

**STAGE 1 PRELIMINARY SITE INVESTIGATION**

**Levelton Consultants Ltd.**  
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**23 LEGAL TITLES AT THE  
BEAR MOUNTAIN DEVELOPMENT SITE  
LANGFORD AND HIGHLANDS, BRITISH COLUMBIA**

Vancouver Island Region

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*Construction Materials*  
*Building Science*  
*Geotechnical*  
*Metallurgy and Corrosion*  
*Environmental*  
*Analytical Chemistry*  
*Physical Testing*

**19 June 2007**  
**File No.: 507-0127**



## EXECUTIVE SUMMARY

Ms. Rachael Sansom representing LGB9 Development Corporation (client) c/o of Turner Lane Development Corporation retained Levelton Consultants Ltd. (Levelton) to conduct a Stage 1 Preliminary Site Investigation (PSI) of 23 legal titles in the Bear Mountain development site (subject property) located in the City of Langford and the District of the Highlands, British Columbia (Figure 1, Appendix I). The Stage 1 PSI consisted of evaluating and reporting existing and historical information collected through an historical search and records review, a site review and interviews with individuals knowledgeable about the site. Levelton understands that the Stage 1 PSI is required for due diligence prior to the potential sale of the properties.

### North Portion

The north portion of the subject property (refer to Figure 2, Appendix I) is irregularly square-shaped and approximately 160 hectares in area. The north portion is highly undulating with steep slopes, bedrock outcrops, rolling hills, trees, shrubs and grassed areas. The north portion is currently under development for a new golf course and significant tree, rock and soil removal has been carried out. Significant rock and soil deposition has occurred in several areas of this portion of the property. There were no buildings on the north portion and significant bedrock and soil removal, and deposition are planned for the area.

### South Portion

The south portion of the subject property (refer to Figure 3, Appendix I) runs between the golf course greens on the southwest side and extends south of the golf course. The southeast half of the this portion of the subject property extends east of the south tip of the golf course, skirting the northern residential development and continues to the Bear Mountain Parkway. The area extends southeast to the end of Gade Road. The south portion in various locations is highly undulating, heavily forested, cleared of trees, with significant rock blasting, soil removal and fill placement. The south portion is approximately 187 hectares in area. There are no buildings on this portion of the subject property. A small temporary equipment maintenance area had been set up in the last few months on the southeast corner of the site near the Bear Mountain Parkway and area site access road. There are no buildings or shops in this area and it will be moved to a new location in the near future. There is a newly installed aboveground hydro line in the southeast portion of the site and no other services are presently connected to the development area.

A file search of the MOE Sites Registry for the subject property and surrounding area (located within a radius of approximately 0.5 km of the site) was conducted through BC Online. The search indicated the subject property was not registered in the database. Due to the size of the subject property six points were chosen in order to cover the subject property area and



adjacent properties. Of the six searched locations only the searched location off the southeast corner of the south portion of the subject property resulted in three surrounding area listings. The first listing at 2363 Setchfield Avenue was listed as inactive and remediation complete. The second listed property was located at 95-2500 Florence Lake Road and was listed as active and under assessment regarding a small site with simple contamination. This location is located south of the southeast portion of the subject property and significantly downslope of the subject property. The third listed property was located at 2156 Millstream Road and was listed as inactive and remediation complete. This address is located across Millstream Road and downslope of the subject property. These three listed properties do not pose a likely environmental risk to the subject property.

Based on the aerial photograph review, the subject property appeared to be forested until 1997. By 2005, the subject property and area were under development. The surrounding areas had some sparse residential development to the far north, east and south by the 1960's.

Levelton interviewed Mr. Peter Stepaniuk of Scansa Construction, the current subject property construction site supervisor, regarding the present use of the subject property. Mr. Stepaniuk has been familiar with the subject property since the early stages of the Bear Mountain development. To his knowledge, the subject property was forested with native vegetation prior to the Bear Mountain development. To his knowledge, there are no aboveground or underground tanks on the subject property. He was not aware of any spills or leaks of equipment onsite. According to Mr. Stepaniuk the small equipment maintenance area on the southeast portion of the subject property was only temporary and will be relocated in the coming weeks. He was unaware of any spills or leaks in this area. Waste mechanical fluids are stored in pails and regularly removed by a licensed contractor. The area is outfitted with spill kits including, absorbent booms, pads and granular materials. Mr. Stepaniuk was aware of some imported fill on the southwest corner of the north portion of the subject property. This material came from various locations in the District of Saanich. The District of Saanich claims that the material is not contaminated. A letter from Mr. Mike Ippen of the District of Saanich dated 18 May 2007 has been attached for reference. The exact location and quality of the material in the area is unknown. No confirmation of soil quality was available at the time of this study. This area of the subject property has been filled between 30m to 40m, mainly with rock, blastrock and soil materials from various locations on the Bear Mountain development site and with the imported fill.

At the time of the site review no aboveground or underground storage tanks were known historically or presently to be located on the subject property.



Based on the general topography of the area, surface water runoff would appear to infiltrate the ground surfaces of the subject property. It is expected that groundwater in the subject area flows in an overall southeasterly direction based on area topography towards Langford Lake or northwesterly towards Goldstream Park depending on site location. However, without further investigation beyond the scope of this investigation, the groundwater hydraulic gradient cannot be confirmed.

Based on the findings of the Stage 1 PSI, Levelton considers the risk of environmental impacts from activities that have occurred at the subject property or from off-site sources to be low and further environmental investigation is not recommended.



**Summary of Report Participants**

BCE SITE ID#: \_\_\_\_\_

1. This report was commissioned by:

company: LGB9 Development Corporation  
C/o Turner Lane Development Corp.  
contact name: Ms. Rachael Sansom  
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3. Contributors to report:

name/position: Eric Gauvin, P.Eng.  
Senior Environmental Engineer  
name/position: Wendy Beairsto, B.Sc.  
Environmental Scientist

4. Ministry of Environment (MOE) policy considers that a regional pollution prevention manager has no duty to consider an application for an Approval in Principle and a Certificate of Compliance or an approval of a preliminary or detailed site investigation until an applicant or the applicants agent provides a written signed statement that the documentation prepared in support of any application has been carried out in accordance with all requirements in the Environmental Management Act and the regulations thereto, and certifies that the person signing the statement has demonstrable experience in remediation of the type of contamination at the site for which the statement applies and is familiar with the remediation carried out on the site.

