



Australian Government

Department of Defence

# Quail Island Air Weapons Range Unexploded Ordnance (UXO) Hazard Reduction Project

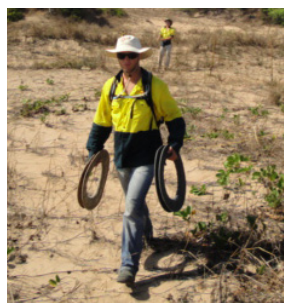
Newsletter No 3  
9 September 2011

# WELCOME

Welcome to the third newsletter for the Quail Island Air Weapons Range Unexploded Ordnance (UXO) Hazard Reduction Project.

This edition includes a project update, with details about the search that has commenced on Quail Island. We look into the history of the use of the islands as a practice bombing range and learn about the technology that is being used to detect unexploded ordnance. We also talk to Jim Smith, who runs the Sea Darwin turtle tours on Bare Sand Island and meet another project team member.

Please remember, if you have any information you would like to put forward for our next newsletter or if there is any part of the project you would like to read more about, please send your contribution or query through to Sophie Morrison at 02 6273 0232 or [sophie.morrison@contentgroup.com.au](mailto:sophie.morrison@contentgroup.com.au)



## PROJECT UPDATE

Contractors from G-tek Australia have been busy preparing Quail Island for the commencement of the remediation project on this island. This activity has included the mobilisation of equipment and deep search and clearance of the camp and stockpile areas.

The visual and shallow search on Bare Sand and Djadjalbit Islands is now complete. The Quail Island shallow search has begun, with this activity expected to continue over the next few weeks. The disposal of the four unexploded bombs found on Bare Sand Island is another task that has been scheduled for this next period.

The G-tek contractors remain in close contact with various turtle and fishing tour groups in order to facilitate their trips to the islands. They also continue their excellent work in clearing the islands of rubbish with the removal of four to five bags from the island each day.

## HISTORY OF THE ISLANDS AS AN AIR WEAPONS RANGE

The Quail Island Air Weapons Range was used by the Royal Australian Air Force as a high explosive practice bombing range between 1945 and 1979. However, historical information has come to light indicating that the range was used certainly as early as 1944 and probably prior to that.

The Range was used for activities such as practice bombing, rocketry and gunnery practices. Within the Air Weapons Range, Unexploded Ordnance, ranging from 1000 pound high explosive bombs to 20 millimetre high explosive incendiary projectiles, is potentially remnant.

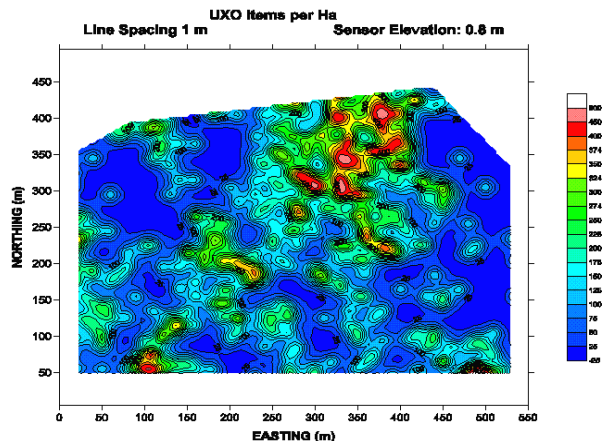
The discovery of the four high explosive bombs on Bare Sand Island confirms the presence of Unexploded Ordnance in the Quail Island Air Weapons Range and reinforces the need for the hazard reduction project and the safety precautions that are currently in place.

## TECHNOLOGY

G-tek Australia, the Defence contractor for the project, is preparing to apply total magnetic field digital imaging equipment at the Quail Island site. This equipment can be either hand carried or, using an array of caesium vapour sensors, can be towed on a specially designed trailer behind an all-terrain quad cycle. Each sensor will record the earth's magnetic field value up to ten times per metre travelled. Each value is stored in a computerised data logger, together with the precise location of the reading that is provided by differential global positioning equipment.

The resulting data is computer processed and an image of the area covered can be produced. Further computer-aided interpretation, usually by a specially trained geophysicist, will produce a list of likely targets – ie, potential UXO items – together with estimates of depth and mass.

The picture below is an illustration only, and is not drawn from the Quail Island data.



**A total magnetic field image of a WWII artillery range. This image predicts the likely number of items per hectare. (G-tek Australia)**

Each item is then relocated, again using a differential global positioning system, by a recovery crew, identified and, if safe, the item is removed. Items of UXO that are not safe to move will be rendered safe in-situ. This is usually undertaken by explosive demolition.

The equipment being employed by G-tek is state of the art and the level of expertise reflects world's best practice. Given this level of technology and expertise, there is an extremely high probability that all hazardous items will be found and removed.

## TURTLE TOURS

Bare Sand Island is home to a large population of Flatback Sea Turtles, which nest during the winter months.

Between April and October (around the lunar cycle) Sea Darwin, an eco-certified tour company, runs turtle tours to Bare Sand Island. The sunset tours provide people with the opportunity to witness the activities of nesting turtles which includes the females making their way from the ocean and digging a pit in which to lay their eggs. Some lucky visitors also get the chance to observe the remarkable movement of hatchlings as they make their way from their nests in the warm sand to the open sea.

The Sea Darwin team conduct around ten tours a month, with visitors coming from not only interstate but all over the globe. With the help of project manager, Major Geoff Robinson and the team from G-tek, Sea Darwin has been able to continue taking visitors to Bare Sand Island to observe the turtles while the hazard reduction project is taking place.

Jim Smith, Operator of Sea Darwin Tours, said he supports the hazard reduction project taking place on the islands.

“I am definitely in favour of the project as it means the islands will be safe for both visitors and the turtles. The team from Defence conducting the project have also been very good to work with”.

For more information about Sea Darwin, the tours they conduct and the work that they do with the turtles please go to their website: [www.seadarwin.com](http://www.seadarwin.com)



Untamed Outback Images

## MEET THE TEAM



Greg Guthrie is the Chief Operating Officer of G-tek Australia Pty Limited, the company that has been commissioned by Defence to undertake the search for UXO.

An Australian Army trained Ammunition Technical Officer (ATO) and former Reservist, Greg was promoted to the rank

of Lieutenant Colonel in 1992. Greg also has qualifications in explosive ordnance disposal, improvised explosive devices, training development, foodstuffs/petrol, oil and lubricants management, supply management, war administration and advanced operations.

Greg left the Regular Army in 1982. He has successfully project directed and project managed a large number of UXO remediation and assessment tasks for a variety of Defence and commercial clients including the remediation of the former Leanyer Air Weapons Range in Darwin and remediation tasks in Labuan, Malaysia.

A Member of the Institute of Explosives Engineers, Greg has also acted as UXO consultant to, and developed risk management strategies for, a number of high profile projects including the Darwin Waterfront Redevelopment, the Wickham Point LNG Plant, the Bayu-Darwin Natural Gas Pipeline, the Port of Albany redevelopment and the Ichthys-Darwin LNG Pipeline and Plant.



Untamed Outback Images