

**SITE OBSERVATION FORM:** DNV Landslide Risk Assessment  
**LOCATION:** 2249 Berkley Avenue  
**INSPECTION DATE:** (mm/dd/yy) 11/09/05  
**WEATHER:** Overcast



**BGC ENGINEERING INC.**  
 AN APPLIED EARTH SCIENCES COMPANY

500 - 1045 Howe Street  
 Vancouver, BC  
 Canada V6Z 2A9

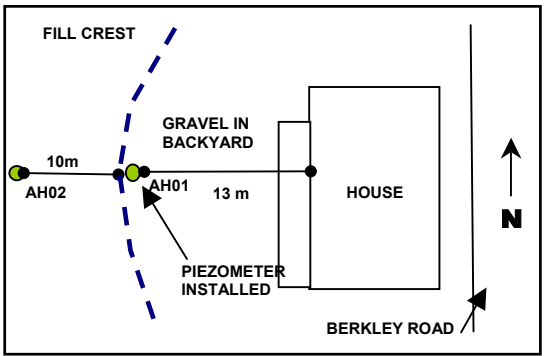
THICKNESS OF LOOSE MATERIALS	<1 m	1-2 m	2-3 m	>3 m
AT SLOPE CREST			<input checked="" type="checkbox"/>	
10 m DOWNSLOPE FROM SLOPE CREST			<input checked="" type="checkbox"/>	

SLOPE BELOW CREST/ RETAINING STRUCTURE	SLOPE = 38°		
	CRACKS	SLIDES	EROSION
OBSERVATIONS: Backyard sloping gently 5°, fill pile sloping 38°, down slope area below fill slope is 28°.			

TREES BELOW CREST/ RETAINING STRUCTURE	STRAIGHT	PISTOL-BUTT	LEANING
PERCENT CONIFER: 50%	<input checked="" type="checkbox"/>		
OBSERVATIONS: Mostly straight, few leaning			

RETAINING STRUCTURES	YES	NO <input checked="" type="checkbox"/>	HEIGHT= n/a
TYPE	CONCRETE	TIMBER CRIB	OTHER:
DEFORMATION	UNDEFORMED	CRACKED	BULGING
OBSERVATIONS:			

DEFORMATION IN BACKYARD	YES <input checked="" type="checkbox"/>	NO
LOCATION: Backyard		
DESCRIPTION: Minor settlement, covered in clean coarse gravels		



POOLS	YES	NO <input checked="" type="checkbox"/>
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	YES <input checked="" type="checkbox"/>	NO
OBSERVATIONS: Down slope according to owner		

HOUSE DISTANCE TO CREST = 13 m

RECEIVES SURFACE RUNOFF FROM	BACKYARD	1/2 ROOF	FULL ROOF	FRONT YARD	STREET
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
OBSERVATIONS:					

CONNECTED TO STORM SEWER	YES	NO <input checked="" type="checkbox"/>	UNSURE
OWNERS COMMENTS: DNV reports that this property is not connected to storm sewer.			

**GENERAL OBSERVATIONS**

- Crack on south side of property reported in the 1980 Klohn report is not observed
- Seepage all year round approximately 50 m down slope according to owner
- According to owner, site inspected by an engineer. Test pits and piezometer observed.



Figure 1. 2249 Berkley Avenue – Front of the house



Figure 2. 2249 Berkley Avenue – View looking north along crest with marked piezometer





Figure 3. 2249 Berkley Avenue – View looking south along crest with marked piezometer



Figure 4. 2249 Berkley Avenue – Drainage pipe exit

# INSPECTION LOCATION # 2249 Berkley

**Project :** DNV Landslide Risk Assessment

**Project No. :** 0404-002-01

**Location :** 2249 Berkley  
**Drill Method :** Dutch Hand Auger  
**Inspection Date :** 09 Nov 05  
**Logged by :** SF/JB  
**Reviewed by :** MJP

