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**POST ACTIVITY REPORT
5% UNEXPLODED ORDNANCE
CONTAMINATION ASSESSMENT (FIELD
VALIDATION SURVEY)
OAKAJEE SITE, GERALDTON, WA -
CONTRACT A61253**

By



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Prepared For: Western Australian Land Authority (LandCorp)
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This report was commissioned for the purpose of detailing the activities undertaken by Milsearch on the Client's Site and the results of those activities (The Purpose).

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LIST OF ACRONYMS & DEFINITIONS

Acronyms and Definitions that may be utilised in this report:

Explosive Ordnance (EO): All munitions containing explosives or chemical agents. This includes bombs and warheads; guided and ballistic missiles; artillery, mortar, rocket and small arms ammunition; all mines, torpedoes, depth charges and demolition charges; pyrotechnics, clusters and dispensers; cartridge and propellant actuated devices; electro-explosive devices; clandestine and improvised explosive devices; and all similar or related items or components explosive in nature.

Explosive Ordnance Disposal: The detection, identification, field evaluation, rendering safe and final disposal of unexploded ordnance. It may also include the rendering safe and/or disposal of explosive ordnance, which may have become hazardous by damage or deterioration.

Explosive Ordnance Waste (EOW): Inert material remnant from the initiation or functioning of explosive ordnance.

Small Arms Ammunition (SAA): Ammunition for small arms, ie all ammunition of less than 20mm in calibre and all gauges of shotgun cartridges.

Unexploded Ordnance (UXO): Explosive ordnance that has been primed, fused, armed, or otherwise prepared for action, and have been fired, dropped, launched, projected or placed in such a manner as to constitute a hazard to operations, installation, personnel, or materiel but remains unexploded either by malfunction, design, or any other cause. UXO includes items of EO that have been removed from their original resting place for any reason, including souveniring by members of the public.

UXO Assessment Survey: An operation designed to determine, assess and report on all or some of the following:

1. whether an area is affected by UXO;
2. the boundaries of the affected area;
3. the densities of UXO, including the locations and characteristics of impact areas, within the affected area; and
4. the residual depths, types and natures of UXO and inert ordnance-related items within the affected area.

UXO Remediation: An operation to reduce the hazards associated with UXO, to a level that is acceptable to the appropriate approving authority with regard to the planned use of the land.



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POST ACTIVITY REPORT UNEXPLODED ORDNANCE ASSESSMENT OAKAJEE SITE, GERALDTON, WA – CONTRACT A61253

1.0 INTRODUCTION

1.1 GENERAL

Milsearch Pty Ltd, a specialist in the field of assessing and remediating land previously used for Military purposes, was contracted by the Western Australian Land Authority (LandCorp -the Client) to conduct an Unexploded Ordnance (UXO) assessment of the following parcels of land at the Oakajee Port and Rail Project Site:

- a. Strategic Industry Core of 1,134.6 ha, less 237 ha previously assessed by FESA, ie., 897.6 ha;
- b. General Industry Precinct 1 of 80.2 ha; and
- c. General Industry Precinct 2 of 115.8 ha.

The above three areas combined totalled 1093.6 ha and are those shown in Figure 1 below:



Figure 1: 5% UXO Field Validation Study Site (As Tendered May 2009)

1.2 MILITARY HISTORY

The project area fell within a region that was gazetted for use by the Commonwealth (Department of Defence) for the purpose of artillery and bombing training areas in early 1942. There are records confirming that the general land area was used for Artillery Training with an Air Gunnery and Bombing Range gazetted offshore between the Buller and Oakajee Rivers. However, details of the exact nature and extent of ordnance used in the areas where training was conducted was unknown. There were numerous anecdotal reports that UXO of Army origins had been located by farmers and other land users throughout the general region north and north east of Geraldton since the end of WWII.

1.3 SITE DETAILS

Following contract award, several changes were made to the As Tendered Scope. These were:

- a. coordinates for the 237 ha previously searched by FESA in 1997 for the since defunct Kingstream Project were provided in AGD 84 datum. These were converted to MGA 1994 datum and the location of the FESA works within the current day Strategic Industry Zone was agreed;
- b. the Client 'squared off' the southern boundaries of the two General Industry Zones and new coordinates for these were provided; and
- c. the Client advised that a 31.64 ha area of dense vegetation in the South West was to be excised from the principal task and would be addressed at the end of the project if, after close on-site inspection, Milsearch felt that the conduct of an FVS assessment was feasible. Coordinates for this area were also provided.

The effect of the above was to increase the As Tendered scope from 1,093.6 ha to 1,123.77 ha, an increase of 30.07 ha, as follows:

Revised Zones	Revised Area (ha)	Less (ha)	
Combined Strategic Industry/General Industry Zone No 2 as per image below	1306.64		
Heavily Vegetated Portion in SW		31.64	
FESA 1997 Search Area		237.4	
Sub total:			1037.6
General Industry Zone No 1	86.17		
New Total requiring 5% FVS:			1123.77
As Tendered scope:			1093.6
Area additional to As Tendered scope:			+30.07

This increased area was advised to the Client by email dated 6 July 2009 and agreed by the Client on 7 July.

