

Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Sun
Address	925 Selkirk Cres	Coquitlam
Photo frames	5380-5382	
Comments		



Soil Fill

Thickness at back fence line	Est. 0 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50% 5 m

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic veg.	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	
Footing drains	Some street water enters
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	23 m
City infrastructure location	Front
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 27, 2013	Overcast
Address	1361 Chine Crescent	Coquitlam
Photo frames	5360-5373	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 1 m
12 m downslope of crest	None
Fill width	Fan of concrete debris below
Native soil at surface	Till

Topography

Backyard slope, direction	Very gentle to north
Slope below fence	80%; 120% at head of bowl.
Slope below crest, distance	55-60% to base of bowl

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		70%	70%
Prev. slide magnitude/runout	Head of side ravine below crest		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic veg.	N	Y
Seepage	N	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N
Groundwater seepage	N	Y

Comments

Retaining Walls

	Size	Condition
Timber crib	0.5 m H, rail ties along crest	okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	50
Deck support posts	Concrete
Driveway	N
Footing drains	Prob. to ravine
Roof drainage to storm sewer?	Prob. to ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Brick	By house
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	12 m min; 33 m wide
City infrastructure location	Likely at back.
St. drains into d'way, bkyd.	No street drainage to yard.
Buried irrig, electric cables	Unknown

View Across North Part of Slope Below Crest



1361 Chine Crescent

Seepage Occurring Over Dense Till in Headscarp of Ravine Below Yard



View Across Bowl to North Showing Revegetation and Seepage Area



Pile of Compost and Yard Clippings at North Edge of Crest

1361 Chine Crescent



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Slopes below should have no drainage water added at top or gullying or landslides could occur.

Site Observation Form

Site Air Photo

Date/Weather	June 11, 2012	Sun
Address	1363 Chines Crescent	Coquitlam
Photo frames	4526-4546	
Comments		



Soil Fill

Thickness at back fence line	-
Thickness at slope crest	Est. 1- 1.5 m
12 m downslope of crest	Est. 0.7 m
Fill width	Est. 15 m
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50-120%

Comments A rough wall built from concrete slab debris is located partway down slope

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		70	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	Y
Seepage	To crest	To crest
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N

Comments Lots of concrete slab debris and compost on slope, metal rails stored on slope.

Retaining Walls

	Size	Condition
Timber crib	Y 1-1.5 m H at crest	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 yrs.
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	N

Comments Loose rock wall partway down slope

Backyard Structures

	Size	Location
Garden shed	10x10 ft. patio bldg.	Near crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Patio house on promontory has evidence of creep affecting concrete path.

Main Structures

House distance to crest	Est. 8 m
City infrastructure location	In back yard to NE
St. drains into d'way, bkyd.	In part
Buried irrig, electric cables	Unknown

Site Photographs

Main Crest Area

1363 Chines Crescent



Main Crest With Wood Tie Retaining Walls



Patio Building On Escarpment Promontory



1363 Chines Crescent

North Part Of Main Slope Area



2013 View From Northwest of Lower Slopes and Patio Building



Soil Test Hole Layers

1363 Chines Crescent

Interval (m)	Crest	Interval (m)	Downslope
0-0.1	Dark brown, organic silty sand, fill/colluvium	0-0.1	Leaf litter
0.1-0.3	Loose, red brown, silty sand with pebbles, moist	0.1-0.7	Loose, moist, grey silty sand pebbles. Colluvium
0.3-0.7	Dark brown silty sand	0.7-1.0	Moist, red brown, sand silt with pebbles, moderate density Native soil.
0.7-1.0	Beige, moist, slightly clayey silt, some pebs. brick chips, colluvium		
1.0	Refusal		

1.6 m below tie wall

15 m below crest, near pipe

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-7.

The City and the Property Owner should share relevant engineering and surveying reports.

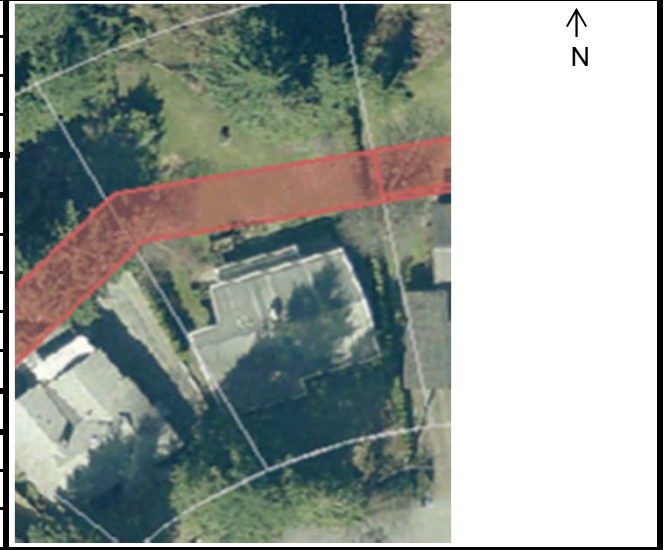
The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

The City and property owner must ensure that street drainage does not go down driveway towards slope crest.

Site Observation Form

Site Air Photo

Date/Weather	June 11, 2012	Sun
Address	1369 Chines Cres.	Coquitlam
Photo frames	4552-4567	
Comments		



Soil Fill

Thickness at back fence line	Est. 0.5 m
Thickness at slope crest	
12 m downslope of crest	None
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60-80%

Comments 2.5 x 1.5 x 1 m boulder below crest from land clearing

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	Y
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic veg.	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	Y	Y
Groundwater seepage	N	N

Comments Backyard reported often wet. Pipes replace drain tile.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Comments Solid white pipe takes roof water over crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	20 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1369 Chines Cres.



Crest





Soil Test Hole Layers

Interval (m)	Crest	Interval (m)	Downslope
0-0.1	Topsoil	0-0.12	Dark brown, moist sandy silt, leaf litter
0.1-0.3	Fill - Dark brown, moist silty sand, pebbles, wood	0.12-1.0	Red brown, silty sand pebbles, cobbles
0.3-0.9	Tan, red brown, moist sandy silt, dense	1.0-1.1	Red brown silty sand dense - Native
0.9-1.05	Dense, light grey, silty fine sand, dry nodules	1.1	Refusal - cobble layer

Near Crest

About 13 m below crest

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 11, 2012	Sun
Address	1371 Chines Cres.	Coquitlam
Photo frames	4568-4580	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	Prob. Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	60 - 80%

Comments Boulders pushed to below crest by bulldozer during land clearing

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		40	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	To crest	To crest
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	Y
Pipes	N	N
Groundwater seepage		

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	17 m
City infrastructure location	Back yards
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back yard

1371 Chines Cres.



Below Crest



Soil Test Hole Layers

Interval (m)	Crest	Interval (m)	10 m Downslope of Crest
0-0.25	Topsoil	0-0.2	Organic debris
0.25-0.55	Grey, med to coarse sand pebbles	0.2-0.5	Loose, dry pebble sand
0.55-1.0	Dark grey, moist to wet, silty sand and pebbles iron oxidized ?weathered till	0.5-0.7	Silty pebble sand ? weathered till
		0.7-0.85	red brown, silty sand, pebbles, roots moderate compaction
1.0	Refusal on cobble		

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

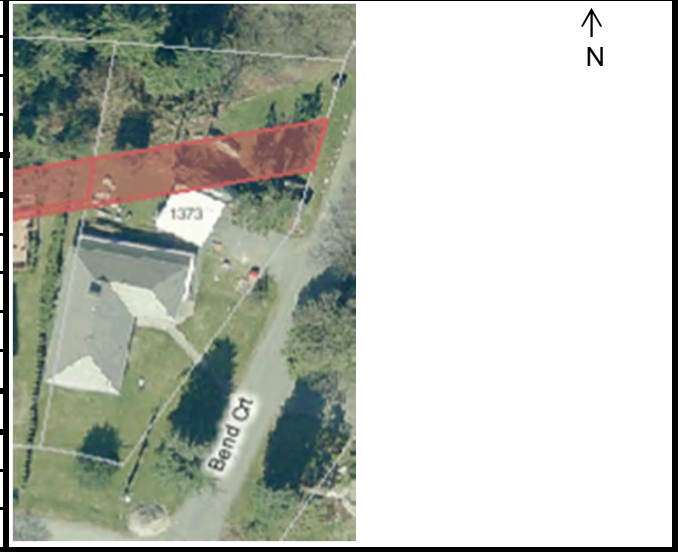
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Site Observation Form

Site Air Photo

Date/Weather	June 11, 2012	Sun
Address	1373 Chines Cres.	Coquitlam
Photo frames	4581-4593	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 1 m
12 m downslope of crest	Est. 0 m
Fill width	Est. 15 m
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		70	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	Y	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Roof drainage to storm sewer?	To back of lot

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	
Comments	House and yard under reconstruction	

Main Structures

House distance to crest	Est. 8 m
City infrastructure location	In back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Main Crest Area

1373 Chines Cres.



Small Lobe New Fill At Crest From Garage Excavation



Slope Below Yard



New Roof And Foundation Pipes Drain
Towards Storm Sewer And Crest



Garage Excavation Into Till



1373 Chines Cres.

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Property owner should remove new fill from ravine crest area.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	1377 Chine Cres.	Coquitlam
Photo frames	4711-4719	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	1-2 m
12 m downslope of crest	< 1 m
Fill width	Nose of fill about 15 m
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	55% over 30 m

Comments Boulders pushed to below crest by bulldozer during land clearing

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	Maple	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		<10%	
Prev. slide magnitude/runout			

Water Features

Sources of drainage
 Hydrophilic vegetation
 Seepage
 Yard drainage
 Patio drainage
 Pool, pond drainage
 Pipes
 Groundwater seepage

	Crest	Below
Yard/Roof	Yard/Roof	Yard/Roof
	N	N
	N	N
	To crest	To crest
	N	N
	N	N
	Y	Y
	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age
 House foundation
 Deck support posts
 Driveway
 Footing drains
 Roof drainage to storm sewer?

40 yrs.
Concrete
Straight
No cracks
Unknown - likely to crest
Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	21 m
City infrastructure location	West, north
St. drains into d'way, bkyd.	Some
Buried irrig, electric cables	yes

Site Photographs

Back yard

1377 Chine Cres.



Below Crest, Possible Nose of Fill, No Directed Water



Across Slope to Northeast



Slope Below Bend Court Adjacent to West

1377 Chine Cres.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

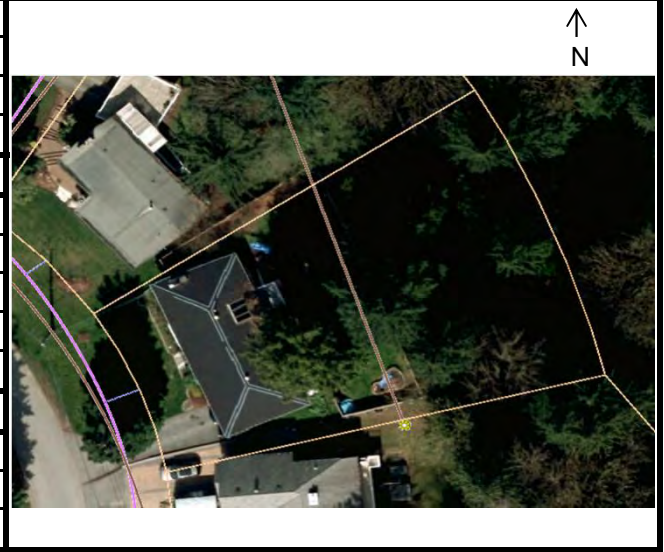
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Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	1381 Chine Cres.	Coquitlam
Photo frames	4721-4732	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	< 1 m
12 m downslope of crest	< 1 m
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	50 - 60 %

Comments Boulders pushed to below crest by bulldozer during land clearing

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	Old Swale
% conifer cover at crest		20-30%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	To crest	To crest
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	Y
Pipes	N	N
Groundwater seepage		

Comments Possible subsidence in yard near back fence line.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	50 yrs.
Deck support posts	Concrete
Driveway	Wood Straight
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	12 m	28 m wide
City infrastructure location	Back yards	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back yard

1381 Chine Cres.



Below Crest



Below Crest to East



Slope along crest

1381 Chine Cres.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	1385 Chine Cres.	Coquitlam
Photo frames	4733-4757	
Comments		



Soil Fill

Thickness at back fence line	1 - 1.5 m
Thickness at slope crest	1 - 1.5 m
12 m downslope of crest	<0.5 m
Fill width	10 m
Native soil at surface	

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	55% over 30 m

Comments Old concrete, old domestic garbage downslope (bears?)

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	Maple	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		10-20%	
Prev. slide magnitude/runout	About 5 m W, 20 m L		

Comments Old shallow failure below.

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	2 pipes	2 pipes
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown - likely to crest
Roof drainage to storm sewer?	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	Y	2 m back of crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

New drainage pipe being installed, reveals subsurface till deposit.

Main Structures

House distance to crest	16 m	27 m W
City infrastructure location	Back yards	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back yard

1385 Chine Cres.



Shallow trench showing till sediment, little topsoil



Below Crest



View along Crest

1385 Chine Cres.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

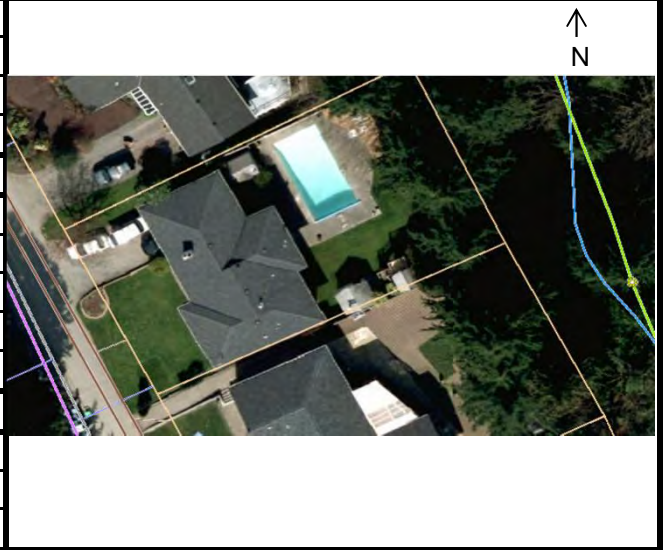
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Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	937 Canyon Court	Coquitlam
Photo frames	4733-4757	
Comments	Recent slope failure below, 2-3 m H scarp.	



Soil Fill

Thickness at back fence line	1 - 2 m
Thickness at slope crest	1 - 2 m
12 m downslope of crest	Failed Slope
Fill width	22 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	80 - 150%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	Possible	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	Y
% conifer cover at crest	50%	<10%	<10%
Prev. slide magnitude/runout	About 20 m W, 5-7 m inset		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Slope failure below. Outer edge lawn subsided.

Retaining Walls

	Size	Condition
Timber crib	9 m L, max. 1 m H	Poor condition
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	50
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	Concrete, wood	
Swimming pool	Y	
Greenhouse	N	
Pond	N	

Below property, near creek, 6 in black corrugated plastic pipe with strong flow evidence. No slope stability issues apparently caused by this pipe.

Main Structures

House distance to crest	17 m	22 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back Yard, View South



Across Slope Below Property



Headscarp of Failure Below Property Along Sundial Creek Tributary



Back Yard, View North



937 Canyon Court

Top of Slope Below Back Yard With Old Failure Evidence

937 Canyon Court



Pipe Outlet Near Base of Slope Showing Evidence Recent Strong Outflow



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Wood retaining wall should be replaced.

Slopes below property should have no drainage water added at top or gullying or landslides could occur.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	941 Canyon Court	Coquitlam
Photo frames	4776-4794	
Comments	March 2013 slope erosion below site.	



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	< 1 m
Fill width	5 - 7 m Nose of Fill
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	80 - 90% then near vertical

Comments Feb.-March 2013 erosion of west gully wall below site, headscarp retrogression upslope.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	Y
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	Y
% conifer cover at crest		50%	
Prev. slide magnitude/runout	10 m to Ravine Bottom		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Y	Y
Seepage	N	N
Yard drainage	Y	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	1 m H	Cracked, Leans
Rock / mortar	N	
Engineered	N	

House Age

House foundation	50
Deck support posts	Concrete
Driveway	Wood, okay
Footing drains	Front
Roof drainage to storm sewer?	Unknown - likely to crest
	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete slabs	
Swimming pool	N	
Greenhouse	N	
Pond	N	

City of Coquitlam arborist has leaning cedar under observation re: fall toward house and yard.

Comments

Main Structures

House distance to crest	12 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

View Along Crest

941 Canyon Court



Below Crest



View Up Slope To Crest



Concrete Wall Along Crest



941 Canyon Court

Slope Below With Drainage Pipe



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

In Feb.-March 2013, erosion of west gully wall immediately north of site, headscarp retrogression upslope toward neighbour's back yard.

Slopes below should have no drainage water added at top or further gulying or landslides could occur.

The City and the Property Owner should work to resolve roof/foundation/driveway drainage problems.

The City and the Property Owner should share relevant engineering and surveying reports.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	944 Canyon Court	Coquitlam
Photo frames	4876-4907	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	Along Yard
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	80 - 90%

Comments Property is flat top of long ridge.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	Y
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	N
Deep failures	N	N	N
% conifer cover at crest		50%	
Prev. slide magnitude/runout	10 m to Ravine Bottom		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	Yes	N
Yard drainage	Y	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	E. side	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	1 m H	Cracked, Leans
Rock / mortar	N	
Engineered	N	

House Age

House foundation	50
Deck support posts	Concrete
Driveway	Wood, straight.
Footing drains	Front
Roof drainage to storm sewer?	Unknown
	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete slabs; brick	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Possible old failure northeast corner, re: shallow swale with moist soil (weathered till)

Comments Had pool, filled in, decommissioned.

Main Structures

House distance to crest	2.5 m at NE corner of house.
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

944 Canyon Court



Below Crest



View Down Slope West Side of Property



Below Crest East Side

944 Canyon Court



City Stormwater Pipe Down East Side Slope



Possible Subsidence North End of Yard



Below Crest East Side Near Greenhouse



944 Canyon Court

Long View Downslope Central Part



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

A geotechnical assessment is not required at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Slopes below should have no drainage water added at top or gullying or landslides could occur.

