SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2391 Carman Place**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Raining heavily, 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**
FENCE LINE				☑
15 m DOWNSLOPE FROM SLOPE CREST		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE =** 38°		
	CRACKS	**SLIDES**	**EROSION**
			☑

OBSERVATIONS: Minor surface erosion.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	70 %	☑		

OBSERVATIONS: Trees have been pruned and cut down. Moderately dense shrubs are growing on the slope.

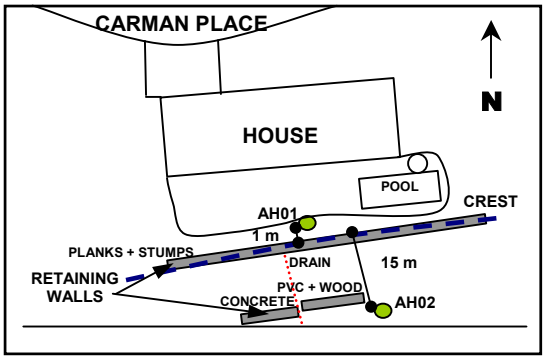
RETAINING STRUCTURES		**YES** ☑	**NO**	**HEIGHT=** 1.5 m
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:** Wooden planks/stumps/PVC/concrete
		☑		☑
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**
				☑

OBSERVATIONS: Wooden planks placed behind stumps at crest of slope. PVC and log retaining structures 15 m down slope are leaning down slope. An undeformed 15 cm thick, 2 m high concrete wall located approximately 18 m down slope from crest.

DEFORMATION IN BACKYARD	**YES** ☑	**NO**
LOCATION: Patio around pool near crest of slope.		
DESCRIPTION: Tilted patio (cement blocks) around pool on down slope side of pool.		

POOLS	**YES** ☑	**NO**
DESCRIPTION: Hot tub and pool present. Partially full, not currently in use.		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: None observed.		



HOUSE DISTANCE TO CREST = 6.7 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑	☑	☑	

OBSERVATIONS: Front yard and driveway dip towards slope. Drain located in driveway.

CONNECTED TO STORM SEWER	**YES**	**NO** ☑	**UNSURE**
OWNERS COMMENTS: DNV reports that this property is not connected to the storm sewer system.			

GENERAL OBSERVATIONS

- Drainage pipes observed 15 m down slope from crest exiting near intact cement retaining wall.
- Property is adjacent (east) to 1979 slide site.

Figure 1. 2391 Carman Place – Front of the house

Figure 2. 2391 Carman Place – View of backyard looking west

Figure 3. 2391 Carman Place – Timber retaining wall

Figure 4. 2391 Carman Place – View of backyard and crest looking east

INSPECTION LOCATION # 2391 Carman

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2391 Carman
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : MB/ES/SF/JB
Reviewed by : MJP

AUGERHOLE: BGC05-2391CAR-AH01 1m Back from Slope Crest
FINAL DEPTH OF AUGERHOLE: 3.10 m
THICKNESS OF LOOSE MATERIALS: 3.00 m

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SAND (SM) Fine sand, silty, trace fine gravel, poorly graded, very loose to loose, max particle = 10 mm, sub-rounded, dark brown, odourless, moist, homogeneous, no cementation, rootlets [TOPSOIL]	
0.5	SAND (SM) Fine to medium sand, silty, trace fine gravel, poorly graded, loose, max particle size = 10 mm, sub-rounded, brown, no odour, moist, homogeneous, no cementation, rootlets [FILL]	
1.0	SILT (ML) and SAND (SP) Fine to medium sand, trace fine gravel, poorly graded, loose, max particle = 15 mm, sub-rounded to sub-angular, grey brown, no odour, moist, homogeneous, no cementation [FILL]	
1.5	SAND (SW) Some silt, some gravel, trace cobbles, well graded, loose, max particle = 20 mm, sub-rounded, brown with orange mottling, no odour, moist, homogeneous, no cementation [FILL]	
2.0		
2.5		
3.0	SAND (SP) Fine sand, trace silt, gravel sized silt clasts, poorly graded, very loose to loose, light brown with some red mottling, no odour, moist, homogeneous, no cementation, minimal resistance or recovery in this unit to 3.0 m [FILL]	

