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# Site Development Management Plan 52 Golf Road Oakleigh South Victoria

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Golf Road Project Development

C/o VIMG

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# Statement of Limitations

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This document has been prepared in response to specific instructions from Golf Road Project Development to whom the report has been addressed. The work has been undertaken with the usual care and thoroughness of the consulting profession. The work is based on generally accepted standards, practices of the time the work was undertaken. No other warranty, expressed or implied, is made as to the professional advice included in this report.

The report has been prepared for the use by Golf Road Project Development and the use of this report by other parties may lead to misinterpretation of the issues contained in this report. To avoid misuse of this report, Prensa advise that the report should only be relied upon by Golf Road Project Development and those parties expressly referred to in the introduction of the report. The report should not be separated or reproduced in part and Prensa should be retained to assist other professionals who may be affected by the issues addressed in this report to ensure the report is not misused in any way.

Prensa is not a professional quantity surveyor (QS) organisation. Any areas, volumes, tonnages or any other quantities noted in this report are indicative estimates only. The services of a professional QS organisation should be engaged if quantities are to be relied upon.

## **Sampling Risks**

Prensa acknowledges that any scientifically designed sampling program cannot guarantee all sub-surface contamination will be detected. Sampling programs are designed based on known or suspected site conditions and the extent and nature of the sampling and analytical programs will be designed to achieve a level of confidence in the detection of known or suspected subsurface contamination. The sampling and analytical programs adopted will be those that maximises the probability of identifying contaminants. Golf Road Project Development must therefore accept a level of risk associated with the possible failure to detect certain sub-surface contamination where the sampling and analytical program misses such contamination. Prensa will detail the nature and extent of the sampling and analytical program used in the investigation in the investigation report provided.

Environmental site assessments identify actual subsurface conditions only at those points where samples are taken and when they are taken. Soil contamination can be expected to be non-homogeneous across the stratified soils where present on site, and the concentrations of contaminants may vary significantly within areas where contamination has occurred. In addition, the migration of contaminants through groundwater and soils may follow preferential pathways, such as areas of higher permeability, which may not be intersected by sampling events. Subsurface conditions including contaminant concentrations can also change over time. For this reason, the results should be regarded as representative only.

Golf Road Project Development recognises that sampling of subsurface conditions may result in some cross contamination. All care will be taken and the industry standards used to minimise the risk of such cross contamination occurring, however, Golf Road Project Development recognises this risk and waives any claims against Prensa and agrees to defend, indemnify and hold Prensa harmless from any claims or liability for injury or loss which may arise as a result of alleged cross contamination caused by sampling.

## **Reliance on Information Provided by Others**

Prensa notes that where information has been provided by other parties in order for the works to be undertaken, Prensa cannot guarantee the accuracy or completeness of this information. Golf Road Project Development therefore waives any claim against the company and agrees to indemnify Prensa for any loss, claim or liability arising from inaccuracies or omissions in information provided to Prensa by third parties. No indications were found during our investigations that information contained in this report, as provided to Prensa, is false.

## **Recommendations for Further Study**

The industry recognised methods used in undertaking the works may dictate a staged approach to specific investigations. The findings therefore of this report may represent preliminary findings in accordance with these industry recognised methodologies. In accordance with these methodologies, recommendations contained in this report may include a need for further investigation or analytical analysis. The decision to accept these recommendations and incur additional costs in doing so will be at the sole discretion of Golf Road Project Development and Prensa recognises that that Golf Road Project Development will consider their specific needs and the business risks involved. Prensa does not accept any liability for losses incurred as a result of Golf Road Project Development not accepting the recommendations made within this report.

## 1 Introduction

Prensa Pty Ltd (Prensa) was commissioned by the Department of Treasury and Finance (DTF) to develop a site-specific Site Development Management Plan (SDMP) for the former Oakleigh South Primary School, located at 52 Golf Road, Oakleigh South (the Site). The SDMP was developed following the identification of asbestos containing material (ACM) debris within a soil stockpile onsite during Prensa's July 2013 investigation (ref: *Environmental Site Assessment, 1 Beryl Avenue, Oakleigh South VIC 3167*). It is noted that 1-17 Beryl Avenue was the former address and the Site is now identified as 52 Golf Road.