Probability of a retrogressive landslide at the ravine crest: High

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun
Address	945 Canyon Court	Coquitlam
Photo frames	4847 - 4874	
Comments		



Soil Fill

Thickness at back fence line	<1 m
Thickness at slope crest	<1 m
12 m downslope of crest	Headscarp
Fill width	Intervals along crest.
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	
Slope below crest, distance	70-80% until vertical headscp

Comments About 25-30 m from crest to bottom of gully at angle.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	Y
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	Y
% conifer cover at crest		<10%	
Prev. slide magnitude/runout	10 m to Ravine Bottom		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Salmonberry
Seepage	Y	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	W. side	Unknown
Groundwater seepage	N	N

Comments City arborist keeping track of leaning dead alder
 Along north side of yard, subsidence and creep indicators.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	Short	Old, fallen
Rock / mortar	N	
Engineered	N	

House **Age**

	50
House foundation	Concrete
Deck support posts	Wood, okay
Driveway	Front
Footing drains	Unknown - likely to crest
Roof drainage to storm sewer?	Unknown - likely to crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	12 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard, View West

945 Canyon Court



Back Yard, View East



View Up Back Yard, East Side



View of East Sundial Creek Gully Erosion Below Property



945 Canyon Court

View of Slope North of Property



View of Slope Northwest Part of Property



Central Part Headscarp Below Crest



945 Canyon Court

South Part of Headscarp Below Crest



Eroding Slope Below Crest, Sediment Into Creek At Base



Sediment Into East Sundial Creek At Base of Gully

945 Canyon Court



Downstream of Property, Stormsewer Outlet Damaged and Water Erosion



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

Slopes below should have no drainage water added at top or further gullying or landslides could occur.

The City and the Property Owner should work to resolve roof/foundation/driveway drainage problems.

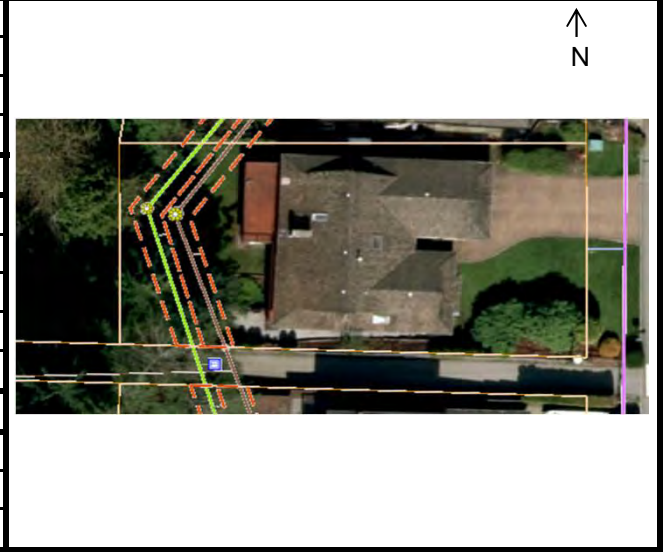
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Overcast
Address	1000 Corona Drive	Coquitlam
Photo frames	4787-4798	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	0 m
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Down to crest
Slope below fence	Est. 50%
Slope below crest, distance	

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	30	25	>15
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Edging along back fence	
Stacked blocks	N	
Concrete	N	
Rock / mortar	Cracks in wall by stairs	
Engineered	N	

House **Age**

House foundation	30 yr.
Deck support posts	Concrete
Driveway	Straight
Footing drains	Unknown
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	14 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown



Chain Link Fence At Back Property Line and City Fence at Park Edge



Crack in Block and Mortar Stairs From Settling



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

If a fill failure or rupture of storm or sanitary pipes would occur, the residences at 2247, 2251 or 2255 Park Crescent or other nearby locations could be affected.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

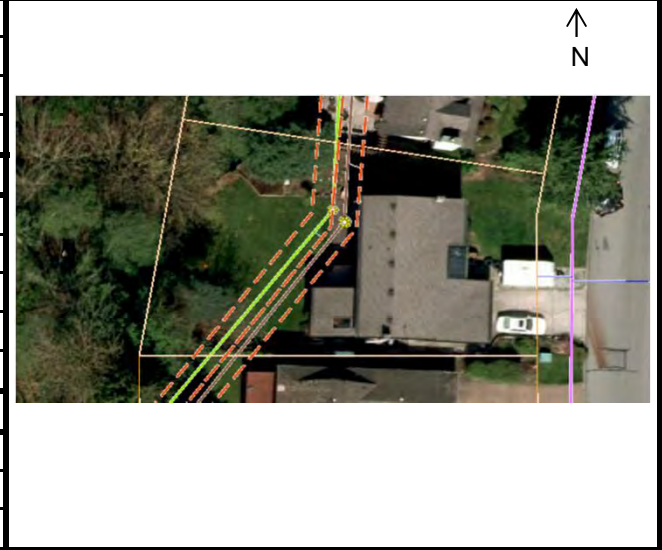
The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun, cool
Address	1004 Corona Drive	Coquitlam
Photo frames	4806-4806; 046-050	
Comments		



Soil Fill

Thickness at back fence line	About 0.5 m
Thickness at slope crest	About 0.5 m
12 m downslope of crest	0 m
Fill width	North half of back yard crest
Native soil at surface	Quadra

Topography

Backyard slope, direction	Down to crest
Slope below fence	5 - 30%
Slope below crest, distance	30% over 30 m

Comments Not all back yard and slope observed due to access difficulties with fences

Instability Features

	Backyd	Crest	Below
Creep	N	N	Tr.
Tension Cracks	N	N	N
Leaning trees	N	Maple	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		5%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Tr.
Hydrophilic vegetation	N	Tr.
Seepage	Yard	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	Unknown
City Pipes	N	N
Groundwater seepage		

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

	35
House foundation	Concrete
Deck support posts	N
Driveway	To house
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Gravel, small	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Access to back yard and slope constrained by private chain link fences. Land downslope is private.

Main Structures

House distance to crest	19 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown



Slope Below Back Yard



View North From South West Part of Back Yard





Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-9.

If a fill failure or rupture of storm or sanitary pipes would occur, the residences at 2255 and/or 2259 Park Crescent or other nearby locations could be affected.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

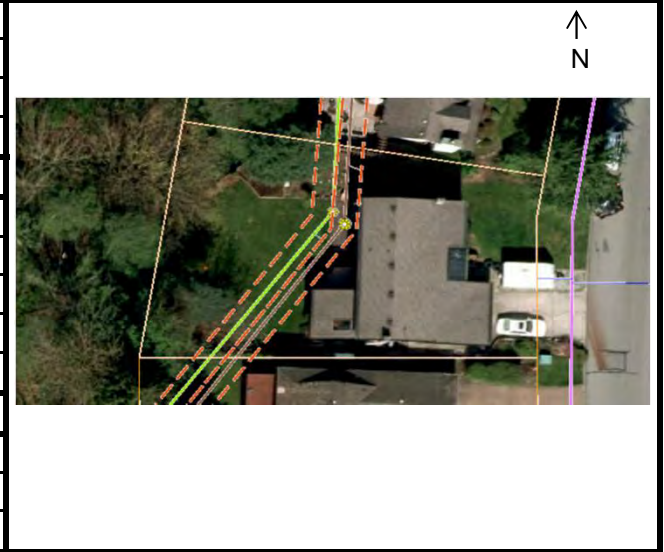
The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun, cool
Address	1008 Corona Drive	Coquitlam
Photo frames	4941-4948	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	< 1 m
12 m downslope of crest	None
Fill width	Width of 19 m W lot
Native soil at surface	Quadra

Topography

Backyard slope, direction	Down to crest
Slope below fence	55 - 60%
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		5%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Salmonberry
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	Unknown
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

	35
House foundation	Concrete
Deck support posts	N
Driveway	To house
Footing drains	Prob. to ravine
Roof drainage to storm sewer?	Prob. to ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete, brick	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	9 m	19 m W
City infrastructure location	Back yard	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	



Slope Below Back Yard



View North Across Area With Shallow Fill



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide and affect 2263, 2267, and/or 2271 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

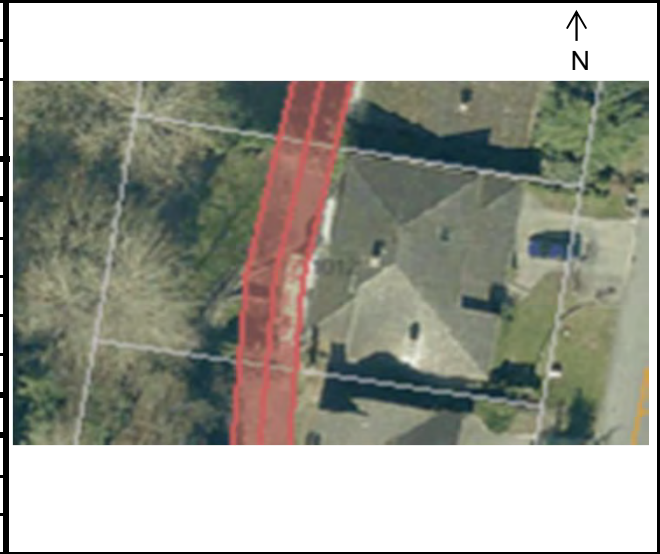
The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Overcast, lt. rain
Address	1012 Corona Drive	Coquitlam
Photo frames	4810-4811	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	
Slope below fence	75%
Slope below crest, distance	75%
Comments	

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	Y	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	>10	20	25
Prev. slide magnitude/runout			
Comments			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	Y, separate, north perimeter	
Stacked blocks	Side Yard 1-2 m H	Okay
Concrete	N	
Rock / mortar	N	
Engineered	N	
Comments	Allen block wall in back yard to 1-2 m H	

House Age

House foundation	30 yr.
Deck support posts	Concrete
Driveway	Straight
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	
Comments		

Main Structures

House distance to crest	16 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard Crest

1012 Corona Drive



Soil Test Hole Layers

Interval (m)	
0-0.15	Brown, moist, topsoil, lots of roots
0.15-1.0	Dark brown, moist, loose pebbly silty sand
1.0	Silty sand, occ. silty layers

Soil pit at crest

Back Yard



Concrete Wall along Side Yard Showing Poor Foundation



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide or debris flow and affect 2271 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Overcast
Address	1016 Corona Drive	Coquitlam
Photo frames	4821-4835	
Comments		



Soil Fill

Thickness at back fence line	Compost
Thickness at slope crest	Est. 0.8 - 1.0 m
12 m downslope of crest	
Fill width	Lobes
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	65%
Slope below crest, distance	

Comments Small ravine at north edge property, all trees on slope lean - creep

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	15	75	20
Prev. slide magnitude/runout		N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	Yard	Yard
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	N
City Pipes	N	N
Groundwater seepage		

Comments

Retaining Walls

	Size	Condition
Timber crib	South fence	
Stacked blocks	N	
Concrete	Side yard	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	
Footing drains	At front, some street water
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	12 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

Slope Below Yard

1016 Corona Drive



Timber Wall Side Garden

Fence At Edge Of City Park



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide and affect 2271 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Overcast
Address	1020 Corona Drive	Coquitlam
Photo frames	5029-5046	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	19 m W
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	60 - 80%
Slope below crest, distance	60 - 80% 20 m

Comments Small ravine below property, all trees on slope lean - creep

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	Maple	Maple	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		5%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Y
Hydrophilic vegetation	N	Possible
Seepage	Y	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	Y	Y
City Pipes	Tr.	Tr.
Groundwater seepage		

Comments Below property, small drainage pipe eroded 0.5m x 0.5 m gully

Retaining Walls

	Size	Condition
Timber crib	On S side yard	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	On S side yard	Okay
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts	Straight	
Driveway	To house	
Footing drains	To ravine prob.	
Roof drainage to storm sewer?	To ravine prob.	

Comments Below property, flow from 22 cm pipe has eroded 5 m W x 2 m D plunge pool,

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wood	near crest
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments No bad surface runoff noted during wet Feb.March 2013

Main Structures

House distance to crest	9 m	19 m W
City infrastructure location	Down S and N sides	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

March 2013-South wall and back deck re-construct

Site Photographs

Backyard

1020 Corona Drive



Below Backyard



View Up to House



Downslope Centre



Post Hole With Silty Sand With Tr. Cobbles



Downslope North Corner



1020 Corona Drive

North West Corner



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide and affect 2271 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

The Property Owner should contact the City of Coquitlam or City of Port Moody and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	1024 Corona Drive	Coquitlam
Photo frames	5047-5062	
Comments		



Soil Fill

Thickness at back fence line	< 0.5 m
Thickness at slope crest	< 0.5 m
12 m downslope of crest	None
Fill width	19 m W
Native soil at surface	Quadra

Topography

Backyard slope, direction	Down to crest
Slope below fence	25% to west
Slope below crest, distance	

Comments Back yard not really developed.

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	Y	Y
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Near house	Leans
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40-50
Deck support posts	Concrete
Driveway	Straight
Footing drains	To house
Roof drainage to storm sewer?	Prob. To Ravine
	Prob. To Ravine

Backyard Structures

	Size	Location
Garden shed	Y	Near house
Patio, material	Outdoor green carpet	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	7 m	19 m W
City infrastructure location	Back yard	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Across Sou Backyard

1024 Corona Drive



Across North End of Slope



Centre of Back Yard





Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide and affect properties below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

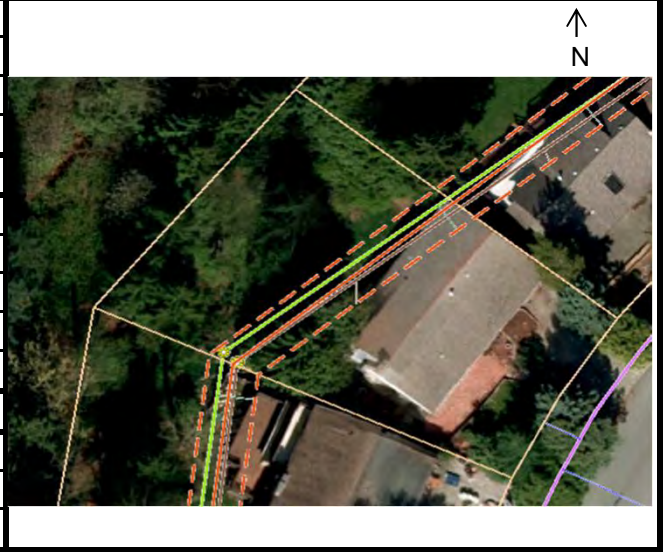
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Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	1028 Corona Drive	Coquitlam
Photo frames	5063-5069	
Comments		



Soil Fill

Thickness at back fence line	None
Thickness at slope crest	None
12 m downslope of crest	None
Fill width	26 m W
Native soil at surface	Quadra

Topography

Backyard slope, direction	30% down to ravine
Slope below fence	30%
Slope below crest, distance	30% over > 30 m

Comments Lots of round granitic cobbles and boulders on surface

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	Maple	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		<25 %	
Prev. slide magnitude/runout		None	

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	Y	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	Y	Y
City Pipes	N	N
Groundwater seepage		

Comments

Retaining Walls

	Size	Condition
Timber crib	Near house	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age 40 - 50 m

House foundation	Concrete
Deck support posts	Straight
Driveway	To house
Footing drains	To Ravine
Roof drainage to storm sewer?	To Ravine

Backyard Structures

	Size	Location
Garden shed	Y	Near house
Patio, material	Outdoor green carpet	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	5 m	26 m W
City infrastructure location	Back yard	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	



Slope Below North End



Centre of Back Yard



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

Any fill failure or rupture of storm/sanitary sewers would likely cause a landslide and affect properties below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

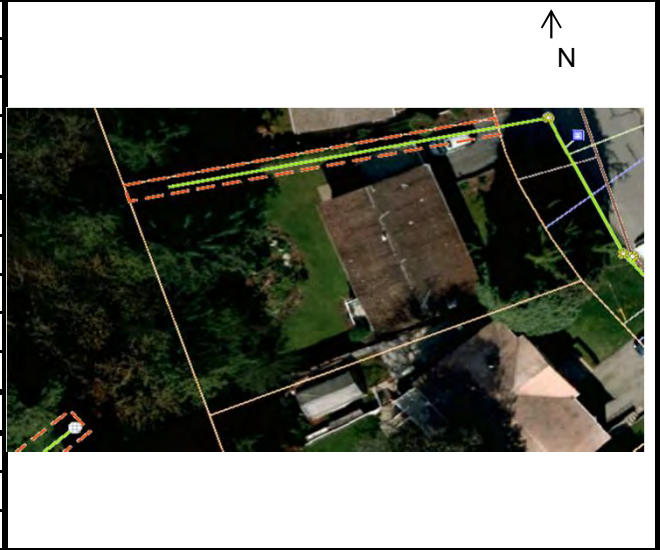
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Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun, cool
Address	968 Corona Crescent	Coquitlam
Photo frames	0432-0447	
Comments		



Soil Fill

Thickness at back fence line	Mostly none, up to 1 m
Thickness at slope crest	None
12 m downslope of crest	None
Fill width	About 8 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	Very gentle to ravine
Slope below fence	
Slope below crest, distance	55 - 75% over 25 m

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100%	
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	N	Tr.
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	North	N
Groundwater seepage	N	N

Comments

Retaining Walls

Size	Condition
Timber crib	N
Stacked blocks	N
Concrete	N
Rock / mortar	Along south yard side, straight, good drainage
Engineered	N

House

Age	30 - 40 Y
House foundation	Concrete
Deck support posts	Straight
Driveway	No street water in
Footing drains	To ravine
Roof drainage to storm sewer?	To ravine
	Front

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Until 5 years ago, storm drain outletted on north property side to Suter Brook. Erosion caused small gully. Five years ago, City extended metal pipe to creek, infilled gully with soil, made surface even. City installed perforated drainage pipes below Corona several years ago.

Comments

Main Structures

House distance to crest	14 m	21 m W
City infrastructure location	Back yard	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	N	

Site Photographs

Backyard

968 Corona Drive



Below Crest



Head End of Suter Brook Upstream of Site, Fed By Stormwater Pipes



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

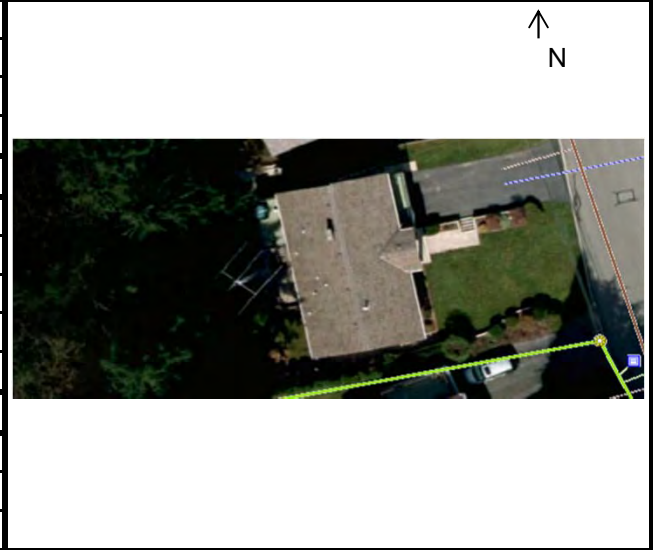
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	March 25, 2013	Sun, cool
Address	972 Corona Crescent	Coquitlam
Photo frames	0448-0459	
Comments		



Soil Fill Rim of fill along crest.