AUGERHOLE: BGC05-2391CAR-AH02 15 m Downslope
FINAL DEPTH OF AUGERHOLE: 1.55 m
THICKNESS OF LOOSE MATERIALS: 1.55 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SILT (ML) Sandy, fine to coarse, low plasticity, very soft, dark brown, moist, homogeneous, no dilatancy, organics, roots [TOPSOIL]	
0.5	SAND (SW) Gravelly, fine to coarse gravel, trace silt, well graded, loose, max particle size = 30 mm, sub-angular, light brown to grey, moist, homogeneous, rootlets [FILL or COLLUVIUM]	
1.0	SILT (ML) Some fine gravel, trace fine sand, trace clay, gravel sized silt clasts, low plasticity, very soft, grey with orange mottling, moist, homogeneous, no dilatancy [COLLUVIUM]	
1.5	1.40 m: Material density increases to 'soft to firm'. An increase in fine sand content noted. 1.55 m: EOH - Refusal of auger on cobbles	
2.0		
2.5		
3.0		

(Continued on next page)

Location : 2391 Carman
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : MB/ES/SF/JB
Reviewed by : MJP

Depth (m)	***AUGERHOLE:*** BGC05-2391CAR-AH01 1m Back from Slope Crest ***FINAL DEPTH OF AUGERHOLE:*** 3.10 m ***THICKNESS OF LOOSE MATERIALS:*** 3.00 m Lithologic Description	Depth To Water Table	Depth (m)	***AUGERHOLE:*** BGC05-2391CAR-AH02 15 m Downslope ***FINAL DEPTH OF AUGERHOLE:*** 1.55 m ***THICKNESS OF LOOSE MATERIALS:*** 1.55 m minimum Lithologic Description	Depth To Water Table
	3.00 m: Material becomes stiff 3.10 m: EOH - Refusal as material is too stiff to auger through. No water table encountered				
3.5			3.5		
4.0			4.0		
4.5			4.5		
5.0			5.0		
5.5			5.5		
6.0			6.0		

SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2379 Carman Place**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Overcast, 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**
FENCE LINE			☑	
10 m DOWNSLOPE FROM SLOPE CREST		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE = 42°**		
	CRACKS	**SLIDES**	**EROSION**
		☑	

OBSERVATIONS: Erosion observed.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	60 %	☑		

OBSERVATIONS: Slight leaning observed in several trees.

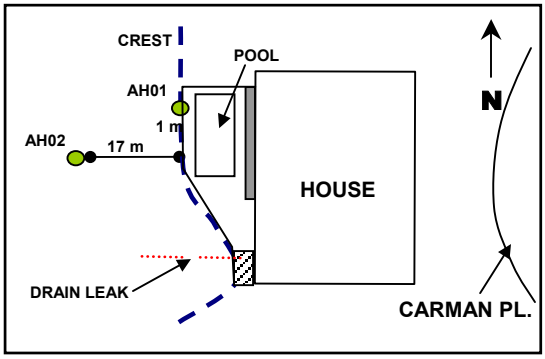
RETAINING STRUCTURES		**YES**	**NO** ☑	**HEIGHT=** n/a
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:**
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**

OBSERVATIONS: No retaining wall at crest, retaining wall between house and pool.

DEFORMATION IN BACKYARD	**YES**	**NO** ☑
LOCATION:		
DESCRIPTION: None observed. Deck appears level. Chain link fence posts leaning.		

POOLS	**YES** ☑	**NO**
DESCRIPTION: No evidence of cracking.		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: None observed.		



HOUSE DISTANCE TO CREST = 2 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑	☑	☑	

OBSERVATIONS: Front yard slopes towards house and crest of slope. Roof drains flow down 1979 slide site in pipes that were observed to be leaking pipe connection near the scarp.

CONNECTED TO STORM SEWER	**YES**	**NO** ☑	**UNSURE**
OWNERS COMMENTS: DNV reports that this property is not connected to the storm sewer system.			

GENERAL OBSERVATIONS

- Site of 1979 slide, slope now covered with deciduous trees.
- South west corner of wooden deck overhangs a portion of the 1979 head scarp, leaking pipe located down slope from deck.
- Auger hole at crest located at the north side of fence line in fill.