In consideration of the above policy, please detail below the relevant qualifications and experience of the main author(s) of the report.

**Eric Gauvin, P.Eng.** is a senior environmental engineer with over 14 years of experience as an engineering consultant. As part of his management experience, Mr. Gauvin is familiar with the requirements of the MOE *Contaminated Sites Regulation (CSR)* and the MOE regulatory process. Mr. Gauvin has been involved as project manager for a large number of environmental projects involving MOE regulations and guidelines. He has completed numerous field assessments to completion of final environmental reports, several Stage 1 and 2 PSIs, Detailed Site Investigations (DSIs), and site remediation programs for sites located throughout Vancouver Island.

**Wendy Beairsto, B.Sc.** holds a Bachelors Degree in Earth Science and has been involved in numerous projects in environmental engineering within British Columbia and Alberta since 2001. These have included Stage 1 and 2 site investigations, contaminated sites investigations, groundwater investigations, biosolids land applications, and HAZMAT surveys.

  
Signed

19 June 2007  
Date

  
Signed

19 June 2007  
Date



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## 1.0 INTRODUCTION

Ms. Rachael Sansom representing LGB9 Development Corporation (client) c/o of Turner Lane Development Corporation retained Levelton Consultants Ltd. (Levelton) to conduct a Stage 1 Preliminary Site Investigation (PSI) of 23 legal titles in the Bear Mountain development site (subject property) located in the City of Langford and the District of the Highlands, British Columbia (Figure 1, Appendix I). The Stage 1 PSI consisted of evaluating and reporting existing and historical information collected through an historical search and records review, a site review and interviews with individuals knowledgeable about the site. Levelton understands that the Stage 1 PSI is required for due diligence prior to the potential sale of the properties.

## 2.0 SITE DESCRIPTION AND SETTING

The subject property is comprised of twenty-three legal titles. The subject property for the purposes of this report will be divided into two areas. The first area will be referred to as the north portion and is the located north of the existing Bear Mountain Development. The second area will be referred to as the south portion and is located south of the present Bear Mountain Development. See Figures 2 and 3 in Appendix I for an aerial view of the subject property areas. The following table summarizes the location, legal title and the latitudes and longitudes for the subject property:

Table 1: Subject Property Information		
Area	Legal Description	Latitude <sup>1</sup> Longitude <sup>1</sup>
North	Lot A Section 4 Range 4W Highland District Plan VIP70021, Except that Part in Plan VIP75586	48° 28' 41.3" 123° 31' 26.2"
	Section 5, Range 4 West, Highland District, Except Part in Plans VIP60675, VIP67875, and VIP75584	48° 28' 48.6" 123° 31' 15.2"
	The South 60 Acres of Section 6, Range 4 West, Highland District, Except Part in Plan VIP67875	48° 29' 0.3" 123° 31' 1.3"
	Section 12, Highland District, Except Parts in Plans 10853, 1134, and 45402	48° 29' 16.6" 123° 31' 4.3"
	Section 16, Highland District Except that Part in Plan VIP72555	48° 28' 56.3" 123° 31' 44.0"
	Block B Section 75 Highland District	48° 29' 16.9" 123° 31' 31.9"
South East	Lot 1 Section 2 Range 4 West Highland District Plan VIP74504, Except Part in Plan VIP80713 and VIP80714	48° 28' 9.2" 123° 30' 53.2"
	Lot 33 Section 2 and 3 Range 4 West and Section 83 Highland District Plan VIP80330 Except Part in Plan VIP82960	48° 28' 26.3" 123° 31' 2.2"

<sup>1</sup> Capital Regional District Natural Areas Atlas





Table 1 CONT.: Subject Property Information contd.			
Area	Legal Description	Latitude <sup>1</sup>	Longitude <sup>1</sup>
South East	Lot 34 Section 3 Range 4 West Highland District Plan VIP80330	48° 28' 13.0"	123° 31' 28.1"
	Lot A Sections 1 and 2 Range 4W Highland District Plan VIP80713	48° 27' 56.2"	123° 30' 49.4"
	Lot A Sections 1 and 2 Range 4 West and Section 83 Highland District Plan VIP82483	48° 28' 6.5"	123° 31' 28.7"
	Lot 2 Section 1 Range 4 West Highland District Plan VIP78400, Except Part in Plan VIP80713	48° 28' 2.8"	123° 31' 11.7"
	Lot 3 Sections 1 and 2 Range 4 West Highland District Plan VIP78400, Except Part in Plan VIP80330, VIP82483 and VIP78400	48° 28' 2.8"	123° 31' 11.7"
	Lot A Section 2 Range 4 West and Section 83 Highland District Plan VIP82960	48° 28' 12.8"	123° 31' 11.9"
	Lot A Section 82 Highland District Plan VIP81958	48° 28' 28.0"	123° 31' 40.4"
	Lot 1 Section 82 Highland District Plan VIP76365, Except Part in Plan VIP79028		
	Lot 2 Section 82 Highland District Plan VIP76365	48° 28' 35.9"	123° 31' 45.6"
	Lot 3 Section 82 Highland District Plan VIP76365		
South West	Lot 4 District Lot 82 Highland District Plan VIP76365		
	Section 83, Highland District Except Parts in Plans VIP75509, VIP77878, VIP78873, VIP80330, VIP82040, VIP82483, and VIP82960	48° 27' 58.2"	123° 31' 53.1"
	Section 81, Highland District Except Parts in Plans VIP72556 and VIP75509	48° 28' 21.1"	123° 32' 22.9"
	Section 82, Highland District Except Part in Plans VIP75509, VIP76197, VIP76364, VIP76365, VIP76988, VIP77878, VIP80330 and VIP81135	48° 28' 30.0"	123° 32' 2.1"
	Section 84, Highland District Except That Part in Plans VIP72556 and VIP75509	48° 27' 58.8"	123° 32' 16.1"

North Portion

The north portion of the subject property (refer to Figure 2, Appendix I) is irregularly square-shaped and approximately 160 hectares in area. The north portion is highly undulating with steep slopes, bedrock outcrops, rolling hills, trees, shrubs and grassed areas. The north portion is currently under development for a new golf course and significant tree, rock and soil removal has been carried out. Significant rock and soil deposition has occurred in several areas of this portion of the property. There were no buildings on the north portion and significant bedrock and soil removal, and deposition are planned for the area.