The revised scope is shown in the image below at Figure 2:

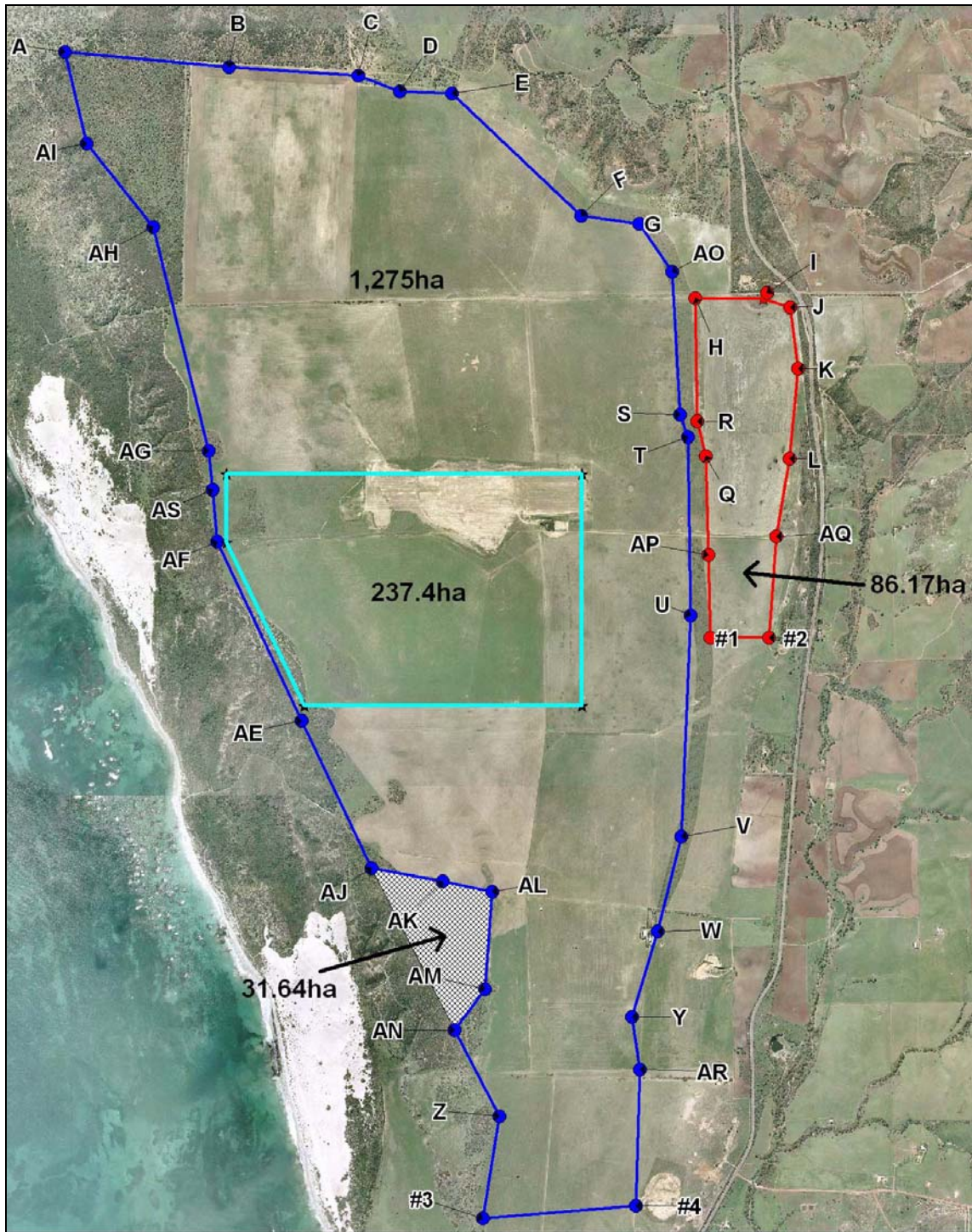


Figure 2: Agreed Site and Scope for 5% UXO Assessment on 7 July 2009

2.0 PROJECT OBJECTIVES

The agreed objectives of the contracted works were as follows:



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- a. to conduct a minimum 5% Unexploded Ordnance Field Validation Survey to detect fragmentation and other residual munitions items within the revised Site.
- b. the primary objective of the task was to locate and identify any evidence of military related explosive ordnance waste (EOW), such as fragmentation, fuze portions, projectile driving bands, mortar tail fins and the like, to determine if high explosive munitions (HE) or solid-shot anti-armour projectiles have impacted the Site from previous training activities.
- c. any EOW located was to be characterised to classify the nature of any potential UXO that may still be remnant within the Site and Milsearch would provide timely advice and clear recommendations for the Client to consider in conjunction with FESA, regarding the need for any further UXO works.