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	
Native soil at surface	Quadra

Topography

Backyard slope, direction	Very gentle to ravine
Slope below fence	
Slope below crest, distance	75% over 20 m South end

Comments 60% over 20 m north end

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100%	
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	North	N
Groundwater seepage	N	N

Retaining Walls

Size	Condition
Timber crib	N
Stacked blocks	N
Concrete	N
Rock / mortar	Along south yard side, straight, good drainage
Engineered	N

House

Age	45
House foundation	Concrete
Deck support posts	Straight
Driveway	No street water in
Footing drains	To ravine
Roof drainage to storm sewer?	To ravine
	Back yard

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete panels, north end	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments House quite close to ravine edge at north

Main Structures

House distance to crest	3 - 10 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	N



Below Crest - Small Sections Old Wall



Slope Below With Straight Conifers



Fill With Concrete Rubble

972 Corona Drive



Possible Nose of Fill At Crest, Centre of Yard



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

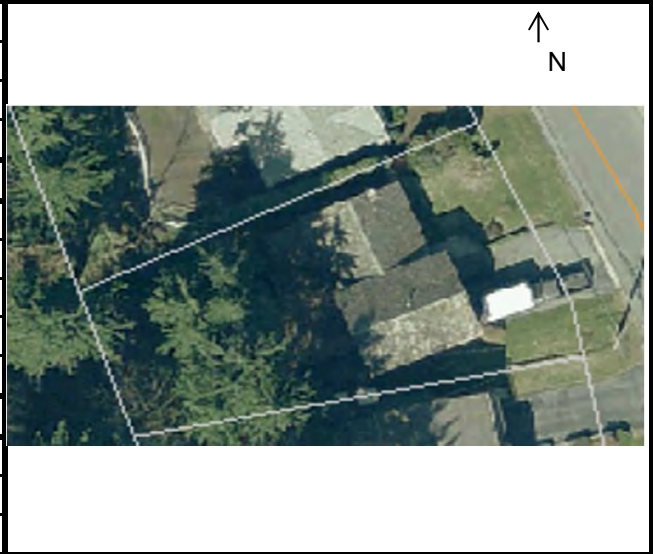
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Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Clear, cool
Address	976 Corona Drive	Coquitlam
Photo frames	4671-4685	
Comments	Raised decks to crest of slope	



Soil Fill

Thickness at back fence line	> 1 m
Thickness at slope crest	> 1.1 m
12 m downslope of crest	> 1 m
Fill width	est. 10 m
Native soil at surface	

Topography

Backyard slope, direction	5-10% to ravine
Slope below fence	100%
Slope below crest, distance	100% , 12 m

Comments Steep but straight trees, flat below with small stream

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	50-70%	50-70%	50-70%
Prev. slide magnitude/runout	N	N	

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	Y 15 m
Seepage	N	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments 11 m downslope is an old scarp - interpreted due to early street drainage

15 m below crest on flat is devil's club

Retaining Walls

Size	Condition
Timber crib	N
Stacked blocks	N
Concrete	N
Rock / mortar	N
Engineered	N

House

Age	44 yrs.
House foundation	Concrete
Deck support posts	Straight
Driveway	No street water in
Footing drains	To back
Roof drainage to storm sewer?	To back
	Front

Comments Loose concrete blocks on slope surface

Deck on concrete sonotube footings

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wood	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Decks occupy most of backyard

Main Structures

House distance to crest	8-10 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	N

Site Photographs

Backyard And Crest

976 Corona Drive



Below Crest



Up Toward House From Slope Below



Soil Test Hole Layers

976 Corona Drive

Interval (m)	Crest	Interval (m)	About 12 m Downslope
0-0.5	Brown, moist sandy silt	0-0.25	Black, organic, moist, concrete pieces, colluvium
0.5-1.0	Tan brown, moist silty medium to coarse sand, some pebbles	0.25-0.8	Red brown, oxidized medium to coarse sand cemented
1.0-1.1	Black sandy silt dense old soil/tree ?	0.8-1.05	Moist, grey to black sandy, clayey silt old root

Probability of a specific hazardous landslide starting from this property affecting downslope properties: High.

See Table 5-9.

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

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Site Observation Form

Site Air Photo

Date/Weather	June 11, 2011	Clear, cool
Address	980 Corona Drive	Coquitlam
Photo frames	4686-4713	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 - 2 m
Thickness at slope crest	
12 m downslope of crest	None
Fill width	Est. 20 m
Native soil at surface	

Topography

Backyard slope, direction	Flat
Slope below fence	40-60%
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Cv butt	Cv butt
Pistol-butt trees	N	N	N
Shallow failures	N	In spoils	N
Deep failures	N	N	N
% conifer cover at crest	N	N	50%
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Y

Comments At base of slope, wet, organic soils beside creek with sands, cobbles (flashy flow)

Vertical crack in concrete retaining wall at corner.

Retaining Walls

	Size	Condition
Timber crib	0.8 m H, 20 mL	Leans out slightly
Stacked blocks	N	
Concrete	1-1.5 m H	Old pool wall
Rock / mortar	N	
Engineered	N	

House

Age	40 - 50 yrs.
House foundation	Concrete
Deck support posts	Straight
Driveway	No street water to dway
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Brick	
Swimming pool	Filled in, not used	
Greenhouse	N	
Pond	N	

Back yard is occupied by a decommissioned concrete swimming pool. Unknown status.

Comments Old outer concrete wall from inground pool

Main Structures

House distance to crest	7 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	N



Small Wood Tie Retaining Wall, Lower Right



Downslope Soil Pit, With Wet Plastic Soil At Depth

ete wall



View Downslope Over Fringe of Fill



Crack in northwest corner of concrete retaining wall.



Concrete wall on north side of property, no cracks or alignment issues.



Soil Test Hole Layers

13 m d/s

Interval (m)	Crest	Interval (m)	Downslope
0-0.2	Mix soil & organics. loose, fill silty sand	0-0.15	Dark brown sand & organics colluvium
0.2-0.6	Moist, grey loose silty sand	0.15-0.5	Red brown sand moist
0.6-1.05	Denser, pebbles iron oxidized, increase to moderate density	0.5-0.8	Silty clayey sand oxidized, moist plastic
1.05	Refusal on cobble.	0.8-1	Tan, wet, slightly clayey silt, sticky, moderate dens.

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

High

See Table 5-9.

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

A geotechnical assessment of the slope stability is required.

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Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Sun
Address	984 Corona Drive	Coquitlam
Photo frames	5310-5320	
Comments		



Soil Fill

Thickness at back fence line	1 -2 m est.
Thickness at slope crest	
12 m downslope of crest	0 m
Fill width	21 m est.
Native soil at surface	

Topography

Backyard slope, direction	
Slope below fence	est. 70 - 80%
Slope below crest, distance	est. 70 - 80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Prob.

Comments Heavy brush and ground cover stops view of possible instability features

Three topped trees below crest

Retaining Walls

	Size	Condition
Timber crib	Y	Tipping downslope
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 -50 yr.
Deck support posts	Concrete
Driveway	Straight
Footing drains	To Crest
Roof drainage to storm sewer?	N

Comments Soil fill under decks

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wood	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	8 m est.
City infrastructure location	Front
St. drains into d'way, bkyd.	Y
Buried irrig, electric cables	Unknown

Site Photographs

Small Retaining Walls of Wood Ties Below Crest

984 Corona Drive



View Across Main Slope With Lobe of Concrete Debris



View Down Slope



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very High.
See Table 5-9.**

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

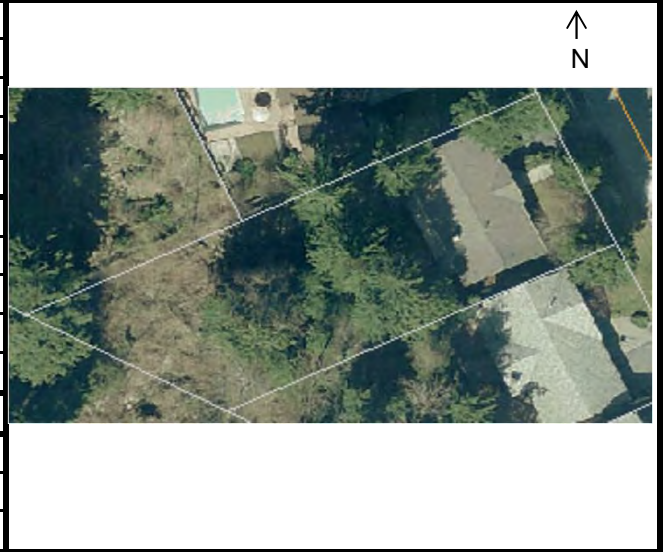
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Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Sun
Address	988 Corona Drive	Coquitlam
Photo frames	5321-5324	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 1 m
12 m downslope of crest	None
Fill width	2 lobes, part of 21 m width
Native soil at surface	

Topography

Backyard slope, direction	Down to crest
Slope below fence	
Slope below crest, distance	50-60%

Comments Thin lobes of fill downslope

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Comments Mature straight conifers at crest, on slope

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yr.
Deck support posts	Concrete
Driveway	Not Aligned
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Onto back yard

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	8 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

988 Corona Drive



Below Crest



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
High.**

See Table 5-9.

A fill failure or rupture of storm/sanitary sewers could potentially cause a landslide or debris flow and affect 2242 Park Crescent below.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution, strength properties, and water conditions may be required.

The Property Owner should contact the City of Coquitlam and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Overcast
Address	990 Corona Drive	Coquitlam
Photo frames	4716-4734	
Comments		



Soil Fill

Thickness at back fence line	Occupied by Pool and Wall
Thickness at slope crest	Unknown
12 m downslope of crest	
Fill width	Est. 20 m
Native soil at surface	

Topography

Backyard slope, direction	Patio
Slope below fence	Vertical
Slope below crest, distance	

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		0	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Y
Hydrophilic vegetation	N	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Y

Comments

Retaining Walls

	Size	Condition
Timber crib	Small, in yard	
Stacked blocks	N	
Concrete	Yes, 2-3 m H	Straight, some
Rock / mortar		encrustation
Engineered		

House **Age**

House foundation	36 yr.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Y, brick Large	Cracked, subsided
Swimming pool	Y, Concrete, Cracked	
Greenhouse	N	
Pond	N	

Soil Test Hole Layers See 992 Corona

Comments

Main Structures

House distance to crest	14 m
City infrastructure location	Back re: Map
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	N



Pool With Repaired Cracks



North End of Concrete Outer Wall



South End of Outer Concrete Wall



One of Five Drainage Pipes From Toe Of Wall

990 Corona Drive



View Down Slope Below Toe Of Concrete Wall

View Down Over Outer Concrete Wall



Patio Beside Pool With Subsidence Indicators



990 Corona Drive

**Probability of a specific hazardous landslide starting from this property affecting downslope properties: Very High.
See Table 5-9.**

If a slope failure or rupture of storm or sanitary pipes would occur, the residences at 2242 and 2244 Park Crescent or other nearby locations could be affected.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution and strength, and water conditions may be required.

The Property Owners of 990 Corona Crescent should have the retaining wall assessed by a geotechnical engineer for seismic stability, factor of safety, and up-to-date overall stability, if not already completed.

The Property Owner should contact the City of Coquitlam and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Cloud, rain
Address	992 Corona Drive	Coquitlam
Photo frames	4735-4786	
Comments		



Soil Fill

Thickness at back fence line	Est. <0.5 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Variable
Slope below fence	
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	0	20	20
Prev. slide magnitude/runout		N	

Comments

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	Y	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	Y
City Pipes	Y	Y
Groundwater seepage	N	Y

Skunk cabbage, horsetail at base of slope

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Y	New, straight
Concrete	Y	New, straight
Rock / mortar	N	
Engineered	Y	

Comments: AGRA had designed, installed Allen block wall and drainage

House

Age	40 yr.
House foundation	Concrete
Deck support posts	Yes, straight
Driveway	Leads down to drain
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wooden decks	
Swimming pool	N	
Greenhouse	N	
Pond	Y at bottom of slope	

Main Structures

House distance to crest	< 5 m
City infrastructure location	? Backyard
St. drains into d'way, bkyd.	Y - but drain
Buried irrig, electric cables	Unknown

Site Photographs

Backyard - Allen Block Walls



992 Corona Drive

Soil Test Pit (in Fill?) Below Large Concrete Retaining Wall



Soil Test Pit, Deeper in Quadra Sands



Northwest Side of House, Allen Block Walls



Southwest Part of Property, Wet Patch



992 Corona Drive

Southwest Part of Property, Water-loving Vegetation



Cedar Tree With Buttress Roots, West Part of Property



Soil Test Hole Layers

992 Corona Drive

Interval (m)	Below Pool Wall	Interval (m)	Downslope
0.0-0.05	Organic Leaf litter	0-0.25	Organic Leaf litter
0.05-0.55	Grey moist, silty med. sand angular pebbles Fill?	0.25-1.0	Red brown, fine to medium sand, cobble
0.55-1.1	Tan grey, moist mostly sand, angular pebbles cobble	1.0-1.1	Roots, trace silt. dense fine sand
	3 m below upper property line		Near lower property line in tree root pit

Recommendations

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very High.

See Table 5-9.

If a slope failure or rupture of storm or sanitary pipes would occur, the residences at 2242 and 2244 Park Crescent or other nearby locations could be affected.

A geotechnical assessment of the slope stability is required.

In the Phase 3 geotechnical assessments, investigations of subsurface soil composition, distribution, strength properties, and water conditions may be required.

The subject property at 992 Corona Crescent had previous geotechnical slope stability assessments completed. These previous assessments are considered to still be in effect.

The property upslope at 990 Corona Crescent with the outdoor swimming pool and concrete retaining wall has evidence of previous subsidence and drainage issues. Drainage pipes outlet onto the 992 Corona property. If the pool and wall failed, water and soil would flow through the 992 Corona property and the downslope houses would be exposed to dangerous debris flow and water erosion conditions.

The owners of 990 Corona Crescent should have the retaining wall evaluated by a geotechnical engineer for seismic stability, factor of safety, and up-to-date overall stability, if not already completed.

The Property Owner should contact the City of Coquitlam and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Overcast
Address	998 Corona Drive	Coquitlam
Photo frames	4787-4798	
Comments		



Soil Fill

Thickness at back fence line	Compost
Thickness at slope crest	Est. 1 m
12 m downslope of crest	Native
Fill width	Est. 20 m
Native soil at surface	

Topography

Backyard slope, direction	15% to crest
Slope below fence	
Slope below crest, distance	est. 50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	Tr.	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	>10	20	25
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	1 m H, installed 2000	
Stacked blocks	Allen block patio, stairs	New, slight subside
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	30 yr.
Deck support posts	Concrete
Driveway	
Footing drains	
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Y Large	Back from crest.
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	19 m
City infrastructure location	Backyard
St. drains into d'way, bkyd.	
Buried irrig, electric cables	

Site Photographs

Backyard

998 Corona Drive



Timber Wall Along Crest, Creep Indicators

Top of Crest With Panel Fence, Edge of Fill



Soil Test Hole Layers

3 m below wooden wall

Interval (m)	Downslope
0-0.25	Dry, loose red brown sand, pebbles pebbles

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-9.

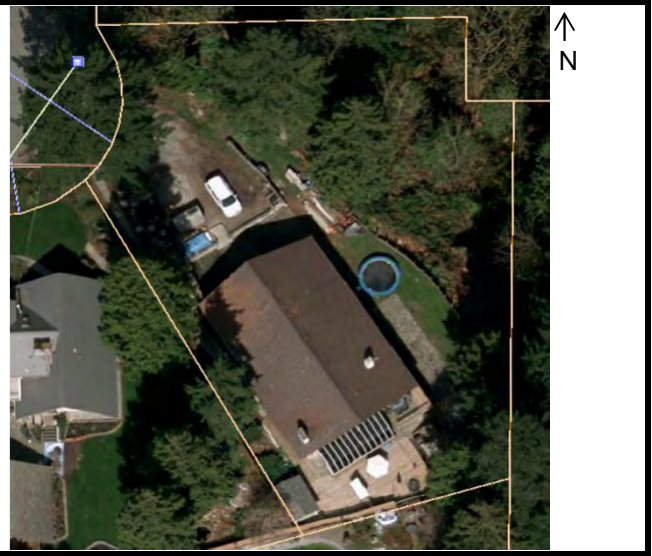
The property owner should contact the City of Coquitlam and exchange any previous geotechnical engineering or other reports, construction designs, maps or letters, to ensure that the property boundaries, the nature of slope stability conditions and previous stability assessments are mutually understood.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 27, 2013	Sun
Address	1904 Bowman Ave.	Coquitlam
Photo frames	5364-5366; 5332-5355	
Comments	House is for sale	



Soil Fill

Thickness at back fence line	Est. 2 - 3 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	0
Fill width	Est. 20 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	80%
Slope below crest, distance	55% for >30 m

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50%	
Prev. slide magnitude/runout		N	

Comments

Water Features

Sources of drainage
Hydrophilic vegetation
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Yard/Roof	Yard/Roof
N	N
N	Below wall
N	N
N	N
N	N
N	N

Retaining Walls

	Size	Condition
Timber crib	1-1.8 m H, 20-25 m L	New, failed
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

New timber post and tie retaining wall has failed posts, bulges outwards, gaps in ties.

House Age

House foundation	40 - 50
Deck support posts	Concrete
Driveway	Straight
Footing drains	To house
Roof drainage to storm sewer?	To ravine
	To ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Vertical crack in landscape block wall by patio and crest

Main Structures

House distance to crest	7 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	



Down Slope



East Section of Wall Okay



Slope Below East Section of Wall



1904 Bowman Court

Central Wall Section With Broken Uprights and Ties



Slope Below West Part of Lot



Crest Along Back Yard



Patio Wall With Vertical Crack Near Crest



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

The wood retaining wall should be repaired.

Site Observation Form

Site Air Photo

Date/Weather	Tuesday, June 12, 2012	Overcast
Address	1919 Custer Court	Coquitlam
Photo frames	5360-5363	
Comments		



Soil Fill

Thickness at back fence line	0.5 m est.
Thickness at slope crest	0.5 m est.
12 m downslope of crest	Native
Fill width	est. 20 m
Native soil at surface	

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	70-75%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50	50
Prev. slide magnitude/runout		N	N

Comments

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Resident indicated that drinking water pipes replaced.