### South Portion

The south portion of the subject property (refer to Figure 3, Appendix I) runs between the golf course greens on the southwest side and extends south of the golf course. The southeast half of the this portion of the subject property extends east of the south tip of the golf course, skirting the northern residential development and continues to the Bear Mountain Parkway. The area extends southeast to the end of Gade Road. The south portion in various locations is highly undulating, heavily forested, cleared of trees, with significant rock blasting, soil removal and fill placement. The south portion is approximately 187 hectares in area. There are no buildings on this portion of the subject property. A small temporary equipment maintenance area had been set up in the last few months on the southeast corner of the site near the Bear Mountain Parkway and area site access road. There are no buildings or shops in this area and it will be moved to a new location in the near future. There is a newly installed aboveground hydro line in the southeast portion of the site and no other services are presently connected to the development area.

## **3.0 STAGE 1 PSI PROCESS**

### **3.1 Purpose**

The purpose of the Stage 1 PSI was to provide the client with an evaluation of known and potential environmental liabilities at the site and identify present conditions or practices that may represent failure to comply with applicable environmental laws, regulations or guidelines.

### **3.2 Scope of Work**

The scope of work included the following:

- An historical search and records review. The search included but was not limited to; reviewing aerial photographs and land titles with respect to environmental concerns associated with the site and surrounding properties that may impact the site;
- A site review and interviews with persons knowledgeable about past and present activities on the site. Items addressed included: asbestos-containing materials (ACM), chemical storage and handling, underground and aboveground storage tanks (USTs, ASTs), polychlorinated biphenyls (PCBs), non-hazardous and hazardous wastes, air and water discharges, and dumping/landfilling activities;
- A review of the BC Ministry of Environment (MOE) Contaminated Sites Registry (0.5 km radius) and aquifer database;



- The identification of potential impacts of the surrounding environment on the site; and
- The preparation of this report outlining the findings of the investigation and, where applicable, identification of areas of potential environmental concern and provision of recommendations for any further work.

### 3.3 Regulatory Framework

Since 1988, the Waste Management Act (WMA) has been addressing contaminated sites in British Columbia. In June 1993, the Waste Management Amendment Act, 1993 (WMAA, also known as Bill 26) was passed. The MOE (formerly MWLAP and MELP) added provisions, which specifically address contaminated sites, and promulgated the *Contaminated Sites Regulation*<sup>2</sup> (CSR), which came into effect on 1 April 1997. On 19 July 1999 first stage, on 1 February 2002 second stage, on 21 November 2003 third stage, and on 8 July 2004 fourth stage amendments to the CSR were made. The new Environmental Management Act (formerly the Waste Management Act) and the fourth stage amendments to the CSR became effective 8 July 2004. The CSR has divided site investigations as follows:

- Stage 1 PSI comprising an historical search and records review, and a site review to identify any Areas of Potential Environmental Concern (APECs) and associated Potential Contaminants of Concern (PCOCs);
- Stage 2 PSI comprising selective sampling and analysis of soil and groundwater at each APEC to determine the presence or absence of contamination due to PCOCs identified at each APEC; and
- Detailed Site Investigation comprising evaluation of the extent and concentrations of contaminants of potential environmental concern within each area of concern (AEC) identified during the Stage 2 PSI.

Canada Mortgage and Housing Corp<sup>3</sup> (CMHC) and Canadian Standards Association<sup>4</sup> (CSA) refer to Stage 1 and Stage 2 PSIs as Phase 1 and Phase 2 Environmental Site Assessments (ESAs), respectively. The DSI is referred to as a Phase 3 ESA.

<sup>2</sup> Contaminated Sites Regulation (CSR, BC Reg. 375/96 including amendments up to BC Reg. 464/2004); Effective 1 April 1997; Ministry of Environment; Victoria, British Columbia.

<sup>3</sup> Canada Mortgage and Housing Corp (CMHC); Dated June 1993; Environmental Site Investigation Procedures; Phase 1 Environmental Site Assessments (I1 9907-02); Ottawa, Ontario.

<sup>4</sup> Canadian Standards Association (CSA); Dated November 2001 (amended April 2003); Phase 1 Environmental Site Assessment (CSAZ768-01); Rexdale, Ontario.

### 3.4 Methodology

Levelton conducts a Stage 1 PSI in accordance with the CMHC and CSA guidelines for a Phase 1 ESA, and requirements in the CSR. Current and historical information on both the site and surrounding properties was acquired through a review of available historical aerial photographs, land titles, fire insurance maps, the MOE database, city directories, interviews with individuals knowledgeable about the property, and a reconnaissance of the subject property. No sampling and analysis of materials was conducted during this study.

The site and surrounding land use history was completed by reviewing information from the following sources:

- Historical aerial photographs (1946, 1957, 1964, 1966, 1975, 1980, 1992, 1997 and 2005) obtained from the University of British Columbia (UBC), Geographic Information Centre, Department of Geography;
- Historical land titles obtained from Wendy Smith Registry Ltd;
- Topographical map;
- Geological survey map of Victoria area; and
- Discussions with Mr. Pete Stepaniuk of Scansa Construction Ltd.

Ms. Wendy Bearsto, B.Sc. of Levelton, completed the site review on 7 June 2007. The site review consisted of a drive-through of accessible areas to ascertain the presence of suspect hazardous materials and environmental concerns associated with the subject property. Photographs taken during the site review are presented in Appendix II. The review of adjacent properties was limited to what was visible from public areas or from the subject property.

## 4.0 HISTORICAL INFORMATION

The results of the historical search and records review are summarized in the following sections:

### 4.1 City of Langford and the District of the Highlands

Zoning information, provided by the City of Langford and the District of the Highlands, indicated that the north portion of the subject property is currently zoned as GB2 (Greenbleit) and BMCD1 (Bear Mountain Comprehensive Development). The south portion of the subject property is zoned CD6 (Comprehensive Development) and GB1 (Greenbelt). The surrounding areas are mainly residential and greenbelt zoning. The surrounding areas to the east of the



north portion of the subject property have some general and medium industrial zoning. The area between the north and south portions of the subject property is mainly residentially-zoned with some commercial/light industrial zoning.

#### 4.2 Land Titles

The land titles are summarized in Table 2. A copy of the land titles are attached in Appendix III.