Depth (m)	Lithologic Description	Depth To Water Table	Depth (m)	Lithologic Description	Depth To Water Table
	<p><b>AUGERHOLE:</b> BGC05-2249BER-AH01 on Slope Crest  <b>FINAL DEPTH OF AUGERHOLE:</b> 2.50 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 2.35 m</p>			<p><b>AUGERHOLE:</b> BGC05-2249BER-AH02 5.7 m Downslope  <b>FINAL DEPTH OF AUGERHOLE:</b> 3.00 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.02 m</p>	
0.0	<p>SILT (ML) Trace fine sand, dark brown, moist, homogeneous, organics [TOPSOIL] SAND (SP) Fine to medium sand, trace silt, medium grained gravel sized sand clasts, poorly graded, loose, moist, light brown with brown mottling, homogeneous, roots [FILL] 0.20 m - 1.30 m: Some very loose zones</p>		0.0	<p>SILT (ML) Trace fine sand, dark brown, moist, homogeneous, organics [TOPSOIL] SILT (ML) Trace sand, trace fine gravel sized silt clasts, non plastic, loose, light grey and brown with brown mottling, moist to wet, homogeneous, trace organics [FILL]</p>	
-0.5			-0.5		
-1.0			-1.0	<p>SILT (ML) Non plastic, firm, light grey to grey brown with orange brown mottling on top surface, moist, homogeneous, no cementation [COLLUVIUM]</p>	▼
-1.5	<p>1.30 m - 1.40 m: Organic material, loose to compact, highly decomposed, some charcoal</p> <p>SILT (ML) Trace fine sand, trace fine gravel, gravel sized silt clasts, non plastic, soft to firm, orange brown staining, moist, homogeneous [FILL]</p>		-1.5		
-2.0			-2.0		
-2.5	<p>2.30 m: Material becomes denser SILT (ML) Trace fine sand, non plastic, stiff, light grey with trace orange brown mottling, mottling decreases with depth, moist, homogeneous [Weathered GLACIOMARINE] 2.50 m: EOH - Refusal as material is too stiff to auger through.</p>		-2.5		
-3.0			-3.0	<p>3.00 m: EOH - Extent of auger</p>	

BGC05-2249BER-AH01

<b>SITE OBSERVATION FORM:</b>	<b>DNV Landslide Risk Assessment</b>
<b>LOCATION:</b>	<b>2251 Berkley Avenue</b>
<b>INSPECTION DATE:</b> (mm/dd/yy)	<b>11/09/05</b>
<b>WEATHER:</b>	<b>Overcast</b>



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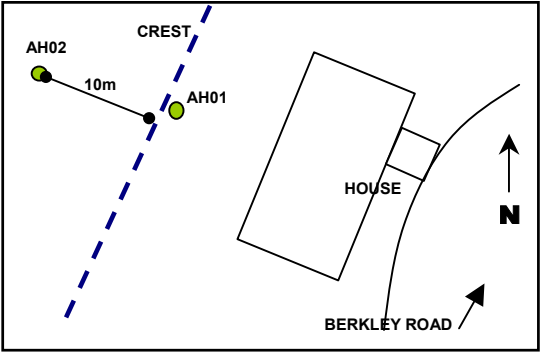
THICKNESS OF LOOSE MATERIALS	<1 m	1-2 m	2-3 m	>3 m
1 m BACK FROM SLOPE CREST			<input checked="" type="checkbox"/>	
10 m DOWNSLOPE FROM SLOPE CREST		<input checked="" type="checkbox"/>		

<b>SLOPE BELOW CREST/ RETAINING STRUCTURE</b>	<b>SLOPE = 34°</b>		
	<b>CRACKS</b>	<b>SLIDES</b>	<b>EROSION</b>
			<input checked="" type="checkbox"/>
<b>OBSERVATIONS:</b> Some erosion immediately below fence at slope crest, soil oversteepened.			

<b>TREES BELOW CREST/ RETAINING STRUCTURE</b>	<b>STRAIGHT</b>	<b>PISTOL-BUTT</b>	<b>LEANING</b>
<b>PERCENT CONIFER:</b>	95%	<input checked="" type="checkbox"/>	
<b>OBSERVATIONS:</b> Mostly straight, some pistol butts observed.			