Main Structures

House distance to crest	12 - 15 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1919 Custer Court



Along Crest



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Light rain
Address	1927 Custer Court	Coquitlam
Photo frames	4881-4901	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 - 1.2 m
Thickness at slope crest	Est. 1.1 m
12 m downslope of crest	Est. trace
Fill width	Est. 23 m
Native soil at surface	

Topography

Backyard slope, direction	5% to crest
Slope below fence	70%
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout		Small, shallow	

Comments Likely shallow slough of fill, short distance, no mature trees

Retaining Walls

	Size	Condition
Timber crib	1.2 m H	Newer, slight bulge
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	Concrete	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	12 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Plastic pipes both edges of lot, active drainage (roof)

House Age

House foundation	40 yr.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	N

Site Photographs

Back Yard

1927 Custer Court



Below Wood Timber Retaining Wall



Roof and Yard Drain



Soil Pit Below Crest



1927 Custer Court

Below Crest, Old Slope Failure Scar



Soil Test Hole Layers

Interval (m)	Downslope
0-1.1 Fill?	Red brown, low compaction, mix fine to coarse sand rotted cedar
1.1	Black, organic rich sandy silt - old soil?
	4 m below fence and wall

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

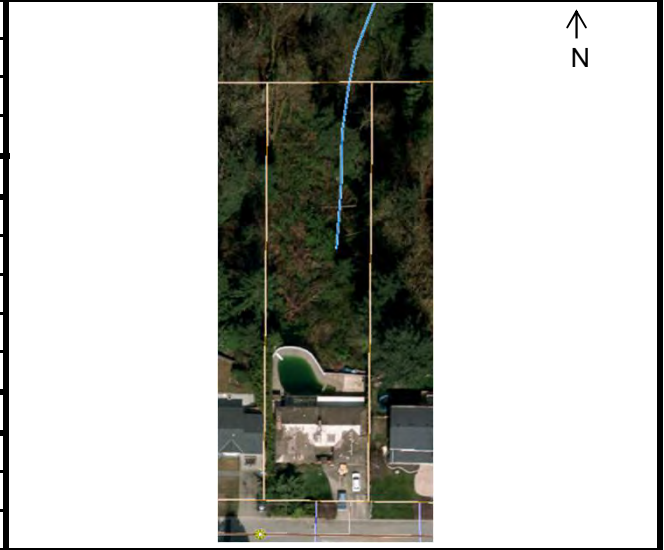
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1933 Custer Court	Coquitlam
Photo frames	5690-5698	
Comments	Part of top of slope obscured by panels.	



Soil Fill

Thickness at back fence line	
Thickness at slope crest	About 1.5 m
12 m downslope of crest	None
Fill width	About 20 m
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	90-100%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Cov'd	Tr.	Tr.
Tension Cracks		N	N
Leaning trees		N	N
Pistol-butt trees		N	N
Shallow failures		N	N
Deep failures		N	N
% conifer cover at crest		5%	
Prev. slide magnitude/runout			

Comments All backyard under pool and deck.
Most trees below back yard removed.

Retaining Walls

	Size	Condition
Timber crib	10 m L, 0.4 m H	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wood	All back yard
Swimming pool	About 15 m x 7 m	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	23 m	Pool just above crest
City infrastructure location		Front
St. drains into d'way, bkyd.		
Buried irrig, electric cables		Unknown

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic veg.	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

House Age

House foundation	40 - 50 years
Deck support posts	Concrete
Driveway	Straight
Footing drains	N
Roof drainage to storm sewer?	Prob. To Ravine
	Prob. To Ravine



Pool Structure From Below With Rebar, Pipes, No Cracks or Seeps



East Edge Pool Base With Old Stump Indicating Old Surface



West Edge of Crest



Old Stump, Cut Maples, Centre of Slope Below Crest



Slope Below West Edge of Property, Trees Removed



1933 Custer Court

Gap In Fill Below Concrete Surface Layer

1933 Custer Court



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Sun
Address	1943 Custer Court	
Photo frames	5367-5380	
Comments		



Soil Fill

Thickness at back fence line	1-2 m est.
Thickness at slope crest	1 m est.
12 m downslope of crest	Native
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	5% down to crest
Slope below fence	est. 60%
Slope below crest, distance	

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments: Straight conifers at crest and downslope.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Allen, 0.8 m H	New, straight
Concrete	0.5 m H	Old, settled
Rock / mortar	N	
Engineered	N	

Comments: Old concrete block wall, short, slightly tilted

House **Age**

House foundation	40 yr.
Deck support posts	Concrete
Driveway	Straight
Footing drains	New, drains to street
Roof drainage to storm sewer?	Unknown
	Front only

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	7 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown



Along Crest



Old Small Walls



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Light rain
Address	1953 Custer Court	Coquitlam
Photo frames	4902-4905	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	0
12 m downslope of crest	0
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	5% to crest
Slope below fence	55%
Slope below crest, distance	55%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	10	50	75
Prev. slide magnitude/runout			

Comments Large straight conifers at and below crest

Water Features

Sources of drainage
Hydrophilic vegetation
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Yard/Roof	Yard/Roof
N	N
N	N
Y	Y
N	N
N	N
N	N
N	N

Retaining Walls

	Size	Condition
Timber crib	Y	
Stacked blocks	Y	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation
Deck support posts
Driveway
Footing drains
Roof drainage to storm sewer?

40 yr.
Concrete
Straight
Unknown
Front only

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	5 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	

Site Photographs

Backyard

1953 Custer Court



Along Crest



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Light Rain
Address	1963 Custer Court	Coquitlam
Photo frames	4906-4912	
Comments		



Soil Fill

Thickness at back fence line	Est. < 1 m
Thickness at slope crest	Small lobes of fill
12 m downslope of crest	Est. None
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Est. 60 - 80%
Slope below fence	
Slope below crest, distance	

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Comments

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Y < 1 m H	Old, no movement
Concrete	Y < 1 m H	Old, buried
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	40 yr.
Deck support posts	Concrete
Driveway	Short
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Only at front

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Est. 5-7 m
City infrastructure location	Front and east side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1963 Custer Court



Old Small Walls



Slope Below



Further Downslope, August 2011

1963 Custer Court



Old Trail and Infrastructure Below Site, August 2011



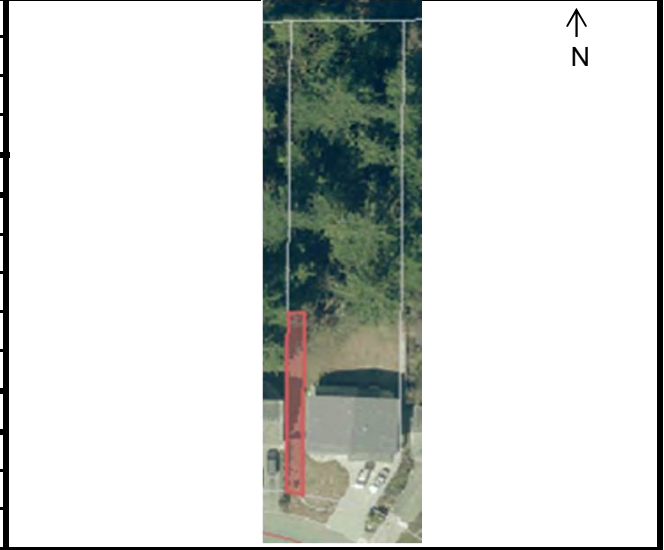
**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Rain
Address	1973 Custer Court	Coquitlam
Photo frames	4913-4920	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	0
Fill width	Est. 20 m
Native soil at surface	

Topography

Backyard slope, direction	5 % to crest
Slope below fence	70%
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50	50
Prev. slide magnitude/runout		N	N

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	West	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	34 yr.
Deck support posts	Concrete
Driveway	Straight
Footing drains	N
Roof drainage to storm sewer?	Unknown
Old storm sewer back yard, is on City Plans.	Only front

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	15 - 21 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1973 Custer Court



Along Crest



Fill at Crest



1973 Custer Court

Downslope



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Light rain
Address	1975 Custer Court	Coquitlam
Photo frames	4921-4928	
Comments		



Soil Fill

Thickness at back fence line	Est. 0.5 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Down to crest
Slope below fence	15%
Slope below crest, distance	45%

Comments Backyard slopes for house access. Boulders at edge, likely extent of most fill.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	5	5	50
Prev. slide magnitude/runout			

Comments Straight small conifers at crest and below

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	Y
Groundwater seepage	N	N

Drain pipe exits slope about 10 m below crest.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Garden shed on old rail ties

House

Age	40 yr.
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Front

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	About 15 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1975 Custer Court



Along Crest



Soil Test Hole Layers 8 m below crest

Interval (m)	Crest	Interval (m)	Downslope
0-0.2	Fill composed of till	0-0.2	black organic material roots
0.2 - 0.25	Refusal at stony layer	0.2-0.9	Red brown, slightly moist, fn-cs sand, pebbles, cobbles
	Fill	0.9	Refusal All native soil

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 12, 2012	Rain
Address	805 Northview Place	Coquitlam
Photo frames	53-5359	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 5 m
12 m downslope of crest	>5 m
Fill width	Includes four lots
Native soil at surface	

Topography

Backyard slope, direction	Gentle to ravine
Slope below fence	
Slope below crest, distance	80%

Comments Large established fill area, with trail, unknown downslope extent

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		0	
Prev. slide magnitude/runout			

Comments Shallow creep evidence widespread

Water Features

Sources of drainage	
Hydrophilic vegetation	
Seepage	
Yard drainage	
Patio drainage	
Pool, pond drainage	
City Pipes	
Groundwater seepage	

	Crest Slope	Below Slope
	N	N
	N	N
	N	N
	N	N
	N	N
	Y	Y
	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	20-30 yrs
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Est. 20 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Trail On Slope Below



North Part of Large Fill Area



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

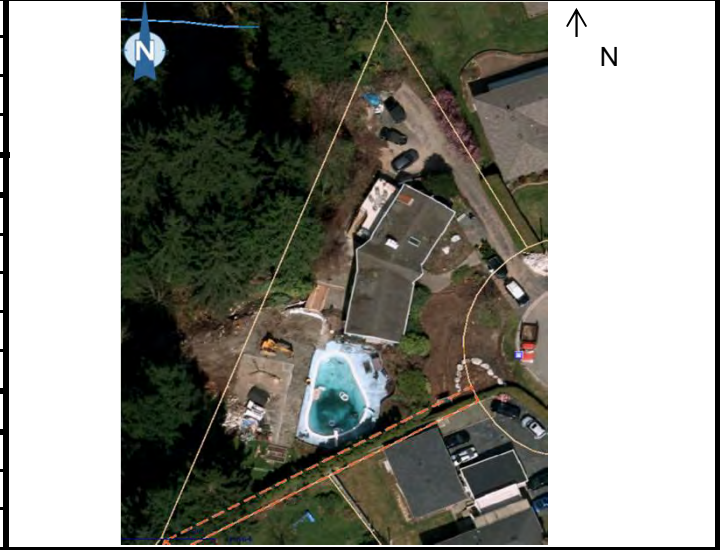
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 27, 2013	Sun
Address	830 Ultra Court	Coquitlam
Photo frames	5382-5384; 5235-5342	
Comments		



Soil Fill Back yard under re-construction.

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 - 3 mm
12 m downslope of crest	Est. 0 - 1 m
Fill width	Est. >50 m
Native soil at surface	

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	55 - 85%
Slope below crest, distance	55%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50	50
Prev. slide magnitude/runout		N	N

Comments Thick vegetation in wet swale in northwest

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y in swale
Seepage	N	Y in swale
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Unknown	Unknown
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Owner indicated a retaining wall is planned.

House Age

House foundation	About 45
Deck support posts	Concrete
Driveway	N
Footing drains	Front
Roof drainage to storm sewer?	Unknown
	Unknown

Backyard Structures

	Size	Location
Garden shed	Y	Crest
Patio, material	concrete, brick	Southwest
Swimming pool	Y	Southwest
Greenhouse	Pool house	At crest
Pond	N	

Comments

Concrete debris added to large swale by previous owner.

Some recent fill placement and soil storage near crest. Yard landscaping not complete.

Main Structures

House distance to crest	Est. 5 m at minimum
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Fill Along Lane Behind House

830 Ultra Court



Fill Near New Pool Building



Fill At North End Property, Below End of Driveway



Large Wet Swale With Old Concrete Debris, Northwest Corner



830 Ultra Court

Large Wet Swale From Distance, Northwest Corner



Natural Slope North of Large Wet Swale



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

During landscaping, the owner should endeavor to limit fill placement and soil storage at the ravine crest.

Any future retaining wall design and construction should follow Coquitlam by-laws and have engineering design.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	838 Ultra Court	Coquitlam
Photo frames	5243-5249	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 mm
12 m downslope of crest	< 0.5 m
Fill width	Different Fill Deposits
Native soil at surface	

Topography

Backyard slope, direction	Gentle to crest
Slope below fence	40 - 80%
Slope below crest, distance	40%

Comments Angular armour rock and concrete debris placed below stormwater outlet at top of slope.

Instability Features

	Backyd	Crest	Below
Creep	Y	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		> 50%	
Prev. slide magnitude/runout		N	N

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Yes	Yes
Groundwater seepage	N	N

Apron of Fill northwest corner, 1-1.5 D, 13 m along crest

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50
Deck support posts	Concrete
Driveway	N
Footing drains	Front
Roof drainage to storm sewer?	Unknown - prob. to ravine
	Only front, rest to ravine

Backyard Structures

	Size	Location
Garden shed	Y A few	Near crest
Patio, material	By Pool	northwest
Swimming pool	Y	> 30 m from crest
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Est. 10 m min.
City infrastructure location	Mainly at back, west side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard View East

838 Ultra Court



City Stormsewer Outlet At Top Of Slope, West Boundary

Armour Along Water Track Below Storm Outlet



Main Slope Below Property



838 Ultra Court

Northeast Part Main Slope



Roof? Pipe Outlet, Northeast Slope Below Crest



With Indication High Flow

**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

The City of Coquitlam should consider conveying the stormwater down to the bottom of slope by a flexible plastic drainage pipe, as has been done for other stormwater pipe outlets.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	921 Fresno Place	Coquitlam
Photo frames	5584-5594	
Comments		



Soil Fill

Thickness at back fence line	About 0.6 m
Thickness at slope crest	About 0.6 m
12 m downslope of crest	None
Fill width	22 m
Native soil at surface	Till/Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		10%	65%
Prev. slide magnitude/runout	None		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	Y - moist
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	City storm
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	At crest, 0.5 m H	Good
Stacked blocks	Around raised patio near crest.	
Concrete	South side of yard away from crest.	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	To house
Roof drainage to storm sewer?	Unknown
	SW side and back yard

Backyard Structures

	Size	Location
Garden shed	Y 6x6 m	NE corner nr crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	12 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

View Northeast along Crest

921 Fresno Place



View South along Crest



View Along Slope North



View Across Slope Below Crest with Possible Fill

921 Fresno Place



View Down Slope



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	925 Fresno Place	Coquitlam
Photo frames	5595-5603	
Comments		



Soil Fill

Thickness at back fence line	About 1 m below lawn, 1 m fill
Thickness at slope crest	
12 m downslope of crest	None
Fill width	19 m along crest
Native soil at surface	Till/Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	55%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100%	100%
Prev. slide magnitude/runout	None		

Comments

Water Features

Sources of drainage
Hydrophilic vegetation
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Yard/Roof	Yard/Roof
N	N
N	N
To crest	To crest
N	N
N	N
N	City storm
N	N

Retaining Walls

	Size	Condition
Timber crib	Along crest, 1.2 m H	Good
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments: Timber crib wall has very slight bow outwards

House Age

House foundation
Deck support posts
Driveway
Footing drains
Roof drainage to storm sewer?

40 - 50 yrs.
Concrete
N
Front
Unknown
SW side and back yard

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	5 m minimum
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

View Northeast along Crest

925 Fresno Place



View South along Crest



Fill Apron North Part of Crest



View Down and Across Slope



925 Fresno Place

View Up Across Slope To South



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	928 Fresno Place	Coquitlam
Photo frames	5604-5614	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	
12 m downslope of crest	None
Fill width	21 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50% 80% down fill face

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	A few
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		75%	100%
Prev. slide magnitude/runout	None		

Comments Pistol butt trees may be from machine damage.

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Salmonberry
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Yes

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	Landscape blocks, 1 m H, 15 m L, new	
Rock / mortar	N	
Engineered	N	

Comments Lawn subsided a bit near south edge

House **Age**

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	Unknown
	SW side and back yard

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	7 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Slope Below Centre of Property

928 Fresno Place



Across Slope Below Edge of Fill



Slope Below Fill Apron, North Side



Cedar Growing on Logs From Original Land Clearing or Logging

928 Fresno Place



View Down Slope Below Centre of Fill Apron



Fill Back Edge Of Yard.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

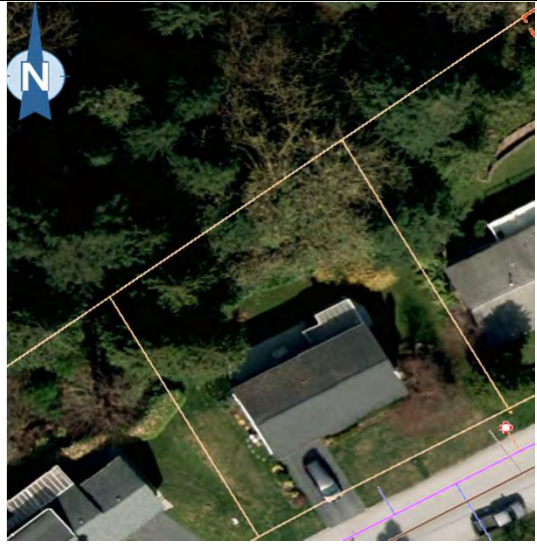
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	932 Fresno Place	Coquitlam
Photo frames	5615-5623	
Comments		



Soil Fill

Thickness at back fence line	About 2 m
Thickness at slope crest	
12 m downslope of crest	None
Fill width	21 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	45%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50%	90%
Prev. slide magnitude/runout	None		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Salmonb.	Salmonb
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Ravine side	Good, straight
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments: Lawn sunken a bit near south edge

House Age

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	Unknown
	SW side and back yard

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	8 m	21 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back yard

932 Fresno Place



Up Slope Below Edge of Fill



Slope Below, View South





Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

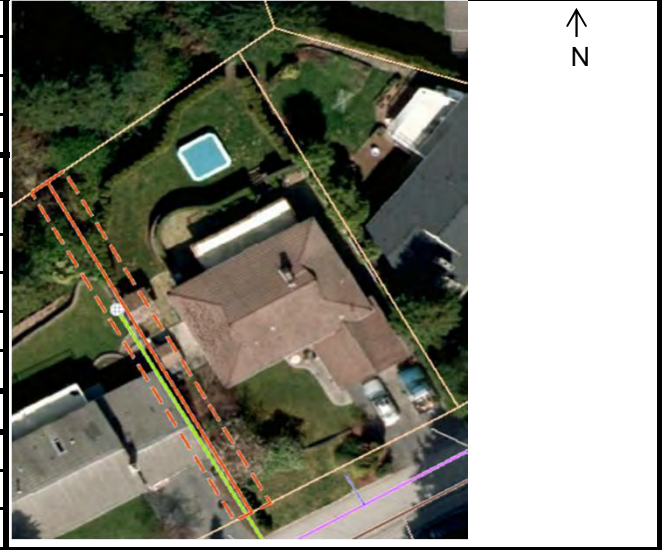
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	936 Fresno Place	Coquitlam
Photo frames	5624-5632	
Comments		



Soil Fill

Thickness at back fence line	1 m yard, 1 m fill
Thickness at slope crest	
12 m downslope of crest	None
Fill width	19 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		N	75%
Prev. slide magnitude/runout	None		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Salmonb.	Salmonb.
Seepage	N	40 m d/s
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	SW	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	17 m L, 2 m H	Straight
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	Unknown
	SW side and back yard

Comments: Fill 8 m down from crest, organics and gravel. Probe 0.5-0.9 m into suspect fill

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	8 m	21 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back Yard

936 Fresno Place



Lower Wall At Crest



Slope Below North Side



Slope Below North Side

936 Fresno Place



Upper Wall, Sunken Stairs, Out-Tipped Wall



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	940 Fresno Place	Coquitlam
Photo frames	5634-5638	
Comments		



Soil Fill

Thickness at back fence line	About 2 m
Thickness at slope crest	About 2 m
12 m downslope of crest	End of Fill
Fill width	About 5 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100%	25%
Prev. slide magnitude/runout	None		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Salmonb.	Salmonb.
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	0.6 m H, 5 m L	
Engineered	N	

House Age

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	Front
Footing drains	Unknown
Roof drainage to storm sewer?	SW side and back yard

Backyard Structures

	Size	Location
Garden shed	Y	At Crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	18 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back yard

940 Fresno Place



Below Yard North



Downslope Long Distance



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 27, 2013	Sun
Address	1335 Harbour Drive	Coquitlam
Photo frames	5461-5495	
Comments		



Soil Fill

Thickness at back fence line	Gen. < 1 m
Thickness at slope crest	Gen. < 1 m
12 m downslope of crest	None
Fill width	24 m
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	80 - 90%
Slope below crest, distance	80 - 90% to gully

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		>50%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Pipes
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	W. side	N
Groundwater seepage	N	N

Comments
City storm pipe outflow has rock/broken toilet pieces as armour.