Additional requirements in achieving these objectives were:

- d. prior to undertaking the search operations, the Milsearch Project manager, utilising a Differential Global Positioning System (DGPS) accurate to sub-metre, was to identify and confirm the Lot boundary coordinates;
- e. the Site was to be systematically and progressively subjected to a minimum 5% UXO assessment along nominally one metre wide transect lanes utilizing analogue F3 Minelab metal detectors. Lanes were to be nominally parallel and spaced at approximately 20 metre intervals;
- f. a four man team of former military EOD technicians or personnel with equivalent skills and experience was to be fielded;
- g. each Milsearch technician was to employ a Garmin Foretrex 201 Global Positioning System to record the UXO FVS transect paths. These plotted transect paths were to be overlaid on the DGPS plotted Site boundary coordinates and presented in MapInfo GIS format;
- h. all evidence of explosive ordnance (EO) and explosive ordnance waste (EOW), i.e. fragmentation (both ferrous and non-ferrous) was to be collected, photographed and DGPS position recorded and presented as GIS information in MapInfo format;
- i. any UXO located, either live or inert, was to be identified, depth and attitude recorded, photographed and DGPS position marked and presented in GIS MapInfo format; and
- j. a full post activity report was to be delivered that included the agreed site boundaries DGPS positioned and recorded on digital MapInfo GIS plots, full details of any located UXO items and any limitations of the UXO FVS operations.

3.0 CONTRACTOR DETAILS

The contracting firm was Milsearch Pty Ltd (Milsearch), ABN 44 007 106 881. Milsearch is a Contracted member of the Defence Unexploded Ordnance Panel (DUXOP) and, as part of that membership, is considered competent by, and has a contract with the Commonwealth of Australia, for the conduct of UXO assessment and remediation works.

Milsearch is also an accredited member of the FESA UXO Panel Managed since inception in 2003 by the Fire and Emergency Services Authority of Western Australia (FESA).

3.1 MILSEARCH TECHNICAL STAFF

The following Milsearch personnel were directly involved in the UXO assessment operations:

Project Manager and EOD Technician No 1:	-	Mr Paul Ingerton
Assistant Project Manager and EOD Technician No 2:-		Mr Evan (Grassy) Hopper



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EOD Technician No 3:

Mr Tom Roberts

EOD Technician No 4:

Mr Geoff Swinburn

Mr Paul Ingerton was subsequently rotated from the project and his role was taken over by Mr Evan Hopper. At that point Mr Mark Reynish was added as Technician No 4.

Resume's for the above personnel are presented at Appendix A.

3.0 CLIENT DETAILS

The LandCorp Client Representative for this Project was:

Mr. John Quilty

LandCorp: Level 3, 40 The Esplanade, Perth, WA, Phone: 0409-926715

The LandCorp Project Manager was:

Mr Travis McNaught: Phone: 08-94827505

4.0 CONTRACTOR UXO SERVICES

4.1 DATES OF CONDUCT

The UXO assessment operations were conducted over the period 13 July – 7 August 2009.

Mobilization occurred over two days 13-14 July. The advance party comprising the Project Manager and one other technician mobilized on 13 July, with the balance of the team mobilized on 14 July.

4.2 SITE PREPARATION

Prior to undertaking the UXO assessment, site boundaries were identified and marked over one and half days 14-15 July.

4.3 CONDUCT OF ASSESSMENT OPERATIONS

4.3.1 *Main 1123.77 ha Site*

A disciplined and systematic UXO assessment was conducted along nominally one metre wide transect lanes spaced at approximately 20 metre intervals.

Using a Garmin Foretrex 201 to record the assessment transects, all metallic (ferrous and non-ferrous) responses were investigated for possible UXO; HE munitions fragmentation and explosive ordnance waste (EOW) to determine the nature of any potential UXO contamination.

The primary assessment instrument was the F3 Minelab Metal Detector. This is a state of the art Australian designed electromagnetic induction coil detector, built to military specifications. As an electromagnetic detector, the F3 will detect both ferrous (ie, fragmentation) and non-ferrous metallic material (brass and alloy fuse segments, copper driving bands, aluminium mortar tail fins and the like). The F3's overall performance capabilities made it the most suitable analogue search tool for assessment investigations. Technical specifications for the F3 Minelab Metal Detector are presented at Appendix B.

The assessment commenced in the General Industry Zone No 1 working from the north towards the south. The assessment then continued in the north west of the Strategic Industry Zone progressing generally southwards. An area of moderately vegetated scrub in the north east was bypassed then completed last.

The 1,123.77 ha was completed by close of work 5 August 2009.

Photographs 1-2 below illustrate the conduct of the assessment operations over improved pasture and crop land which made up a good proportion of the site.



Photograph 1: Assessment Operations



Photograph 2: Assessment Operations

4.3.2 Heavily Vegetated 31.64 ha SW Portion

At a progress review meeting conducted on site with the Client on 20 July, it was agreed that the conduct of a 5% FVS assessment would be attempted through the heavily vegetated section. This work was to be attempted on the completion of the 1,123.77 ha and would be on a schedule of daily rates basis, using rates provided in the contract.

Conduct of assessment operations in this area was attempted during the period 6-7 August. Approximately two thirds of the area was addressed with reasonably close to a 5% ground coverage, although parallel tracked paths were difficult to achieve as in some areas, reliance had to be placed on paths made by native fauna. About a third of this zone was impossible to access with instruments and was not attempted.

The team expended 1.5 days on this densely vegetated zone.

Photographs 3-4 below illustrate the conduct of the assessment operations in the densely vegetated SW zone.