<b>RETAINING STRUCTURES</b>	<b>YES</b>	<b>NO</b> <input checked="" type="checkbox"/>	<b>HEIGHT= n/a</b>
<b>TYPE</b>	<b>BLOCKS</b>	<b>CONCRETE</b>	<b>TIMBER CRIB</b>
<b>DEFORMATION</b>	<b>UNDEFORMED</b>	<b>CRACKED</b>	<b>SETTLED</b>
<b>OBSERVATIONS:</b> None observed.			

<b>DEFORMATION IN BACKYARD</b>	<b>YES</b>	<b>NO</b> <input checked="" type="checkbox"/>
<b>LOCATION:</b>		
<b>DESCRIPTION:</b> None observed.		



**HOUSE DISTANCE TO CREST = 14.4 m**

<b>POOLS</b>	<b>YES</b>	<b>NO</b> <input checked="" type="checkbox"/>
<b>DESCRIPTION:</b> None		

<b>SEEPAGE/ SPRINGS IN OR BELOW FILL</b>	<b>YES</b>	<b>NO</b> <input checked="" type="checkbox"/>
<b>OBSERVATIONS:</b> A white PVC drainage pipe discharges at top of slope		

<b>RECEIVES SURFACE RUNOFF FROM</b>	<b>BACKYARD</b>	<b>1/2 ROOF</b>	<b>FULL ROOF</b>	<b>FRONT YARD</b>	<b>STREET</b>
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
<b>OBSERVATIONS:</b> Driveway slopes towards house from street, minimal curb height.					

<b>CONNECTED TO STORM SEWER</b>	<b>YES</b>	<b>NO</b> <input checked="" type="checkbox"/>	<b>UNSURE</b>
<b>OWNERS COMMENTS:</b> DNV reports that this property is not connected to storm sewer.			

<b>GENERAL OBSERVATIONS</b>
<ul style="list-style-type: none"> <li>• Drainage pipe discharges at the top of the slope on the north side of the lawn, erosion below.</li> <li>• Compost and debris dumped over the crest of the slope.</li> <li>• Deck distance to crest is 12.1 m.</li> </ul>





Figure 1. 2251 Berkley Avenue – Front of the house



Figure 2. 2251 Berkley Avenue – View down-slope from crest



Figure 3. 2251 Berkley Avenue – View looking south along crest

# INSPECTION LOCATION # 2251 Berkley

**Project :** DNV Landslide Risk Assessment

**Project No. :** 0404-002-01

**Location :** 2251 Berkley  
**Drill Method :** Dutch Hand Auger  
**Inspection Date :** 09 Nov 05  
**Logged by :** MB/ES  
**Reviewed by :** MJP

Depth (m)		Depth To Water Table		Depth (m)		Depth To Water Table
	<p><b>AUGERHOLE:</b> BGC05-2251BER-AH01 1m back from Slope Crest  <b>FINAL DEPTH OF AUGERHOLE:</b> 2.40 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 2.10 m</p> <p style="text-align: center;">Lithologic Description</p>				<p><b>AUGERHOLE:</b> BGC05-2251BER-AH02 10 m Downslope  <b>FINAL DEPTH OF AUGERHOLE:</b> 1.50 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.40 m</p> <p style="text-align: center;">Lithologic Description</p>	
0.0	SAND (SM) Fine to medium sand, silty, poorly graded sand, loose, dark brown, no odour, moist, homogeneous, no cementation [TOPSOIL]			0.0	SAND (SP) Fine to medium sand, some silt, poorly graded, loose, dark brown, no odour, moist, homogeneous, no cementation [TOPSOIL]	
0.5	SAND (SP) Fine to medium sand, trace silt, fine gravel sized silt clasts, poorly graded sand, loose, light brown to brown with orange mottling, odour, moist, homogeneous, no cementation [FILL]			0.5	SAND (SP) Fine to medium sand, trace silt, fine gravel sized soft sand clasts, poorly graded sand, loose, light brown to brown with orange mottling, no odour, moist, homogeneous, no cementation [FILL] 0.50 m - 0.60 m: Organic influence in material, colour is dark brown	
1.0	SAND (SW) Fine to coarse sand, some fine to medium grained gravel, well graded sand, loose, grey/brown, no odour, moist, homogeneous, no cementation [FILL] 1.25 m - 1.50 m: Some organics, dark brown			1.0	SILT (ML) and SAND (SP) Fine to medium sand, poorly graded sand, low plastic silt, soft, brown with orange mottling, no odour, moist, homogeneous, no cementation, non dilatant [COLLUVIUM]	
1.5	1.60 m - 1.70 m: Charcoal			1.5	SILT (ML) and SAND(SP) Fine to medium sand, trace fine to medium gravel, trace cobbles, poorly graded sand, low plastic silt, stiff, greyish brown with orange mottling, no odour, moist, homogeneous, no cementation, non dilatant [Weathered GLACIOMARINE] 1.50 m: EOH - Refusal of auger on cobble	
2.0	SILT (ML) Sandy, fine to medium sand, some fine to coarse sub rounded gravel, low plastic silt, firm, grey and brown with orange Fe staining/mottling, no odour, moist, homogeneous, no cementation, non dilatant [COLLUVIUM]			2.0		
2.5	SILT (ML) Some fine sand, low plastic, stiff, grey, minor orange mottling, no odour, moist, homogeneous, no cementation, non dilatant [Weathered GLACIOMARINE] 2.40 m: EOH - Refusal as material too stiff to auger through			2.5		
3.0				3.0		