This SDMP was then updated in December 2018 for the new project entity for future construction at the Site, Golf Road Project Development Pty Ltd (Golf Road Project Development).

## 2 Objectives

The objectives of the SDMP were to:

- Provide control measures relating to asbestos in soil to minimise the potential health risk to construction workers and site users;
- Outline the procedures to follow for the removal and disposal of ACM, if identified; and
- Ensure compliance with Victorian *Occupational Health and Safety Regulations 2017* and Victorian EPA regulations.

This SDMP has been designed to consider risks associated with asbestos only and does not include other site, excavation or contamination risks.

## 3 Methodology

This SDMP was developed in accordance with the following guidelines:

- Victorian *Occupational Health and Safety Regulations 2017*;
- West Australian Department of Health, *Guidelines for the Assessment and Management of Asbestos-Contaminated Sites in Western Australia*, May 2009 (WA Guidelines);
- State Environment Protection Policy, *Prevention and Management of Contamination of Land*, 2002 (Land SEPP);
- National Environmental Protection Council, National Environment Protection (Assessment of Site Contamination) Measure 1999, May 2013 (NEPC 2013);
- EPA Victoria, Industrial Waste Resource Guidelines 611.2, *Asbestos Transport and Disposal*, June 2017 (IWRG611.2);
- EPA Victoria, Industrial Waste Resource Guidelines 621, *Soil Hazard Categorisation and Management*, June 2009 (IWRG621);
- EPA Victoria, Industrial Waste Resource Guidelines 702, *Soil Sampling*, June 2009 (IWRG702);
- Australian Standard 4964, *Method for the qualitative identification of asbestos in bulk samples*, 2004;
- WorkSafe Victoria, Compliance Code, *Managing Asbestos in Workplaces*, October 2018;
- WorkSafe Victoria, Compliance Code, *Removing Asbestos in Workplaces*, October 2018; and
- WorkSafe Victoria, Guidance Note, *Asbestos-Contaminated Soil*, October 2010.

## 4 Project Description

The Site comprised the former Oakleigh South Primary School and has an estimated land area of 20,193 m<sup>2</sup>. No building infrastructure was present at the Site during a July 2013 inspection.

Multiple investigations have been undertaken at the Site between 2000 and 2014, which included contamination assessments, validation assessments, a cost estimate, a groundwater assessment and various ESA reports relating to the Site.

A Golder Associates' report, *Preliminary Contamination Assessment & Cost Estimate – DET Site, Oakleigh South*, dated 11 November 2005, identified suspected ACM onsite following building demolition. This included large pieces of possible ACM sheeting abandoned on the Site surface along with possible ACM sheeting fragments within soil stockpiles and on the Site surface around previous building footprints.

An HLA-Envirosciences report, *Environmental Site Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh South*, dated 1 December 2006, positively identified asbestos in the single sample of fibrous-cement sheeting taken from the Site during a Site Investigation. The HLA-Envirosciences report recommended that surface clearance of asbestos by a licensed asbestos removal contractor be conducted.

As part of ENSR | AECOM's site assessment works, *Additional Environmental Site Assessment, Former Oakleigh South Primary School, Beryl Avenue, Oakleigh, Victoria*, dated 9 January 2008, a licensed asbestos removalist was engaged to remove visible and accessible asbestos cement sheeting from the areas identified in the HLA-Envirosciences report. As part of these works, an Asbestos Clearance Certificate was issued. The report concluded that an asbestos management plan should be established if development of the Site was undertaken.

ACM has been identified at the Site in previous investigations and was positively identified in the form of fibre cement sheet fragments within a soil stockpile generated from the excavation and re-validation of former UST Pits 1 and 2 during the most recent assessment undertaken by Prensa during July 2013.

It is noted that only minor and isolated quantities of ACM were identified and removed either by a licensed contractor, or through sampling. Nevertheless, in the unlikely event that ACM is uncovered in the future, this SDMP has been developed for the management of potential ACM.