Figure 1. 2379 Carman Place – Front of the house

Figure 2. 2379 Carman Place – View of backyard looking NW

Figure 3. 2379 Carman Place – Concrete and rock retaining wall between the house and pool

Figure 4. 2379 Carman Place – View looking SE along crest

INSPECTION LOCATION # 2379 Carman

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2379 Carman
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : MB/ES
Reviewed by : MJP

AUGERHOLE: BGC05-2379CAR-AH01 on Slope Crest, N Corner of Property
FINAL DEPTH OF AUGERHOLE: 2.90 m
THICKNESS OF LOOSE MATERIALS: 2.10 m

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SAND (SW) Some silt, some fine to coarse gravel, well graded sand, loose, max particle = 30 mm, sub-rounded, brown, no odour, moist, homogeneous, no cementation, rootlets [FILL]	
0.5		
	0.70 - 0.80 m: ORGANICS layer Plastic foreign material (garbage), dark brown	
	SAND (SP) Some silt, trace fine gravel, gravel sized fine sand and silt clasts, poorly graded, loose, max particle size = 5 mm, sub-rounded, brown, no odour, moist, homogeneous, no cementation [FILL / COLLUVIUM]	
1.0		
	1.30 m: Material becomes grey to light brown	
1.5		
2.0		
	2.10 m: Material density becomes 'firm'	
2.5		
	SILT (ML) and SAND (SP) Fine sand, trace clay, low plastic, firm to stiff, grey, no odour, moist, homogeneous, no cementation, no dilatancy [Weathered GLACIOMARINE]	
	2.90 m: EOH - Refusal of auger on rock. No water table encountered	
3.0		

AUGERHOLE: BGC05-2379CAR-AH02 17 m Downslope
FINAL DEPTH OF AUGERHOLE: 1.50 m
THICKNESS OF LOOSE MATERIALS: 1.50 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SAND (SM) Fine to medium sand, silty, trace fine gravel, poorly graded sand, very loose, dark brown, no odour, moist, homogeneous, no cementation, rootlets [TOPSOIL]	
	SAND (SM) Mainly fine sand, silty, some gravel, trace cobbles, poorly graded, loose, max particle size = 90 mm, sub-rounded, brown, no odour, moist, homogeneous, no cementation, trace rootlets [COLLUVIUM]	
0.5		
1.0		
	1.30 m: Material becomes wet.	▼
1.5		
	1.50 m: EOH - Refusal of auger on cobble	
2.0		
2.5		
3.0		

SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2360 Carman Place - South**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Overcast, 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**
FENCE LINE (West side of property)		☑		
10 m DOWNSLOPE FROM SLOPE CREST		☑		
FENCE LINE (Southwest side of property)		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE =** 38°		
	CRACKS	**SLIDES**	**EROSION**
		☑	

OBSERVATIONS: Site of 1979 slide at centre of fence line. Deck extends over head scarp with foundations at base of scarp.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	70 %	☑		

OBSERVATIONS: 1979 slide vegetated with ferns and shrubs.

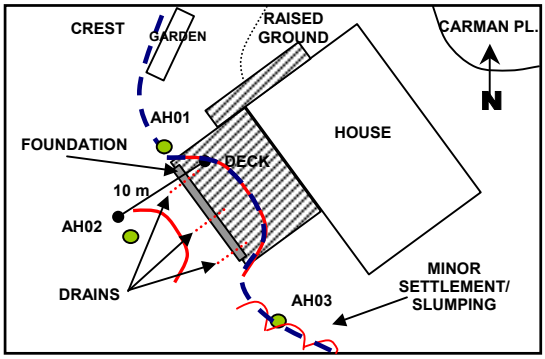
RETAINING STRUCTURES		**YES**	**NO** ☑	**HEIGHT=** n/a
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:**
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**

OBSERVATIONS:

DEFORMATION IN BACKYARD	**YES** ☑	**NO**
LOCATION: South west corner of property on lawn at crest of slope.		
DESCRIPTION: Minor slumping or settlement.		

POOLS	**YES**	**NO** ☑
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: Material in down slope auger hole is wet, appears to be due to heavy rain.		



HOUSE DISTANCE TO CREST = 4 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑	☑	☑	

OBSERVATIONS: Front yard slopes towards house and crest of slope. Roof drains flow down 1979 slide site in pipes that were observed to be leaking pipe connection near the scarp.

CONNECTED TO STORM SEWER	**YES**	**NO** ☑	**UNSURE**
OWNERS COMMENTS: DNV reports that this property is not connected to the storm sewer system.			