**SITE OBSERVATION FORM:** DNV Landslide Risk Assessment  
**LOCATION:** 2265 Berkley Avenue  
**INSPECTION DATE:** (mm/dd/yy) 11/09/05  
**WEATHER:** Raining, heavy rain for several days prior to visit.



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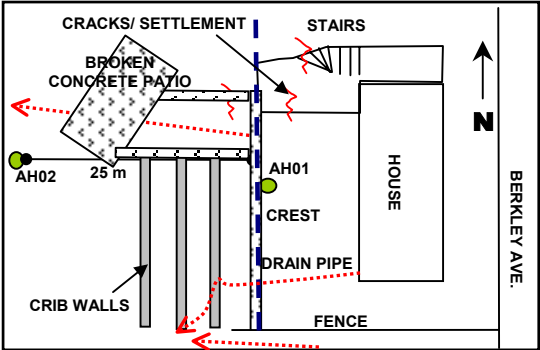
THICKNESS OF LOOSE MATERIALS	<1 m	1-2 m	2-3 m	>3 m
CREST LINE		<input checked="" type="checkbox"/>		
25 m DOWNSLOPE FROM SLOPE CREST		<input checked="" type="checkbox"/>		

<b>SLOPE BELOW FENCE/ RETAINING STRUCTURE</b>	SLOPE = 36° to inflection point and 20° after inflection		
	CRACKS	SLIDES	EROSION
OBSERVATIONS: Slope angle taken from below the fallen retaining wall/patio for 15 m then slope changes to 20°. 4 tiers of crib wall 0.7-0.8 m high on the south side of property.			<input checked="" type="checkbox"/>

<b>TREES BELOW FENCE/ RETAINING STRUCTURE</b>	STRAIGHT	PISTOL-BUTT	LEANING
PERCENT CONIFER:	75%	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
OBSERVATIONS:			

<b>RETAINING STRUCTURES</b>	YES <input checked="" type="checkbox"/>	NO	HEIGHT= 0.7 m –0.8 m
TYPE	BLOCKS	CONCRETE	TIMBER CRIB
DEFORMATION	UNDEFORMED	CRACKED	SETTLED
OBSERVATIONS: Timber crib appears intact, it was constructed after the concrete retaining wall/ patio cracked and fell. Owner notes that concrete slab broke off after an earthquake approximately 20 years ago.			

<b>DEFORMATION IN BACKYARD</b>	YES <input checked="" type="checkbox"/>	NO
LOCATION: Backyard		
DESCRIPTION: Settlement and cracks in concrete patio.		



<b>POOLS</b>	YES	NO <input checked="" type="checkbox"/>
DESCRIPTION: None observed		

<b>SEEPAGE/ SPRINGS IN OR BELOW FILL</b>	YES <input checked="" type="checkbox"/>	NO
OBSERVATIONS: Appears to be sourced from the base of the broken concrete wall approx. 5 m from the crest of the original slope.		

