



Explosives Safety Scheme



**GLOBAL EXPLOSIVE ORDNANCE DISPOSAL SOLUTIONS FOR THE
MARITIME INDUSTRY**



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EXPLOSIVE
ORDNANCE
DISPOSAL



Overview

The Explosives Safety Scheme (ESS) is part of the Ramora UK suite of services, available worldwide to clients who wish to understand all threats to their business and ensure they have proven and effective measures in place to respond.

Globally there are many thousands of tons of ordnance lying on the sea floor and a greater number on the adjacent land areas. These items of Unexploded Ordnance (UXO) could be items which failed to function during a particular conflict, items dumped at sea following a conflict or simply part of the debris remaining as military forces withdrew. Regardless of the history, each of these items has the potential to cause commercial losses to anyone operating subsea around the world today.

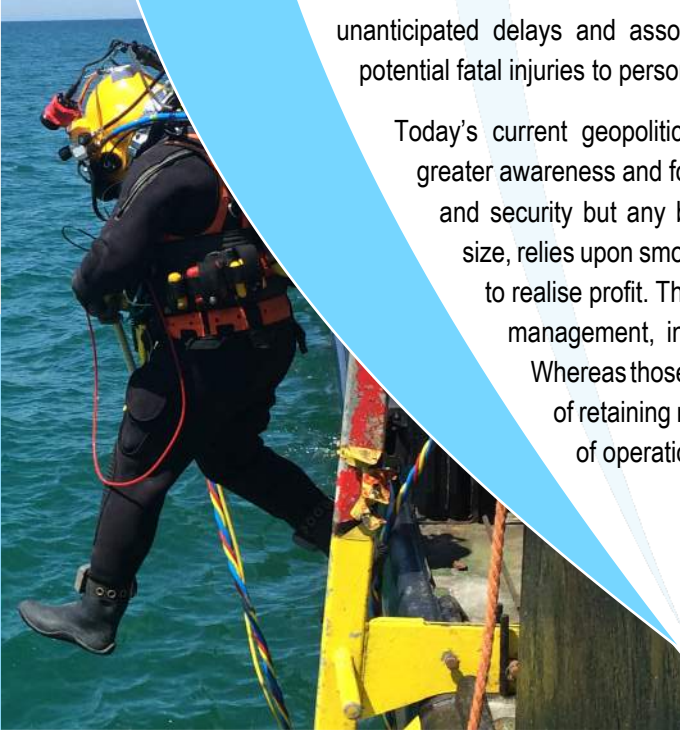
Often the actual risks posed by the discovery of an item of UXO is either over emphasised or under assessed. In each of these cases, the implications unnecessarily increase the risk profile and/or commercial losses. Each and every item of UXO discovered should be assessed by an Explosive Ordnance Disposal (EOD) specialist familiar with the item and its methods of functioning. This process can be completed in a matter of minutes by our duty Explosive Officer and relevant actions taken to ensure both limited risk and continued production.

The ever increasing growth in exploration and construction, especially within the maritime environment, impacts on the rise of ordnance discovery, rendering the siting and operation of projects dangerously problematic. Although a UXO will unlikely detonate without disturbance, impact to surrounding areas such as drilling, piling and cable installation could initiate the UXO. This would certainly cause damage to vessels and infrastructure creating project damage, unanticipated delays and associated costs alongside potential fatal injuries to personnel within the vicinity.

Today's current geopolitical situation dictates a greater awareness and focus on safe operations and security but any business, regardless of size, relies upon smooth, efficient operations

to realise profit. Those who choose to ignore the potential for UXO discoveries, by neglecting risk management, invariably encounter significant elevated costs and risk as a consequence.

Whereas those who initially invest wisely and entirely in a UXO solution will reap the benefits of retaining maximum operational flexibility and enabling the safe and timely delivery of operations.





UXO Risk

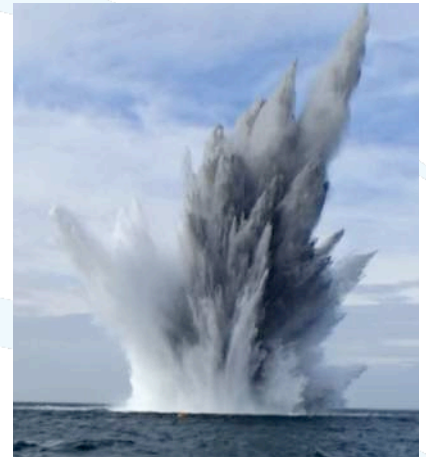
Following numerous military conflicts and related support activity, items of UXO exist worldwide and pose a potentially lethal risk for those wishing to operate commercially in the same space. For commercial, military and other government organisations the threat to personnel, equipment and operations is extremely significant.

Almost every ocean and sea area of the world has some level of contamination following conflicts and other contaminating acts (sea dumping etc.). Each of these areas has an often similar array of munitions in terms of type, however, they can differ widely in terms of age and technology. These are key elements in determining the safety of a site following the discovery of any suspect UXO item.

Where an item is highly corroded and assessed as being submerged for a prolonged period care must be taken when determining whether it poses a threat. Whilst any internal batteries may be depleted and fusing system rendered inoperable due to the effects of salt water, there is still a high degree of risk. Regardless of the initiation systems and degree of corrosion most items of UXO contain explosives and it is these compounds that present the ongoing risks. Any interaction with the UXO that introduces sufficient levels of heat, shock or friction into the item has the potential to cause detonation. Activities such as piling, drilling, anchoring and trawling all produce sufficient energy to cause detonation of an item, even if the item has been submerged for 75 years or more.

The specific risk and likely impact to localised infrastructures can be determined quickly by one of the ESS EOD specialists. In formulating this initial assessment ESS specialist will consider the following:

- Type of item (Mine, Bomb, Missile, Torpedo)
- Size of item (to determine explosive content)
- Method of arming and initiation
- History of the area
- Condition of item (case breach exposing booby traps etc.)
- Details of all infrastructures within 1000m



Following confirmation that any item is identified as UXO, or suspect UXO, the initial safety measures can be put in place within a matter of hours via the ESS 24/7 Emergency Response Centre. Deployment of specialists to the scene is then coordinated to minimise any potential impact to the project or unnecessary loss of productivity.





Ramora UK is a leading bomb disposal company operating worldwide both onshore and subsea. Specialising in the reduction of the human and commercial risks posed by explosive munitions, Ramora UK has repeatedly delivered cost effective solutions to a broad client base. Providing UXO solutions to projects ranging from the clearance and disposal of Explosive Remnants of War (ERoW), to the ever increasing security threat posed by terrorist organisations employing Improvised Explosive Devices (IEDs), Ramora UK has now expanded its service delivery via the **ESS**. Operating via a 24/7 Emergency Response Centre, Ramora UK ensure these solutions are timely, cost effective and in accordance with relevant legislation and appropriate safety considerations.

Ramora UK have been working with the oil and gas and renewables sector for more than 10 years and have undertaken more UXO disposals in recent years than many international military counterparts. Utilising a wide range of established and cutting edge technology based solutions, Ramora UK have dealt with in excess of 750,000 explosive items.

Applying a proven risk reduction methodology to all projects, Ramora UK has repeatedly delivered safe and effective solutions which are now available via the **ESS**.