GENERAL OBSERVATIONS

- Site of 1979 slide, slope now covered with deciduous trees and dense shrubs.
- Concrete patio foundations are located 3 m below the crest of the scarp. 3" drains embedded in concrete to dewater the upslope side of the patio foundations. Water exits onto the base of the uppermost head scarp.
- Appears to be a second smaller scarp approximately 3 m below patio foundation.
- Eaves are over flowing and draining towards crest.

Figure 1. 2360 Carman Place – Front of the house

Figure 2. 2360 Carman Place – View looking NW along crest

Figure 3. 2360 Carman Place – Drainage pipe exit on slope

Figure 4. 2360 Carman Place – View of backyard looking south

INSPECTION LOCATION # 2360 Carman - South

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2360 Carman - South
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : SF/JB
Reviewed by : MJP

AUGERHOLE: BGC05-2360CAR-AH02 Below Crest in Old Scarp
FINAL DEPTH OF AUGERHOLE: 1.20 m
THICKNESS OF LOOSE MATERIALS: 1.20 m

Depth (m)	Lithologic Description	Depth To Water Table
0.0	TOPSOIL	
	SAND (SP) Fine to coarse sand, some fine to coarse gravel, trace silt, poorly graded, loose, max particle size = 55 mm, sub-rounded to sub-angular, grey brown, moist, homogeneous [COLLUVIUM]	
0.5		▼
	0.65 m: Material becomes wet. SAND (SP) Fine to medium, silty, non plastic silt, poorly graded, loose, trace orange mottling, light brown grey with orange brown mottling, wet, homogeneous, rapid dilatancy [Weathered GLACIOMARINE]	
1.0		
	1.20 m: EOH - Refusal as material is too compact to auger through	
1.5		
2.0		
2.5		
3.0		

AUGERHOLE: BGC05-2360CAR-AH03 on Slope Crest, SW Corner of Property
FINAL DEPTH OF AUGERHOLE: 0.95 m
THICKNESS OF LOOSE MATERIALS: 0.95 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	TOPSOIL	
	SAND (SP) Medium to coarse sand, some fine to coarse gravel, poorly graded, very loose, max particle size = 65 mm, sub-rounded, brown to light brown with orange brown staining on gravels, moist, homogeneous, small woody material [FILL]	
0.5	0.40 m: Small piece of charcoal	
1.0	0.95 m: EOH - Refusal of auger on coarse gravel or cobble	
1.5		
2.0		
2.5		
3.0		

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Vancouver, BC Phone: (604) 684 5900

Client: District of North Vancouver

SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2360 Carman Place - North**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Overcast, heavy rain for several days prior to visit.**

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Vancouver, BC
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THICKNESS OF LOOSE MATERIALS	**<1 m**	**1-2 m**	**2-3 m**	**>3 m**
FENCE LINE (West side of property)		☑		
10 m DOWNSLOPE FROM SLOPE CREST		☑		
FENCE LINE (Southwest side of property)		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE = 38°**		
	CRACKS	**SLIDES**	**EROSION**
		☑	

OBSERVATIONS: Site of 1979 slide at centre of fence line. Deck extends over head scarp with foundations at base of scarp.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	70 %	☑		

OBSERVATIONS: 1979 slide vegetated with ferns and shrubs.

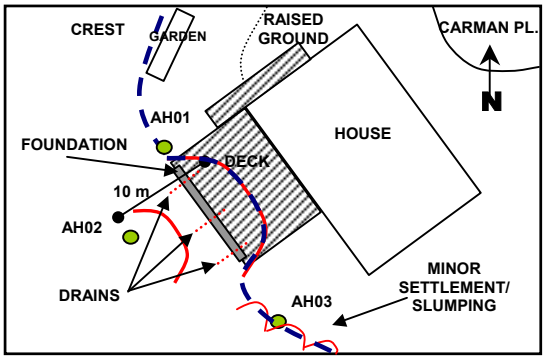
RETAINING STRUCTURES		**YES**	**NO** ☑	**HEIGHT=** n/a
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:**
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**

OBSERVATIONS:

DEFORMATION IN BACKYARD	**YES** ☑	**NO**
LOCATION: South west corner of property on lawn at crest of slope.		
DESCRIPTION: Minor slumping or settlement.		

POOLS	**YES**	**NO** ☑
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: Material in down slope auger hole is wet, appears to be due to heavy rain.		