HOUSE DISTANCE TO CREST = 7.5 m

<b>RECEIVES SURFACE RUNOFF FROM</b>	BACKYARD <input checked="" type="checkbox"/>	½ ROOF <input checked="" type="checkbox"/>	FULL ROOF <input checked="" type="checkbox"/>	FRONT YARD	STREET
OBSERVATIONS: Middle to lower slope (15-30 m from crest) is saturated from seepage and drainage pipes from this property and property to the south.					

<b>CONNECTED TO STORM SEWER</b>	YES	NO <input checked="" type="checkbox"/>	UNSURE
OWNERS COMMENTS: DNV reports that this property is not connected to storm sewer.			

- GENERAL OBSERVATIONS**
- Unable to place AH02 closer than 25 m down slope from crest due to concrete and debris from broken patio.
  - Crest line AH01 is estimated due to refusal on gravel fill.
  - Drainage from the roof drains onto slope 3 m from crest at south side of property. Property to south has a drain causing slope erosion.



Figure 1. 2265 Berkley Avenue – Front of the house



Figure 2. 2265 Berkley Avenue – Large crack in retaining wall



Figure 3. 2265 Berkley Avenue – Significant erosion from pipe draining at crest



Figure 4. 2265 Berkley Avenue – Concrete retaining wall





Figure 5. 2265 Berkley Avenue – Two tiers of a four tiered timber crib retaining wall

# INSPECTION LOCATION # 2265 Berkley

**Project :** DNV Landslide Risk Assessment

**Project No. :** 0404-002-01

**Location :** 2265 Berkley  
**Drill Method :** Dutch Hand Auger  
**Inspection Date :** 09 Nov 05  
**Logged by :** SF/JB  
**Reviewed by :** MJP

Depth (m)	Lithologic Description	Depth To Water Table	Depth (m)	Lithologic Description	Depth To Water Table
	<p><b>AUGERHOLE:</b> BGC05-2265BER-AH01 2.5m back from Slope Crest  <b>FINAL DEPTH OF AUGERHOLE:</b> 0.75 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 0.75 m minimum (estimate 1-2 m)</p>			<p><b>AUGERHOLE:</b> BGC05-2265BER-AH02 25 m Downslope  <b>FINAL DEPTH OF AUGERHOLE:</b> 1.20 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.20 m minimum</p>	
0.0	GRAVEL (GW) Fine to coarse gravel, silty, some fine to medium sand, poorly graded, loose, max particle size = 60 mm, rounded, dark brown, moist, homogeneous, trace concrete to 110 mm in size [FILL]		0.0	ORGANICS - PEAT / HUMUS Trace coarse sand, dark brown highly decomposed organics, wet, roots, bark [TOPSOIL]	
0.5	SILT (ML) Sandy, fine to medium sand, non plastic, soft, dark brown, moist, homogeneous, non dilatant, trace charcoal [FILL]		0.5	SILT (ML) Trace fine to medium sand, non plastic, very soft, dark brown, wet, homogeneous, slow dilatancy	
1.0	0.75 m: EOH - Refusal of auger on gravels		1.0	SILT (ML) Some fine to medium sand, trace fine gravel, some gravel sized silt clasts, non plastic, sub-rounded, soft, dark grey, wet, homogeneous, slow dilatancy, some charcoal [FILL]	
1.5			1.5	1.20 m: EOH - Refusal of auger on gravel	
2.0			2.0		
2.5			2.5		
3.0			3.0		

BGC05-2265BER-AH01

**BGC ENGINEERING INC.**  
AN APPLIED EARTH SCIENCES COMPANY  
Vancouver, BC Phone: (604) 684 5900

*Client: District of North Vancouver*

**SITE OBSERVATION FORM:** DNV Landslide Risk Assessment  
**LOCATION:** 2279 Berkley Avenue  
**INSPECTION DATE:** (mm/dd/yy) 11/09/05  
**WEATHER:** Light rain, heavy rain for several days prior to visit.