TABLE 2: HISTORICAL LAND TITLES			
Date Entered	Owner	Title No.	
PID: 025-536-095			
April 3, 2006	LGB9 Development Corporation	FA36884	
April 3, 2006	LGB9 Development Corporation	FA36881	
March 24, 2005	LGB9 Development Corporation	EX22571	
November 1, 2004	John Goudy	EW139779	
December 5, 2002	Elizabeth Booth and Katherine Rose Burr	ET131216	
PID: 009-431-985			
December 31, 1987	Elizabeth Booth and Katherine Rose Burr	S136895	
PID: 025-838-555			
June 28, 2005	LGB9 Development Corporation	EX76566	
January 28, 2004	LGB9 Development Corporation	EW5438	
PID: 009-858-636			
June 12, 2006	LGB9 Development Corporation	FA68931	
February 9, 2006	LGB9 Development Corporation	FA11533	
November 17, 2004	LGB9 Development Corporation	EW153287	
June 7, 2004	LGB9 Development Corporation	EW70058	
January 28, 2004	LGB9 Development Corporation	EW5449	
January 16, 2004	LGB9 Development Corporation	EV147531A	
July 30, 2003	LGB9 Development Corporation	EV84427	
January 8, 2002	LGB9 Development Corporation	ES118682	
February 19, 1988	Western Forest Products Limited	EB13266	
PID: 025-838-563			
January 28, 2004	LGB9 Development Corporation	EW5439	
PID: 025-838-989			
January 28, 2004	LGB9 Development Corporation	EW5440	
PID: 025-695-118			
July 30, 2003	LGB9 Development Corporation	EV78528	
PID: 009-853-081			
July 30, 2003	LGB9 Development Corporation	EV84429	
December 31, 2001	LGB9 Development Corporation	ES118678	
August 22, 2001	Western Forest Products Limited	ES60843	
August 22, 2001	Western Forest Products Limited	ES60834	
October 28, 1974	Province of British Columbia	D4183	

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 23 Legal Titles in the Bear Mountain Development Site, Langford, BC  
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**TABLE 2. Cont'd: HISTORICAL LAND TITLES**

Date Entered	Owner	Title No.
PID: 009-853-103		
July 30, 2003	LGB9 Development Corporation	EV84426
January 8, 2002	LGB9 Development Corporation	ES118679
August 22, 2001	Western Forest Products Limited	ES60842
August 22, 2001	Western Forest Products Limited	ES60835
October 25, 1974	Province of British Columbia	D4182
PID: 025-838-865		
January 28, 2004	LGB9 Development Corporation	EW5441
PID: 026-575-655		
May 7, 2007	LGB9 Development Corporation	FB41051
February 9, 2006	LGB9 Development Corporation	FA11727
PID: 025-088-106		
June 7, 2004	LGB9 Development Corporation	EW70059
January 15, 2004	LGB9 Development Corporation	EV147530A
January 8, 2002	LGB9 Development Corporation	ES118677
August 22, 2001	Western Forest Products Limited	ES60858
PID: 026-228-211		
May 7, 2007	LGB9 Development Corporation	FB41050
January 25, 2007	LGB9 Development Corporation	FB7352
February 9, 2006	LGB9 Development Corporation	FA11537
March 24, 2005	LGB9 Development Corporation	EX22573
March 24, 2005	John Goudy	EX22568
PID: 000-010-324		
November 1, 2004	John Goudy	EW139780
January 12, 1988	John Goudy and Barbara Paterson	S136894
August 19, 1983	Agnes Isobel Goudy	M76930
PID: 009-431-985		
January 14, 2005	John Goudy	EX1111
December 5, 2005	Elizabeth Booth and Katherine Rose Burr	ET131217
PID: 009-858-652		
May 7, 2007	LGB9 Development Corporation	FB37942
May 7, 2007	LGB9 Development Corporation	FB7353
November 9, 2006	LGB9 Development Corporation	FA133799
February 9, 2006	LGB9 Development Corporation	FA11534
May 26, 2005	LGB9 Development Corporation	EX57933
November 17, 2004	LGB9 Development Corporation	EW153288
July 30, 2003	LGB9 Development Corporation	EV84428
January 8, 2002	LGB9 Development Corporation	ES118681
February 19, 1988	Western Forest Products Limited	EB13267
PID: 026-575-680		
February 9, 2006	LGB9 Development Corporation	FA11728



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TABLE 2 Cont: HISTORICAL LAND TITLES		
Date Entered	Owner	Title No.
PID: 002-115-093		
January 16, 2004	LGB9 Development Corporation	EV147592
January 15, 2004	LGB9 Development Corporation	EV147530
July 16, 2003	LGB9 Development Corporation	EV73882
July 16, 2003	LGB9 Development Corporation	EV73880
January 8, 2002	LGB9 Development Corporation	ES118680
March 3, 2000	Western Forest Products Limited	EP16336
September 26, 1974	Province of British Columbia	D6264
PID: 026-632-209		
April 3, 2006	LGB9 Development Corporation	FA36880
PID: 026-228-203		
April 3, 2006	LGB9 Development Corporation	FA36882
March 24, 2005	LGB9 Development Corporation	EX22572
March 24, 2005	John Goudy	EX22567
PID: 026-867-494		
November 9, 2006	LGB9 Development Corporation	FA126188
PID: 025-695-126		
June 12, 2006	LGB9 Development Corporation	FA68930
May 26, 2005	LGB9 Development Corporation	EX57934
January 28, 2004	LGB9 Development Corporation	EW5450A
July 30, 2003	LGB9 Development Corporation	EV78529
PID: 024-672-092		
September 11, 2003	LGB9 Development Corporation	EV83606
September 11, 2003	LGB9 Development Corporation	EV83605
April 20, 2001	Kingco 2000 Developments Ltd.	ES25898
January 18, 2000	Langford Poultry Farm Ltd.	EP1770
PID: 009-861-963		
February 19, 1988	Langford Poultry Farm Ltd.	EB13274
PID: 027-055-880		
May 7, 2007	LGB9 Development Corporation	FB37941
PID: 009-861-815		
September 8, 2003	LGB9 Development Corporation	EV83559
January 8, 2002	LGB9 Development Corporation	ES118686
October 9, 1998	Western Forest Products Limited	EM97031
March 2, 1995	Western Forest Products Limited	EJ16132
February 19, 1988	Western Forest Products Limited	EB13268



