK MITIGATION**

EOD Contracts, a leading UK company dealing with the risk mitigation of items of unexploded ordnance (UXO), was founded in 2002 and is now well-established in the assessment, survey and investigation of sites all over the UK and overseas.

EOD Contracts has since gone one step further with the introduction of underground service clearance and verification. This unique addition to our services allows the client to save both time and money by reducing mobilisation and additional manpower that can now be provided by EOD Contracts.

Alongside these services EOD Contracts also deals with the safe disposal of (UXO) and Time Expired Pyrotechnics (TEPs).

Our team at EOD Contracts Ltd has been providing professional and knowledgeable advice to our clients for the last 20 years, giving them the peace of mind to allow their projects to proceed, in domains such as civil engineering, geotechnical investigations, oil & gas, maritime, QA/QC (Quality Assurance/Quality Control), archaeological investigations and renewable energy.

All levels of UXO risk mitigation meet the highest industry standards in accordance with CIRIA C681 (Unexploded Ordnance (UXO) "A Guide for the Construction Industry"). EOD Contracts Ltd also maintains the highest quality management standards ISO 9001 – 2015 & ISO 14001 – 2015 providing professional reassurance for all our clients.











# **UXO Desktop Study**

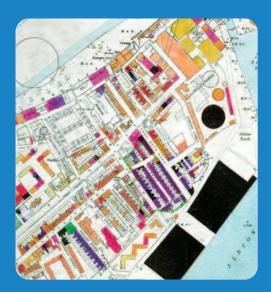
EOD Contracts provides our clients with honest, precise and detailed Desktop Studies, fully compliant with the industry standard CIRIA C681. These reports have allowed our clients to proceed with their projects in the safest possible way, implementing sufficient UXO risk mitigation for the risk on their site.

Our detailed site assessments provide our client with the following, but not limited to:

- Ministry of Defence records
- Bombing records
- Bomb damage mapping
- Historical mapping
- Potential site geology/ground make-up
- Historic review
- Abandoned bombs
- Prior clearance operations
- Military usage
- Bomb penetration depths
- Consequences of UXO encounters

We ensure that all available mapping and information are supplied within the report.

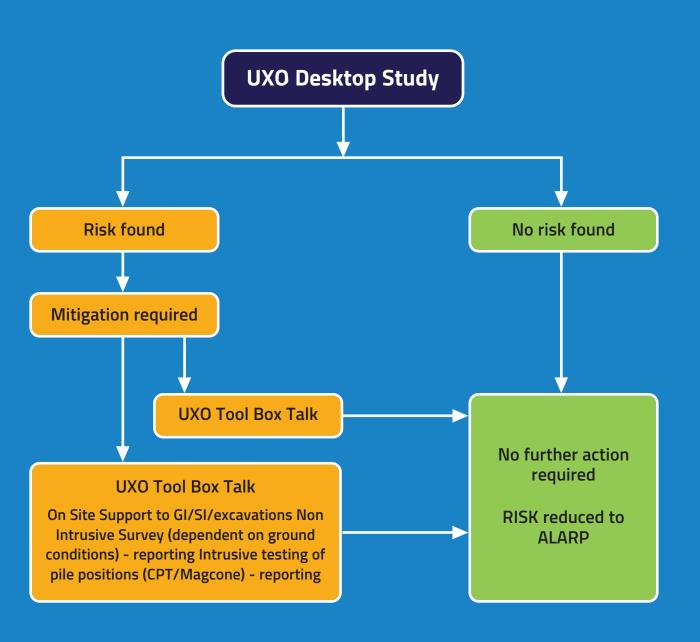
Our data analysts compile all this information into one concise document in order to provide the client with a clear understanding of the risk and the mitigation (if any) that is required for their site.















# **Non-Intrusive Surveys**

EOD Contracts Ltd offers our clients several means of clearing parcels of land through the use of our specialist equipment. Our surveys are conducted using state-of-theart, computer-linked magnetometers, which enable us to collect and process high quality data. Once collected, the data is subjected to rigorous assessment by our geophysical engineers and NATO/IMAS qualified Explosive Ordnance Disposal (EOD) engineers. This data is then forwarded to the client along with "Best Practice" standards enabling them to move forward with their project.

The survey utilises non-intrusive technology to provide a detailed "colour-coded" map of all the ferro-magnetic fields within the survey footprint. Any signals that could potentially offer a risk of being an item of UXO are highlighted for further investigation.

This quick, efficient survey system not only reduces ecological damage within the survey area, but also ensures that any necessary intrusive investigations are minimalised, thereby reducing time delays and offering the most cost-effective method to the client.

Our clients demand and deserve the best and we pride ourselves in exceeding their expectations. We ensure that we provide a timely, accurate, high-quality product at competitive prices. Furthermore, all our surveys are covered by our professional insurances.











### **Intrusive Surveys**

On most "brownfield" sites, non-intrusive methodology proves inconclusive due to the (usually) high content of surface ferro-contamination/sub-surface ground contamination. It therefore becomes difficult to produce an accurate interpretation of the ground make-up. In these circumstances EOD Contracts Ltd can offer the client an Intrusive UXO survey, providing a "look ahead" capability, ideal for clearing pile locations/clusters & boreholes.