'Ramora UK were contracted by Chevron to remove a WWII mine that was discovered in a prospect West of Shetland. Ramora were extremely quick to react and had people and equipment moving the day after the discovery was made. The disposal was extremely challenging as the water depth was 1300m which precluded any standard removal techniques. Deep water ROVs and downhole wire-lining kit were used for the ordnance disposal which is an industry first. The scope took 7 days to complete from the time of the initial discovery, including compilation of procedures equipment and risk assessments, and it was all completed incident free.'

Subsea Intervention Team, Chevron Upstream Europe (2012)

A comprehensive risk management service is available to each member, ranging from the conduct of initial threat assessments through to the delivery of strategic management policies. Adopting this approach allows clients to appreciate the significant safety and commercial benefits provided when integrating the **ESS** services at a strategic and operational level. **ESS** and Ramora UK seek to maintain and develop relationships with clients, fostering long term trust and commitment.

Ramora UK personnel have over 100 years combined experience in the planning and delivery of EOD and security related services; consistently delivering cost effective solutions to complex and sensitive situations globally.

The **ESS** team have extensive knowledge of the operations and activities undertaken within the maritime field and the inherent difficulties faced by managers and key company officials. These difficulties are particularly evident when safety or security issues are highlighted.



Why Join ESS?

ESS was established by Ramora UK to provide a guaranteed practical response to explosive related issues, improve explosive awareness and subsequently reduce the risks and commercial losses, improving health and safety as well as ensuring the most efficient and cost effective methodologies. These elements are now achieved through exclusive access to ESS benefits which include: **24/7 access to EOD specialists** (for unlimited advice and guidance), **Training** (to ensure companies are equipped with the knowledge and capability to deal with any incidents involving explosives), **access to the Duty ESS Team** (who provide guaranteed reactive response to any incident worldwide), as well as receiving **exclusive member service rates** for all ESS services.



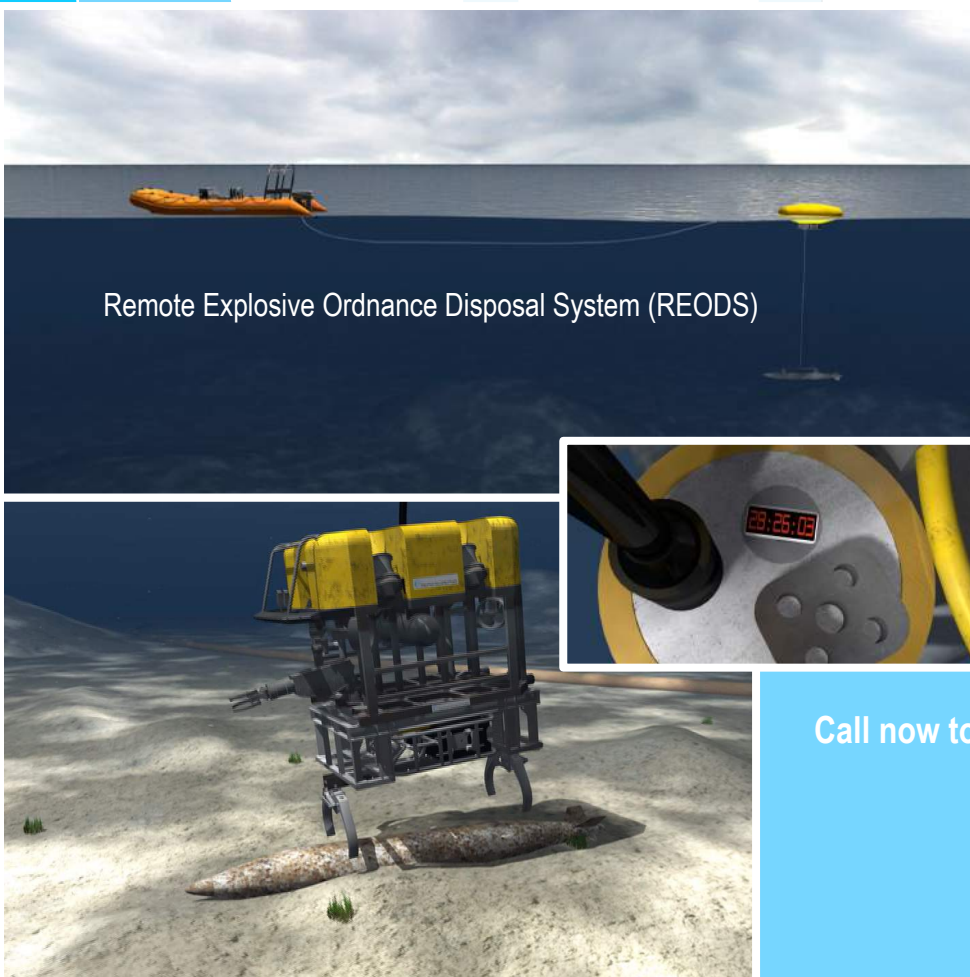
Through close liaison with all Member's, regulators, emergency services and other key stakeholders ESS, via Ramora UK, are able to fully understand the requirements of the maritime sector as well as providing a safe yet sensible solution to any incident, involving ordnance, minimising losses to an absolute minimum. The knowledge, expertise and specialised equipment available through ESS membership provides clients with a reactive, bespoke and cost effective solution to support all of each client's activities.

ESS membership ensures that each member is fully prepared for any ordnance related scenario. This is achieved through the delivery of bespoke UXO awareness training, access to EOD specialists to develop, facilitate and take part in exercises and drills to ensure, test and measure response readiness, and crucially 24/7 access to the ESS Emergency Response Centre which provides advice and guidance on any UXO scenario.

ESS offers a cost effective and specialised insurance solution for any EOD scenario, not only by ensuring companies are prepared for any explosives related incident through the ESS preparedness initiatives, but also through access to exclusive discounted service rates available to members (including third party services) and access to negotiated payment plans and fixed rates for up to 5 years.

Through Ramora UK's expertise, the 24/7 emergency response capability and specialised equipment membership of the ESS is guaranteed to reduce exposure to ordnance related risks whilst maximising productivity.

Remote Explosive Ordnance Disposal System (REODS)



Call now to discuss your requirements

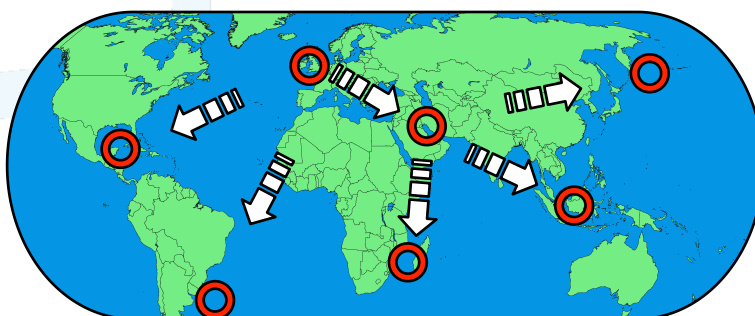
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Global Response

Regardless of the location **ESS** can provide overarching guidance, reassurance and response to any ordnance related incident.

