



March 31, 2014

Pebbles West Ltd.  
6800 Oldfield Road  
Saanichton, BC, V8N 2A3

Via Email Only

**ATTENTION:** Mr. Gerry Mounce

**REFERENCE:** **Performance Verification Plan for Certificate of Compliance  
Former TimberWest Dry Sort, 9930 South Shore Road, Honeymoon  
Bay, BC, Ministry Site ID: 10002**

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## **INTRODUCTION**

Active Earth Engineering Ltd. (Active Earth) was retained by Pebbles West Ltd. to prepare a Performance Verification Plan (PVP) to support an application for a Certificate of Compliance (COC) at the former TimberWest Dry Sort located at 9930 South Shore Road, Honeymoon Bay, BC (Site).

The PVP presents the principal risk management measures that apply at the Site so that the (COC) remains valid. The PVP was prepared in accordance with BC Ministry of Environment (MOE) Administrative Guidance 14 (Performance Verification Plans, Contingency Plans and Operation and Maintenance Plans).

## **RISK ASSESSMENT MANAGEMENT CONTROLS**

A Screening Level Risk Assessment (SLRA) was completed for the Site and presented in the report titled, "*Screening Level Risk Assessment, 9930 South Shore Road, Honeymoon Bay, BC, Prepared by Active Earth Engineering Ltd. for Pebbles West Ltd., dated March 2014*". The principal risk controls on which the SLRA was based, as presented in Schedule B of the COC, are as follows:

- (a) The geofabric liner placed above soils with elevated Copper, as defined by the metes and bounds description (See attached), must be maintained indefinitely and must not be occupied by future residential lots.
- (b) A minimum of 1.0m of uncontaminated soil must be maintained in the area of the Site containing elevated Benzene and Toluene in soil.
- (c) Groundwater at the subject site must not be used for drinking water.

## **RISK ASSESSMENT MANAGEMENT CONTROLS**

Based on the risk controls for the Site (i.e. the use of engineered controls to mitigate/eliminate risks at the Site and lack of imminent risks in the event that required controls were either not implemented or were implemented but were rendered ineffective), the Site is considered to be Remediation Type 2.

Under a Risk-Based Remediation Type 2 scenario, the MOE indicates that a PVP is required, while an operations and maintenance plan may be required.

## **PERFORMANCE VERIFICATION PLAN**

A PVP is required to ensure that the principal risk controls on which the SLRA is based are being met at the Site.

This includes the maintenance of up to date records of Performance Verification actions and results for the Site being maintained by the Responsible Person (or their agents). If requested by the Director, the Responsible Person (or their agents) must provide these records to MOE. As well, if requested by the Director, the Responsible Person(s) must provide a signed statement on whether conditions set out in this Schedule B are being met.

Performance verification actions for the Site must include the following:

- (a) The geofabric liner placed above soils with elevated Copper, as defined by the metes and bounds description (See attached), must be maintained indefinitely and must not be occupied by future residential lots.

The rationale for the liner is to prevent exposure of the underlying soils containing elevated Copper to terrestrial receptors (i.e. soil invertebrates and plants). No other receptors (e.g. human receptors) were at risk as concentrations were within these standards. The liner is designed to prevent plants and vegetation roots from penetrating into the underlying soils and to prevent access to soil invertebrates.

The liner is permeable to enable the downward flow of any rain or surface water.

The metes and bounds area is to be excluded from future residential development as this would potential result in disturbance of the liner over time.

A soil cover above the liner (minimum 0.3m) must be maintained to physically protect the liner.

To ensure the liner is functioning as designed, yearly inspection is required.

- (b) A minimum of 1.0m of uncontaminated soil must be maintained in the area of the Site containing elevated Benzene and Toluene in soil.

Toluene in soil was found to be marginally above the standards for terrestrial receptors (i.e. soil invertebrates and plants). No other receptors (e.g. Human) were at risk as concentrations were within these standards. Benzene was within all applicable surface standards.

At present, 2m of clean gravel overly the zone of toluene impacted soils. The SLRA determined that the impacted soil remaining at the Site poses no unacceptable risks to human or ecological

receptors assuming that the current clean soil cover remains in place. This intrinsic control is considered sufficient to mitigate the potential risks. To ensure the intrinsic control is functioning as designed, yearly inspection is required.

(c) Groundwater at the subject site must not be used for drinking water.