**Photograph 3: Dense Vegetation in SW Zone
viewed from General Industry Zone No 2**



**Photograph 4: Accessible portions of Dense
Vegetation SW Zone**

Figure 3 below depicts the assessment transects in UTM, WGS 84, Zone 50 projection

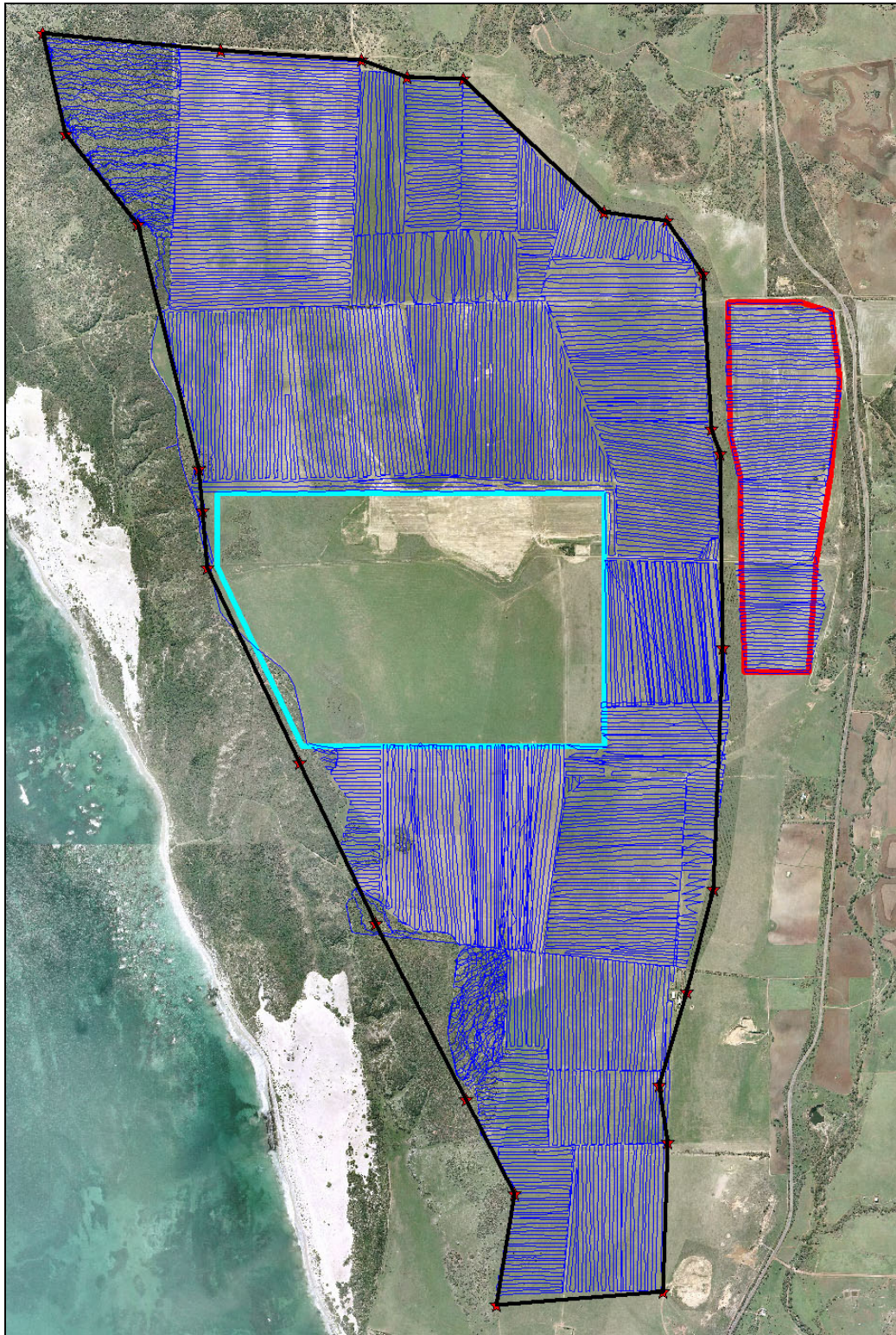


Figure 3: 5% UXO Assessment Recorded Transect Paths

5.0 SIGNIFICANT FINDS/RESULTS

No items of live UXO, nor any items of an EOW nature were discovered at all during the entire Site Assessment. Numerous items of an agricultural or domestic origin were located.

Quantity two.303 calibre spent small arms cartridge cases were located on Day 1 (16 July) of the assessment operations in the northern portion of General Industry Zone No 1. These may have arrived as the result of WW2 military training activity, but could just as easily derive from farmer's vermin reduction activities. Given the total lack of evidence related to heavier calibre weapons use, it is felt that the latter explanation is the more likely.

6.0 QUALITY MANAGEMENT

Milsearch is certified by Lloyd's Register Quality Assurance (LRQA) under AS/NZS ISO 9001:2000 Quality Management Systems – Requirements. Our Quality Management System (QMS) describes the processes and procedures used to satisfy the requirements and expectations of the Client and also, the objectives of the Project. To ensure the required quality control and assurance was achieved on this Project, as a minimum the following actions were undertaken.