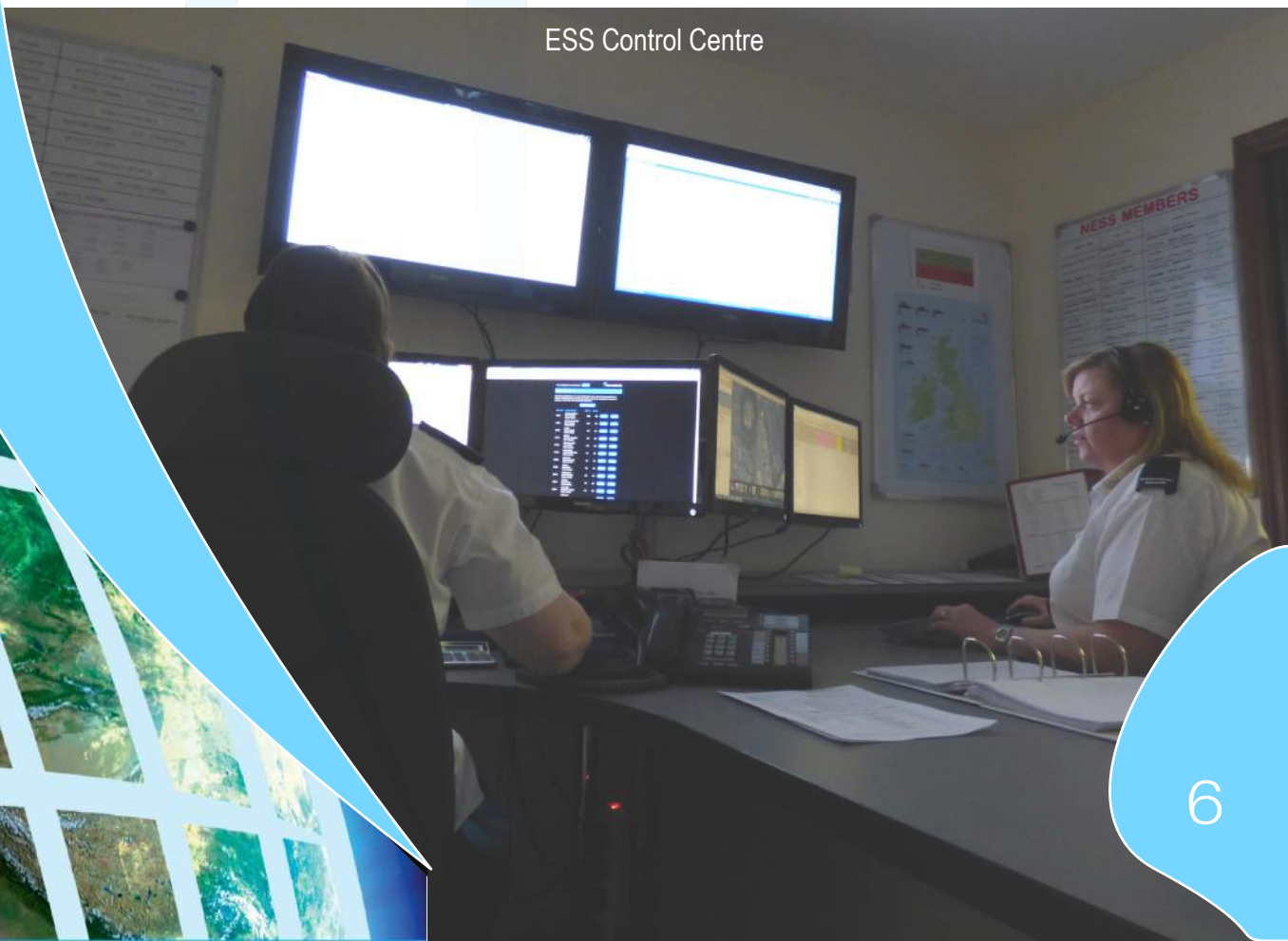
- The on call EOD response teams can be deployed at any time, regardless of time zone, to any site via the **ESS** Emergency Response Centre (0845 2608 999)
- All **ESS** equipment is self contained and can be mobilised anywhere in the world.
- **ESS** management systems and HSEQ standards along with an array of globally consistent tools and processes ensure the successful and efficient delivery of all **ESS** EOD solutions.



Global Experience

Each of the **ESS** EOD response teams has undertaken subsurface and land based Ordnance Disposal operations internationally during both military and commercial EOD employment. This experience alongside our established logistics network **ESS** teams have the background and experience to deliver safe conclusion to any UXO incident regardless of location.

ESS Control Centre





Emergency Response

The primary service delivery within the **ESS** package is response to a discovery of UXO at any member location. Due to the potential risks associated with UXO and other EROW it is crucial that effective decisions and threat assessments are made during the initial hours of the incident.

The **ESS** service is built around an Emergency Response model, with personnel on call, equipment ready to deploy and well proven and tested procedures for each potential incident.

'Ramora UK are efficient and professional. They took control of the situation and made everyone feel at ease.'

Managing Director, Dredging and Aggregates Company (2009)

The **ESS** structure not only provides a global response to maritime UXO discoveries, it also offers global response to land based UXO and other explosives issues, including IEDs. In the UK these land based EOD services are delivered under the UK National Explosives Safety Scheme (NESS).

The NESS offers a wide range of EOD and clearance services to any industry and a number of government agencies. These services include response to any land based explosive incident and the NESS model can be applied to any location worldwide, subject to local restrictions, and is available as a bolt on service to the **ESS** membership.

24 HOUR RESPONSE CENTRE

0845 2608 999 (United Kingdom)

0044 (0)1329 226152 (International)

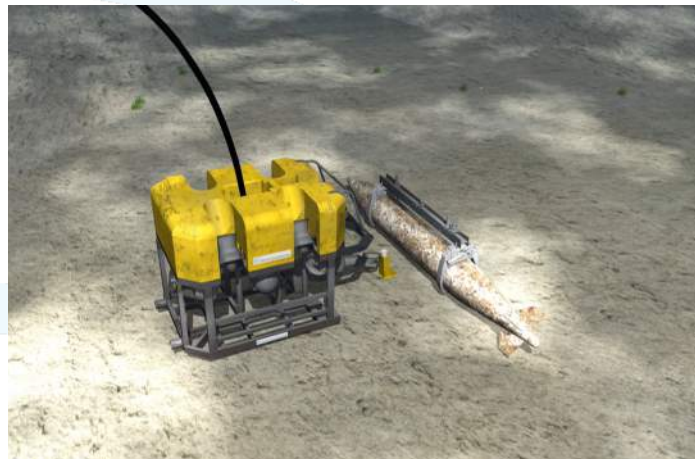
Dedicated Control Room providing the following services to Members:

- * Advice and Guidance relating to UXO Risk
- * Assessment of possible UXO discoveries
- * Deployment of Specialist personnel
- * Deployment of REODS Equipment
- * Co-ordination of UXO Incident Management
- * Documentation Support
- * Reporting and Monitoring Hub



The global Oil and Gas sector, and more recently, a number of renewable operators, understand the value in having robust Emergency Response procedures and systems in place. However, these systems are an expensive asset for any organisation and they must therefore be effective and fully understood if they are going to be of any value.

The **ESS** 24/7 Emergency Response Centre offers an immediate service which provides unlimited access to advice and guidance relating to UXO risk by dedicated EOD specialists. They can advise on the severity of a situation, best course of action and, where necessary, deploy personnel promptly to manage the situation. The centre can be accessed through our Emergency Response Helpline on **08452 608 999**.

