



## POST ACTIVITY REPORT

# REPORT

### UNEXPLODED ORDNANCE FIELD VALIDATION SURVEY LINDFIELD LEARNING VILLAGE NSW

V1.01

***G-tek Australia Pty Limited***

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Project Ref: 18090ENIN

Prepared For: Design Inc

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#### DOCUMENT VERSION CONTROL

Version	Date	Raised By	Released By
1.01	29 October 2018	G Guthrie	P O'Donnell

#### DOCUMENTATION CONTROL

Copy Number	Issued To
1	Design Inc
2	G-tek Australia Pty Limited

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## Table of Contents

<b>1.0</b>	<b>INTRODUCTION</b>	<b>1</b>
<b>2.0</b>	<b>AUTHORITY TO UNDERTAKE TASK</b>	<b>2</b>
<b>3.0</b>	<b>OBJECTIVE</b>	<b>2</b>
<b>4.0</b>	<b>NATURE OF REPORT</b>	<b>2</b>
<b>5.0</b>	<b>PREVIOUS INVESTIGATIONS OF THE SITE</b>	<b>2</b>
<b>6.0</b>	<b>DATES OF CONDUCT</b>	<b>2</b>
<b>7.0</b>	<b>CONTRACTOR DETAILS</b>	<b>2</b>
<b>7.1</b>	<b>Personnel</b>	<b>3</b>
<b>8.0</b>	<b>CLIENT DETAILS</b>	<b>3</b>
<b>9.0</b>	<b>SITE CHARACTERISTICS</b>	<b>3</b>
<b>10.0</b>	<b>FIELD VALIDATION SURVEY</b>	<b>3</b>
<b>11.0</b>	<b>HEALTH AND SAFETY</b>	<b>4</b>
<b>12.0</b>	<b>OUTCOMES</b>	<b>4</b>
<b>13.0</b>	<b>CONCLUSIONS</b>	<b>6</b>
<b>14.0</b>	<b>RECOMMENDATIONS</b>	<b>6</b>

### Attachments:

1	Equipment Specifications
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## 1.0 INTRODUCTION

G-tek Australia Pty Limited (G-tek) has been contracted to conduct an unexploded ordnance (UXO) Field Validation Survey (FVS) determine the nature and extent of any UXO contamination within the Lindfield Learning Centre Site, particularly the non-developed, treed, areas of the Site as outlined in Yellow at Figure 1 and as required to meet Draft Condition of Consent B15 "Prior to commencement of external works or vegetation clearing, an unexploded ordnance (UXO), exploded ordnance (EO) and exploded ordnance waste (EOW) Site Assessment Survey must be undertaken by an UXO contractor listed on the Defence Panel of suitably qualified UXO consultants and contractors and submitted to the Secretary."