## 5 Contaminant of Concern – Asbestos (ACM)

### 5.1 Toxicity Assessment

Asbestos poses a potential human health risk through the inhalation of its fibres. If deposited in the lungs, the fibres can initiate diseases that take many years to produce major health effects. These effects include asbestosis, lung cancer and mesothelioma.

### 5.2 Types of Asbestos

The WA Guidelines identify three forms of asbestos contamination. These descriptions of the three forms of asbestos contamination have been adopted for this SDMP and are discussed below.

The term asbestos containing material (ACM) is classified as an asbestos containing material in sound condition, although possibly broken or fragmented, within which the asbestos fibres are bound in a matrix (i.e. asbestos cement sheet or vinyl tiles). The identification of ACM is also restricted to material that cannot pass through a 7 mm x 7 mm sieve.

Fibrous asbestos (FA) encompasses friable asbestos material, such as severely weathered ACM and asbestos in the form of loose fibrous material such as insulation products. Friable asbestos is defined as asbestos material that is in a degraded condition such that it can be broken or crumbled by hand pressure.

Asbestos fines (AF) include free fibres of asbestos, small fibre bundles and also ACM fragments that pass through a 7 mm x 7 mm sieve. Both FA and AF have the potential to generate or be associated with free asbestos fibres, which can pose a considerable inhalation risk if made airborne.

For this SDMP (based on the findings of the previous assessment) ACM has been adopted as the contaminant of concern.

### 5.3 Exposure

There is the potential that workers at the Site undertaking soil related activities may be exposed to inhalable asbestos fibres. The management controls (refer to Section 6) in this SDMP have been developed to minimise the identified potential risk posed by the asbestos identified on the Site.

#### 5.3.1 Populations of Concern

This SDMP has been developed to assist in minimising the potential health risk to future construction workers and the public during potential Site redevelopment works. This plan does not include measures for the ongoing use/users of the Site post development.

#### 5.3.2 Routes of Exposure

Based on the physical properties of asbestos and toxicity assessment, the route of exposure is inhalation of asbestos fibres. The management techniques outlined in this SDMP should be adopted to minimise worker and public exposure via this inhalation pathway. The asbestos previously identified on the Site was bonded ACM in the form of cement sheet. Bonded ACM contains asbestos fibres which are firmly bonded within a matrix. Therefore, the risk of inhalation of fibres is considered to be low with minimal disturbance. In the event that bonded ACM is mechanically cut or grinded, or where bonded ACM is highly weathered, the potential for free asbestos fibres to be generated from the ACM is increased.

#### 5.3.3 Levels of Exposure

It is assumed that the construction workers would be working eight hour days, six days a week during the potential construction period, this allows for a degree of overtime.

Providing that the management controls documented in this SDMP are adopted, the levels of exposure to workers are considered to be negligible.

In the event that AF or FA are identified during the proposed redevelopment works, a risk assessment should be obtained for the material based on the Site conditions and proposed uses.

## 6 Management Controls

ACM was adopted as the contaminant of concern. The following subsections outline the management controls that should be adopted to:

- Prevent asbestos exposure resulting from ACM; and
- Assist with the management of asbestos waste in accordance with EPA Victoria guidelines.

## 6.1 Site Setup

### 6.1.1 Health and Safety

Responsible Party: Contractor

Prior to commencement of works at the Site, workers undertaking soil related activities should be inducted in accordance with this SDMP and all works should be undertaken in line with this SDMP.

The minimum health and safety requirements for the Site should include the following:

- Workers and staff undertaking soil related activities should have an understanding of the potential asbestos in soil contamination issues at the Site;
- Workers and staff undertaking soil related activities where asbestos is identified or suspected should wear the appropriate personal protective equipment (PPE) as outlined in Section 6.6 of this SDMP;
- The work area should be barricaded and signed to prevent public access;
- Dust suppression techniques described within Section 6.7 of this SDMP should be employed;
- Designated smoking, eating and amenities areas should be established away from the work zone. Care should be taken to ensure the amenities area is generally located upwind of the work area;
- Good hygiene practices, including washing of hands before eating, smoking or going to the toilet should be adopted by site workers; and
- Decontamination of personnel, equipment and plant (as required prior to leaving an asbestos work zone).