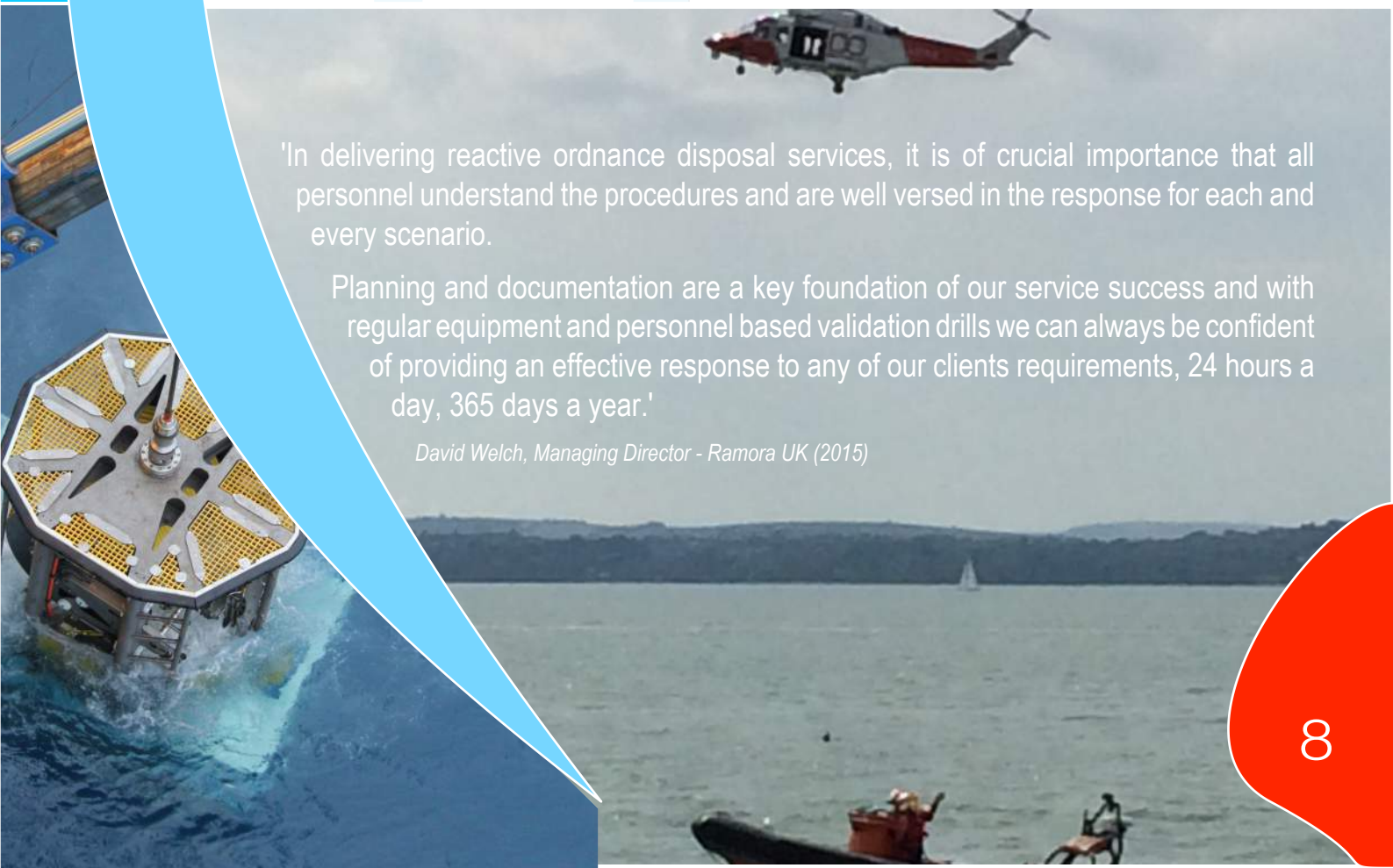


As a 24/7 emergency response provider, it is imperative that within the **ESS** procedures there are robust mechanisms in place to ensure business continuity. As a result of exposure to internal or external threats, it has made allowances to synthesise hard and soft assets to provide prevention and recovery for the business and, as a result, client's requirements. Redundancy has been built into all **ESS** services to ensure resilience such that, if an incident occurs at an **ESS** or Ramora UK facility, clients are not affected, ensuring continuity of services and ongoing operational capability.

'In delivering reactive ordnance disposal services, it is of crucial importance that all personnel understand the procedures and are well versed in the response for each and every scenario.

Planning and documentation are a key foundation of our service success and with regular equipment and personnel based validation drills we can always be confident of providing an effective response to any of our clients requirements, 24 hours a day, 365 days a year.'

David Welch, Managing Director - Ramora UK (2015)

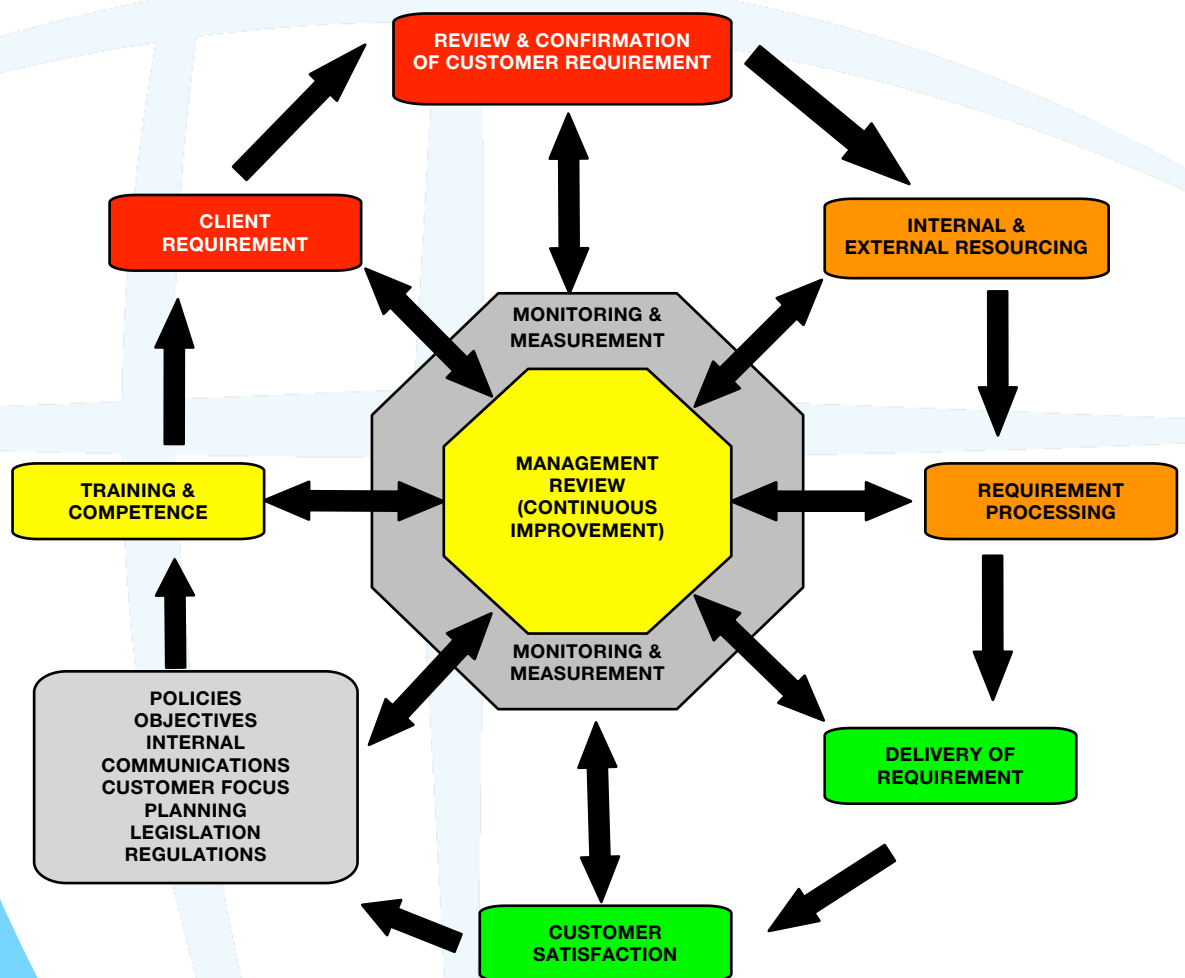




Service Excellence

The primary membership group of the **ESS** derives from the global Oil and Gas sector and is closely followed by the rapidly increasing number of Renewable sector members. Given the high standards already demanded within each of these key industries it is of the utmost importance that service delivery to each and every **ESS** member is exemplary at every stage.