HOUSE DISTANCE TO CREST = 4 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑	☑	☑	

OBSERVATIONS: Front yard slopes towards house and crest of slope. Roof drains flow down 1979 slide site in pipes that were observed to be leaking pipe connection near the scarp.

CONNECTED TO STORM SEWER	**YES**	**NO** ☑	**UNSURE**
OWNERS COMMENTS: DNV reports that this property is not connected to the storm sewer system.			

GENERAL OBSERVATIONS

- Site of 1979 slide, slope now covered with deciduous trees and dense shrubs.
- Concrete patio foundations are located 3 m below the crest of the scarp. 3" drains embedded in concrete to dewater the upslope side of the patio foundations. Water exits onto the base of the uppermost head scarp.
- Appears to be a second smaller scarp approximately 3 m below patio foundation.
- Eaves are over flowing and draining towards crest.

INSPECTION LOCATION # 2360 Carman - North

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2360 Carman - North
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : SF/JB
Reviewed by : MJP

AUGERHOLE: BGC05-2360CAR-AH01 on Slope Crest, 1m from patio
FINAL DEPTH OF AUGERHOLE: 1.50 m
THICKNESS OF LOOSE MATERIALS: 1.50 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SILT (ML) and SAND (SP) Medium to coarse sand, trace fine to medium gravel, low plastic silt, loose, dark brown, homogeneous, organics [TOPSOIL / FILL]	
0.5	SAND (SP) Medium to coarse sand, some fine to medium gravel, trace silt, gravel sized silt clasts, poorly graded, very loose, max particle size = 30 mm, sub-rounded, orange-brown, no odour, moist, homogeneous, rootlets [FILL]	
	ORGANICS Humic, black to brown, degraded bark, rootlets [FILL]	
1.0	SAND (SP) Medium to coarse sand, some fine to coarse gravel, gravel sized silt clasts, poorly graded, loose, max particle size = 40 mm, sub-angular to sub-rounded, light brown with orange-brown staining on larger clasts, moist, homogeneous [FILL/COLLUVIUM] 0.75 m: Material becomes light grey and brown 0.85 m: Material becomes denser	
1.5	1.55 m: EOH - Refusal of auger on cobble or coarse gravel	
2.0		
2.5		
3.0		

AUGERHOLE: BGC05-2360-AH02 Below Crest in Old Scarp
FINAL DEPTH OF AUGERHOLE: 1.20 m
THICKNESS OF LOOSE MATERIALS: 1.20 m

Depth (m)	Lithologic Description	Depth To Water Table
0.0	TOPSOIL	
0.5	SAND (SP) Fine to coarse sand, some fine to coarse gravel, trace silt, poorly graded, loose, max particle size = 55 mm, sub-rounded to sub-angular, grey brown, moist, homogeneous [COLLUVIUM]	
	0.65 m: Material becomes wet.	▼
1.0	SAND (SP) Fine to medium, silty, non plastic silt, poorly graded, loose, trace orange mottling, light brown grey with orange brown mottling, wet, homogeneous, rapid dilatancy [Weathered GLACIOMARINE]	
1.5	1.20 m: EOH - Refusal as material is too compact to auger through	
2.0		
2.5		
3.0		

SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2372 Carman Place**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Overcast**

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THICKNESS OF LOOSE MATERIALS	**<1 m**	**1-2 m**	**2-3 m**	**>3 m**
FENCE LINE		☑		
10 m DOWNSLOPE FROM SLOPE CREST		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE =** 31-33°		
	CRACKS	**SLIDES**	**EROSION**

OBSERVATIONS: None observed. Trails and cuts in slope below crest.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	80 **%**			☑

OBSERVATIONS: Trees at fence line straight and old. Below crest some leaning trees observed.

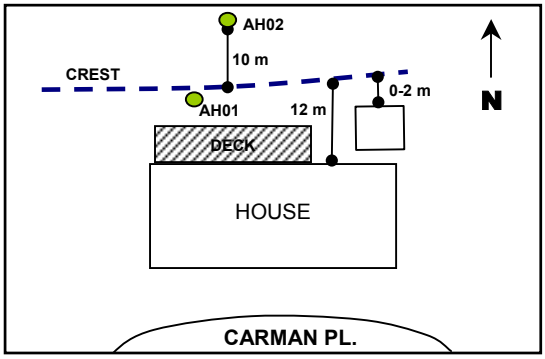
RETAINING STRUCTURES		**YES**	**NO** ☑	**HEIGHT=** n/a
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:**
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**

OBSERVATIONS:

DEFORMATION IN BACKYARD	**YES** ☑	**NO**
LOCATION: Centre of backyard.		
DESCRIPTION: Minor localized settlement.		