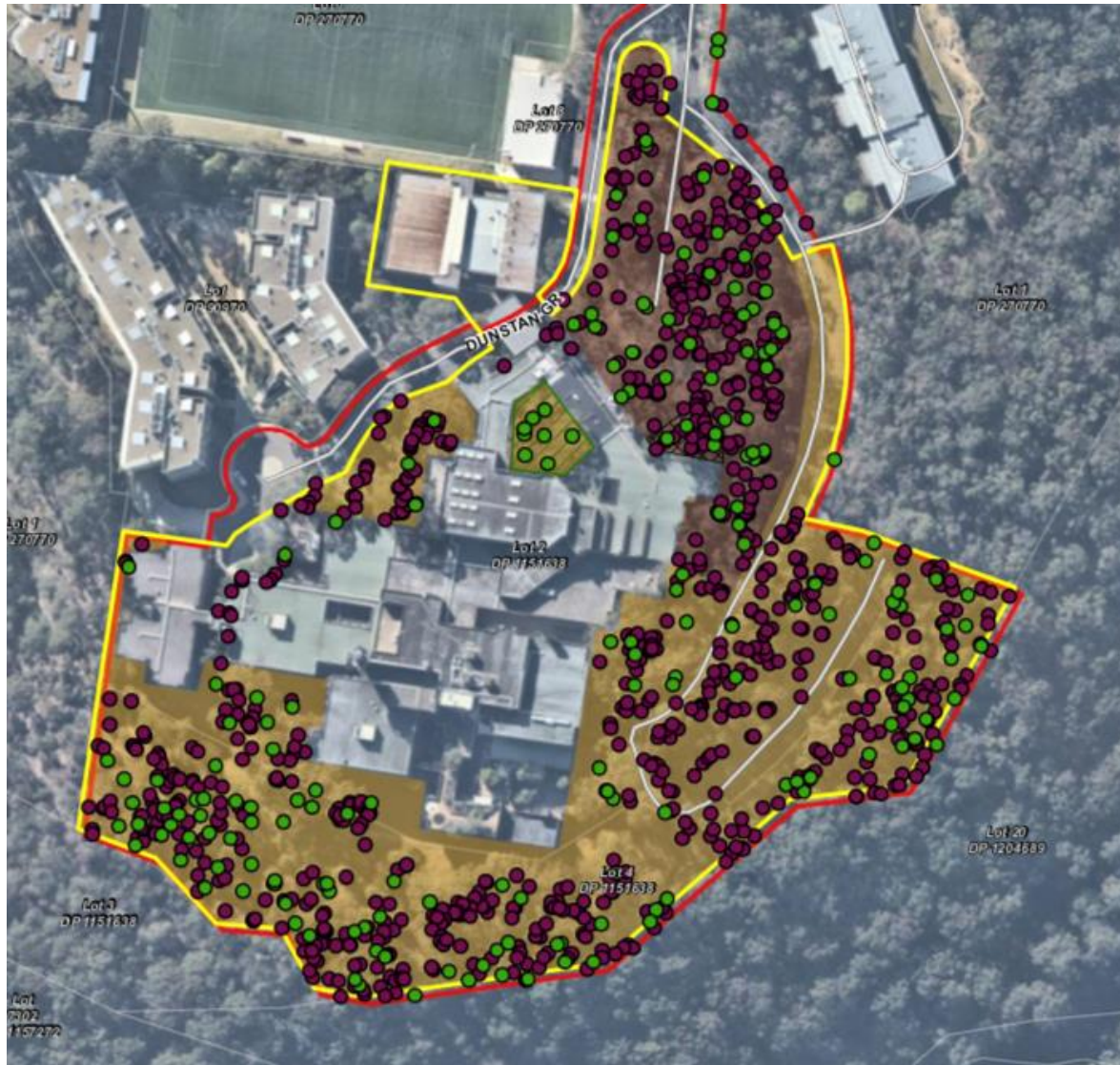


Figure 1 – Lindfield Learning Village External/Treed Areas [Client Supplied]

The potential for remnant ordnance related material within the Site is based on the presence of the former Department of Defence (Defence) Chatswood (Roseville) Rifle Range to the south east of the Site from approximately 1915 until its closure and progressive land disposal through the 1950's and 1960's. The former rifle range was aligned towards the Site with the targets/stop butts at the base of the raised area on which the Site has been developed (Figure 2 below).

The former Chatswood (Roseville) Rifle Range is not included within Defence UXO listings as an area with a potential UXO risk.



Figure 2 – Lindfield Learning Village Site (Yellow) relative to Chatswood (Roseville) Rifle Range 1943 [Client Supplied]

## 2.0 AUTHORITY TO UNDERTAKE TASK

Email Edmondson (Savills Australia)/Guthrie (G-tek) [Savills-GCOR-000816] dated 29 October 2018.

## 3.0 OBJECTIVE

The objectives of this task were:

1. Determine the nature and extent of UXO, EO or EOW contamination within the required areas; and
2. Provide a Post Activity Report (PAR) detailing the outcomes.

## 4.0 NATURE OF REPORT

This report details the conduct of the works and the results obtained. All relevant documentation is included as part of this report.

## 5.0 PREVIOUS INVESTIGATIONS OF THE SITE

G-tek has not undertaken previous investigations of the Lindfield Learning Village Site or of the former Chatswood (Roseville) Rifle Range.

## 6.0 DATES OF CONDUCT

Field Validation Survey was conducted on Friday 26 October 2018.

## 7.0 CONTRACTOR DETAILS

The contracting firm is G-tek Australia Pty Limited (G-tek) ABN 47 099 519 034; G-tek is a member of the current Department of Defence Environmental and Heritage Panel (DEHP) and is considered suitably qualified to conduct these works.