1. All search equipment was functionally tested prior to the commencement (start) and the completion (end) of each day's UXO assessment operations using the manufacturers test piece. As a further test, noting that the FESA Register of Contaminated Sites records that an air-to-ground Air Force gunnery range template existed over the Oakajee Site during WW2, representative 20mm aircraft cannon projectile targets were buried at 100mm and 200mm and the instruments tested for signal response. See Photograph 5 below. These test items were fabricated from commercially available materials and the test range was moved to a number of locations around the site for convenience and to test a variety of soil conditions. This ensured the equipment was performing at all times within the manufacturer's specifications. The 20mm cannon projectile is similar in ferrous size to typical fragmentation from 3" infantry mortar bombs or 25 pdr field artillery, both typically used in Western Australian training areas during WW2; and
2. A daily review of the downloaded Garmin Foretrex 201 FVS data was undertaken to ensure a minimum 5% assessment coverage had been realised. Several gaps or zones where coverage was judged to be less than the required 5% density, were rectified on the last day of operations by direction of the Milsearch Project Director.



Photograph 5: 20mm Cannon Projectile Representative Test Piece buried at 200mm

7.0 CONCLUSIONS

The Site, as identified by Figure 2 above, has been subjected to a disciplined 5% UXO assessment and investigation operation by qualified former Defence Explosive Ordnance Technicians. In view of the competence of the operators, the capabilities of the equipment, the results of regular equipment testing and the outcomes of QC checks, it is concluded that the methodology applied to conduct the UXO assessment operation within this Site was appropriate to meet the Contracted objectives of the task.

As a result of the UXO assessment operations, it is concluded that no military target areas utilizing heavy calibre high explosive filled weaponry that could potentially leave a residue of UXO or other solid-shot projectiles capable of causing alarm and dismay on encounter, were situated within the area assessed.

8.0 RECOMMENDATIONS

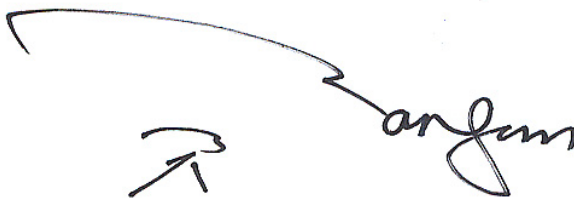
Subject to FESA endorsement, in our opinion, future planned development within those areas assessed and recorded by this report, can now proceed without further concern for potential UXO hazards.

Report Prepared By:

A handwritten signature in black ink, appearing to read 'D. J. Halmarick'.

D. J. Halmarick
Managing Director

Report Validated by:

A handwritten signature in black ink, appearing to read 'M.R. Ransom'.

M.R. Ransom
Principal Operations Officer and Project Director

10 September 2009

Appendices:

- A. Resumes of Technical Staff
- B. Equipment Technical Specifications



Appendix A

Resume's of Technical Staff Conducting this Operation

PAUL INGERTON

QUALIFICATIONS

- RNZAF Armament Technician
- Certificate in Aeronautical Engineering - Armament
- Advanced EOD - RNZAF
- EOD Team Supervisors Course RNZAF
- Warranted Department of Labour EOD Operator
- Occupational Health and Safety Accident Prevention
- Transport of Hazardous Substances
- CPR & Basic First Aid NZDF

RELEVANT COMPETENCIES

- EOD Field Team Management
- Team Leader - Weapons Preparation, Storage and Handling.
- Team Leader - Missile Servicing and Preparation.
- Supervisor Armament Teams - Aircraft Loading and Arming.
- Range Clearance Duties - RNZAF

RELEVANT EXPERIENCE

- UXO Clearance, Townshend Island, Shoalwater Bay Training Area, North Qld
- UXO Clearance Secret Harbour WA
- UXO Clearance - Sepon, Lao PDR,
- UXO Clearance - Xe Bang Fai Bridge, Lao PDR.
- UXO Clearance and EM61 Trials in various sites, Lao PDR.
- Sub-surface Imaging Survey - Salt Ash Air Weapons Range
- 100% UXO Remediations on WW2 US Army ranges, Parkhurst, Rockhampton, Qld
- UXO FVS & Clearance, Redbank Plains, Qld
- UXO Clearances, Caloundra Council, Qld
- UXO 10% FVS Clear Mountain, Pine Rivers Shire, Brisbane
- UXO 1% FVS on 1,200 ha Egoline site, Northam WA
- UXO Geophysical Survey - Englobot-Ettamogah
- UXO Clearances, SW Arterial Pipeline, Redbank, Qld
- UXO 10% and 5% FVS assessments former Redbank Artillery Range, Qld
- 100% UXO remediations for a variety of Clients, Redbank Artillery Range, Qld
- UXO Assessments and remediations, ExxonMobile LNG Site, Port Moresby, PNG
- UXO assessments and consultancy ExxonMobil Ancillary Sites, Port Moresby, PNG

KEY SKILLS AND EXPERIENCE

Currently based in Brisbane as the Milsearch Queensland Operations Manager, Mr. Ingerton has over 28 years of diverse experience in the EOD field. He completed 20 years service in the RNZAF in November 1999, moving to Australia on demobilisation in order to enhance his EOD job opportunities.