POOLS	**YES**	**NO** ☑
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: None observed		



HOUSE DISTANCE TO CREST = 12 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑	☑		

OBSERVATIONS: Unsure where roof drainage is directed.

CONNECTED TO STORM SEWER	**YES**	**NO**	**UNSURE** ☑

OWNERS COMMENTS: DNV reports that the connection to the storm sewer is uncertain. 1980 Klohn reports notes property is connected to storm drains.

GENERAL OBSERVATIONS

- Garage/bunkhouse located 0-2 m from crest.
- Crest appears natural, rounded; backyard is relatively flat.
- Compost dumped over crest.

Figure 1. 2372 Carman Place – Front of the house

Figure 2. 2372 Carman Place – View along crest line towards the house

Figure 3. 2372 Carman Place – View down-slope from the crest

INSPECTION LOCATION # 2372 Carman

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2372 Carman
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : SF/JB
Reviewed by : MJP

AUGERHOLE: BGC05-2372CAR-AH01 on Slope Crest
FINAL DEPTH OF AUGERHOLE: 1.00 m
THICKNESS OF LOOSE MATERIALS: 1.00 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	ORGANICS Sandy, fine to coarse sand, mainly fine to medium sand, silty, poorly graded, very loose, moist, organic odour, roots and woody material, non plastic fines, dark brown [TOPSOIL/FILL]	
0.5	0.05 m: ASH LAYER - Grey, sandy	
	SAND (SW) Fine to coarse sand, some fine to coarse gravel, trace silt, sub-rounded, well graded sand, poorly graded gravel, loose, max particle size = 50 mm, sub-angular to sub-rounded, orange brown sand, moist, odourless [COLLUVIUM]	
1.0	1.00 m: EOH - Refusal of auger on cobble or large gravel - 2nd hole at this site had refusal at 0.90 m	
1.5		
2.0		
2.5		
3.0		

AUGERHOLE: BGC05-2372CAR-AH02 10 m Downslope
FINAL DEPTH OF AUGERHOLE: 2.05 m
THICKNESS OF LOOSE MATERIALS: 2.00 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	ORGANICS Very loose, dark brown, organic odour, moist [TOPSOIL]	
	SAND (SP) Medium to coarse sand, trace fine to coarse gravel, trace silt, poorly graded, max particle size = 30 mm, sub-rounded gravel, brown, moist [FILL]	
0.5		
	0.83 m: Sub-angular gravel sized silt clasts, very loose	
1.0	1.05 m: Material colour changes to light brown	
	SAND (SP) Fine to medium sand, trace fine to medium gravel, trace silt, poorly graded, loose, maximum particle size = 50 mm, sub-rounded, light brown with orange brown mottling, moist, homogeneous [COLLUVIUM]	
1.5	1.60 m: Material becomes light yellowish brown with less mottling. 1.70 m: Material density changes from 'loose' to 'loose/compact'	
2.0	2.00 m: Material contains iron stained gravel sized clasts of silt and sand	
	2.05 m: Material density changes to 'compact'. EOH - Refusal as material is too compact to auger through	
2.5		
3.0		

SITE OBSERVATION FORM:	**DNV Landslide Risk Assessment**
LOCATION:	**2386 Carman Place**
INSPECTION DATE: (mm/dd/yy)	**10/31/05**
WEATHER:	**Cloudy**

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THICKNESS OF LOOSE MATERIALS	**<1 m**	**1-2 m**	**2-3 m**	**>3 m**
FENCE LINE		☑		
10 m DOWNSLOPE FROM SLOPE CREST		☑		

SLOPE BELOW FENCE/ RETAINING STRUCTURE	**SLOPE = 33°**		
	CRACKS	**SLIDES**	**EROSION**

OBSERVATIONS: No slope deformation observed.

TREES BELOW FENCE/ RETAINING STRUCTURE		**STRAIGHT**	**PISTOL-BUTT**	**LEANING**
PERCENT CONIFER:	70 %	☑	☑	

OBSERVATIONS: Some trees appear to have slight pistol butt.