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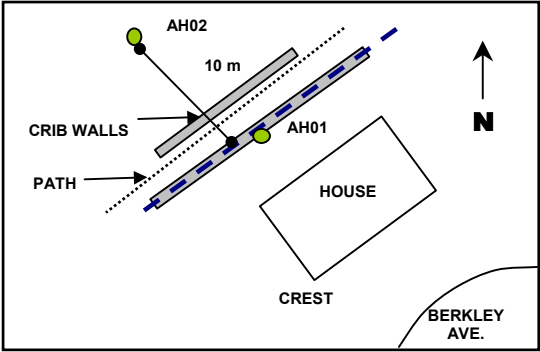
THICKNESS OF LOOSE MATERIALS	<1 m	1-2 m	2-3 m	>3 m
CREST LINE		<input checked="" type="checkbox"/>		
10 m DOWNSLOPE FROM SLOPE CREST		<input checked="" type="checkbox"/>		

<b>SLOPE BELOW FENCE/ RETAINING STRUCTURE</b>	SLOPE = 35° from crest to inflection, then 24°		
	CRACKS	SLIDES	EROSION
			<input checked="" type="checkbox"/>
OBSERVATIONS: Erosion immediately down slope of trees.			

<b>TREES BELOW FENCE/ RETAINING STRUCTURE</b>	STRAIGHT	PISTOL-BUTT	LEANING
PERCENT CONIFER: 40%			<input checked="" type="checkbox"/>
OBSERVATIONS: Deciduous trees leaning down slope.			

<b>RETAINING STRUCTURES</b>	YES <input checked="" type="checkbox"/>	NO	HEIGHT= 2.50 m
TYPE	BLOCKS	CONCRETE	TIMBER CRIB
			OTHER: Landscape ties and planks
DEFORMATION	UNDEFORMED	CRACKED	SETTLED
	<input checked="" type="checkbox"/>		BULGING
OBSERVATIONS: Terraced retaining walls in 2 steps. Wall at crest is 1.4 m high and second wall with pathway on terrace is 1.1 m high.			

<b>DEFORMATION IN BACKYARD</b>	YES	NO <input checked="" type="checkbox"/>
LOCATION:		
DESCRIPTION: Yard dips toward crest approximately 2 m from crest.		



<b>POOLS</b>	YES	NO <input checked="" type="checkbox"/>
DESCRIPTION: None observed		

<b>SEEPAGE/ SPRINGS IN OR BELOW FILL</b>	YES <input checked="" type="checkbox"/>	NO
OBSERVATIONS: Running water is pooling at inflection point in the slope.		

HOUSE DISTANCE TO CREST = 9.5 m

<b>RECEIVES SURFACE RUNOFF FROM</b>	BACKYARD	1/2 ROOF	FULL ROOF	FRONT YARD	STREET
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
OBSERVATIONS: Front yard is levelled in two terrace steps.					

<b>CONNECTED TO STORM SEWER</b>	YES	NO <input checked="" type="checkbox"/>	UNSURE
OWNERS COMMENTS: DNV reports that this property is not connected to storm sewer.			

**GENERAL OBSERVATIONS**

- Lots of debris lying on the slope (eg. tires and bricks).





Figure 1. 2279 Berkley Avenue – Front of the house



Figure 2. 2279 Berkley Avenue – Seepage zone down-slope





Figure 3. 2279 Berkley Avenue – View looking south along crest



Figure 4. 2279 Berkley Avenue – View looking north along crest



Figure 5. 2279 Berkley Avenue – Timber crib retaining wall



**Project :** DNV Landslide Risk Assessment

**Project No. :** 0404-002-01

**Location :** 2279 Berkley  
**Drill Method :** Dutch Hand Auger  
**Inspection Date :** 09 Nov 05  
**Logged by :** MB/ES  
**Reviewed by :** MJP