City 33 inch wood stave pipe, also 2 plastic pipes
House Age 50 yrs.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

House foundation	Concrete
Deck support posts	Straight
Driveway	N
Footing drains	Prob. To Ravine
Roof drainage to storm sewer?	Prob. To Ravine

Comments
Concrete retaining wall at boundary of adjacent property to east: 1455 Harbour.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

The small drainage pipes on east side outlet onto upper slope. The amount of water creates a wet zone down the slope. This is not good for slope stability.

Main Structures

House distance to crest	18 m
City infrastructure location	West side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1335 Harbour Drive



Gully and Erosion Down To Dense Till, West Side Below Lot



Crest East Side of Property



Midway Down Gully on West Side



1335 Harbour Drive

Roof and/or Foundation Drainage East Side of Slope Below Crest



Wet Zone Below Pipe, East Side



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 11, 2012	Overcast
Address	1445 Harbour Drive	Coquitlam
Photo frames	455-4622	
Comments	Likely thin fill along crest as at 1455 to east	



↑
N

Soil Fill

Thickness at back fence line	Est. 1.1 m
Thickness at slope crest	Est. 0.2
12 m downslope of crest	Est. 0.2 m
Fill width	20 m est.
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	35-40%
Slope below crest, distance	35-40%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Comments

Water Features

Sources of drainage
Hydrophilic veg.
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Yard	Yard
N	Y
N	Y
To crest	To crest
N	N
N	N
Y	Y
N	N

0.44 m diam. outfall east side of property

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Concrete retaining wall at boundary of adjacent property to east: 1455 Harbour.

House Age

House foundation	50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	To back

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	15 m
City infrastructure location	East side and along back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1445 Harbour Drive



Below Back Fence Line, View East





Shallow Soil Test Pit Below Crest Into Fill and Till, With Seepage



Soil Test Hole Layers

Interval (m)	Back Yard	Interval (m)	Downslope
0-0.35	Organics, roots domestic garbage	0-0.2	Surface organics, sandy silt, Fill.
0.35-1.1	Fill? Dark brown, moist silty sand	0.2	Water table or seepage zone
		0.2-0.4	Silty sand, cobbles, pebbles
			Likely native till soil.
		About 8 m below fence	

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 11, 2012	Sun, cloud
Address	1455 Harbour Drive	Coquitlam
Photo frames	4623-4642.4646	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Unknown, wall terraces
12 m downslope of crest	Armour for storm outfall
Fill width	Est. 7 m, continues west
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. >80%

Comments Resident indicated construction difficulties during storm pipe installation, yard later re-landscaped

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		0	
Prev. slide magnitude/runout	Large, > 30 m		

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	West side	City storm
Groundwater seepage	N	Tr.

Comments Previous landslide at this location est. 1979

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	2 levels, concrete, cobble	Cracks, settled?
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	SW side and back yard

Comments Retaining wall appears home made; old concrete trough for flow (before pipe) appears City made.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

2 cm crack in 2.5 m H upper wall - bowing outwards
 Cracks in concrete trough - subsided 10 cm
 Small cracks in 3.2 m H lower wall - photo
 Terrace with grass between outstepped walls

Main Structures

House distance to crest	16 m
City infrastructure location	West side and back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Concrete and Boulder Lower Retaining Wall Above City Storm Sewer Outlet

1455 Harbour Drive



Storm Sewer Outlet With Riprap



Upper Portion of Lower Retaining Wall Near Yard Fence and Old Water Flume, July 2011



Along edge of lower wall, July 2011



Gully below stormwater outlet, July 2011



1455 Harbour Drive

Concrete and boulder lower retaining wall with small cracks



Soil test pit in backyard





Soil Test Hole Layers

Interval (m)	Back Yard
0-0.15	Dark brown, organics silty sand, top soil
0.15-0.7	Brown, moist, sandy silt charcoal, brick chips, Fill
0.7	Refusal on cobble

In corner of back yard near head of gully.

Back Yard Near Gully Head



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate

See Table 5-7.

A geotechnical assessment of the concrete retaining wall at the storm sewer outlet is recommended.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1769 Harbour Drive	Coquitlam
Photo frames	5222-5223; 5498-5505	
Comments		



Soil Fill

Thickness at back fence line	About 1 m; 2 m over pipe
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	About 5 m
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60-70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	Tr.
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	20	40	40
Prev. slide magnitude/runout	None		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard, Pipe
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	-	-
Pool, pond drainage	-	-
City Pipes	West	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H	Okay
Stacked blocks	N	
Concrete	Y 1 m H	Okay, City Storm
Rock / mortar	N	
Engineered	N	

House Age

House foundation	50
Deck support posts	Concrete - okay
Driveway	N/A
Footing drains	To house
Roof drainage to storm sewer?	Unknown
	Unknown

Backyard Structures

	Size	Location
Garden shed	Gazebo	Crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	21 m
City infrastructure location	Side yard, pipe outlet back of yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

1769 Harbour Drive

Site Photographs

Back Yard with City Concrete Bag Wall and Resident's Wood Tie Wall Above



Backyard above storm outlet



Plunge Pool from Stormwater Outflow



Head of Gully Below Site



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1773 Harbour Drive	Coquitlam
Photo frames	5217-5227	
Comments		



Soil Fill

Thickness at back fence line	Native
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	No, To Back

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	26 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back yard

1773 Harbour Drive



Crest



Lower slopes toward 1769 Harbour



Roof drains toward back of house

1773 Harbour Drive



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1777 Harbour Drive	Coquitlam
Photo frames	5228-5231	
Comments		



Soil Fill

Thickness at back fence line	None, Natural Soil
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	Y 1 m H	Okay
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Probably at front only.

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Unknown
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1777 Harbour Drive



Slopes Below Crest



Small Drain Pipe on Slope



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 14, 2012	Overcast
Address	1781 Harbour Drive	Coquitlam
Photo frames	5234-5240	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 80 - 90%

Comments: Likely fill along crest, fence below, heavy brush at crest, open ravine slope below.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments:

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown - likely to crest

Comments: Small timber crib raised garden at crest.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments:

Main Structures

House distance to crest	20 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1781 Harbour Drive



Slopes Below Crest



Down Slope With Maple to Creek in Distance



1781 Harbour Drive

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

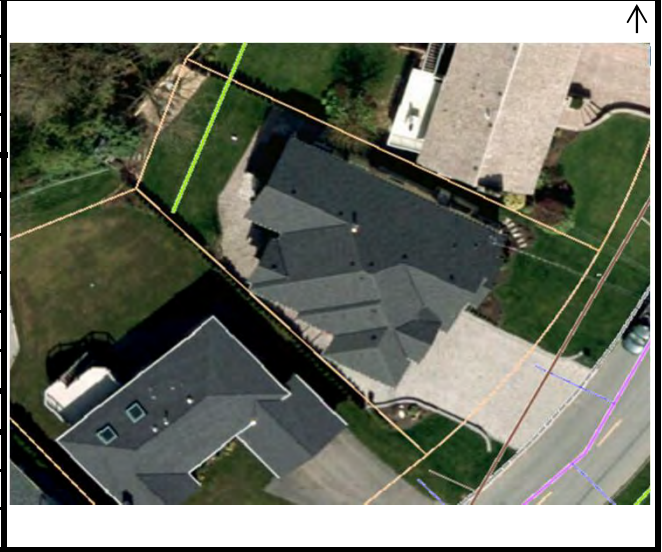
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1785 Harbour Drive	Coquitlam
Photo frames	5243-5252	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	
12 m downslope of crest	Bare soil from previous failure
Fill width	Est. 16 m
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 80 - 110%

Comments: Fill at crest sagging in locations

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout	Est. 8 m W, 1 m D, 12 m L		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments:

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	Y Gabion plus geogrid	Appears intact.

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Unknown - likely to crest

Comments: In about 1995, water main burst, water went down slope, eroded, City had gabion wall installed.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Y Wood	Very close to crest
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments: Wooden patio sits on uprights on loose concrete blocks above gabions. Does not appear secure.

Main Structures

House distance to crest	17 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Deck Uprights On Concrete Blocks On Unknown Soil.

1785 Harbour Drive



Crest Under Wooden Patio



Gabion Under North Side of Property



Patio At Centre Of Yard At Crest



1785 Harbour Drive

Ravine Slope Below South Side Of Property, Leads Down To Creek



Revegetated Failure Scar Under Gabions



Below Crest



1785 Harbour Drive

Along Crest



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

A geotechnical assessment of the gabion retaining wall at back yard edge is recommended.

A review of the patio footings in the ravine slope area is recommended.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1789 Harbour Drive	Coquitlam
Photo frames	2553-5257, 5260-5265	
Comments	Gabions likely hold up south edge of pty.	



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 80 -100%

Comments Likely fill along crest, fence below, heavy brush at crest, open ravine slope below

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments Solid drain pipes north and south side, corrugated pipe in centre, all drain down ravine slope.

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H	New, 2 pipes thru
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 yrs
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown - likely to crest

Comments Timber crib wall at crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	18 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1789 Harbour Drive



Old Stump Below Crest From Land Clearing



Drain Pipe Through Wooden Tie Retaining Wall



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

A geotechnical assessment of the gabion retaining wall at back yard edge is recommended.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1791 Harbour Drive	Coquitlam
Photo frames	5266-5272	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	85-95%

Comments "Hardpan" reported near surface

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments Backyard reported often wet. Pipes replace drain tile.

Retaining Walls

	Size	Condition
Timber crib	Y 0.8 m H	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Probably

Comments South pipe drains onto new soil fill - advised owner.

Backyard Structures

	Size	Location
Garden shed	8x8 ft.	Near crest
Patio, material	New, soil over crest	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	14 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Slope Below Crest



Small Drain Pipe On Slope



Back Fence Line

1791 Harbour Drive



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

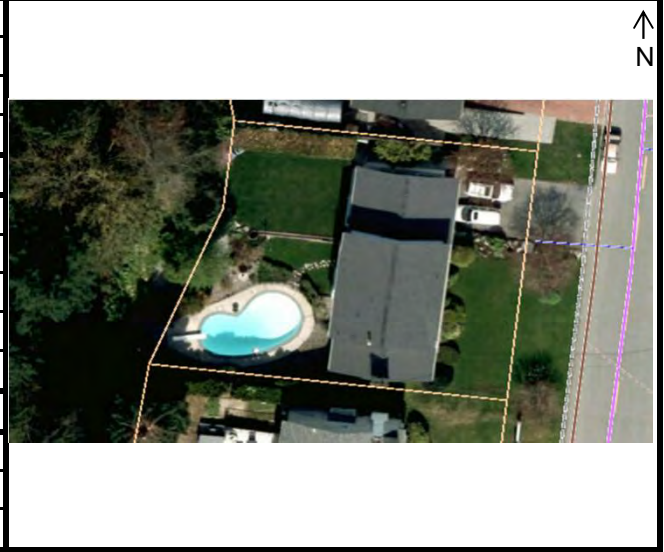
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	1793 Harbour Drive	Coquitlam
Photo frames	5506-5529	
Comments		



Soil Fill

Thickness at back fence line	1-2 m
Thickness at slope crest	1-2 m
12 m downslope of crest	None
Fill width	About 20 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to NW
Slope below fence	1.5 m W, gentle
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Yes
Tension Cracks	N	N	N
Leaning trees	N	A few	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	Yes
Deep failures	N	N	N
% conifer cover at crest	0	20	90
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Slope
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Slope	Slope
Patio drainage	N/A	N/A
Pool, pond drainage	Unknown	
City Pipes	N	N
Groundwater seepage	N	Tr.

Comments Previous 1979 landslide in ravine; also 1990 pool drainage water eroded slope, deposited below

Retaining Walls

	Size	Condition
Timber crib	N/A	
Stacked blocks	N/A	
Concrete	N/A	
Rock / mortar	N/A	
Engineered	N/A	

House

Age	50
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	To crest
Roof drainage to storm sewer?	To crest

Backyard Structures

	Size	Location
Garden shed	Pool house 2x5 m	Crest
Patio, material	Gravel	
Swimming pool	Y	Backyard
Greenhouse	N/A	
Pond	N/A	

About 1990, drained pool onto slope behind, erosion, headscarp and track to creek. Replanted DFO recommended species. Trace seepage in old headscarp, likely till.

Main Structures

House distance to crest	17 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Likely

Crest Area in Yard with Old Stump

1793 Harbour Drive



Slope Below Yard



Head of Old Shallow Erosion Feature, Now Vegetated



View Down Track of Old Erosion Feature



1793 Harbour Drive

View Up Track of Old Erosion Feature



View of Deposit From Erosion Feature, Where Cobbles Displace Stream



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

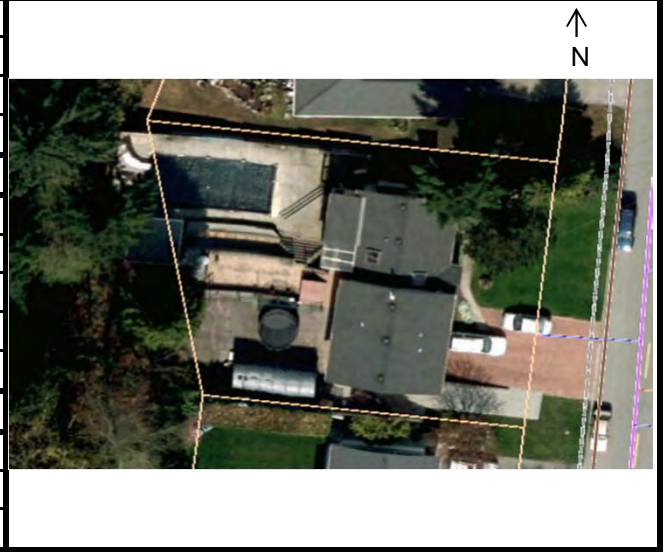
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	1797 Harbour Drive	Coquitlam
Photo frames	5530-5544	
Comments		



Soil Fill

Thickness at back fence line	About 2 m
Thickness at slope crest	About 2 m
12 m downslope of crest	None
Fill width	About 9 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle, NW
Slope below fence	70%
Slope below crest, distance	80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	Construct damage	
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	5	20	50
Prev. slide magnitude/runout			

Comments Previous 1979 landslide in ravine

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	
Patio drainage	Yard	Yard
Pool, pond drainage	Unknown	
City Pipes	Unknown	
Groundwater seepage	N	

Retaining Walls

	Size	Condition
Timber crib	About 18 m along crest	New, straight
Stacked blocks	N	
Concrete	Back from crest	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	40-50
Deck support posts	Concrete
Driveway	N
Footing drains	Front
Roof drainage to storm sewer?	Prob. To back
	Prob. To back

Backyard Structures

	Size	Location
Garden shed	Pool house 7x5	At back fence line
Patio, material	Y	
Swimming pool	Y 15x6	NW corner
Greenhouse	N	
Pond	N	

Comments

New mound soil fill NW corner from pool reconstruction, perched above old failure side ravine
Should relocate fill away from slope.
On far side of ravine is a 10 m H, near vertical headscarp in till and Quadra Sands

Main Structures

House distance to crest	About 18 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	



South Edge of Swale Below Crest With Damaged Maple Trees



View Below Crest Down Natural Swale and Over Apron of Soil Fill



Apron of New Soil Fill from Pool/Patio Reconstruction



1797 Harbour Drive

View Across Centre of Crest Area With New Soil Fill



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

The property owner should remove the new soil fill along the crest to a more stable location.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1801 Harbour Drive	Coquitlam
Photo frames	5276-5286	
Comments		



Soil Fill

Thickness at back fence line	< 1 m fill
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	5 % to crest
Slope below fence	
Slope below crest, distance	70 - 100 % planar

Comments Parcel extends a long distance onto ravine slopes. Lobe of fill extends over crest.

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments 80% slope for 30 m into ravine

Trees generally straight

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Allen block, 21 m L, 0.5-1.5 m H	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	18 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard And Crest

1801 Harbour Drive



View Down Slope



|

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1805 Harbour Drive	Coquitlam
Photo frames	5290-5297	
Comments		



Soil Fill

Thickness at back fence line	< 1 m fill
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	5-10% to ravine
Slope below fence	
Slope below crest, distance	70 - 80 % planar

Comments Parcel extends a long distance onto ravine slopes. Lobe of fill extends over crest.

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Y
Hydrophilic vegetation	N	Y
Seepage	To crest	To crest
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments 80% slope for 30 m into ravine

Trees generally straight

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Wall on side of property, 2 m H concrete.

House **Age**

House foundation	58 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	22 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard And Crest

1805 Harbour Drive



View Down Slope



View Along Slope Crest Near End Of Side Wall



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

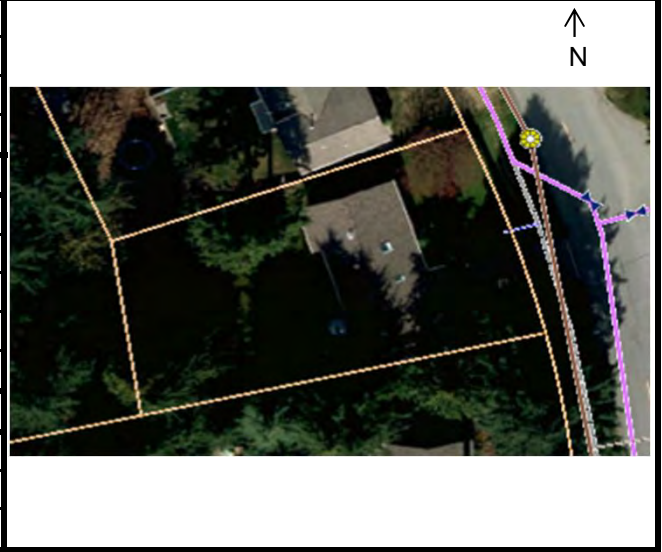
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Sun
Address	1807 Harbour Drive	Coquitlam
Photo frames	5298-5300	
Comments		



Soil Fill

Thickness at back fence line	Native
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	75%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Previous 1979 landslide in ravine

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age 40 yrs.