### 6.1.2 Fencing and Signage

Responsible Party: Contractor

If excavation or remedial works are to be undertaken in an area where asbestos has been identified, the area should be secure and signed appropriately (e.g. 'Authorised Persons Only' or 'Specialised Work Zone').

For the purposes of this SDMP an asbestos work zone is designated as an area where:

- Asbestos is identified and is being managed by onsite workers;
- Asbestos has been identified and is waiting to be removed by a licensed removalist;
- The licensed removalist is in the process of removing the asbestos from the soil;
- An area where asbestos has been removed, but has not been cleared by the onsite hygienist; and
- An area where soil containing asbestos is being excavated to be disposed offsite as Category C waste.

This boundary should be maintained throughout the duration of the remedial works. Contractors and site workers undertaking soil related activities and working in an asbestos work zone should be inducted into this SDMP.

## 6.2 Excavation

Subsequent to the removal of vegetation from the Site surface, an inspection of the exposed surface should be conducted by a hygienist.



### 6.2.1 Removal of ACM

Responsible Party: Site Workers

Unlicensed removal of minor asbestos is permitted in Victoria for non-friable ACM and quantities that require less than 1 hour a week per company to remove and total less than 10 m<sup>2</sup> of ACM. The ACM identified at the Site is considered to comprise ‘minor contamination’.

Where ACM contamination is identified in soil and comprises surface and sub-surface ACM, the following procedures must be followed:

- The asbestos work zone should be isolated with asbestos warning signage and barrier tape;
- Where the contamination is found to be localised, to exist in minor quantities, and it is deemed practicable to manually remove visible fragments, the ACM should be removed by a nominated person who is trained under this SDMP. If the quantities are not minor (i.e. >10 m<sup>2</sup> of ACM or will take more than 1 hour a week to remove), a licensed contractor should be engaged to remove the asbestos;
- The asbestos removalist or nominated person should pick through the soil using a rake with teeth less than 7 mm apart and greater than 10 cm long. At least two passes of picking and raking should be made with 90° direction change between each pass. The ACM fragments should be placed into a 200 µm thick plastic bag;
- Visible asbestos must be removed from the soil under asbestos removal working conditions (refer to previous two dot points) at each stage the soil is handled (i.e. following each occasion that it is moved);
- Where the nominated person has removed the visible asbestos fragments as far as reasonably practical, the soil may then be reused onsite, or disposed offsite in accordance with IWRG621 based on the chemical contamination of the soil, if required;
- Should the nominated person or hygienist find at any stage that the contamination is extensive and the hand picking of the fragments is deemed impractical, it is recommended that a licensed asbestos removalist be engaged to remove the ACM and possibly the soil. The soil should **not be** reused onsite and should be loaded directly into a plastic lined skip for offsite disposal. The soil should be classified as Category C waste (depending on chemical contaminant concentrations) in accordance with IWRG611.2 (i.e. as asbestos waste) and disposed offsite;
- Where a licensed removalist has been engaged to remove the ACM, a hygienist must be engaged to inspect the soil and confirm that visible fragments have been removed so far as reasonably practicable. The soil may then be reused onsite, or disposed offsite, in accordance with EPA Victoria Publication IWRG621 based on the chemical contaminant concentrations in the soil, if required;
- Plastic bags containing ACM fragments should be disposed of at a licensed EPA landfill as Asbestos Waste (refer to Section 6.8 of this SDMP);
- Any skips containing ACM contaminated soil should be disposed to a licensed EPA landfill as Category C waste (refer to Section 6.8 of this SDMP); and
- When removal work is being undertaken, site workers within the asbestos work zone must wear appropriate PPE (i.e. half face mask with particulate filter and disposable coveralls).