Potable water is supplied to the Site and surrounding area by municipal infrastructure and no drinking water wells were identified within 500m of the Site. Given the municipal supply, the future development planned for the Site (circa 2014), will not utilize Site groundwater for potable purposes.

Based on the above, the recommended PV action is an advisory that groundwater must not be used as drinking water; the listing of this risk control in Schedule B of the COC meets this requirement.

## **CLOSURE**

This report has been prepared by Active Earth Engineering Ltd. exclusively for Pebbles West Ltd., based on information obtained through historical records, investigations by others, interviews with persons knowledgeable of site conditions, recent investigations carried out by Active Earth, and other information sources.

Where Active Earth has relied on reports, data, studies, plans, specifications and documents prepared by others, we accept no responsibility for information contained therein. The environmental investigations were limited to those areas and contaminants specifically addressed in the report.

This report is believed to provide a reasonable representation of general environmental condition at the Site. The conclusions made in this report reflect Active Earth's best judgment in light of the information available at the time of reporting. Should additional information become available or Site conditions change, the conclusions and recommendations of this report may be subject to change.

Any use which the client or a third party, other than those specifically listed above, makes of this report, or any reliance on or decisions to be made based on it, are the responsibility of such parties. Active Earth accepts no responsibility for damages, if any, suffered by third parties as a result of business decisions made or actions based on this report.

Yours truly,

**ACTIVE EARTH ENGINEERING LTD.**



David Mitchell, P.Eng., CSAP  
Senior Engineer

Encl. Metes and Bounds Drawing

Metes and Bounds Description

Covered Fill Area within Lot 4, Section 34, Renfrew District,  
(Situate in Cowichan Lake District), Plan 40628

All and singular that certain parcel or tract of land and premises situate, lying and being in the Cowichan Valley Regional District, in the Province of British Columbia, comprising a portion of Lot 4, Section 34, Renfrew District (Situate in Cowichan Lake District), Plan 40628 which may be more particularly described as follows:

Commencing at a point situate  $40^{\circ} 10' 50''$  55.60 metres and  $130^{\circ} 10' 50''$  14.86 metres from the most westerly corner of said Lot 4, and which said bearings are referenced to said Plan 40628;

Thence  $40^{\circ} 10' 50''$  44.85 metres;

Thence  $130^{\circ} 10' 50''$  22.20 metres;

Thence  $220^{\circ} 10' 50''$  44.85 metres;

Thence  $310^{\circ} 10' 50''$  22.20 metres more or less to the point of commencement and containing by admeasurement  $996\text{m}^2$  more or less.

N. Roger Parry, BCLS

Dated this 26<sup>th</sup> day of March, 2014

File No: 010048381



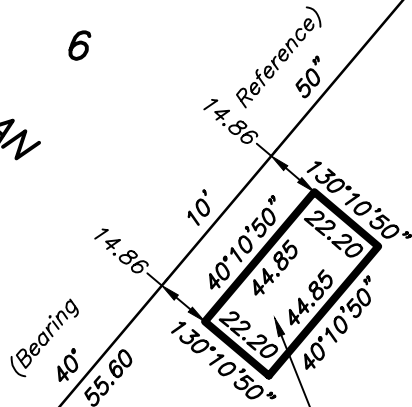
PLAN

6

COWICHAN LAKE

Boundary  
by  
Plan

40628



COVERED FILL AREA  
Area = 996 m<sup>2</sup>

4

SOUTH SHORE ROAD

Easement 'D'

REM 21

40628

3

LEGAL DESCRIPTION

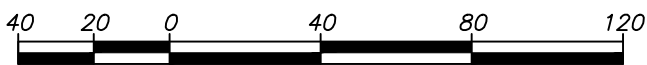
PID: 000-204-536

LOT 4, SECTION 34, RENFREW DISTRICT, (SITUATE IN COWICHAN LAKE DISTRICT), PLAN 40628

Date of Field Survey: March 12th, 2014

LEGEND

● denotes standard iron post found



All distances are in metres and decimals thereof.

The intended plot size of this plan is 216mm in width by 279mm in height (A size) when plotted at a scale of 1:2000.

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PROJECT

**ACTIVE EARTH ENGINEERING LTD**

**9930 SOUTH SHORE ROAD  
HONEYMOON BAY, BC**

SHEET TITLE

**SITE PLAN OF COVERED FILL AREA**

DRAWN <b>ME</b>	DATE <b>2014-03-26</b>	CHECKED <b>NRP</b>	SCALE <b>1:2000</b>
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SHEET No. **010048381-CNSI01-R00**