It is with this basic concept in mind that robust measures have been put in place to not only ensure the services delivered are of the highest standard, but also measures these services to identify quickly where they are not achieving the required standards and immediately take steps to remedy any shortfall.





Quality product and service provision is the core aim of the ESS, alongside specific consideration for Safety Health and Environmental (SHE) aspects. All ESS procedures and work activities focus on the continual effort to provide defect free products and services to clients within specified timeframes and budgets. All efforts are made to consistently deliver products and services specifically in line with client requirements by implementing Ramora UK's (as ESS' Service Provider) Quality Management System (QMS) that has gained BS EN ISO9001:2008 certification.

Our committed to consistently providing quality service provision and is demonstrated by:

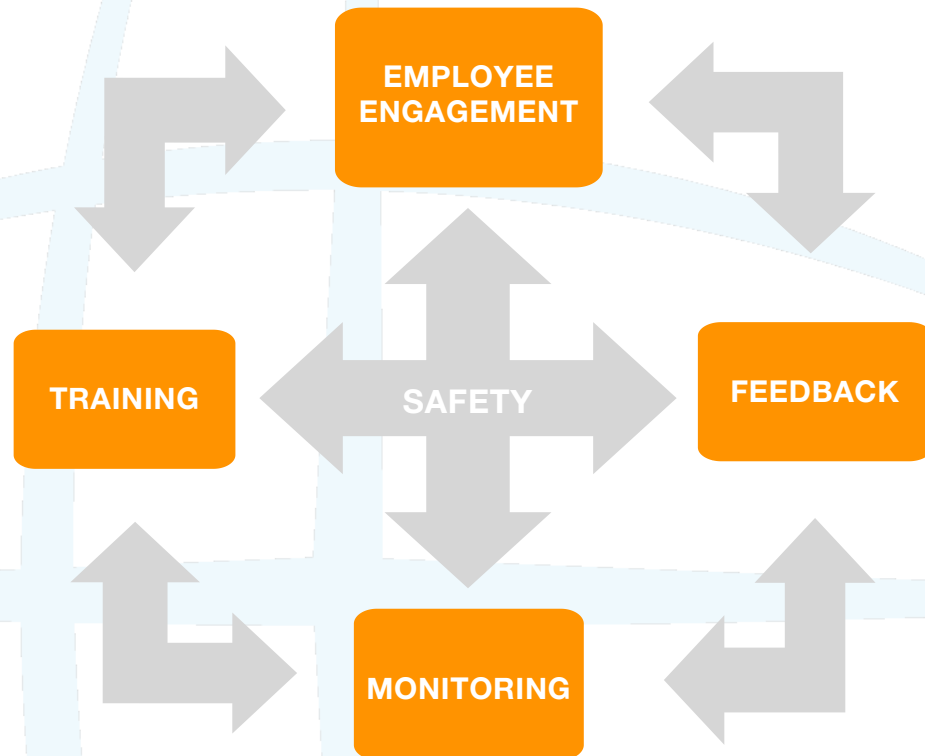
1. Establishing the Company's quality objectives and regularly communicating these companywide
2. Ensuring that regular management reviews evaluate the quality objectives and report on internal audit results as a means of monitoring and measuring the processes and the effectiveness of the QMS
3. Developing and improving the QMS, wherever possible
4. Continually improving the effectiveness of the QMS via regular monitoring and analysis
5. Developing and enhancing client satisfaction through regular feedback and internal/external auditing
6. Ensuring client needs and expectations are determined and fulfilled prior to undertaking works, with the core aim of achieving client satisfaction
7. Communicating companywide the importance of meeting client needs and all relevant statutory and regulatory requirements
8. Ensuring the availability of resources in accordance with client requirements and expectations
9. Continually monitoring quality performance and implementing subsequent improvements wherever appropriate
10. Periodically reviewing these quality procedures in order to ensure its continuing suitability





Safety, Health & Environment

Adherence to a sound Health and Safety ethos is paramount in the delivery of all ESS solutions. Each and every member of the ESS team undergoes significant safety related training and a dedicated team of professionals are devoted to monitoring and improving HSEQ across the ESS service area. This team includes members of the Management team and EOD Specialists with specific responsibilities and oversight



The ESS SHE policy, incorporating the environmental policy:

- Includes top level commitment from senior management
- Includes a commitment to continual improvement
- Includes a commitment to at least comply with current applicable environmental legislation and with other requirements to which the company subscribes
- Is documented, implemented and maintained at intervals
- Is communicated to all employees with the intent that employees are made aware of their individual environmental obligations
- Is available to interested parties as requested
- Is reviewed periodically by the in house Quality and Environmental Compliance Officer (QECO) to ensure it remains relevant and appropriate to the Company and the industry it operates within.



ESS have established, and maintain, an environmental management programme inclusive of various documentation, processes and procedures for achieving all overarching environmental objectives. This includes documentation highlighting:

- The designated responsibility and authority for achievement of objectives at relevant functions and levels of the Company
- The associated targets and aims assigned in order to achieve the overall objectives
- The means and time-scale by which targets, aims and objectives are to be achieved

The environmental management programme is reviewed at regular and planned intervals and, where necessary, amended to address changes to the activities, products, services or conditions of the company and the industry it operates within.

SHE Management Competence

The role of SHE Management is undertaken by the ESS collective SHE Team who possess a considerable wealth of experience gained in both commercial and Military sectors.

The SHE Team collectively have an extensive understanding gained in the design, management and delivery of SHE subject matters worldwide. This expertise includes a broad knowledge of initiating, implementing and validating SHE programmes across a wide customer spectrum.



The ESS SHE Team possess collectively, as a minimum, the following qualifications:

- Internal Auditor – Institute of Quality Assurance UK
- Level 3 Certificate National Examination Board in Occupational Safety and Health (NEBOSH) General Certificate
- Institute of Occupational Safety and Health (IOSH) Managing Safely Certificate
- Health and Safety Certificate – Chartered Institute of Environmental Health





Preparedness

The effective delivery of Emergency Response services requires any provider to demonstrate capability, expertise and preparedness for deployment. Whilst it is often easy to demonstrate expertise and capability, it does not always follow that preparedness is also at an acceptable level. It with this in mind that the **ESS** team have developed a dedicated structure that ensures each item of equipment and each team member responsible for the delivery of services is maintained at the highest state of readiness to perform their duties.