House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	32 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard And Crest

1807 Harbour Drive



Crest



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

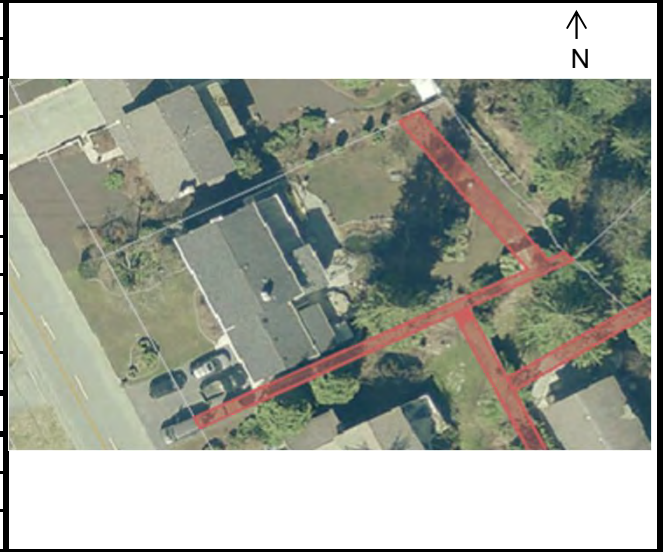
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1822 Harbour Drive	Coquitlam
Photo frames	5579-5582	
Comments		



Soil Fill

Thickness at back fence line	1-2 m
Thickness at slope crest	1-2 m
12 m downslope of crest	None
Fill width	23 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle to west
Slope below fence	
Slope below crest, distance	80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	Old, wet
Deep failures	N	N	N
% conifer cover at crest	N	5	60
Prev. slide magnitude/runout	Old, shallow wet scar		

Comments: Landslide scar feature on slope below, lot centre

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Salmonberry	Salmonberry
Seepage	N	N
Yard drainage	Slope	Slope
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	1 m H, 9 m L est.	Good, straight
Stacked blocks	N	
Concrete	Yard	Not close to crest
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	50
Deck support posts	Concrete
Driveway	N/A
Footing drains	N/A
Roof drainage to storm sewer?	Likely to back
	Likely to back

Backyard Structures

	Size	Location
Garden shed	5x5 m	SE corner
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	26 m
City infrastructure location	Side, back
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1822 Harbour Drive



Northeast Corner Yard and Crest



View Along Crest to North



View Down Slope

1822 Harbour Drive



Compost Area



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

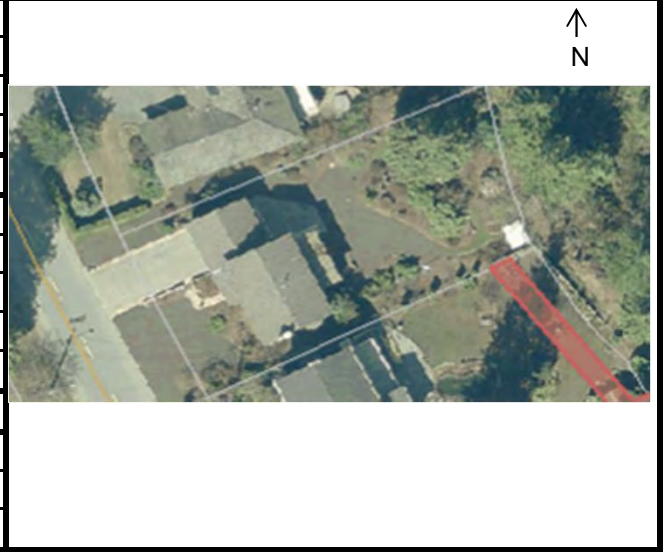
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Sun
Address	1826 Harbour Drive	Coquitlam
Photo frames	5301-5309	
Comments		



Soil Fill

Thickness at back fence line	8 m L, 4 m W and 1 m D lobe
Thickness at slope crest	
12 m downslope of crest	Est. Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	65%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments: Landslide scar feature on slope below, lot centre

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments: 1 m timber crib property to south

Main Structures

House distance to crest	> 30 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Slope Below

1826 Harbour Drive



Slope Below Crest



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 14, 2012	Overcast
Address	1830 Harbour Drive	Coquitlam
Photo frames	5304-5305	
Comments		



Soil Fill

Thickness at back fence line	Native
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70-75%
Comments	

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			
Comments			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Along side boundary	
Concrete	N	
Rock / mortar	N	
Engineered	N	
Comments		

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	
Comments		

Main Structures

House distance to crest	21 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1830 Harbour Drive



Slope Below Yard



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1834 Harbour Drive	Coquitlam
Photo frames	5387-5404	
Comments		



Soil Fill

Thickness at back fence line	Est. < 0.5 m
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Swale in back yard
Slope below fence	
Slope below crest, distance	est. 80%
Comments	

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Sk Cab
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Y

Comments Old 12 m W, 25 m L, 1-2 m D erosion scar in ravine slope with wet at head and trickle flow at base.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	Y just below crest	old, not engineered
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 yrs
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	> 20 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown



Old Concrete Wall Below Crest



Shallow Scallop With Wet To Flowing Water, About 20 m Below Crest.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

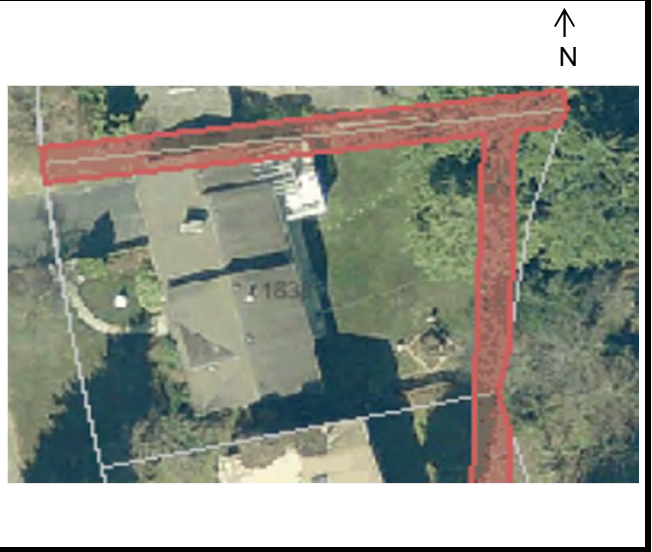
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1838 Harbour Drive	Coquitlam
Photo frames	5383-5403	
Comments		



Soil Fill

Thickness at back fence line	Est. < 1 m
Thickness at slope crest	
12 m downslope of crest	Native
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	Swale in back yard
Slope below fence	
Slope below crest, distance	est. 75 - 80%

Comments "Hardpan" reported in back yard

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Sk Cab
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	North	Crest
Groundwater seepage	N	N

Comments

In backyard, owner reports 6 in. concrete pipe to rock pit

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	47 years
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Front only

Comments 6 inch drain pipe to rock pit in back yard

Backyard Structures

	Size	Location
Garden shed	Y	Near crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	20 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1838 Harbour Drive



Slope Below To North



Slope Below To South



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1842 Harbour Drive	Coquitlam
Photo frames	5545-5568	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	14 m
Native soil at surface	Till

Topography

Backyard slope, direction	Gentle NE
Slope below fence	About 80%
Slope below crest, distance	About 80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	Yes
Deep failures	N	N	20
% conifer cover at crest		20	
Prev. slide magnitude/runout		Yes	

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Drain
Hydrophilic vegetation	N	Salmonberry
Seepage	N	N
Yard drainage	Slope	Slope
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	South	N
Groundwater seepage	N	N

Comments About 5x7 m shallow, 10-50 yr. old failure below

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	1.3 m H, 20 m L	Good, 10 m back
Engineered	N	

House **Age**

	50
House foundation	Concrete
Deck support posts	N
Driveway	At front
Footing drains	To crest
Roof drainage to storm sewer?	To crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	16 m
City infrastructure location	South side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Ravine Slope Crest

1842 Harbour Drive



Fill Slope Below Fence Line



View Down Slope With Rolled Boulders Far Below



View of Old Concrete Debris Below Crest

1842 Harbour Drive



Tree Growing on Old Stump in Back Yard With Some Pushed Boulders



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1846 Harbour Drive	Coquitlam
Photo frames	5569-5577	
Comments		



Soil Fill

Thickness at back fence line	1-2 m
Thickness at slope crest	1-2 m
12 m downslope of crest	Edge of fill
Fill width	15 m
Native soil at surface	till / Quadra

Topography

Backyard slope, direction	Flat
Slope below fence	No fence
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	Tr.	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	10	90	90
Prev. slide magnitude/runout	N		

Water Features

	Crest	Below
Sources of drainage	Pipe	Pipe,slope
Hydrophilic vegetation	N	Salmonberry
Seepage	N	N
Yard drainage	Pipe	Pipe
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments Old 12 m W, 1-2 m D landslide headscarp in ravine slope with wet at head and trickle flow at base. Headscarp is near property.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	Along south side of lot.	
Engineered		

House

Age	45
House foundation	Concrete
Deck support posts	Y, okay
Driveway	Front
Footing drains	Likely to back
Roof drainage to storm sewer?	Likely to back

Comments Backyard landscaped; owner to have excess soil fill removed

Backyard Structures

	Size	Location
Garden shed	5x5 m	near crest
Patio, material	Brick	new
Swimming pool	N	N
Greenhouse	N	N
Pond	N	back from crest

Comments

Main Structures

House distance to crest	18 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Likely



Crest Area, March 2013 During Construction, With Drain Pipe



Crest Area During Construction



Fill Slope Northeast Corner of Lot. Owner Indicates This Will Be Pulled Back.

1846 Harbour Drive



View Up Fill Slope With Water Track



Evidence of Water Flow Downslope Carrying Gravel, Filling Plant Pot



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate

See Table 5-7.

Property owner must pull back new fill soil at crest.

Property owner must complete drainage system, minimize erosion.

No geotechnical assessment is recommended at this time. If there is any evidence of further slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	1850 Harbour Drive	Coquitlam
Photo frames	5405-5419	
Comments		



Soil Fill

Thickness at back fence line	Est. 2 m
Thickness at slope crest	
12 m downslope of crest	Est. 1 m
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	15% down to crest
Slope below fence	
Slope below crest, distance	Fill est. 80-90%

Comments Slopes away from fill are about 50%. Ravine below crest on property to north

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	Y
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Old 20 m W, 8 m D/S, 1-2 m thick nose of fill at top of crest. Overgrown with brush.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	42 yrs.
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Comments Owner indicates that when house built, excavated basement, soil put at crest of ravine.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Backyard drainage pipes replaced 2009.

Main Structures

House distance to crest	21 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard And Crest With Subsidence

1850 Harbour Drive



View Of Fill Apron At Crest Of Ravine With Subsidence



Approximate Outer Edge Of Fill With Damage To Trees



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Sun
Address	1861 Harbour Drive	Coquitlam
Photo frames	5420-5426	
Comments		



Soil Fill

Thickness at back fence line	Est. < 0.5 m
Thickness at slope crest	
12 m downslope of crest	Disturbed
Fill width	
Native soil at surface	House on "hardpan"

Topography

Backyard slope, direction	Slopes to north
Slope below fence	
Slope below crest, distance	est. 50%

Comments After landslide, geotechnical work done, rock drains installed, no work recently.

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		0	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	N
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments 1979 landslide removed half of driveway, where soil fill failed due to wet storm conditions.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	Y	
Rock / mortar	N	
Engineered	N	

House

Age	40 yrs.
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	Y	
Pond	N	

Comments

Main Structures

House distance to crest	28 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Crest And East Part Of Head Scarp

1861 Harbour Drive



Crest And Central Part Of Slope



Crest And West Part Of Slope



Overgrown 1979 Landslide Track Below House and Headscarp

1861 Harbour Drive



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Overcast, rain
Address	1010 Blue Mountain	Coquitlam
Photo frames	5015, 5017-5033	



Comments

Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	20 m est.
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50%

Comments Dense blackberry and thimbleberry below yard, blocks assessment of surface.

Instability Features

	Backyd	Crest	Below
Creep	N	Unknown	Unknown
Tension Cracks	N	Unknown	Unknown
Leaning trees	N	Unknown	Unknown
Pistol-butt trees	N	Unknown	Unknown
Shallow failures	N	Unknown	Unknown
Deep failures	N	Unknown	Unknown
% conifer cover at crest			
Prev. slide magnitude/runout			

Comments Lots creep indicators on property. Previous small retaining wall fell. Very thick brush below property

Retaining Walls

	Size	Condition
Timber crib	Y	
Stacked blocks	N	
Concrete	Two at 1 m H, braced	Cracked
Rock / mortar	One at 1 m H	Have had problems
Engineered	N	

Comments Concrete wall near house with cracks

Backyard Structures

	Size	Location
Garden shed	Garage/shed	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Fill in back yard not much smoothed

Main Structures

House distance to crest	Est. 15 m
City infrastructure location	Front
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Unknown
Seepage	N	Unknown
Yard drainage	Yard	Unknown
Patio drainage	N	Unknown
Pool, pond drainage	N	Unknown
City Pipes	N	Unknown
Groundwater seepage	N	Unknown

House

Age	40 yrs.
House foundation	Concrete
Deck support posts	
Driveway	Some street water
Footing drains	Unknown
Roof drainage to storm sewer?	

Site Photographs

Backyard

1010 Blue Mountain



View Along Wall With Cracks





Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Overcast, rain
Address	1015 Blue Mountain St.	Coquitlam
Photo frames	5034-5055	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 0 m
12 m downslope of crest	
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	est. 50%

Comments: Back yard roughly terraced. Large landslide scar in escarpment to the east.

Instability Features

	Backyd	Crest	Below
Creep	N	Unknown	Unknown
Tension Cracks	N	Unknown	Unknown
Leaning trees	N	Unknown	Unknown
Pistol-butt trees	N	Unknown	Unknown
Shallow failures	N	Unknown	Unknown
Deep failures	N	Unknown	Unknown
% conifer cover at crest		0	
Prev. slide magnitude/runout		N	

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Unknown
Seepage	N	Unknown
Yard drainage	Yard	Unknown
Patio drainage	N	Unknown
Pool, pond drainage	N	Unknown
City Pipes	Y	Unknown
Groundwater seepage	N	Unknown

Comments: All trees downslope topped
Very thick brush below property

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	Y small	Old
Engineered	N	

House **Age**

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Prob. To Ravine
Roof drainage to storm sewer?	Prob. To Ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	13 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1015 Blue Mountain



West Part of Back Yard



Roof Drain Outlet Pipe on Back Yard Slope



1015 Blue Mountain

End of Blue Mountain with Potential Water Flow Past Grate to Slopes Below



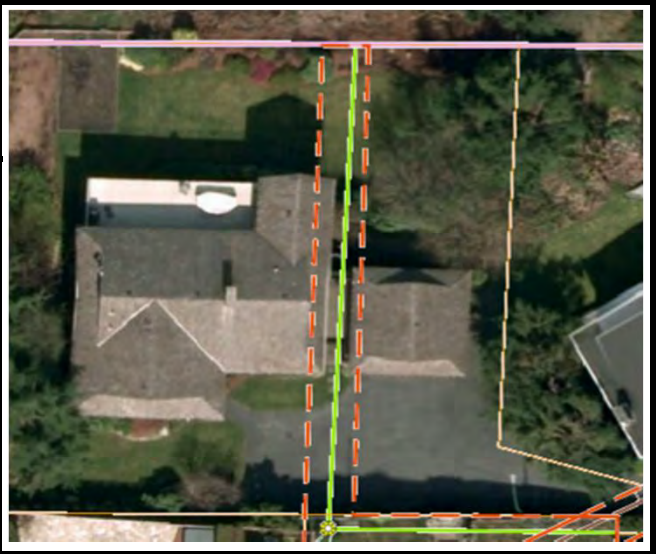
**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Overcast, rain
Address	1020 Blue Mountain St.	Coquitlam
Photo frames	4999-5014, 5016	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	
12 m downslope of crest	
Fill width	20 m est.
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Unknown	Unknown
Tension Cracks	N	Unknown	Unknown
Leaning trees	N	Unknown	Unknown
Pistol-butt trees	N	Unknown	Unknown
Shallow failures	N	Unknown	Unknown
Deep failures	N	Unknown	Unknown
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Slope
Hydrophilic vegetation	N	Unknown
Seepage	N	Unknown
Yard drainage	Y	Unknown
Patio drainage	N	Unknown
Pool, pond drainage	N	Unknown
City Pipes	Y	Y
Groundwater seepage	N	Unknown

Comments All trees downslope topped
Very thick brush below property

Retaining Walls

	Size	Condition
Timber crib	Y	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	
Footing drains	Some street water
Roof drainage to storm sewer?	Unknown

Comments Recent garden landscaping at crest

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wooden	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	13 m
City infrastructure location	To south, and by house
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1020 Blue Mountain



View Along Crest With New Garden



View Downslope Along Outer Tie Garden Wall



1020 Blue Mountain

Crack In North Side Foundation



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 28, 2013	Sun
Address	1037 Gatensbury Dr.	Coquitlam
Photo frames	5640-5668	
Comments		



Soil Fill

Thickness at back fence line	No fence
Thickness at slope crest	About 2 m
12 m downslope of crest	0.5 m
Fill width	20 m W as thin layer
Native soil at surface	Quadra

Topography

Backyard slope, direction	To Crest
Slope below fence	65 - 80%
Slope below crest, distance	65 - 80%

Comments Recent fill added to slope crest near deck, north part of crest.

Instability Features

	Backyrd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	100%	100%
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	Yes	Yes
Hydrophilic vegetation	N	Prob.
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Prob.

Comments Leaning Maple and thick Salmonberry below on slopes near Schoolhouse Creek

Retaining Walls

	Size	Condition
Timber crib	Below deck uprights as boards	New
Stacked blocks	N	
Concrete	South edge	Old Okay
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40-50
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	To Ravine
	To Ravine

Comments Old metal items below crest far northeast part

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Deck footing right at crest
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Crest At North Side Near New Deck

1037 Gatsensbury Dr.



View Northeast Along Outside Edge of Back Yard



Fill Below Deck and Post-Development Cedar Tree Leaning



Slope Below Centre of Property With Apron Of Fill



Possible Tree-Fall Hollow, Central Part Of Slope



Bottom Edge Of Old Fill Below Deck, Northeast End



1037 Gatensbury Dr.

Gaps Below Garage Wall and Door, Suggest Some Subsidence or Jacking of Building Frame



Probability of a specific hazardous landslide starting from this property affecting downslope properties: Moderate.