**TABLE 2 Cont: HISTORICAL LAND TITLES**

Date Entered	Owner	Title No.
<b>PID: 009-861-823</b>		
January 8, 2002	LGB9 Development Corporation	ES118687
October 9, 1998	Western Forest Products Limited	EM97032
February 19, 1988	Western Forest Products Limited	EB13269
<b>PID: 009-861-831</b>		
January 8, 2002	LGB9 Development Corporation	ES118684
February 19, 1988	Western Forest Products Limited	EB13270
<b>PID: 009-861-866</b>		
January 8, 2002	LGB9 Development Corporation	ES118685
August 20, 2001	Western Forest Products Limited	ES60830
February 19, 1988	Western Forest Products Limited	EB13271
<b>PID: 025-088-092</b>		
January 8, 2002	LGB9 Development Corporation	ES118683
August 22, 2001	Western Forest Products Limited	ES60855

The current and historical land titles indicated that prior to the current ownership a significant portion of the subject property was previously owned by Western Forest Products Limited. Some titles of the subject property were previously owned by private individuals and agricultural businesses. Some titles have been split historically into more than one legal title.

#### 4.3 Fire Insurance Maps

Fire Insurance Maps for the subject property and area were not available to Levelton for review at the City of Victoria Archives.

#### 4.4 Site Registry

A file search of the MOE Sites Registry for the subject property and surrounding area (located within a radius of approximately 0.5 km of the site) was conducted through BC Online. The search indicated the subject property was not registered in the database. Due to the size of the subject property six points were chosen in order to cover the subject property area and adjacent properties. Of the six searched locations only the searched location off the southeast corner of the south portion of the subject property resulted in three surrounding area listings. The first listing at 2363 Setchfield Avenue was listed as inactive and remediation complete. The second listed property was located at 95-2500 Florence Lake Road and was listed as active and under assessment regarding a small site with simple contamination. This location is located south of the southeast portion of the subject property and significantly downslope of the subject property. The third listed property was located at 2156 Millstream Road and was listed as inactive and remediation complete. This address is located across Millstream Road





and downslope of the subject property. These three listed properties do not pose a likely environmental risk to the subject property. A copy of the area search is presented in Appendix IV.

#### 4.5 Aerial Photographs

The review of available aerial photographs from 1946, 1957, 1964, 1966, 1975, 1980, 1992, 1997 and 2005 are summarized in Table 3:

**Table 3: Aerial Photographic Summary**

Photo ID	Review
1946 BC245 #7172	The subject property and surrounding areas appeared to be thickly forested and undeveloped. A power line right of way runs through the subject property from the southwest corner to the northeast corner. The quality and scale of the aerial photographs were poor.
1957 BC2090 #4/5	The subject property and surrounding area properties appeared unchanged and similar to the 1946 aerial photographs. The quality and scale of the aerial photographs were poor.
1964 BC5091 #41 - 45	The subject property and surrounding area properties appeared unchanged and similar to the 1957 aerial photographs.
1966 BC5171 #129 - 132	The subject property appeared unchanged and similar to the 1964 aerial photographs. Some residential development was noted to the east on Millstream Road and some to the far south near Florence Lake. Residential development was also noted to the far north of the subject property.
1975 BC5666 #186 - 188	The subject property and surrounding areas appeared unchanged and similar to the 1966 aerial photographs.
1980 30BCC248 #24 - 26	The subject property and surrounding areas appeared unchanged and similar to the 1975 aerial photographs. Increased residential development was noted to the south near Florence Lake.
1992 15BCB92140 #251 - 259	The subject property and surrounding areas appeared unchanged and similar to the 1980 aerial photographs.
1997 15BCB97007 #97-102	The subject property and surrounding areas appeared unchanged and similar to the 1992 aerial photographs.
2005 A8500 RC-13 #252 - 256	The north portion of the subject property appeared to have some tree removal and soil/rock excavation for the Bear Mountain development. The present golf course and further preliminary site development was noted adjacent and immediately north of the south portion of the subject property. The southeast portion had some tree removal done and access road built.

Based on the aerial photograph review, the subject property appeared to be forested until 1997. By 2005, the subject property and area were under development. The surrounding areas had some sparse residential development to the far north, east and south by the 1960's.

#### **4.6 Personal Communication**

Levelton interviewed Mr. Peter Stepaniuk of Scansa Construction, the current subject property construction site supervisor, regarding the present use of the subject property. Mr. Stepaniuk has been familiar with the subject property since the early stages of the Bear Mountain development. To his knowledge, the subject property was forested with native vegetation prior to the Bear Mountain development. To his knowledge, there are no aboveground or underground tanks on the subject property. He was not aware of any spills or leaks of equipment onsite. According to Mr. Stepaniuk the small equipment maintenance area on the southeast portion of the subject property was only temporary and will be relocated in the coming weeks. He was unaware of any spills or leaks in this area. Waste mechanical fluids are stored in pails and regularly removed by a licensed contractor. The area is outfitted with spill kits including, absorbent booms, pads and granular materials. Mr. Stepaniuk was aware of some imported fill on the southwest corner of the north portion of the subject property. This material came from various locations in the District of Saanich. The District of Saanich claims that the material is not contaminated. A letter from Mr. Mike Ippen of the District of Saanich dated 18 May 2007 has been attached for reference. The exact location and quality of the material in the area is unknown. No confirmation of soil quality was available at the time of this study. This area of the subject property has been filled between 30m to 40m, mainly with rock, blastrock and soil materials from various locations on the Bear Mountain development site and with the imported fill.

#### **4.7 City Directories**

City directories were not available for the subject property and surrounding area at the City of Victoria archives. The subject property and area were developed after the last issued directory in 1999. Levelton is aware that the area to the far southwest has been residentially developed since approximately the 1950's with some commercial and industrial development since the 1980's.



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Engineering Solutions

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#### 4.8 Natural Gas

Terasen Gas records indicated that the subject property is not connected to natural gas service.

#### 5.0 SITE GEOLOGY, SURFACE WATER AND GROUNDWATER

Based on the Ministry of Energy and Mines Quaternary Geological Map of Greater Victoria, the soils at the subject property are expected to consist of bedrock outcrops thinly covered by older Pleistocene deposits and upland peat bog areas.