ESS Preparedness is achieved through:

Competent Personnel

- 6 Monthly evaluation and licensing of specialist staff
- HR monitoring
- CRB checks
- Dedicated mentoring and in house training programmes
- Strong ER and SHE ethos at all levels
- Weekly equipment familiarisation and checks

Proven Equipment

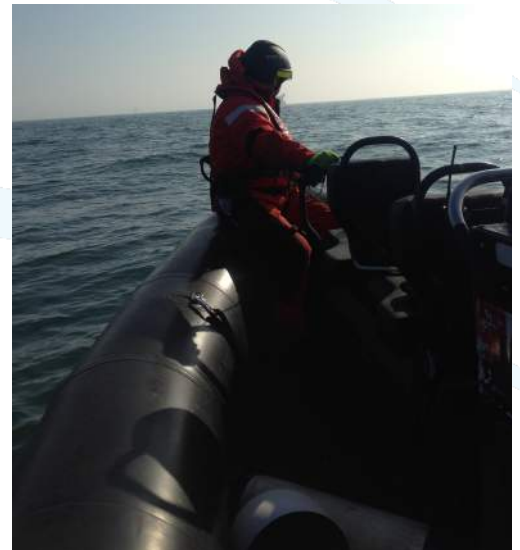
- Dedicated maintenance plan for all equipment
- Enhanced maintenance periodicity for EOD equipment
- In built redundancy of systems to ensure availability
- Dedicated supply chain for replacement elements
- Regular dummy deployment drills
- Ongoing evaluation and research to identify improvements

Dedicated Explosives Stocks

- Retained stocks of explosives available 24/7
- Established Dangerous Cargo (DG) transport solutions (Air, Land and Sea)

Current Permits and Licenses

- Proven and sustained links to licensing bodies
- Formally licensed by UK Home Office for Explosives storage
- **ESS** procedures and methodologies are accepted by many environmental monitoring and licensing agencies





Competency of Personnel

Ramora UK services are delivered by fully qualified and highly experienced former UK Military personnel, each possessing significant experience in the field of EOD and IEDD. With enhanced training development at Ramora UK these experts become some of the most qualified, highly experienced and competent Maritime EOD service providers in the world. In order to uphold this, Ramora UK employs workers with necessary qualifications and experience in order to undertake their role at a safe and competent standard. The term 'workers' includes all site staff, site sub-contractors and line management directly involved in the supervision of the contract. All **ESS** Response personnel will have demonstrable competence, suitability for the tasks and duties they will be expected to perform.

EOD Superintendent

All **ESS** EOD Superintendents are highly experienced and qualified in the field of Maritime EOD and must complete a comprehensive assessment and mentoring package prior to formal accreditation.

The EOD Superintendent is accountable for SHE performance on each project and is the main **ESS** point of contact for the client. The EOD Superintendent is responsible for demonstrating SHE leadership behaviours and encouraging a positive SHE culture within the response team. The EOD Superintendent will act as lead for the project and in particular will ensure all 'workers' adhere to the relevant environmental and consent documentation issued by the relevant regulatory authority (region specific).

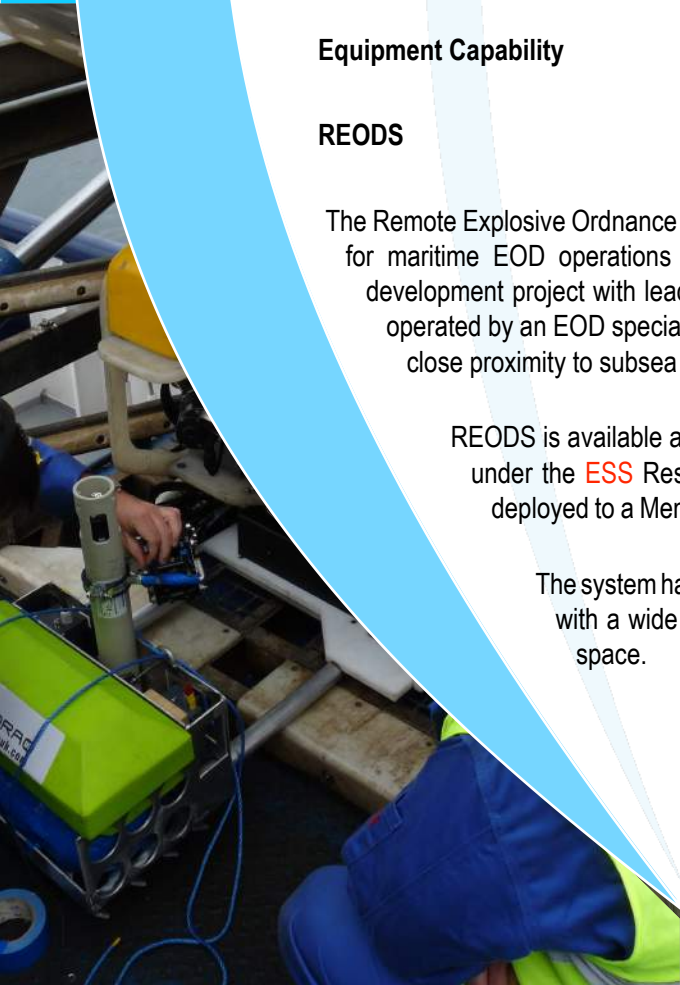
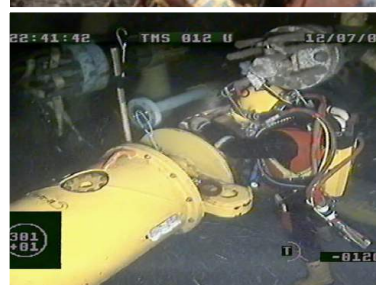
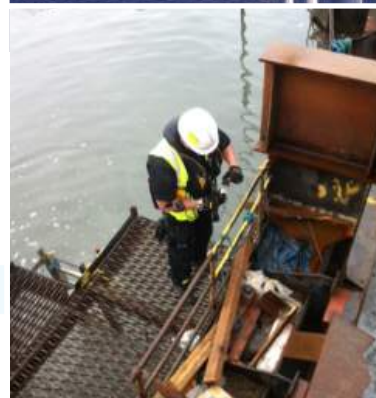
Equipment Capability

REODS

The Remote Explosive Ordnance Disposal System (REODS) is purpose built for maritime EOD operations and is a result of a joint research and development project with leading Oil and Gas companies. The system, operated by an EOD specialist familiar with offshore protocols, is capable of relocating ordnance identified in close proximity to subsea assets and also destroy any item remotely once in clear water space.

REODS is available at immediate notice and is deployed as standard with every EOD Team deployed under the **ESS** Response Network. Where required, a dedicated REODS module can be forward deployed to a Member's location to provide immediate deployment in the event of UXO discoveries.

The system has been proven down to depth in excess of 1100msw and can work in conjunction with a wide spectrum of remote vehicles from any surface vessel with sufficient deck space.





Consultancy

A pivotal element of the **ESS** membership solution is the provision of accurate, timely and competent advice. Such advice can be provided in a variety of circumstances, including:

- Embarked Client Representative ensuring compliance with work scope
- Embarked UXO consultant to provide safety advice to vessel and ROV crews during survey and other operations
- Provision of research documents or UXO desk top studies prior to embarking on a specific construction project
- Compilation and submission of marine license applications prior to UXO relocation or disposal
- UXO survey data assessment



500lb Buoyant Mine (60% Burial) alongside a 36" Subsea Pipeline





Oil and Gas Sector – UXO Adjacent to Subsea Asset)

A call was received in the ESS Control Centre from a major Oil and Gas company. Their request was not unusual, “we have located a suspect UXO near to a subsea asset”, but the location of the item certainly was unusual “it’s in 1000 metres of water”.

Following the initial call, the duty EOD Superintendent deployed immediately to the client's offices ready for a series of HIRA and procedure meetings. Less than 24 hours from the initial call, a full EOD spread was mobilised to an appropriate port. In addition to this, the various liaisons with DECC and MMO were undertaken to ensure approval to undertake the operation and confirm compliance with all environmental factors.