Paul has amassed extensive management experience with all RNZAF Armament Squadron duties including aircraft loading, arming and disarming. He also spent time as the manager in charge of both the Missile Servicing and Preparation Team and the Weapons Preparation, Storage and Handling Team. He has served at supervisor level for all Armament Operations on all three of the RNZAF Operational Squadrons.

As a Warranted NZ Department of Labour EOD Operator, his other duties have included the disposal of all commercial, time expired and defective explosives from civilian manufacturers, the conduct of Range Clearance, UXO recovery, blinds disposal, and assistance to civilian authorities for the render safe and disposal of military and commercial explosives surrendered by members of the public.

As the Milsearch Queensland Manager, Paul has undertaken numerous UXO investigation, assessment and remediation tasks throughout Australia and overseas. He has worked on several projects in Lao PDR, notably UXO Search and Clearance operations on the former Ho Chi Minh Trail at Oxiana's Sepon gold/copper exploration tenement in southern Lao, as well as the Supervision of 3 x 30 man teams carrying out UXO clearance on the Theun Hinboun Hydro project in Savanaket Province for the Japanese J-Power consortium. He has also conducted a number of specialist equipment trials at various sites throughout Lao PDR.

During 2008 in PNG, he conducted field contamination assessments for ExxonMobil discovering the previously forgotten Australian Army's WW2 Boera Artillery Range near Port Moresby. He later returned to Boera and set up and supervised UXO remediation searches involving advanced geophysical techniques to provide safe construction sites for ExxonMobil's \$Billion LNG Project.

With Milsearch, Paul has worked in Queensland and other states of Australia on a wide variety of UXO assessment and remediation operations for Defence, State Government Instrumentalities and commercial land development companies. He has conducted Field Validation transect sampling (FVS) in Western Australia and in Queensland, where the requirements of both those governments are similar.

Paul is well versed in all aspects of UXO contamination sampling and 100% area remediation using either analogue or geophysical techniques supported by GPS, DGPS and RTK GPS positioning technologies. As well as being a competent and experienced field EOD technician, Paul is a most capable manager of both large and small UXO operations.

QUALIFICATIONS

- Associate Diploma of Applied Science in Ordnance Engineering
- Certificates of EOD / IED RAAF
- Certificate in Vocational Training
- Certificate in Management and Supervision
- Powderman Class 1 (NSW)
- St. Johns Ambulance (QLD) Senior First Aid Certificate
- General Safety Induction Construction Industry Qld. (Blue Card)
- OHS General Induction Construction Industry NSW
- Confined Space Entry certified

RELEVANT COMPETENCIES

- Managing complex UXO clearance operations in Third World countries especially Monsoonal environments.
- Interfacing with Clients project staff and sub contractors. Particularly Rio Tinto, Oxiana, Phu Bia Mining (Pan Australian Mining) and Ord River Resources.
- Interfacing with National employed staff and Client Community affairs at these projects.

RELEVANT EXPERIENCE

- Extensive experience in all facets of UXO clearance operations including road construction in IndoChina
- Experience in UXO contamination sampling assessments
- Experience in 100% area UXO remediations using analogue or geophysical search techniques
- Large-scale UXO project management in Indo China and PNG.

EVAN HOPPER

KEY SKILLS AND EXPERIENCE

Mr. Hopper served twenty-one years exemplary service with the Royal Australian Air Force.

After completing a 5 years Armament engineering apprenticeship, his primary duties included the maintenance and replacement of Aircraft explosive operated equipment and explosive components, the preparation, fusing, and loading of Explosive Stores, and Scheduled Explosive inspections. EOD tasks included Weapons Range clearance, and demolition of UXO and Time Expired stores. During that time three years were spent as a full time instructor at the RAAF School of Technical Training primarily as the EOD instructor.

Six years as trade supervisor (RAAF) included a tour at Townsville and was responsible for RAAF EOD tasking in the North Queensland area including the Army High Range exercise area and the maintenance and UXO clearance of the Halifax Bay Air weapons range.

Service in Vietnam, a tour of duty in Malaysia/Singapore and deployments to the USA, New Zealand, Philippines and PNG, have given Evan valuable experience in working in extreme environments and interacting with the local populace throughout those countries. Awarded the following medals:

- Australian Active Service Medal
- Vietnam Medal
- Australian Service Medal (S.E. Asia Clasp)
- Defence Force Service Medal with 1st clasp
- National Service Medal
- Australian Defence Medal
- Republic of Vietnam Campaign Medal
- Vietnamese Unit Citation, Gallantry Cross with Palm
- USAAF Outstanding Unit Award with Valour Device

Evan has been employed by Milsearch in various capacities since 1995 including site reconnaissance and UXO contamination assessment surveys, munitions hazard safeguarding for minerals exploration tasking with various Mining companies, and UXO remediation tasks of varying complexities and size, including the remediation of 111 kms of National Route 6 in northern Lao PDR for the German Government aid agency Kreditanstalt fur Wiederaufbau.

Management of UXO remediation projects for RioTinto, then Oxiana at their Sepon copper-gold exploration and mining tenement and at Pan Australian's Phu Bia Mine exploration sites throughout Lao PDR included the responsibility for the Tasking and Control of up to 250 Lao staff and 8 Expat Technicians at any time. Community liaison and interaction was an important facet of his work in the Lao PDR.