Based on the general topography of the area, surface water runoff would appear to infiltrate the ground surfaces of the subject property. It is expected that groundwater in the subject area flows in an overall southeasterly direction based on area topography towards Langford Lake or northwesterly towards Goldstream Park depending on site location. However, without further investigation beyond the scope of this investigation, the groundwater hydraulic gradient cannot be confirmed.

According to the MOE Groundwater Section Aquifer Database, a moderately vulnerable bedrock aquifer #680 is located beneath the subject property. A search of the water well database of the Groundwater Section of MOE indicated that several water wells are located to the north along Finlayson Arm Road and to the east along Millstream Road and within a 1.5 km radius of the subject property. The status and use of these wells are not known.

#### 6.0 STAGE 1 PSI FINDINGS

##### 6.1 Air and Water Discharges

No potential environmental issues regarding air discharges or water discharges were noted at the subject property during the site review.

##### 6.2 Aboveground and Underground Storage Tanks

At the time of the site review no aboveground or underground storage tanks were known historically or presently to be located on the subject property. The City of Langford and the District of Highlands do not have records regarding permits to install or remove any tanks from the subject property.

### 6.3 Asbestos-Containing Materials

Asbestos in the workplace is defined as a Designated Substance under the Occupational Health and Safety Regulation<sup>2</sup> (OHSR). The OHSR governs the safe handling of asbestos-containing materials (ACMs) in the workplace. This regulation requires owners to notify work persons of the presence of friable ACMs once their presence has been confirmed. OHSR also requires the implementation of an Asbestos Management Plan until all ACMs have been removed from the building. ACMs were discontinued from use in Canada in the late 1970s/early 1980s, although non-friable asbestos is still found in many buildings.

There were no buildings on the subject property at the time of the site review, therefore the potential for ACMs to be present is low.

### 6.4 Lead-Based Paints

Lead-based paint in the workplace is defined as a Designated Substance under the Occupational Health and Safety Regulation<sup>3</sup> (OHSR). The OHSR governs the safe handling of materials in the workplace. This regulation requires owners to notify work persons of potential airborne lead exposure once the presence of lead has been confirmed. OHSR also requires the implementation of an exposure control plan if workers are or may be exposed to lead in excess of 50% of the exposure limits, or if exposure through any route of entry could result in elevated lead body-burdens. Lead-based paints were not typically used after 1980.

There were no buildings on the subject property at the time of the site review, therefore the potential for lead-based paints to be present is low.

### 6.5 Chemical Storage and Handling

Levelton did not observe any areas of chemical storage and handling during the site review.

<sup>2</sup> Sections 6.1 – 6.32; Occupational Health and Safety Regulation; BC Regulation 296/97; Effective 15 April 1998; Workers' Compensation Board of British Columbia; Richmond, British Columbia.

<sup>3</sup> Sections 6.59 – 6.69; Occupational Health and Safety Regulation; BC Regulation 296/97; Effective 15 April 1998; Workers' Compensation Board of British Columbia; Richmond, British Columbia.



## 6.6 Hazardous Waste Generation, Storage and Disposal

During the site review of the accessible areas of the site, no hazardous waste was observed to be generated at the subject property. Some waste oil and mechanical fluids are collected from the onsite equipment in the maintenance area on the south portion of the subject property. These wastes are collected regularly by a licensed contractor. There are no records of any spills or leaks on the subject property associated with these waste fluids.

## 6.7 Non-Hazardous Waste Generation, Storage and Disposal

During the site review of the accessible areas of the site, non-hazardous waste was not observed on the subject property.

## 6.8 Ozone-Depleting Substances

An ozone-depleting substance (ODS) refers to any substance containing chlorofluorocarbon (CFC), hydrochlorofluorocarbon (HCFC), halon or any other material capable of destroying ozone in the atmosphere. ODSs have been used in refrigerators, freezers, rigid polyurethane foam and insulation, laminates, aerosols, air conditioners, fire extinguishers, cleaning solvents and the sterilization of medical equipment. Federal regulations introduced in 1995 required the elimination of production and import of CFCs by 1 January 1996 (subject to certain essential uses) and a freeze on the production and import of HCFC-22 by 1 January 1996. These regulations also require the complete elimination of HCFC-22 by the year 2020.

Levelton did not observe any potential ODS-containing equipment during the site review.

## 6.9 Polychlorinated Biphenyls

In Canada, polychlorinated biphenyls (PCBs) were prohibited from being used in products, equipment and machinery, electrical transformers and capacitors that were manufactured or imported into the country after 1 July 1980. However, older equipment in use after this date may still contain PCBs if the equipment's fluid has not been changed, or if there was sufficient inventory of such equipment.

Some pole-mounted electrical transformers were noted on the south portion of the subject property. These poles were newly installed in the area and labels on these transformers were not visible.



## 6.10 Mercury

The *Hazardous Waste Regulation* (under the Environmental Management Act) recognizes mercury as a potential hazardous waste based on its leachability and volume for transport. Mercury may be found in thermostats, switches and vapour lamps.

Levelton did not observe any mercury-containing items in the accessible areas of the subject property.

## 6.11 Radon and Methane Gas

### Radon

Radon is a colourless, odourless gas that occurs naturally from the breakdown of uranium. Radon can be found where soils and rocks contain uranium mineral. In open air or in areas with high air circulation, radon is not considered a health problem. However, in confined spaces (such as basements or underground structures), radon can concentrate and become a health hazard. Bedrock and soil in the area are known for having low radon gas-generating potential. The Ministry of Health<sup>7</sup> has completed a regional study of radon in homes in British Columbia. The results of the study indicated that radon is not a concern in the Lower Mainland and Coastal Region of British Columbia.

Levelton does not expect radon gas to be an environmental issue at the site.

### Methane Gas

Based on observations made at the time of the site review, Levelton does not expect deleterious fill material to be present on the subject property. There were no records available to Levelton to suggest that questionable fill material was placed on the site in the past.

Levelton does not expect methane gas to be an environmental issue at the site.