The suspect UXO was quickly identified from the supplied imagery, by the ESS team, as a WWII British buoyant contact mine, containing 320lb of explosives. The proximity of subsea assets dictated that the item needed to be relocated prior to disposal.

Upon arrival on scene, the first task was to undertake a survey of the item and confirm the ID and condition of the UXO. One of the vessel's UHD ROVs was launched and took approximately 25 minutes to descend to the seabed (1120msw). The seabed was flat and relatively featureless with gin clear visibility out to approximately 25 metres. There was still around 250 metres to travel to the UXO due to the vessel being located outside a 200 metre Mine Safety Range (MSR).

The target appeared on the ROV sonar well in advance of visual range and the ROV pilot, under the guidance of the EOD Superintendent approached the UXO and commenced the 'as found' survey. The UXO was indeed a British Buoyant contact mine and thankfully fitted with switch horns rather than chemical horns for mine actuation. The chemical horns contain an electrolyte which create a power source when crushed, presenting an increased risk wherever present. Conversely, switch horns are connected to an internal battery which would almost certainly have no power remaining after more than 70 years underwater.

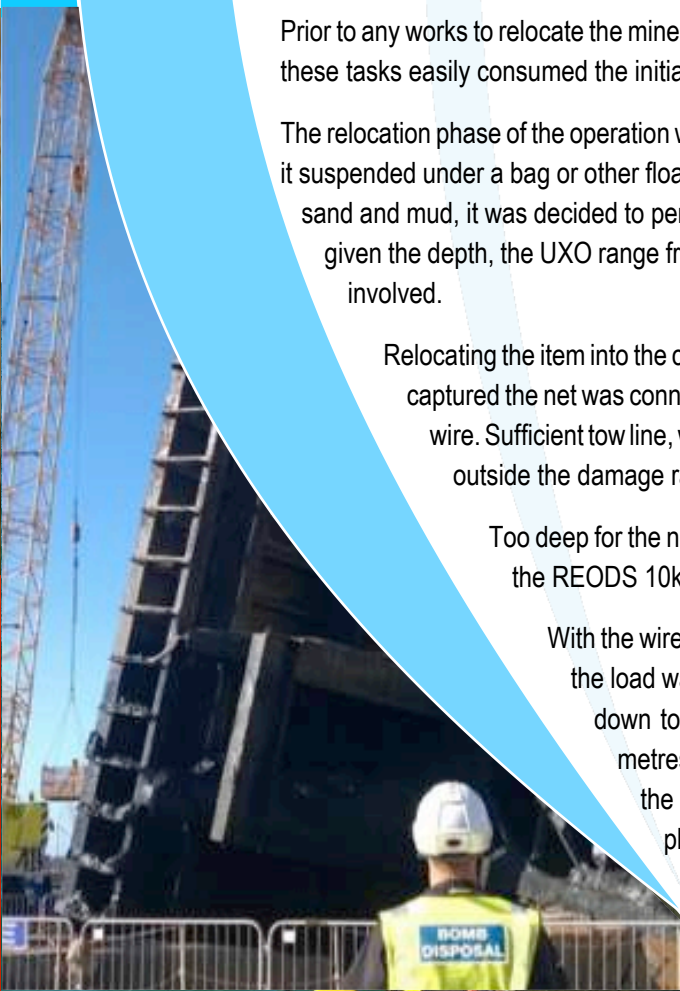
Prior to any works to relocate the mine, a series of surveys and mammal monitoring periods needed to be completed and these tasks easily consumed the initial 24 hours on site.

The relocation phase of the operation would normally have been undertaken by lifting the item off the seabed and moving it suspended under a bag or other floatation. Given the depth involved and the fact the seabed was flat and made up of sand and mud, it was decided to perform a controlled tow of the item along the seabed. Unconventional perhaps, but given the depth, the UXO range from the installation and the benefits gained, it was the clear option of choice for all involved.

Relocating the item into the capture net (part of the REODS equipment) was relatively straightforward and once captured the net was connected to the tow line (1000 metres) which in turn was attached to the vessels crane wire. Sufficient tow line, water depth and crane wire ensured an extended catenary such that the vessel was outside the damage radius of the UXO at all times.

Too deep for the normal acoustic detonation systems, the team opted for a wireline detonation to fire the REODS 10kg countermining charge.

With the wireline and detonator securely attached to the REODS countermining charge, the load was deployed through the vessel's moon pool and monitored by the ROV down to the seabed. Once touched down, the ROV carried the charge 200 metres to the mine (still within the capture net), and placed it alongside at the closest point to the charge case. One final check for correct placement and the ROV returned to the vessel checking the wireline enroute.





The vessel then relocated to 1000 metres plan range and a series of safety checks were undertaken along with MMO recordings and local agency notifications prior to detonating the charge.

Returning to the mine it was apparent that although the mine had detonated, and the explosives had been consumed, much of the actual mine case and fittings remained intact. In keeping with the provisions of the Marine License, the embarked **ESS** team commenced a 6 hour seabed clearance task to recover all of the items to deck for subsequent disposal. Each item was also assessed for any explosive residue/hazard by the embarked **ESS** team.

This was a challenging and hugely interesting task which showcased the skills of the vessel, crew, ROV teams, **ESS** team and the various specialist equipment. The outcome of this task was an expeditious and compliant clearance of an item which could have impacted significantly on commercial operations. It was assessed that each day lost to the project due to the UXO hazard had a huge financial impact but the entire operation to dispose of the UXO cost a fraction of this amount and was concluded safely in less than 4 working days on site.

'Ramora UK's expert response to our service needs was thorough and highly professional throughout.'

Mr Robin Middleton, CBE, Former Secretary of State Representative - Maritime Salvage and Intervention

Renewable Sector

On completion of a UXO survey at a new wind farm construction site, three UXO items were located on the site following a series of severe storms which had disturbed the seabed. These were later identified by **ESS** specialists as a WWII 50kg German Bombs.

Due to the established **ESS** procedures and robust environmental monitoring system which complies with DECC and JNCC guidelines, as well as a marine mammal mitigation plan addressing potential impacts on marine mammals, the required marine licenses for disposal were acquired without delay. The **ESS** Control Centre mobilised a full REODS spread with EOD team, support vessel and ROV (remotely operated vehicle).

The EOD team established a 1000 metre cordon area before deploying the ROV with the explosive charge, in this instance 5kg of Semtex fitted with an acoustic firing system. The ROV was deployed down to the target (27msw) and the charge placed adjacent to the ordnance. The team then retired to a safe distance before using the acoustic transmitter which sends a unique coded signal to initiate the inbuilt firing system. The detonation produced a surprising 3 metre water plume and shook adjacent structures, but safely destroyed the munition without damaging assets or injuring wildlife.

Post detonation the ROV was deployed once more to carry out EOD confirmation and recover any debris, in accordance with client requirement and the Marine Licence. All debris recovered were checked by the **ESS** team and certified as free from explosives (FFE). This process was repeated for each of the UXO items and the site was declared clear in less than 3 working days ensuring minimal downtime and losses for the client.



Membership

The ESS model is based on a membership structure that provides guaranteed support and response to specific member requirements, via proven mechanisms and following established procedures.

The membership packages take into account the diverse array of operators and industries involved in subsea activities around the world, and provide those who join with a long term solution to the issues of UXO risk, regardless of location.