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## 7.1 Personnel

The following G-tek staff were directly involved in this task:

Project Director  
Mapping/Survey

Greg Guthrie  
Paul O'Donnell

## 8.0 CLIENT DETAILS

Design Inc  
Level 12, 77 Pacific Highway,  
North Sydney, NSW, 2060

*Contact*

Sandeep Amin  
Project Management  
Savills Australia

*Contact*

Stephanie Edmondson

## 9.0 SITE CHARACTERISTICS

The Site was generally grassed/treed areas located between compounds and structures of the previous University of Technology Sydney (UTS) buildings currently under refurbishment. The southern and eastern portions outside the temporary construction fencing were characterised by thicker vegetation and exposed sandstone boulders and were steep and inaccessible in parts.

FVS coverage was attempted in all accessible parts of the Site, but steep areas of exposed outcrop were avoided for safety reasons.

## 10.0 FIELD VALIDATION SURVEY

Field Validation Survey (FVS) was conducted by a two (2) person team with each operator conducting both visual and instrumented search of a nominally 1 metre (1m) wide while traversing the Site in (where possible) parallel transects approximately 10m apart. Each operator was equipped with a GPS to both track the areas searched and to record any ordnance related "finds".

Instrumented search was conducted using a Minelab F3 Metal Detector with high sensitivity Black Cap attached; the Minelab F3 provides an aural cue to the operator in the presence of metal; equipment specifications are included at Attachment 1 to this Report.

Each aural cue was investigated by the operator using hand tools to identify the source of the cue; when the source was identified as ordnance related, the location was recorded. After cue identification, each location was then re-checked to ensure that the identified item was not "masking" additional material. Some example ordnance related material was removed during search to allow further identification, while general scrap and non-ordnance related material was left on Site.

Areas outside the temporary fencing were searched first; areas inside the temporary fencing were then searched from south to north with an escort provided; GPS tracking of the areas investigated within this FVS are indicated as Yellow lines in Figure 3.



Figure 3 – Lindfield Learning Village FVS Tracking [Google Earth/G-tek]

## 11.0 HEALTH AND SAFETY

No health or safety incidents were recorded during the conduct of these works. Care was taken to ensure that steep areas of exposed rock were avoided during this FVS; these areas, particularly outside the temporary fencing, are indicated as wide transect spaces in Figure 3.

## 12.0 OUTCOMES

No items of unexploded ordnance (UXO) or explosive ordnance (EO) were identified during this FVS.

One item of explosive ordnance waste (EOW) was identified during this FVS; this item was an inert, empty, ogive from a 40mm projectile

43 items of small arms ammunition waste (SAAW) were identified during this FVS; these items were primarily expended .303-inch calibre projectiles of various ages. This calibre was typically fired from military rifles during the period that the former Lindfield Rifle Range was active. Some projectiles are reasonably intact while others exhibit the deformation associated with ricochet after striking a hard surface such as a metal target frame or rock. EOW and SAAW is indicated as Green triangles in Figure 4 below. No complete small arms ammunition items or cartridge cases were identified. Indicative "Finds" are included in Figure 5 below.