## 6.12 Soils and Fill Materials

Based on the observations made at the time of the site review, Levelton is aware of some areas of fill material on the subject property in the north portion (southwest area) of the subject

<sup>7</sup> Memorandum; Dated 8 December 1992; Mr. Brian Phillips, Director, Radiation Protection Services Branch; Ministry of Health; Burnaby, British Columbia.



property that has been raised by approximately 30m to 40m in elevation with rock and soil fill. The majority of the fill in this area has come from onsite native sources and within the Bear Mountain development site. Approximately 5% of this fill material has been imported to the site by the District of Saanich. The District of Saanich claims that the fill soil is not contaminated. Levelton does not know where the material originated from. No confirmation of soil quality was available at the time of this study. There are various areas of mass rock and soil removal and deposition. The bulk of the reworked material has stayed onsite. Significant blasted bedrock crushing and screening has occurred on the subject property at various times and locations. There were no records available to Levelton to suggest that fill material was placed on the subject property historically.

### 6.13 Surrounding Land Uses and Potential Off-Site Impacts

The properties in the immediate vicinity of the subject property are residential and commercial/light industrial properties. The summary of the surrounding area land use is as follows:

<b>Direction</b>	<b>Land Use</b>
<b>North</b>	Forest and Sparse Residential
<b>East</b>	Millstream Creek, Forested Areas and Sparse Residential, Light Industrial
<b>South</b>	Forested with some sparse residential development and preliminary residential development.
<b>West</b>	Goldstream Provincial Park
<b>Central</b>	Bear Mountain Resort - Commercial

Based on a review from publicly accessible areas, the surrounding areas were mainly forested with some sparse residential development to the north, south and east. Goldstream Provincial Park is located to the west of the subject property. The surrounding areas do not pose a likely environmental risk to the subject property.

## 7.0 CONCLUSIONS AND RECOMMENDATIONS

Based on the findings of the Stage 1 PSI, Levelton considers the risk of environmental impacts from activities that have occurred at the subject property or from off-site sources to be low and further environmental investigation is not recommended.

## 8.0 PROFESSIONAL STATEMENT

Under Part 16, Section 63 of the *Environmental Management Act, Contaminated Sites Regulation* (BC Reg. 375/96, effective 1 April 1997), Levelton confirms that:

- the site review report has been prepared in accordance with requirements of the Act and the regulation; and
- the person(s) signing this report has (have) demonstrable experience in remediation of the type of contamination at the site for which this statement applies, and is (are) familiar with completing the work.

## 9.0 CLOSURE

No environmental site assessment or review can wholly eliminate uncertainty regarding the potential for recognized environmental conditions in connection with a property. Performance of a standardized preliminary site investigation protocol is intended to reduce, but not eliminate, uncertainty regarding the potential for recognized environmental conditions in connection with the site, given reasonable limits of time and cost.

This report has been prepared by Levelton Consultants Ltd. (Levelton) exclusively for LGB9 Development Corporation and is intended to provide an assessment of the potential for the presence of contamination on the subject property. The conclusions made in this report reflect information available at the time of preparation. No other warranty, expressed or implied, is made. Any use which a third party makes of this report, or any reliance on or decisions to be





made or actions based on it, are the responsibility of such third parties. Levelton accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions based on this report. The standard limitations of this report are presented in Appendix VI.

Respectfully submitted,  
**LEVELTON CONSULTANTS LTD.**

A handwritten signature in black ink, appearing to read "W. Bearsto", written over a horizontal line.

Wendy Bearsto, B.Sc.  
Environmental Scientist

A handwritten signature in black ink, appearing to read "Eric Gauvin", written over a horizontal line. To the left of the signature is a circular stamp containing the date "19 June 07".

Reviewed by:  
Eric Gauvin, P. Eng.  
Senior Environmental Engineer

N ↑

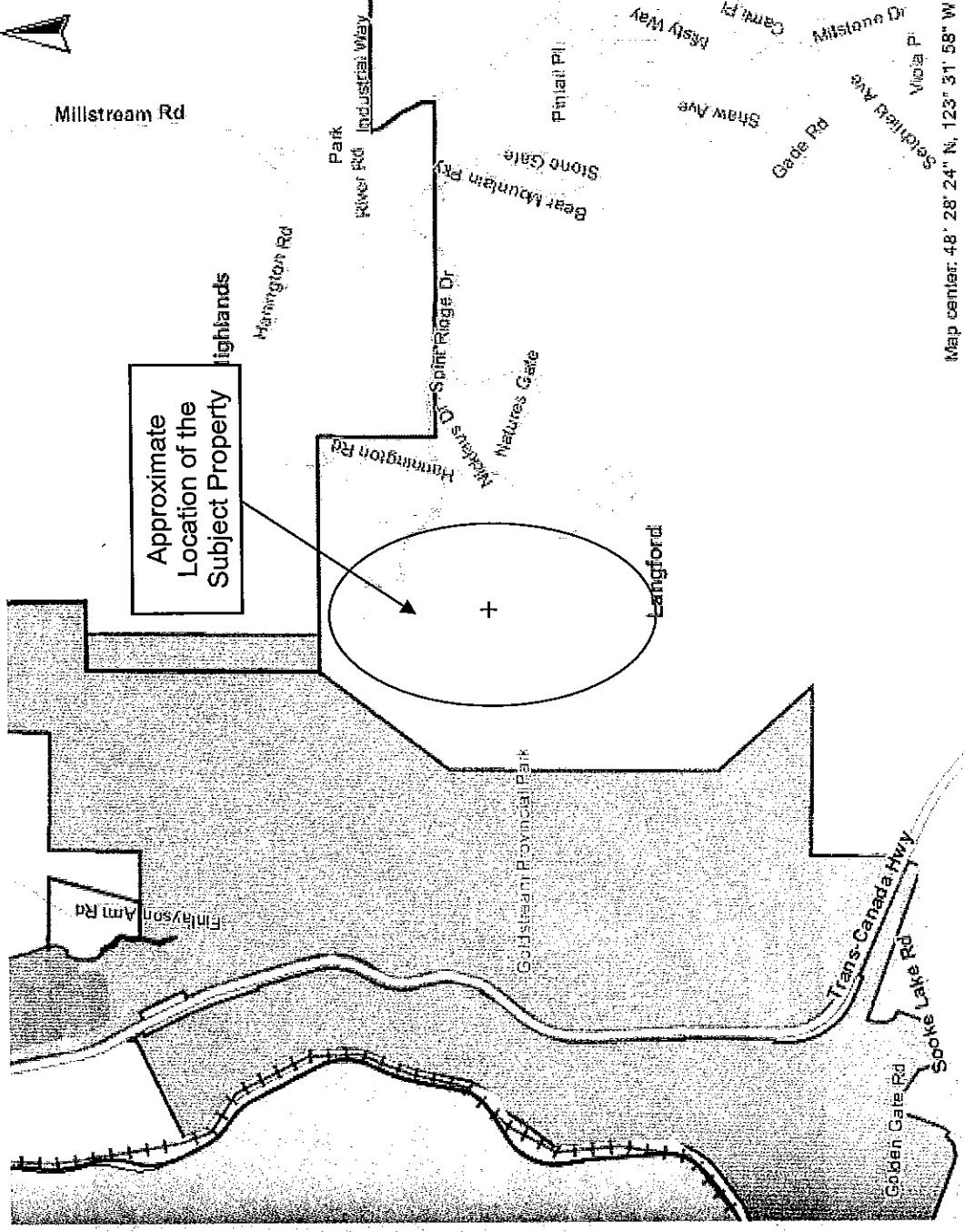


FIGURE NO:  
1

PROJECT:

23 LEGAL TITLES AT THE BEAR MOUNTAIN DEVELOPMENT SITE, LANGFORD, BC

TITLE:

SITE LOCATION

CLIENT:

LGB9 DEVELOPMENTS CORPORATION

DATE:

JUNE 2007

FILE NO.:

507-0127

SCALE:

N/A

DRAWN BY:

WB

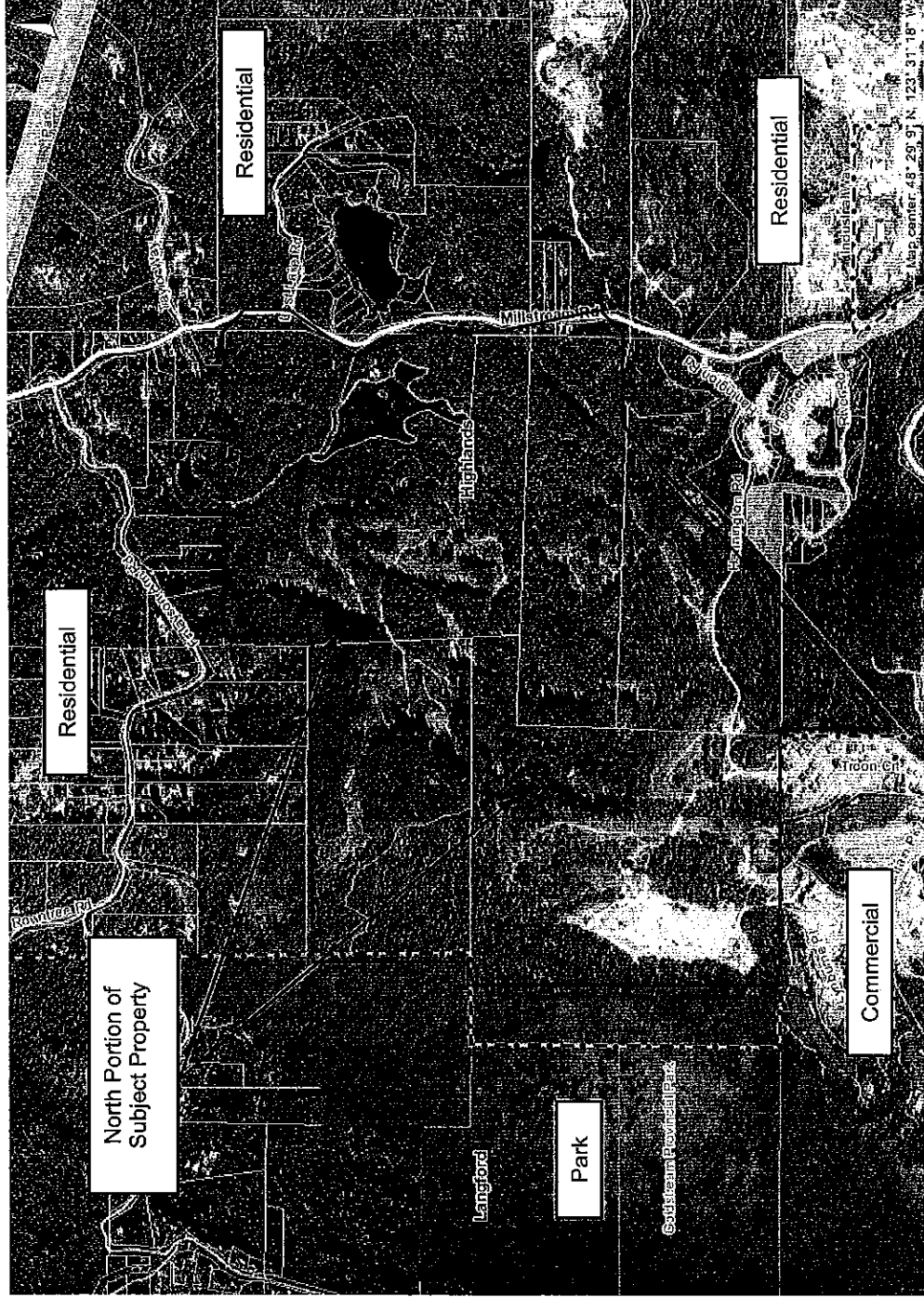



FIGURE NO.:  
2

PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION			
23 LEGAL TITLES AT THE BEAR MOUNTAIN DEVELOPMENT SITE, LANGFORD, BC			
TITLE: SITE PLAN AND SURROUNDING LAND USE - NORTH PORTION			
CLIENT: LGB9 DEVELOPMENT CORPORATION			
DATE: JUNE 2007	FILE NO.: 507-0127	SCALE: N/A	DRAWN BY: WB

N ↑



 <p><b>LEVELTON</b> Engineering Solutions</p>	<p>PROJECT: STAGE 1 PRELIMINARY SITE INVESTIGATION 23 LEGAL TITLES AT THE BEAR MOUNTAIN DEVELOPMENT SITE, LANGFORD, BC</p>	
	<p>TITLE: SITE PLAN AND SURROUNDING LAND USE - SOUTH PORTION</p>	
<p>CLIENT: LGB9 DEVELOPMENT CORPORATION</p>		
<p>DATE: JUNE 2007</p>	<p>FILE NO.: 507-0127</p>	<p>SCALE: N/A</p>
<p>FIGURE NO.: 3</p>	<p>DRAWN BY: WB</p>	