Depth (m)	Lithologic Description	Depth To Water Table	Depth (m)	Lithologic Description	Depth To Water Table
	<p><b>AUGERHOLE:</b> BGC05-2279BER-AH01 2m back from Slope Crest  <b>FINAL DEPTH OF AUGERHOLE:</b> 2.10 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.70 m</p>			<p><b>AUGERHOLE:</b> BGC05-2279BER-AH02 10 m Downslope  <b>FINAL DEPTH OF AUGERHOLE:</b> 2.00 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.80 m</p>	
0.0	<p>SAND (SM)                      Fine sand, silty, trace medium gravel, poorly graded sand, loose, max particle size = 10 mm, sub-rounded, dark brown, no odour, moist, homogeneous, no cementation                      [TOPSOIL]</p>		0.0	<p>SAND (SM)                      Fine sand, silty, trace medium gravel, poorly graded sand, loose, max part = 10 mm, sub-rounded, dark brown, no odour, moist, homogeneous, no cementation                      [TOPSOIL]</p>	
0.5	<p>SAND (SP)                      Fine to medium sand, trace silt, trace fine to medium grained gravel, poorly graded, max particle = 10 mm, sub-rounded, loose, brown, no odour, moist, homogeneous, no cementation                      [FILL]</p>		0.5	<p>SILT (ML)                      Sandy, fine sand, fine to coarse gravel sized silt clasts, poorly graded sand, low plastic, soft to firm, light brown to grey, no odour, moist, homogeneous, no cementation                      [FILL/COLLUVIUM]</p>	
1.0	<p>ORGANIC SAND (SM)                      Fine sand, silty, trace fine to coarse gravel, poorly graded sand, loose, max particle size = 40 mm, sub rounded, dark brown to black, no odour, moist, homogeneous, no cementation, charcoal and wood fragments                      [FILL]</p>		1.0	<p>1.00 m: Material becomes wet</p>	▼
1.5	<p>SAND (SW)                      Some fine to coarse gravel, well graded sand, compact, light brown, no odour, moist, homogeneous, no cementation, minor iron staining around some gravels                      [COLLUVIUM]</p>		1.5		
2.0	<p>SAND (SP)                      Fine to medium sand, trace silt, trace fine gravel, poorly graded, max particle size = 3 mm, sub-rounded, grey with orange mottling, compact, no odour, moist, homogenous, no cementation                      [Weathered GLACIOMARINE]                      2.00 m: Material becomes wet and dense                      2.10 m: EOH - Refusal as material is too dense to auger through</p>	▼	2.0	<p>1.80 m: Material becomes stiff. No recovery.                      2.00 m: EOH - Refusal of auger on cobble</p>	
2.5			2.5		
3.0			3.0		

BGC05-2279BER-AH01

**SITE OBSERVATION FORM:** DNV Landslide Risk Assessment  
**LOCATION:** 2293 Berkley Avenue  
**INSPECTION DATE:** (mm/dd/yy) 11/09/05  
**WEATHER:** Raining, heavy rain for several days prior to visit.



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THICKNESS OF LOOSE MATERIALS	<1 m	1-2 m	2-3 m	>3 m
CREST LINE			<input checked="" type="checkbox"/>	
10 m DOWNSLOPE FROM FENCE		<input checked="" type="checkbox"/>		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	SLOPE = 35°		
	CRACKS	SLIDES	EROSION
		<input checked="" type="checkbox"/>	
<b>OBSERVATIONS:</b> Most of slope covered by branches/fallen logs. A series of 2 m wide slump features is located 4 m downslope from crest on south end of yard.			

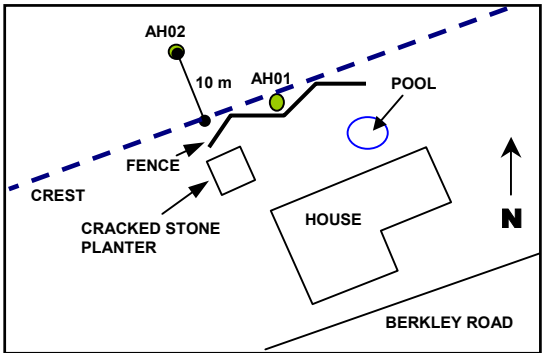
TREES BELOW FENCE/ RETAINING STRUCTURE	STRAIGHT	PISTOL-BUTT	LEANING
PERCENT CONIFER: 40%	<input checked="" type="checkbox"/>		<input checked="" type="checkbox"/>
<b>OBSERVATIONS:</b> Some leaning trees, mostly straight			