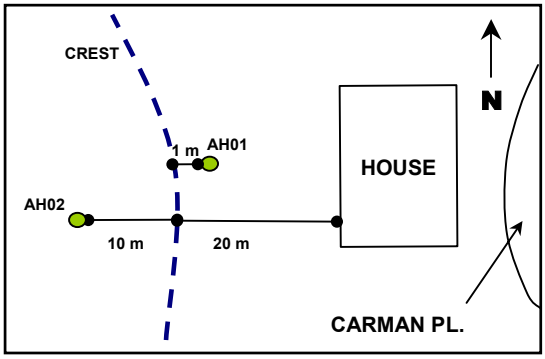
RETAINING STRUCTURES		**YES**	**NO** ☑	**HEIGHT=** n/a
TYPE	**BLOCKS**	**CONCRETE**	**TIMBER CRIB**	**OTHER:**
DEFORMATION	**UNDEFORMED**	**CRACKED**	**SETTLED**	**BULGING**

OBSERVATIONS:

DEFORMATION IN BACKYARD	**YES**	**NO** ☑
LOCATION:		
DESCRIPTION: None observed.		

POOLS	**YES**	**NO** ☑
DESCRIPTION:		

SEEPAGE/ SPRINGS IN OR BELOW FILL	**YES**	**NO** ☑
OBSERVATIONS: None observed.		



HOUSE DISTANCE TO CREST = 20 m

RECEIVES SURFACE RUNOFF FROM	**BACKYARD**	**½ ROOF**	**FULL ROOF**	**FRONT YARD**	**STREET**
	☑	☑			

OBSERVATIONS: Unsure where roof drainage is directed.

CONNECTED TO STORM SEWER	**YES** ☑	**NO**	**UNSURE**

OWNERS COMMENTS: DNV reports that this property is connected to the storm sewer system.

GENERAL OBSERVATIONS

- Occupant notes that vegetation along slope is not as thick as it has always been, and believes the conifers to be dying.
- Occupant notes that soil was scraped off lot and material pushed over slope crest.
- No basement in house.

Figure 1. 2386 Carman Place – Front of the house

Figure 2. 2386 Carman Place – View of backyard looking NE

Figure 3. 2386 Carman Place – View looking east along crest

Figure 4. 2386 Carman Place – View down-slope looking north from west side of crest

INSPECTION LOCATION # 2386 Carman

Project : DNV Landslide Risk Assessment

Project No. : 0404-002-01

Location : 2386 Carman
Drill Method : Dutch Hand Auger
Inspection Date : 31 Oct 05
Logged by : MB/ES
Reviewed by : MJP

AUGERHOLE: BGC05-2386CAR-AH01 1 m Back From Crest
FINAL DEPTH OF AUGERHOLE: 1.40 m
THICKNESS OF LOOSE MATERIALS: 1.40 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SAND (SW) Some silt, trace gravel, well graded, very loose, max particle size = 27 mm, sub-rounded, dark brown, no odour, moist, homogeneous, no cementation, trace rootlets [FILL]	
0.5		
	SAND (SW) Trace silt, some fine to medium gravel, well graded, loose, max particle size = 20 mm, moist, homogeneous, no cementation, trace rootlets [FILL]	
1.0		
	1.40 m: EOH - Refusal of auger on rock - 4 augerholes attempted at crest, this is deepest - No water table encountered	
1.5		
2.0		
2.5		
3.0		

AUGERHOLE: BGC05-2386CAR-AH02 10 m Downslope
FINAL DEPTH OF AUGERHOLE: 1.80 m
THICKNESS OF LOOSE MATERIALS: 1.80 m minimum

Depth (m)	Lithologic Description	Depth To Water Table
0.0	SAND (SM) Fine sand, silty, poorly graded, very loose to loose, max particle size = <1 mm, dark brown, no odour, moist, homogeneous, no cementation, rootlets [TOPSOIL]	
0.5	SAND (SM) Fine to medium sand, silty, trace cobbles, poorly graded, loose, max particle size = 100 mm, brown, no odour, moist, homogeneous, no cementation [FILL/ COLLUVIUM]	
1.0		
1.5		
	1.80 m: EOH - Refusal of auger on cobble - No water table encountered	
2.0		
2.5		
3.0		

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