ESS Membership acts as an insurance policy to those who operate in an area with potential UXO contamination, however small that may be, such that they can guarantee an appropriate and rapid response to any discovery.

Membership Pack

Once a member of **ESS** you will be provided with a membership pack which will contain all the information required as follows:

- Contact information
- Equipment spec sheets for integration purposes
- Deck Plan configurations to assist with vessel allocations
- Member handbook
- **ESS** Contact posters
- **ESS** Membership Cards

Referral Scheme

The **ESS** referral scheme provides existing members with a discount on their annual fees if they recommend a new joiner who subsequently signs up for the minimum period (3 years). The annual discount will be applied to the existing members renewal costs for the duration of the new members contract period.



Levels of Membership

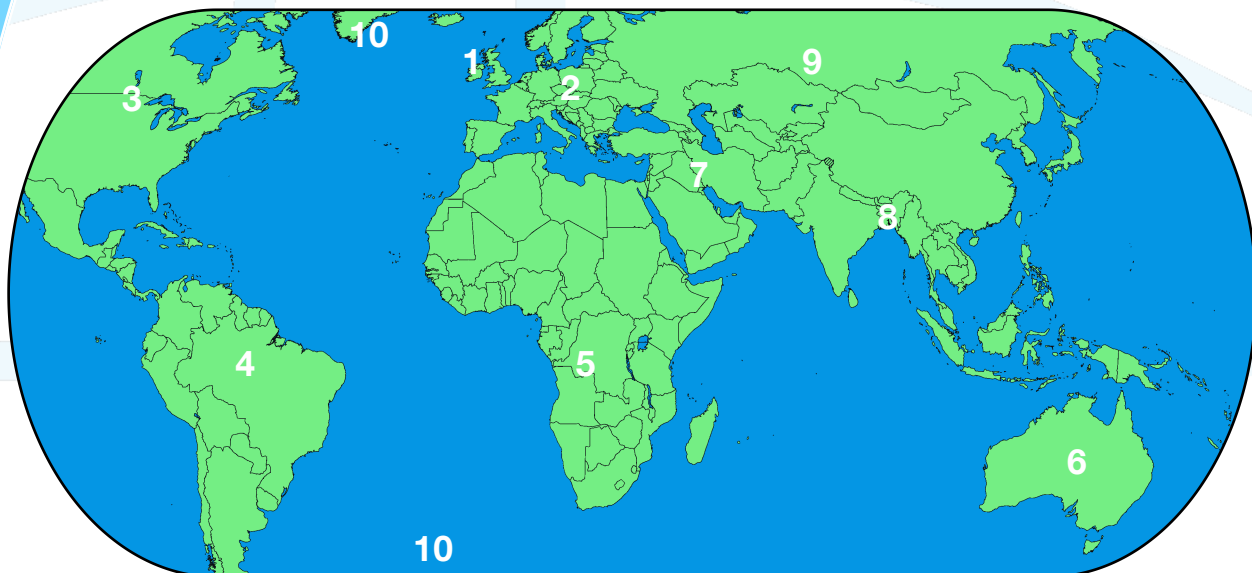
Level 1 - UK/North Sea

The primary package covering subsea operations in the North Sea and other UK waters out to the furthest point in the system (UK and International waters only). Each sea area is defined from the Lowest Astronomical Tide (LAT) line to seaward.

- 1A - UK Waters Excluding North Sea
- 1B - North Sea Only
- 1C - All UK Waters including North Sea

Level 2 - European Waters

With an extended coverage area this package includes all the elements of Level 1 with the addition of European Waters.



Level 3 - Global

Global coverage includes all the sea areas defined within Levels 1 and 2 (unless specifically excluded) alongside bolt on coverage areas as follows:

- Region 1 - UK & North Sea (included in Level 3 as standard)
- Region 2 - Europe (Included in Level 3 as standard)
- Region 3 - North America
- Region 4 - South America
- Region 5 - Africa
- Region 6 - Australia
- Region 7 - Middle East
- Region 8 - Far East
- Region 9 - Northern Asia
- Region 10 - Arctic and Antarctica



Service Provision

Services available as part of **ESS** membership include:

Practical Services

- Explosive Ordnance Disposal (EOD)
- Relocation of Subsurface UXO
- Investigation and Identification of Subsurface UXO
- Intrusive UXO Survey
- Salvage/Explosive Cutting and decommissioning
- Underwater Search (ROV)
- High Risk Confined Space Search
- Improvised Explosive Device Disposal (IEDD)



Practical services are delivered using qualified EOD and Explosive Salvage specialist with a proven level of experience in their specific field of expertise. All equipment utilised for EOD and other explosive works is owned and operated by Ramora UK thereby ensuring continued availability for reactive service delivery.



Consultancy

- 24/7 Emergency Response Helpline
 - Explosive substance information
 - Incident advice
 - Explosive storage issues
- Risk Advice
- Documentation services
 - Desk Top Study
 - Risk Assessments
 - UXO assessment report
- Free From Explosives Certification
- Client Representation
 - Equipment Advice
 - Legal (Expert Witness)



Training

- International Mine Action Standards (IMAS)
- ER staff UXO incident awareness
- Underwater UXO Awareness
- Bespoke explosives training*

(*Courses can be tailored to client's specific training requirements)





Membership Benefits

Level 1 - UK/North Sea

Benefit	Area 1A	Area 1B	Area 1C
Consultant/Client Rep Onsite (Days)*	4	5	7
UXO Awareness Training Course*	1	1	2
24/7 Telephone Help Line	✓	✓	✓
24/7 Access to UXO Specialist (Via Control Room)	✓	✓	✓
Annual Preparedness Audit	✓	✓	✓
Embarked EOD Team and Equipment (Days)*	2	2	3
EOD Team Mobilisation to UK Port	1	1	2

Level 2 - European Waters

Level 2 benefits include all of the benefits provided for area 1B with the addition of:

Benefit	Level 2
Consultant/Client Rep Onsite (Days)*	4
UXO Awareness Training Course*	6
24/7 Telephone Help Line	✓
24/7 Access to UXO Specialist (Via Control Room)	✓
Annual Preparedness Audit	✓
Embarked EOD Team and Equipment (Days)*	1
EOD Team Mobilisation to UK Port	1

Level 3 - Worldwide

Level 3 benefits include all of the benefits provided for Level 2 with the following additions:

Benefit	Level 3	Per Adnl Region	Global
Consultant/Client Rep Onsite (Days)*	4	2	20
UXO Awareness Training Course*	3	2	14
24/7 Telephone Help Line	✓	✓	✓
24/7 Access to UXO Specialist (Via Control Room)	✓	✓	✓
Annual Preparedness Audit	✓	Each Region is audited	
Embarked EOD Team and Equipment (Days)*	3	2	21
EOD Team Mobilisation to UK Port	1	1	4

Notes:

1. Travel and subsistence costs are not included in items marked (*).
2. Benefits can be utilised in any client area covered under the membership agreement
3. Membership benefits are not transferable without prior written consent
4. Membership rates for areas excluding UK and Europe are available upon request
5. UXO Awareness courses are 1 day in duration for up to 16 delegates
5. EOD Superintendent is included as a FOC membership benefit to all Level 2 and Level 3 members whenever a full EOD Team deploy.



Rates

Please contact our membership team for details of Membership Rates

Telephone (UK working hours only):

0845 4608911

Or via email on:

ESS@ramorauk.com



ESS Services are delivered to members worldwide via the personnel and equipment provided by Ramora Global Ltd (T/A Ramora UK)



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