Due to EOD Contracts Ltd's long-standing, professional relationship with two of the UK's leading CPT companies (Lankelma & Fugro), both specializing in in-situ ground investigation, we can offer our clients mobilisation to anywhere in the UK including over-water/off-shore. By being able to draw upon the wide variety of their multi-platformed CPT rigs, from 20 tonne tracked and wheeled vehicles to mini-rigs and railway mounts, together we can offer versatility and flexibility for all types of site conditions.

In addition, EOD Contracts Ltd can offer other CPT services such as:

- Cone and sleeve friction testing
- Piezocone testing
- Vibrating wire piezometers/standpipe piezometers
- Other ground investigation services/installation, as a result of which accurate ground conditions can be obtained without the expensive mobilisation of a further ground investigation team.











### **EOD Site Supervisor and Banksman**

Once a site has been identified as an "at risk of UXO site" (usually through a comprehensive Unexploded Ordnance (UXO) Desktop Study), EOD Contracts Ltd can offer our clients a UN/IMAS qualified UXO engineer to provide onsite support to all ground works and excavations, whether they are geotechnical, environmental, archaeological or construction related.

Our UN/NATO qualified Explosive Ordnance Disposal (EOD) engineers are on site to check and clear the ground prior to the commencement of works, or in a progressive "safe, look ahead" manner whilst the investigations are undertaken.

Should a suspicious item be discovered, our engineer is on hand to assess the item and take the appropriate actions. Where an item is deemed to be UXO, the engineer will then act as safety officer and liaise with the emergency services until the situation is deemed closed.

All our engineers are equipped with specialist equipment and the process makes use of the industry best practices (CIRIA).

The UXO site engineer can also provide UXO safety briefs to all site personnel and management, thus helping to ensure that works at all levels are carried out in a safe manner.











#### **Utility Clearance**

In order to meet the ever-growing requirements of our clients, EOD Contracts has introduced the provision of utility detection and verification to complement our first class EOD/UXO services. We have fully-trained engineers (ProQual Level 3 Certificate in Utility Mapping and Detection) for the location and avoidance of underground services who are available to undertake surveys all over the UK.

What are we offering? As part of our ever-growing arsenal, EOD Contracts Ltd are now able to provide our clients with the following services:

- Utility records EOD Contracts Ltd can offer full and comprehensive utility records (to PAS 128 industry standards). This "first stage" in the planning process will help to identify all known services and make managing all intrusive investigations much safer across the entirety of the site.
- Borehole, window samples, trial pit clearance & mark-up. Geotechnical
  investigations are required across a multitude of sites and for multiple
  purposes. Now EOD Contracts Ltd are able to offer (alongside their UXO risk
  mitigation) sub-surface utility technology (Electro Magnetic Locators (EML)
  & Ground Penetrating Radar (GPR)). By utilising this technology we can
  detect and mark up clearance zones around each borehole or trial pit and
  using our own UXO engineers to fulfill this requirement reduces both costs
  and manpower.
- Our latest GPR systems can supply onsite real time 3D depth slicing of
  data enabling a better visulisation of the utilities within the ground. This
  information can then be instantly emailed as a basic report to be included in
  Dig permits. Where time allows a more in-depth report can be generated
  for each position cleared.
- Our EML and GPR data is logged and recorded so that QAQC can be completed
  of cleared positions, or be reported in various formats allowing our client to
  view and use the data taken.









# **GPS Markout & Recording**

At EOD Contracts we have now increased our GPS accuracy from +/-30cm to centimetre accuracy to fall within the requirements of our clients. Accurate as built X,Y,Z coordinates are often essential when reporting geotechnical investigations. Accurate GPS coordinates allow our clients to relocate services once our engineers have left site. The UK weather can often wash away important markings.

We can also set out positions when we are supplied the coordinates in a .CSV format before the job commences. All of our EOD works are recorded as well and at a small cost these positions can be supplied in various formats.













# **Marine Pyrotechnics (TEPS)**

# EOD Contracts is a Home Office Authorised and Police Approved Explosive Disposal Company.

EOD Contracts explosive disposal techniques are designed to fully comply with current UK and EU legislation. EOD Contracts has extensive knowledge and experience of the disposal of explosives and pyrotechnics worldwide. Our bespoke incinerators and methods deal with the ever –increasing problem of the disposal of marine pyrotechnics and fireworks, in a safe, controlled and effective manner.

EOD Contracts disposal team manager is a NATO qualified advanced EOD engineer. He inspects all items before ascertaining the correct method of disposal. This task is carried out by either one or more of the following methods:

- 1. Fuel-fired incinerator
- 2. Remote function as designed
- 3. Controlled explosive disposal











#### **Contact Information**

To find out more about any of the servcies EOD Contracts provides please get in touch. EOD Contracts Ltd 26-28 Kempton Road Keytec 7 Business Park Pershore WR10 2TA

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