## 6.2.2 Previously Unidentified Contamination

### Responsible Party: Contractor

Minor ACM debris has previously been identified during assessment works at the Site and, although unlikely, further ACM may be encountered in surface soils throughout the Site. Should significant ACM be identified during the potential redevelopment works (i.e. greater than 10 m<sup>2</sup> of ACM or an amount that would require more than one hour per company, per week to remove), works should be conducted under the supervision of a person competent in asbestos works (i.e. a hygienist or Class A removalist). Should ACM be discovered that is consistent with the findings of this assessment, actions consistent with Section 6.2.1 should be adopted.

If previously unidentified asbestos contamination in the form of FA and AF is identified or suspected during the development works, the following procedure should be followed:

- Excavation works should cease immediately and a risk assessment should be undertaken by a hygienist (within the adjacent area);
- The area where the contaminated soil exists should be covered with plastic and isolated using barrier tape and asbestos warning signs;
- The asbestos removalist should work under asbestos removal working conditions. The conditions will include:
  - Isolating the removal area from other areas (i.e. public areas and other work areas);
  - The installation of asbestos warning signage at the entrances to the removal area; and
  - The use of appropriate PPE when removalists are within the work area (i.e. half face mask with a particulate filter and disposable coveralls).
- Where it is deemed impractical to remove the asbestos (due to the amount of contamination) the soil shall be disposed of as Category C waste in accordance with Section 6.2.1; and
- Excavation works can recommence once the contaminated soil has been removed and a hygienist has conducted a satisfactory inspection.

This procedure is subject to change based on site specific conditions and the requirements of the hygienist. It is noted that air monitoring may also be required, based the amount and form of the asbestos identified, in accordance with Section 6.5 of this SDMP.

## 6.3 Reuse of Soil Onsite

### Responsible Party: Contractor

Where soil is proposed to be reused onsite, the following procedures must be followed:

- Where ACM is identified within the soil and it is deemed practicable to manually remove visible fragments, this should be done in accordance with Section 6.2.1 of this SDMP, and under asbestos removal conditions. Where a licensed asbestos removalist is required to undertake the removal of asbestos, a hygienist must be engaged to inspect the soil and confirm that visible fragments have been removed so far as reasonably practicable. Following this, the soil may be reused onsite; or
- Where ACM is not visible within the soil, a hygienist should be engaged to inspect the soil and confirm that no visible fragments of ACM are present. Following this, the soil may be reused on site; and
- The above procedure must be undertaken on each occasion that the soil is moved.



Should the contractor or hygienist find at any stage that the contamination is extensive and the hand picking of the fragments is deemed impractical, a licensed asbestos removalist should be engaged to remove the contaminated soil. The soil should **not be** reused onsite and should be loaded directly into a plastic lined skip for offsite disposal. The soil should be classified as Category C waste (depending on chemical contaminant concentrations) in accordance with IWRG611.2 (i.e. as asbestos waste) and disposed of offsite.

## 6.4 Decontamination

If asbestos removal works have been undertaken either by onsite contractors or a licensed contractor, the area should be left clean and safe for people to enter. If required, the licensed asbestos removalist will require access to water and power to adequately establish a decontamination area.

Before leaving the asbestos work area, employees should decontaminate any tools or equipment used during the works and remove visible dust from protective clothing and footwear using an asbestos vacuum cleaner, washing or wet wiping with a damp rag. While still wearing their respirator, employees should carefully peel off the coveralls and clothing inside out and place them into an asbestos-waste container for disposal.

Respiratory protective equipment must be worn until all contaminated coveralls and clothing has been removed and bagged for disposal. After removing their respirator, employees need to wash their face and hands and clean under their fingernails.

Any machinery working within an asbestos work zone should be inspected by the asbestos hygienist prior to it leaving the asbestos work zone.

Personal decontamination must be undertaken before employees leave the asbestos work area at any time. Asbestos-contaminated PPE must not be transported outside the asbestos work area except for disposal purposes where it is double bagged, sealed and labelled. These practises help to ensure contamination of other areas in the workplace does not occur.

## 6.5 Air Monitoring

Responsible Party: Hygienist

Should non-minor quantities of asbestos or friable asbestos be identified at the Site, control airborne asbestos fibre monitoring should be considered along the boundary of the asbestos work zone.