Evan is remarkably fit for age, easy going and well able to contribute in both civil engineering environments and in cross-cultural interactions within IndoChina.

QUALIFICATIONS

- St. Johns Ambulance Senior First Aid Certificate
- Occupational Health and Safety Accident Prevention
- WA Safety Awareness Training Card

RELEVANT COMPETENCIES

- Competent to operate analogue Minelab F3 Metal Detectors
- Competent to Operate Ferex 4.032 analogue magnetometers
- Competent to operate DGPS positioning systems

RELEVANT EXPERIENCE

- 100% remediation of Lot 501 Public Open Space Areas, Two Rocks, WA March 2009
- 20% FVS Eneabba-Moonyoonooka Transmission Line Construction, Western Power Jan-April 2009
- 100% remediation search DEC Carparks Lake Walyungup, Rockingham, WA, October 2009
- 100% remediations South Avenue Footpaths, Rockingham Council, December 2008
- 10% FVS Perth Northern Rail Extensions for Public Transport authority, November 2008
- 100% remediations of Lot 37/38 Surf Drive, Secret Harbour for Carcione Group, October 2008
- 100% remediations Lot 39 Surf Drive, Secret Harbour for Bellerive Pty Ltd Oct 08
- 30% FVS on the 122 ha Marbury Quarry site at Werribee, Victoria for Hanson Quarries Ltd in May 2008
- 5% FVS on the LandCorp 1124 ha Oakajee Project, Geraldton, WA

GEOFFREY SWINBOURNE

KEY SKILLS AND EXPERIENCE

Prior to joining the Milsearch Team, Geoff spent several years with the Australian Army serving in the Royal Australian Army Ordnance Corps with postings and field operations in north Queensland.

Following his army service, Geoff has spent some 30 years within a variety of commercial employments in the fields of engineering, banking, law and small business generally, which has equipped him well with the business marketing, development and managerial skills necessary for his current role as Milsearch Manager of Western Australian Operations.

Geoff joined the Milsearch team in March 2006. Since this time he has been extensively involved in numerous UXO clearance and assessment tasks at the Rockingham Artillery Range south of Perth and on a wide variety of UXO projects in the Two Rocks, Yanchep regions north of Perth. Additionally, Geoff has worked interstate on Milsearch Projects in both Victoria and South Australia, the former being a large scale FVS assessment task on the former Werribee Bombing and Rocket Range, and the later, being a 100% UXO remediation task on the active Defence Proof and Experimental Establishment Range at Port Wakefield, South Australia.

Since his appointment as the Milsearch Manager of Western Australian Operations, Geoff has built a very solid and professional working relationship with Mr. Andrew Arnold of the UXO Unit of the Fire and Emergency Services of Western Australia.

Geoff is remarkably fit for age and is most adaptable to play any EOD technical role in UXO projects large or small in Australia or overseas if required.

QUALIFICATIONS

- RAAF Weapons and EOD Engineer
- Queensland University of Technology First Year Bachelor of Information Technology
- Associate Diploma of Administration Studies
- Associate Diploma of Applied Science in Ordnance Engineering
- Certificate in Vocational Instruction
- Advanced EOD/IED – RAAF
- Laser Safety Officer - RAAF
- Workplace Health and Safety Officer
- QLD Unrestricted Shotfirer's Certificate 1983-1986
- CPR & First Aid Courses

RELEVANT COMPETENCIES

- Staff Officer Weapons Maintenance Headquarters Operational Command
- Line Armament Officer 482Sqn RAAF
- Staff Officer Weapons Engineering Headquarters Support Command

RELEVANT EXPERIENCE

- Supervising UXO Field Technician Oxiana Sepon Camp Lao PDR
- UXO Field Technician Minnie Waters UXO Clearance, NSW
- UXO Quality Assurance Inspector National Road 9, Lao PDR
- UXO Field Technician Electricity Transmission Construction Ban Dong - Xiang Ngeun - Sayabouli, Lao PDR
- Supervising UXO Field Technician Electricity Transmission Construction Moung Cha -Thanvian, Lao PDR
- Supervising UXO Field Technician Electricity Transmission Construction Phonsavan -Thanvian, Lao PDR
- Supervising UXO Field Technician – Contamination Assessment Project for Nam Theun 2 Hydroelectric Project, Lao PDR
- UXO Field Clearance Manager Nam Theun 2 Hydroelectric Project Stage 1, Lao PDR
- UXO Field Technician ABB Powerline Sepon to Thakek, Lao PDR
- UXO Field Clearance Manager Nam Theun 2 Hydroelectric Project Stage 2, Lao PDR
- UXO Field Technician Sepon District and Phonehong Village School Site Clearances for US Embassy, Lao PDR
- UXO Field Technician supporting 5% FVS Projects at Oakajee, Western Australia

TOM ROBERTS

KEY SKILLS AND EXPERIENCE

Based in Brisbane, Tom Roberts has completed 21 years service in the RAAF and has had extensive management experience at both Squadron and Staff levels. He has 5 years experience in the EOD/IED field in the RAAF and then another 5 years fulltime Field Management and Field EOD Technician Clearance experience in the Lao PDR with Milsearch Pty Ltd.