RETAINING STRUCTURES	YES <input checked="" type="checkbox"/>	NO	HEIGHT= 0.4 m
TYPE	BLOCKS	CONCRETE	TIMBER CRIB
			OTHER: Landscape ties
DEFORMATION	UNDEFORMED <input checked="" type="checkbox"/>	CRACKED	SETTLED
			BULGING
<b>OBSERVATIONS:</b> No deformation observed			

DEFORMATION IN BACKYARD	YES	NO <input checked="" type="checkbox"/>
LOCATION:		
DESCRIPTION:	Cracked stone planter	

POOLS	YES <input checked="" type="checkbox"/>	NO
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	YES	NO <input checked="" type="checkbox"/>
OBSERVATIONS:	None observed	



HOUSE DISTANCE TO CREST = 22.6 m

RECEIVES SURFACE RUNOFF FROM	BACKYARD	1/2 ROOF	FULL ROOF	FRONT YARD	STREET
	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>		
<b>OBSERVATIONS:</b>					

CONNECTED TO STORM SEWER	YES	NO <input checked="" type="checkbox"/>	UNSURE
<b>OWNERS COMMENTS:</b> DNV reports that this property is not connected to storm sewer.			

**GENERAL OBSERVATIONS**

- Owner unsure of where pool drains
- Owner informs no slides or related activity at property



Figure 1. 2293 Berkley Avenue – Front of the house



Figure 2. 2293 Berkley Avenue - Cracked planter near slope crest





Figure 3. 2293 Berkley Avenue – Slumping near crest of slope

# INSPECTION LOCATION # 2293 Berkley

**Project :** DNV Landslide Risk Assessment

**Project No. :** 0404-002-01

**Location :** 2293 Berkley  
**Drill Method :** Dutch Hand Auger  
**Inspection Date :** 09 Nov 05  
**Logged by :** MB/ES  
**Reviewed by :** MJP

Depth (m)	Lithologic Description	Depth To Water Table	Depth (m)	Lithologic Description	Depth To Water Table
	<p><b>AUGERHOLE:</b> BGC05-2293BER-AH01 on Slope Crest  <b>FINAL DEPTH OF AUGERHOLE:</b> 2.40 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 2.10 m</p>			<p><b>AUGERHOLE:</b> BGC05-2293BER-AH02 10 m Downslope  <b>FINAL DEPTH OF AUGERHOLE:</b> 1.00 m  <b>THICKNESS OF LOOSE MATERIALS:</b> 1.00 m minimum</p>	
0.0	SAND (SP) Fine to medium sand, silty, poorly graded, loose to very loose, dark brown to brown, moist, homogeneous, some reddish mottling, some charcoal [FILL]		0.0	SAND (SM) Fine to medium sand, silty, trace cobbles, poorly graded, loose, dark brown, no odour, moist, homogeneous, no cementation, trace rootlets, sub rounded cobbles, max particle size = 140 mm [TOPSOIL]	
0.5			0.5	SILT (ML) and SAND (SP) Fine to coarse sand, some fine to coarse gravels, poorly graded, low plastic, soft, brown with some orange mottling, no odour, moist, homogeneous, no cementation, non dilatent, trace rootlets, trace charcoal [FILL] 0.50 m: Material becomes wet	▼
1.0			1.0	SAND (SM) Fine to coarse sand, some silt, trace cobbles, loose to compact, well graded, light brown to grey with orange mottling, no odour, wet, homogeneous, no cementation, max particle size = 80 mm, sub-rounded [COLLUVIUM] 1.00 m: EOH - Refusal on cobbles Groundwater encountered at 0.50 m	
1.5	1.30 - 1.40 m - Organic layer of roots, wood and charcoal		1.5		
2.0	SAND (SP) Fine to medium sand, trace silt, trace gravel, trace fine gravel sized silt clasts, poorly graded, loose, max particle size = 18 mm, sub-rounded, brown with orange mottling, no odour, moist, homogeneous, no cementation [FILL]		2.0		
2.5	SILT (ML) Some fine sand, trace clay, low plastic, stiff, grey to brown with orange mottling, no odour, moist, homogeneous, non dilatent [Weathered GLACIOMARINE] 2.40 m - EOH Refusal on stiff material No groundwater encountered		2.5		
3.0			3.0		

BGC05-2293BER-AH01