If required, air monitoring should be undertaken each day excavation/soil disturbance works occur to soil containing asbestos. Air monitoring should also be undertaken in the cabin of an excavator operating in the asbestos work zone and in the worker's lunch room if such works are required. This monitoring would validate the adequacy of controls in place and highlight any areas where controls may need to be increased.

## 6.6 Personal Protective Equipment

Responsible Party: Contractor

The use of PPE is mandatory on the Site for workers involved in activities within an asbestos work zone. Environmental assessments identified minor ACM debris and the following should be worn by all workers at all times within the work zone, with the exception of those individuals in trucks/plant:

- Disposable nitrile or leather gloves, when in direct contact with the soil;
- Long pants;
- Long-sleeved shirt;

- Hard hat (when plant and machinery are in operation);
- High visibility fluorescent vest; and
- Steel-capped boots.

For workers working within the asbestos work zone the following PPE is also mandatory:

- Disposable coveralls;
- Disposable shoe covers or footwear that can be easily decontaminated (i.e. gumboots); and
- Half face respirator with P2 particulate filter or P2 disposable mask.

## 6.7 Dust Suppression

### Responsible Party: Contractor

Where ACM is suspected or identified, dust suppression techniques should be adopted to reduce the risk of generation of airborne asbestos fibres. Dust suppression techniques should include the following:

- If required, a water truck or hose should be utilised to keep the soil surface moist. Care should be taken to dispense the water as a mist to prevent run-off into stormwater;
- When excavators are being used onsite, the bucket should only be three quarter filled, ensuring soil does not fall out of the bucket, particularly when loading trucks;
- The excavator bucket should be emptied within the trucks tray (i.e not allowing the soil to fall from height into the tray);
- Dust-producing works should be suspended during exceptionally windy days;
- Machinery used in the work zone should be adequately decontaminated prior to leaving the Site to prevent the spread of contaminants and dust; and
- Any soil to be stockpiled, should be stockpiled on an impermeable surface and covered with weighted plastic. Soil should be stockpiled away from any sensitive receptors including residents and stormwater drains. Workers should stay upwind of stockpiles where practical.

## 6.8 Offsite Disposal

### Responsible Party: Contractor

Asbestos waste must be transported and disposed of in accordance with EPA Victoria Publication Industrial Waste Resource Guideline, *Asbestos Transport and Disposal*, July 2009 (IWRG611.2). IWRG611.2 states that asbestos waste is required to be transported by vehicles with an EPA waste transport permit and that the asbestos waste must be transported with a waste transport certificate.

The ACM is to be packed into a suitable container, which should then be sealed and labelled with asbestos warning marks.

The asbestos waste can only be disposed of to a disposal facility licensed by EPA Victoria to accept waste asbestos.

## 6.9 Site Walkover

### Responsible Party: Consultant (Hygienist)

Following the completion of the development works, a site walkover should be undertaken by a qualified hygienist to confirm that no visible ACM remains on the surface soils at the Site, prior to access to this area being provided to the site users.

In the event that this walkover identifies the presence of ACM, this should be removed in accordance with Section 6.2.1 of this SDMP.

## 6.10 Personal Hygiene

Responsible Party: Contractor

It is important that good personal hygiene practices are adopted by workers involved in asbestos removal works. Workers are to ensure they follow the decontamination process specified in Section 6.4. The workers should always wash their hands following the completion of works within asbestos work zones and should be within designated areas when eating, drinking and smoking.

## 6.11 Induction

Responsible Party: Contractor

As part of the development works, the head contractor will be responsible for conducting inductions of staff, contractors and visitors on the Site who will be involved in asbestos removal works. All contractors and workers on the Site should also be inducted to raise awareness regarding the potential exposure to asbestos in soil at the Site. This SDMP should be included in the site induction.

## 7 Documentation and Record Keeping

Responsible Party: Contractor

Relevant documentation should be maintained by the contractor regarding works that relate to the ACM contamination. The documentation may include (but not be limited to):

- Staff and contractor inductions;
- EPA Waste Transport Certificates;
- Transportation docket for soil containing asbestos waste; and
- Clearance certificates.