Tom commenced his commercial experience with Milsearch managing his first UXO search operation on a WW2 era field artillery and chemical weapons test range in the Northern Rivers District of NSW. He then transferred to Milsearch's Joint Venture company in Lao PDR and undertook numerous field operations.

In the capacity of a Senior Operations Officer, Tom has planned, fielded and managed numerous projects in Lao PDR, amongst them UXO remediation operations on the former Ho Chi Minh Trail at the RioTinto-Oxiana Sepon Copper-Gold Exploration and Mining Tenement, at the Nam Theun 2 Hydroelectric Project, numerous Electricity Transmission Powerline Projects throughout Lao PDR and School Site UXO remediations for the US Embassy. In addition, Tom carried out the duties of a UXO Quality Assurance Inspector examining remediation efforts by the Lao PDR Army on National Route 9 near the Vietnam/Lao border, close to the Vietnam War Demilitarized Zone.

Returning to Australia, Tom has recently re-joined Milsearch's Australian based operations.

MARK REYNISH

QUALIFICATIONS

- RNZAF Armament Technician
- Inspector of Explosives
RNZAF/RAAF
- Advanced EOD – RNZAF
- Explosive Proof Testing & Trials -
RNZAF
- IEDD Team Leader – NZArmy
- Agricultural Blasting operator –
ERMA NZ
- OH&S Co-ordinator – OHS NZ
- First Aid - NZDF

RELEVANT COMPETENCIES

- EOD Task Management
- Quality Assurance Inspection
(Explosives)
- Range Clearance Duties –
RNZAF/NZArmy
- Underground UXO Search and
Clearance - RNZAF
- EOD Instructor RNZAF
- Explosive Defect Investigation
RNZAF
- EOD/IEDD Team Leader – NZDF
- Explosive Chemical Analysis,
Testing & Neutralising

RELEVANT EXPERIENCE

- EOD Technician – Port Moresby,
PNGLNG – Milsearch Pty Ltd
- EOD Technician – Portsea,
PNCT – Milsearch Pty Ltd
- EOD Technician – Bankside,
Hawkins – Milsearch Pty Ltd
- EOD Technician – Oakajee, Land
Corp - Milsearch Pty Ltd

KEY SKILLS AND EXPERIENCE

Based in Westland NZ, Mark performs the duties of an Explosive Ordnance Disposal (EOD) Technician for Milsearch Pty Ltd. Mark is still serving as a Sergeant within the Royal New Zealand Airforce (RNZAF) and is currently on Leave Without Pay (LWOP) after having served 18 years. Mark's experience in the field of military and commercial EOD has spanned over 7 years.

During 18 years service in the RNZAF as an Armament Technician, Mark's career has provided him with extensive experience in aircraft weapons engineering, explosives inspection and EOD. Relevant posts held include Inspector of Explosives (IOX) and Improvised Explosive Device Disposal (IEDD) Team Leader for the Southern EOD Troop. As IOX, Mark was jointly responsible for EOD training, explosive breakdown and defect investigation, explosive proof testing and trials, accident investigation of armament and explosive ordnance related incidents, UXO recovery, crashed aircraft UXO render safe procedures, the modification and repair of explosive ordnance and the test certification of explosive storage facilities. As an IEDD Team Leader the main focus was to provide support to civilian authorities in relation to commercial explosives and IEDD and to carry out instruction the field of EOD/IEDD.

Since joining Milsearch Mark has been involved with a number of projects and has gained valuable experience in the commercial EOD sector. During Mark's tenure with Milsearch he has become proficient with the use of the Ferex 4.032 Foerster Magnetometer, the F3 Minelab and the Differential GPS. Mark has also become familiar with and utilized the G-858 Magnetometer.

Currently Mark is fulfilling the duties of an EOD Technician.



Appendix B

(Equipment Technical Specifications)

MINELAB F3 METAL DETECTOR TECHNICAL SPECIFICATIONS

The Minelab Electronics F3 metal detector incorporates patented Bi-polar technology that enhances Minelab's renowned and highly successful Multi-Period Sensing (MPS technology). Through MPS, the sensitivity of a detector remains constant regardless of the mineralized content of soil. Combined with "static coupling" the F3 does not require motion to detect a target thereby making pin-pointing techniques fast and accurate.

Operating Length	1510mm/59.5ins to 750mm/29.5ins
Operating weight with batteries (complete)	3.2kg / 7lbs
Operating weight without Battery Pack	2.3kg / 5lbs
Battery Pack with batteries	0.9kg / 2lbs
Shipping weight (in hard case with batteries)	11.7kg / 26lbs
Transmission (Pulse Induction)	Bi-polar Multi-Period-Sensing
Audio Output	Internal Loudspeaker / Earset (various configurations available)
Data Output	RS-232 (bi-directional)
Temperature (Operating)	-30 deg C to 60 deg C / -22 deg F to 140 deg F
Design Standard	MIL STD 810F
Batteries (Alkaline)	Alkaline D cell (1.5V – LR20)
Batteries (Alkaline)	NiCad or NiMh D cell minimum 4000mAh capacity