See Table 5-7.

Deck and foundations right at ravine crest - keep under observation.

Recent building construction does not appear engineered.

New soil fill at and below crest should be removed back to a more suitable location.

Downstream along Hachley Creek are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Risk from retrogressive landslide: High

Geotechnical evaluation recommended if not already completed.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	824 Ingersoll Ave.	Coquitlam
Photo frames	5168-5176	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. > 5 m
12 m downslope of crest	Est. 1 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70%

Comments: Fill thickness at edge of ravine estimated > 5 m based on nearby Golder borehole 98-5

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Y
Hydrophilic vegetation	N	N
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments: Active creep at fence line
2 red geotechnical wells located downslope.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40-50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	N

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	13 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

824 Ingersoll Ave.



Crest Below Fence



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

**Requires continued geotechnical assessment to monitor slope stability.
Continue existing slope monitoring programs.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 14, 2012	Overcast
Address	826 Ingersoll St.	Coquitlam
Photo frames	5165-5167	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. > 5 m
12 m downslope of crest	Est. 1 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70%

Comments: Fill thickness at edge of ravine estimated > 5 m based on nearby Golder borehole 98-5

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout	Shallow, 20-30 m		

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	Y
Hydrophilic vegetation	N	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Y

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	13 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	830 Ingersoll Ave.	Coquitlam
Photo frames	5148-5164	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	> 5 m
12 m downslope of crest	Est. > 5 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout	Shallow, 20-30 m		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Y	Y
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	N

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	6 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard, With Varying Fill Thickness, Subsidence

830 Ingersoll Ave.



Outside Retaining Wall Around Back Yard



Edge of Large Fill Pile Behind Residence, With Red Geotechnical Wells



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	845 Catherine St.	Coquitlam
Photo frames	5105-5126	
Comments	Current owner has lived there 40 years.	



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. > 1 m
12 m downslope of crest	Est. > 1 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70% > 20 m

Comments: Fill thickness at edge of ravine estimated based on nearby Golder boreholes.

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	Y	Y
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout	Shallow, Possible 20-30 m		

Water Features

	Crest	Below
Sources of drainage	Yard	Yard/Slope
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Uncovered, drain to front
Roof drainage to storm sewer?	Y
Foundation has lost lateral support on east side	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	0 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Front of House

845 Catherine St.



View of House From Downslope And Behind



Exposed Roof Drain Pipes On East Side of House, View To Front



View of Exposed House Foundations, To South From Centre



845 Catherine St.

View of Exposed House Foundations, To North From Centre



View Down Slope From Edge of House

845 Catherine St.



Spoils Pile Below Ingersoll With Concrete Pieces, Pipes, Leaning Trees



Spoils Pile or Old Terrace Below End of Catherine With BMX Bike Park



845 Catherine St.

**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

**Slope and property require continued geotechnical assessment to monitor slope stability.
Recommend to continue existing City slope monitoring programs.**

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

**Risk from retrogressive landslide: High
Geotechnical evaluation previously completed.**

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	858 Catherine St.	Coquitlam
Photo frames	5129-5147	
Comments		



Soil Fill

Thickness at back fence line	Est. 0.5-1 m
Thickness at slope crest	
12 m downslope of crest	0 m
Fill width	> 20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	65%-85%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	25 yrs.
House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Y
Roof drainage to storm sewer?	Y

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	9 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Visual Risk Evaluation **Low**

Risk by Index Value **0.04**

Low

No Action Required

Site Photographs

Backyard



Along Slope, Below Crest, Straight Mature Trees



Shallow Soil Slough At Edge of Fill, Exposes Sands



858 Catherine St.

**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

**Local ravine slope area has a geotechnical slope monitoring program.
This monitoring program should be continued to monitor slope stability.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	910 Ingersoll	Port Moody
Photo frames	5669-5689	
Comments		



Soil Fill

Thickness at back fence line	1 - 3 m
Thickness at slope crest	Est. up to 5 m
12 m downslope of crest	Est. 1 m
Fill width	About 150 m along slope est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	55 - 80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	Cracks	N	N
Leaning trees	Y	Y	Y
Pistol-butt trees	N	Y	Y
Shallow failures	N	Y	Y
Deep failures	N	N	Y
% conifer cover at crest	<25%		<25%
Prev. slide magnitude/runout	Est. 5 m W, 2 m D, 25 m L		

Water Features

Sources of drainage
Hydrophilic vegetation
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Parking Lot	Lot/Slope
N	Y
N	Tr.
Y	Y
N	N
N	N
Y	Y
N	Tr.

Comments 1979 extensive subsidence in parking lot and below
2000s? small landslide, see photos.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	Y along top of slope	Good
Rock / mortar	N	
Engineered	N	

House Age

House foundation
Deck support posts
Driveway
Footing drains
Roof drainage to storm sewer?

40-60 yrs
Concrete
N
Parking lot slopes to crest
City Storm Sewer
City Storm Sewer

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

A City storm sewer pipe leads from crest to inlet downslope where conveyed below ground for a section, before joining Schoolhouse Ck.

Comments

Main Structures

House distance to crest	16 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Pistol Butt Maple Tree From Fill Dumping

910 Ingersoll St.



View Down Fill On South Edge of Parcel Area



View Down City Stormsewer Pipe Toward Schoolhouse Creek



New Landslide From Tree Fall, August 2011



910 Ingersoll St.

Landslide Track in Soil Fill and Native Soil, August 2011



Headscarp of Landslide, August 2011



Landslide Scar, March 2013



Concrete Debris and Fill on Surface East of Tennis Courts



View South into Ravine with On-Surface City Storm Sewer



Concrete Wall Below Parking Lot, North



910 Ingersoll St.

Fill Slope East Of Landslide



910 Ingersoll St.

Surface of Fill on South-Facing Fill Slope



Sept. 2011 Parking Lot, Drainage Down To East End



910 Ingersoll St.

Sept. 2011 Parking Lot Drains Down Along Concrete "No Posts", Not All Surface Flow Directed to Catch Basin.



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-7.

A drainage assessment of the parking lot and slope below is recommended.

Parking lot drainage is likely to have caused previous landslide and slope erosion.

The parking lot drainage needs proper collection and disposal.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 27, 2013	
Address	1000 Seaforth Dr.	Port Moody
Photo frames	5384-5398	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	Est. 1 m
Fill width	Whole Lot
Native soil at surface	? Salish Sediments

Topography

Backyard slope, direction	Gentle to back
Slope below fence	
Slope below crest, distance	60%

Comments Similar fill slope characteristics to 998 Seaforth next door

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	Y
Shallow failures	N	N	Yes
Deep failures	N	N	N
% conifer cover at crest		75%	75%
Prev. slide magnitude/runout	Gullies 5 m W, >25 m L		

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Slope
Hydrophilic vegetation	Maple	Salmonberry
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Shallow gullies north and south sides - old drainage feature or shallow failure?

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 - 50
House foundation	concrete
Deck support posts	N
Driveway	Front
Footing drains	To back?
Roof drainage to storm sewer?	To back?

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	17 m
City infrastructure location	Assume front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1000 Seaforth Way



Slope Below Crest, Curved And Leaning Maples



Slope Below Crest



Slope Below Yard, View North



1000 Seaforth Way

Swale Down Slope, North Side



Swale Down Slope, South Side



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Overcast
Address	796 Adiron Ave.	Coquitlam
Photo frames	5059-5061	
Comments	Recently built	



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	> 5 m
12 m downslope of crest	Est. 1 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	paved	N	Y
Tension Cracks	paved	N	N
Leaning trees	paved	N	N
Pistol-butt trees	paved	N	N
Shallow failures	paved	N	N
Deep failures	paved	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Comments Steep slope down to Schoolhouse Creek behind

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Pavement and brick back driveway	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	> 20 m
City infrastructure location	Front
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	Yard	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

House

	Age
House foundation	5 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	

Site Photographs

Below Back Driveway Area

796 Adiron Ave.



Schoolhouse Creek Near Back of Property, Old Fencing



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 27, 2013	Sun
Address	824 Miller Ave	Coquitlam
Photo frames	5423-5449	
Comments		



Soil Fill

Thickness at back fence line	None
Thickness at slope crest	None
12 m downslope of crest	None
Fill width	Along slope below in park
Native soil at surface	Till / Capilano Sed.

Topography

Backyard slope, direction	To Crest
Slope below fence	Flat
Slope below crest, distance	Flat

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	100%	100%
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Slope	Slope
Hydrophilic vegetation	Yes	Yes
Seepage	N	Prob.
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	Prob.

Comments Leaning Maple and Salmonberry below on slopes near Schoolhouse Creek

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40-50
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	To Storm sewers
	To Storm sewers

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	Yard, ok condition
Swimming pool	N	West part of yard
Greenhouse	N	
Pond	N	

No concerns re: property.
At top slope in park, an area of old subsiding fill.

Comments Probably 1 - 1.2 m fill around pool, no patio cracks

Main Structures

House distance to crest	> 35 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard View East

824 Miller Ave



Subsidence Area In Park



Subsidence Area Downslope In Park



South Part of Subsidence Area

824 Miller Ave.



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Overcast
Address	841 Wyvem Ave.	Coquitlam
Photo frames	5075-5104	
Comments	Newer House	



Soil Fill

Thickness at back fence line	
Thickness at slope crest	> 5 m
12 m downslope of crest	Unknown
Fill width	Wide apron > 20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60-65%

Comments Lower section of fill slope up to about 130% - very steep. Concrete slabs, large metal pieces at base of fill

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Possible
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Slope	Yard/Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	N	N
Seepage	To crest	To crest
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Large apron of fill extends 15 m below crest at outer edge of property. Schoolhouse Creek below.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	> 20 m
City infrastructure location	Front
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

841 Wyvem Ave.



Small Lobes of Fill Near Fill Pile Edge



Fill Slope With Debris Below House, No Mature Conifers



Cracks in Driveway Suggest Fill Subsidence Below

841 Wyvem Ave.



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 27, 2013	Sun
Address	992 Kinsac St.	Coquitlam
Photo frames	4969-4970, 5399-5422	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	< 1 m
12 m downslope of crest	None
Fill width	Fringe along cleared land
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	60-80%
Slope below crest, distance	60-80% over 30 m

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	Tr.
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100%	100%
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic vegetation	N	Far below
Seepage	N	N
Yard drainage	Tr.	Tr.
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House **Age**

House foundation	40-50
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front
Roof drainage to storm sewer?	Prob. To Ravine
	Prob. To Ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete deck by pool	Yard, ok condition
Swimming pool	Y	West part of yard
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	> 35 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard View West

992 Kinsac St.



Back Yard View North



Slope Below North Part of Yard



Slope Below To West

992 Kinsac St.



Slope Below To Southwest



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Light rain
Address	994 Kinsac St.	Coquitlam
Photo frames	4967-4995	
Comments	Ponds need fencing off from public	



Soil Fill

Thickness at back fence line	Est. < 1 m
Thickness at slope crest	
12 m downslope of crest	Very little
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 70%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	Unknown	Unknown
City Pipes	East	East
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	1 m H, 10 m L	Okay
Stacked blocks	N	
Concrete	N	
Rock / mortar	1 m H, 10 m L	Okay
Engineered	N	

House Age

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Drains down to crest
Roof drainage to storm sewer?	Unknown
	Downpipes not connected

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete tennis court	Above crest.
Swimming pool	Inside house, full of water, disused	
Greenhouse	N	
Pond	Near boundary, 2 large ponds, boulder edges	

Comments Ponds on promontory

Main Structures

House distance to crest	> 30 m
City infrastructure location	Front and east side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

994 Kinsac St.



Slope Below



Slope Below With Curved Tree



994 Kinsac St.

South Pond Near Property Boundary and House



Disused Tennis Court



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Property owner to ensure road and driveway drainage do not enter ravine slope area.

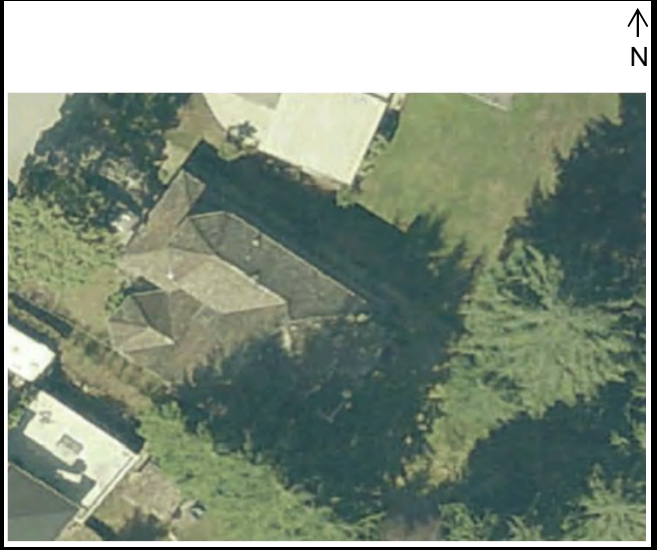
Property owner should monitor ponds re: drainage.

Property owner to east should decommission disused pools and ponds and fence off from public.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	994 Seaforth Way	Port Moody
Photo frames	5201-5209	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. >1 m sand and gravel
12 m downslope of crest	Est. 1 m
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60-70%

Comments Large apron of fill deposited below a number of residential lots

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Yard/Roof	Yard/Slope
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	To Ravine	To Ravine
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Side boundary has short concrete wall, leans

House Age

House foundation	50 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	27 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown



Slope below crest



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 13, 2012	Light rain
Address	996 Kinsac St.	Coquitlam
Photo frames	4967-4995	
Comments	Ponds need fencing off from public	



Soil Fill

Thickness at back fence line	Unknown
Thickness at slope crest	Unknown
12 m downslope of crest	Unknown
Fill width	Unknown
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	Est. 70%

Comments Restricted access due to blackberry, brush, and possible footing problems reported by owner

Instability Features

	Backyd	Crest	Below
Creep	Unknown	Unknown	Unknown
Tension Cracks	Unknown	Unknown	Unknown
Leaning trees	Unknown	Unknown	Unknown
Pistol-butt trees	Unknown	Unknown	Unknown
Shallow failures	Unknown	Unknown	Unknown
Deep failures	Unknown	Unknown	Unknown
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Slope
Hydrophilic vegetation	N	Y
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	Unknown	Unknown
City Pipes	West	West
Groundwater seepage	N	N

Heavy blackberry and thimbleberry obscure slope conditions.

Retaining Walls

	Size	Condition
Timber crib	Unknown	
Stacked blocks	Unknown	
Concrete	Unknown	
Rock / mortar	Unknown	
Engineered	Unknown	

House Age

House foundation	Est. 40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	2 large ponds, granite boulder edges	

Comments Ponds on promontory

Main Structures

House distance to crest	> 30 m
City infrastructure location	Front and west side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

996 Kinsac St.



Slope Below, From Viewpoint To East





Pond Near West Boundary



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.**

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Ensure road and driveway drainage do not enter ravine slope area.

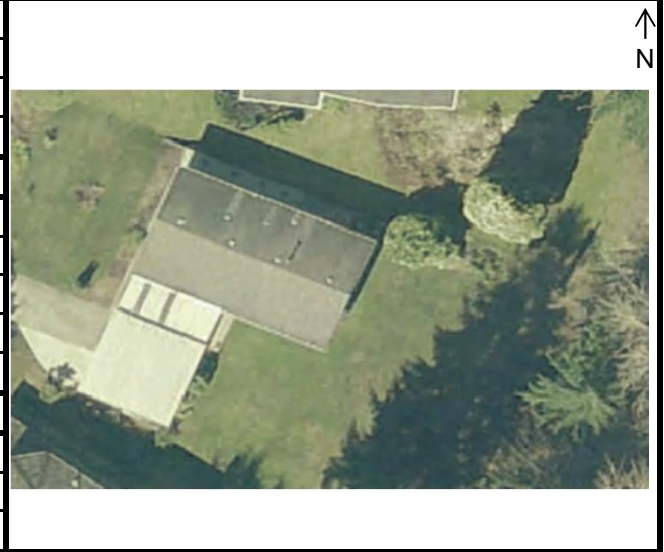
Property owner should monitor ponds on property re: drainage.

Property owner should decommission disused pools and ponds and fence off from public.

Site Observation Form

Site Air Photo

Date/Weather	June 14, 2012	Overcast
Address	998 Seaforth Way	Port Moody
Photo frames	5177-5189	
Comments		



Soil Fill

Thickness at back fence line	Est. > 1 m
Thickness at slope crest	Est. >1 m sand and gravel
12 m downslope of crest	Approx. limit fill fringe
Fill width	20 m est.
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	60-70%

Comments Large apron of fill deposited below a number of residential lots, broken concrete at outer edge

Instability Features

	Backyd	Crest	Below
Creep	N	Y	N
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50	
Prev. slide magnitude/runout			

Comments Straight trees on large, long fill slope

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Slope
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	To Ravine	To Ravine
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Devil's club at base of fill

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Side boundary has short concrete wall, lean

House Age

House foundation	30 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	Y 4x8 ft.	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	27 m
City infrastructure location	
St. drains into d'way, bkyd.	
Buried irrig, electric cables	Unknown

Site Photographs

Slope Below Back Yard



Slope Below Crest



Soil At about 0.9 Depth



998 Seaforth Way

Soil pit below crest

Interval (m)	Crest
0-0.08	Organics, roots
0.08-0.5	Brown grey, dry silty sand, occ. pebble
0.5-0.8	Fine - med. silty sand, iron mottles, coarser with depth
0.8-0.95	Med to coarse sand denser, more iron stain, more pebbles
0.95	Refusal

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Very Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 12, 2012	Overcast
Address	1501 Marine Cres.	Coquitlam
Photo frames	4931-4934	
Comments	Only narrow part of lot adjoins ravine	



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 0.5 m
12 m downslope of crest	Est. 0 m
Fill width	Est. 5 m
Native soil at surface	Till

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	N
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic vegetation	N	Y
Seepage	N	Y
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Previous 1979 landslide in ravine

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
	Probably

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	28 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Crest

1501 Marine Cres.



View From West



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 12, 2012	Overcast
Address	1507 Marine Cres.	Coquitlam
Photo frames	4935-4939	
Comments	Lumpy back yard with thin soil fill near crest	



Soil Fill

Thickness at back fence line	Est. 0.5 - 1 m
Thickness at slope crest	
12 m downslope of crest	Est. 0 m
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	To Crest
Slope below fence	
Slope below crest, distance	up to 110%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard/Roof	Yard/Roof
Hydrophilic veg.	N	Y
Seepage	N	N
Yard drainage	To crest	To crest
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments Nearby, previous 1979 landslide in ravine

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Unknown
Duplex house	Roof drains onto lawn

Backyard Structures

	Size	Location
Garden shed	Y	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	22 m
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

1507 Marine Cres.



View From West



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

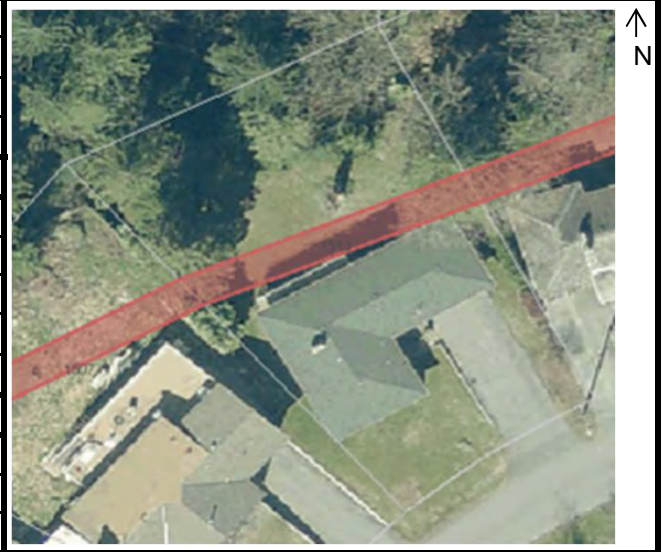
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 13, 2012	cloud, rain, cool
Address	1513 Marine Cres.	Coquitlam
Photo frames	4940-4948	
Comments		



Soil Fill

Thickness at back fence line	Est. 0 m
Thickness at slope crest	
12 m downslope of crest	Est. 0 m
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	100%
Slope below crest, distance	70%

Comments Granitic boulders at surface near shed = limit bulldozer push

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout	N	N	Y

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	N	N
Seepage	N	N
Yard drainage	to ravine	
Patio drainage	N	
Pool, pond drainage	N	
City Pipes	Y	N
Groundwater seepage		

Comments Below bulge in crest, landslide scar 6 m W, 2 m D, 30 m L, no mature veg. - early urban runoff erosion?