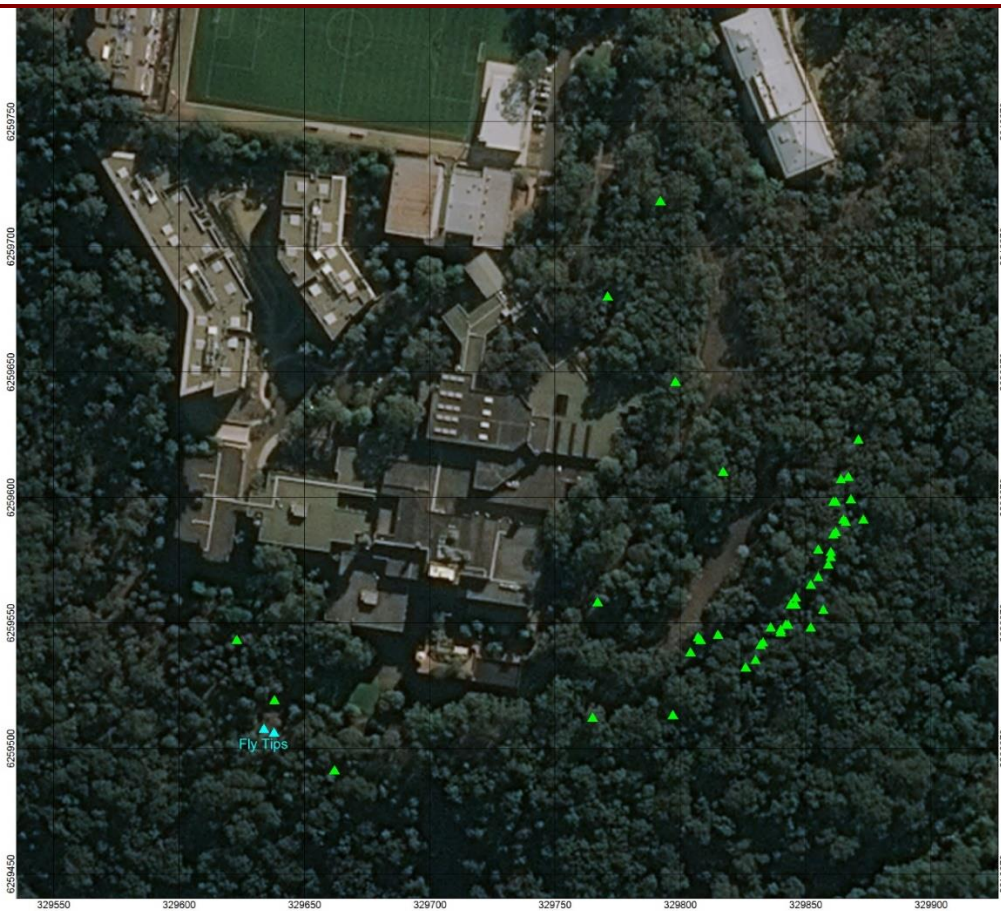


Figure 4 – Lindfield Learning Village FVS “Finds” Locations [Google Earth/G-tek]



Figure 5 – Lindfield Learning Village FVS Indicative “Finds”



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Various waste and scrap, including star pickets, wire, vehicle parts, cans, and similar was also identified during these works and not recorded. Two (2) areas of general waste identified as “Fly Tips” are indicated as Blue triangles on Figure 4.

### **13.0 CONCLUSIONS**

Based on the FVS conducted, it is considered that:

1. The identification and location of small arms ammunition waste (SAAW) is consistent with the presence of the former Chatswood (Roseville) Rifle Range south east of the Site and its use for Rifle training activities.
2. The identification of an expended 40mm empty ogive is consistent with military training activity on the former Chatswood (Roseville) Rifle Range, possibly a demonstration firing late in period of use. The parent item was not high explosive.
3. The identification of various scrap and waste is consistent with past construction and general activities within the former UTS precinct.
4. There is little to no risk of UXO, EO, EOW or SAAW containing high explosive (HE) or other energetic material, such as pyrotechnics or propellant, to be remnant within the requested FVS area.

### **14.0 RECOMMENDATIONS**

It is recommended that external works and vegetation clearing be allowed to be conducted without further unexploded ordnance related works being required or conducted.



## **ATTACHMENT 1: EQUIPMENT SPECIFICATIONS**

## MINELAB F3 METAL DETECTOR



### TECHNICAL SPECIFICATIONS

<b>Operating Length</b>	760mm - 1500mm
<b>Search Head</b>	200mm circular
<b>Operating Weight</b>	3.2kg
<b>Operating Weight (Battery Pack Detached)</b>	2.3kg
<b>Battery Pack with Batteries</b>	0.9kg
<b>Packed Weight (Hard Case)</b>	10.5kg [850 x 450 x 170]
<b>Technology</b>	Pulse Induction Multi Period Sensing - BiPOLAR
<b>Audio Output</b>	Internal Speaker Earset (Options: 1. Speaker ON / 2. Speaker OFF)
<b>Water Resistance</b>	IP67
<b>Batteries</b>	Alkaline D cells (4x1.5V - Lr20) Rechargeable NiCad or NiMH D cells)
<b>Data Output</b>	RS232
<b>Operating Temperature</b>	-30°C to +60°C / -22°F to + 140°F
<b>Design Standard</b>	MIL STD 810 F