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 - 50 yrs..
House foundation	Concrete
Deck support posts	Straight
Driveway	Street water into grate
Footing drains	Unknown
Roof drainage to storm sewer?	To ground surface

Comments Turf and soil wads on surface creeping downslope below shed.

Backyard Structures

	Size	Location
Garden shed	8x8 ft.	Corner by crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Main Structures

House distance to crest	12 m
City infrastructure location	Back and Front
St. drains into d'way, bkyd.	Street water drains into d'way
Buried irrig, electric cables	N



Down Slope



View Upslope From Scallop





Soil Test Hole Layers

Interval	15 m d/slope
0 - 0.35	Dry, dark brown, organics plus sand and silt, colluvium
0.35 - 0.7	Red brown to grey, silty sand, colluvium
0.7 - 0.8	Sandy silt, oxidized patches, tr.pebs. native soil - refusal at cobble

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low.

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	13/06/2012	Cloud
Address	1519 Marine Cres.	Coquitlam
Photo frames	4949-4955	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 0.5 m
12 m downslope of crest	
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	40 -70%

Comments Basement excavation soil likely spread at crest of backyard as lobe - see photo

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	N	N
Seepage	N	N
Yard drainage	To crest	
Patio drainage	Internal	
Pool, pond drainage	N	N
City Pipes	Y	Y
Groundwater seepage	N	N

Comments Small scar below crest

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50 years
Deck support posts	Concrete
Driveway	Straight
Footing drains	Street water into d'way
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Sunken	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

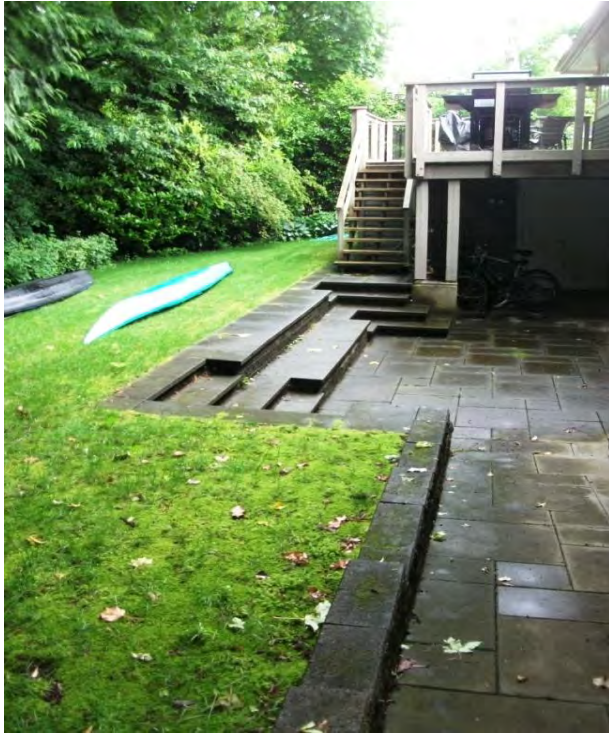
Main Structures

House distance to crest	14 m
City infrastructure location	Front / back
St. drains into d'way, bkyd.	To driveway, then flat
Buried irrig, electric cables	N

Site Photographs

Backyard

1519 Marine Cres.



Down Slope



Small Erosion Scar Below Crest

1519 Marine Cres.



Lobe of fill about 4 m L, 8 m W and 1 m D at crest below centre of yard



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

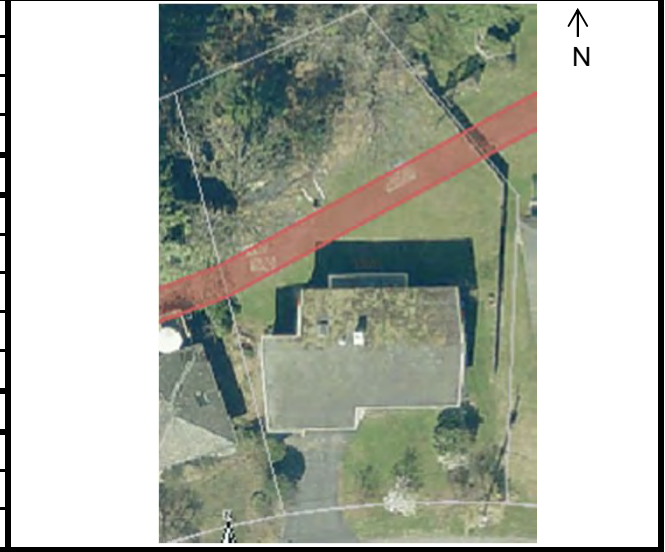
See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 27, 2013	Sun
Address	1525 Marine Crescent	Coquitlam
Photo frames	5358-5374	
Comments		



Soil Fill

Thickness at back fence line	0.5-1 m
Thickness at slope crest	0.5-1 m
12 m downslope of crest	None
Fill width	Part of lot
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	80%
Slope below crest, distance	60%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		50%	
Prev. slide magnitude/runout			

Comments

Water Features

Sources of drainage
Hydrophilic veg.
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

Crest	Below
Yard/Roof	Yard/Roof
N	N
N	N
Y	Y
N	N
N	N
Y	N
N	N

Retaining Walls

	Size	Condition
Timber crib	Ties: 1 m H, 10 m ? L	Leans outward
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation
Deck support posts
Driveway
Footing drains
Roof drainage to storm sewer?

50
Concrete
N
Possible street drainage to
To ravine
To ravine

Backyard Structures

	Size	Location
Garden shed	8x8 ft.	near crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	About 8 m min.
City infrastructure location	Back
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

1525 Marine Crescent



Back Yard



Below Crest



lot

Small Excavation Into Loose Sand and Cobbles Near Crest



1525 Marine Crescent

View Along Slope Crest With Old Stump



Wood Tie Retaining Wall and Structure With Floor



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Very Low.
See Table 5-7.**

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	June 13, 2012	Rain
Address	1531 Marine Cres.	Coquitlam
Photo frames	4956-4962	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	Est. 0.5 m
12 m downslope of crest	
Fill width	
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	65% - 95%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Comments Erosion scar near lot on Mayfair, 80-90% slope

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	N	Yard
Seepage	N	Unknown
Yard drainage	To crest	
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage		

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	40 - 50
Deck support posts	Concrete
Driveway	N
Footing drains	N
Roof drainage to storm sewer?	Under construction
	Front only?

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

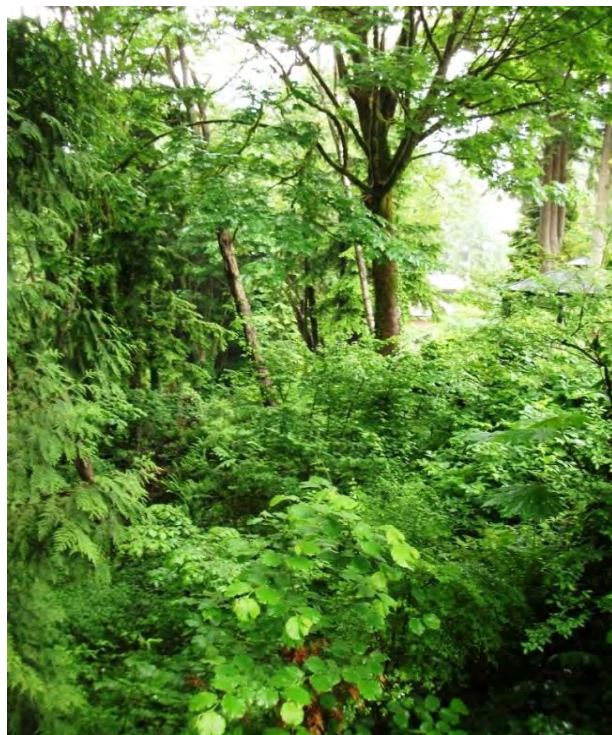
House distance to crest	25 m
City infrastructure location	Front, side
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	N

Site Photographs

Backyard



Along Slope And Behind Property To North



Down Slope Below Crest



1531 Marine Cres.

Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-7.

Ravine head comes to edge of back yard - keep under observation.

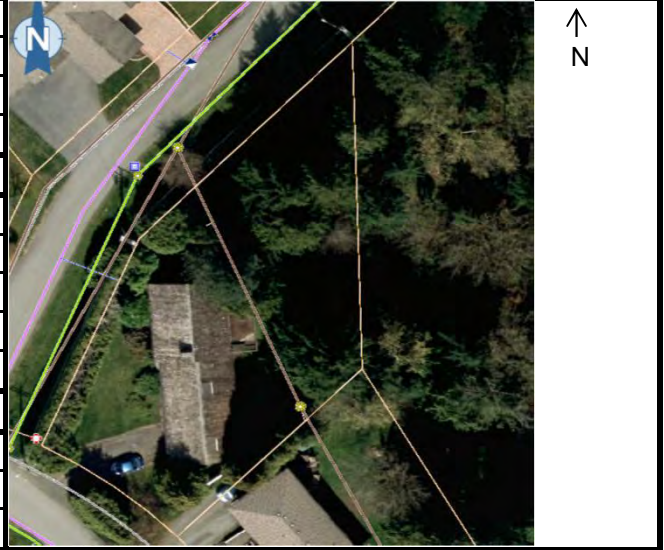
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Sketch

Date/Weather	March 27, 2013	Sun
Address	1537 Marine Cres.	Coquitlam
Photo frames	5450-5460	
Comments		



Soil Fill

Thickness at back fence line	
Thickness at slope crest	1-2 m
12 m downslope of crest	None, about 1 m north end
Fill width	22 m W lot
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	flat
Slope below crest, distance	80-90% East

Comments Basement excavation soil likely spread at crest of backyard as lobe - see photo

Instability Features

	Backyd	Crest	Below
Creep		N	Y
Tension Cracks		N	N
Leaning trees		Y	N
Pistol-butt trees		N	N
Shallow failures		N	Y
Deep failures		N	Yes, old
% conifer cover at crest		25%	Low
Prev. slide magnitude/runout	Old slide, 22 m W, as ravine		

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	N	Salmonberry
Seepage	N	N
Yard drainage	Slope	Slope
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments Small scar below crest

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50 years
Deck support posts	Concrete
Driveway	N
Footing drains	To house
Roof drainage to storm sewer?	Unknown
	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	about 9 m
City infrastructure location	Front / back / sides
St. drains into d'way, bkyd.	No
Buried irrig, electric cables	N

Site Photographs

Backyard

1537 Marine Cres.



Across Slope With Old Headscarp



Nose of Fill at Northeast Corner



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 27, 2013	Sun
Address	1543 Marine Cres.	Coquitlam
Photo frames	4909-4920	
Comments	Fringe fill, retaining wall rotten	



Soil Fill

Thickness at back fence line	1 m in hollow
Thickness at slope crest	About 0.5 - 1 m
12 m downslope of crest	None
Fill width	24 m W
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	75-80%

Comments Basement excavation soil likely spread at crest of backyard as lobe - see photo

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	Y
Deep failures	N	N	N
% conifer cover at crest		100	
Prev. slide magnitude/runout			

Comments Small scar below crest

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic veg.	N	N
Seepage	To crest	N
Yard drainage	Internal	N
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	N	N
Groundwater seepage	N	N

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H	old, bulges out
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments

House Age

House foundation	40 - 50 years
Deck support posts	Concrete
Driveway	Straight
Footing drains	Street water into d'way
Roof drainage to storm sewer?	Unknown

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Sunken	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Driveway drains to pipe.

Main Structures

House distance to crest	10 m
City infrastructure location	Front / back
St. drains into d'way, bkyd.	To driveway, then flat
Buried irrig, electric cables	N



Across Crest with Old Cedar Stump and Old Wood Retaining Wall



View Down Slope



View Up Slope From Below



1543 Marine Cres.

Fill Apron To North



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Low

See Table 5-7.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Sketch

Date/Weather	March 28, 2013	Sun
Address	1553 Marine Cres.	Coquitlam
Photo frames	4940-4948, 5699-5719	
Comments		



Soil Fill

Thickness at back fence line	About 1.5 - 2 m
Thickness at slope crest	About 1.5 - 2 m
12 m downslope of crest	None
Fill width	Yard width
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	50%
Slope below crest, distance	80%

Comments Old fill on slope is soil, concrete debris, asphalt, wood, etc.

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Tr.
Tension Cracks	Y	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		85	
Prev. slide magnitude/runout	N	N	Y

Comments Tension crack about 4 m L, 0.1 m W

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	Y	Y
Seepage	N	N
Yard drainage	to ravine	to ravine
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Gwtr seepage	N	N

drain pipe centre of retaining wall

Retaining Walls

	Size	Condition
Timber crib	1.5 m H North End	New but displacemt
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 - 50 yrs..
House foundation	Concrete
Deck support posts	Straight
Driveway	Street water into grate
Footing drains	Unknown
Roof drainage to storm sewer?	To ground surface

Backyard Structures

	Size	Location
Garden shed	8x8 ft.	Corner by crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	11 m	29 m W
City infrastructure location	Back and Front	
St. drains into d'way, bkyd.	Street water drains into d'way	
Buried irrig, electric cables	N	



Tension crack or settlement feature, centre north half of back yard



Fill below central part of crest and retaining wall



1553 Marine Cres.

Drainage pipe and wall with seepage indicators



Old fill below wall with old stump



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate

See Table 5-7.

Review, and repair or replacement of the wood retaining wall is recommended.

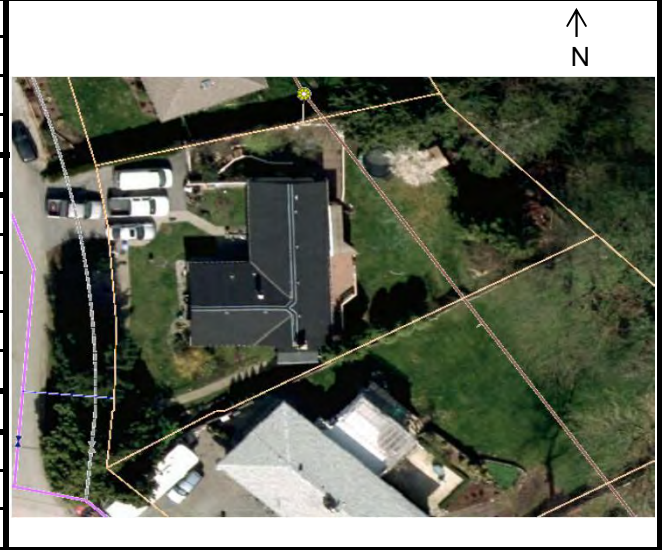
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Sketch

Date/Weather	March 25, 2013	Cloud
Address	1563 Marine Cres.	Coquitlam
Photo frames	4926-4940	
Comments	Perched rim of fill, shed in precarious loc.	



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	Skim of fill
Fill width	24 m lot width
Native soil at surface	Till

Topography

Backyard slope, direction	5% to crest
Slope below fence	
Slope below crest, distance	80%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		5%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Yard	Yard
Hydrophilic veg.	Y	Y
Seepage	N	Some
Yard drainage	To crest	Yard
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Y	N
Groundwater seepage	N	N

Comments

House Age

House foundation	40 - 50 years
Deck support posts	Concrete
Driveway	Straight
Footing drains	Front of house
Roof drainage to storm sewer?	Likely to ravine
	Likely to ravine

Retaining Walls

	Size	Condition
Timber crib	18 m L, 1 m H,	New
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Drain pipe in centre

Backyard Structures

	Size	Location
Garden shed	Y	On fill and ridge
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Garden shed on concrete sono tubes but at crest partly on fill

Main Structures

House distance to crest	12 m
City infrastructure location	Front / back
St. drains into d'way, bkyd.	To driveway, then flat
Buried irrig, electric cables	N

Site Photographs

Slope Below Crest South End

1563 Marine Cres.



Slope Below Crest North End



Slope Crest At Centre With Pipe





Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate

See Table 5-7.

A geotechnical assessment of the retaining wall, shed and slope below is recommended.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2234 Park Crescent	Coquitlam
Photo frames	5074-5090	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	1 - 1.2 m
Thickness at slope crest	1 - 1.2 m
12 m downslope of crest	None
Fill width	Yard edge
Native soil at surface	Quadra/

Topography

Backyard slope, direction	Gentle
Slope Above Yard	
Slope below crest, distance	30-50%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	Y	Y	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			<20%
Prev. slide magnitude/runout		N	N

Water Features

	Crest	Below
Sources of drainage	Slope/Roof	Slope/Roof
Hydrophilic vegetation	Ivy	Ivy
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	North	Y
Groundwater seepage	N	Tr.

Comments

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H	Good
Stacked blocks	N	
Concrete	Y East side	Good
Rock / mortar	N	
Engineered	N	

House Age 40-50

House foundation	Concrete
Deck support posts	N
Driveway	Ok Front
Footing drains	Unknown
Roof drainage to storm sewer?	To Front

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	Y	
Pond	N	

Comments

Main Structures

House distance to crest	15 m
City infrastructure location	Front and back
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

North Half Backyard

2234 Park Cres.



South Half Back Yard



Part of Rail Tie Retaining Wall



Slope Above Yard and Ravine Edge



2234 Park Cres.

Slope Below South Park of Yard



Ravine Park East of Lot. Vertical Soil Face Lower Right Corner



2234 Park Cres.

**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

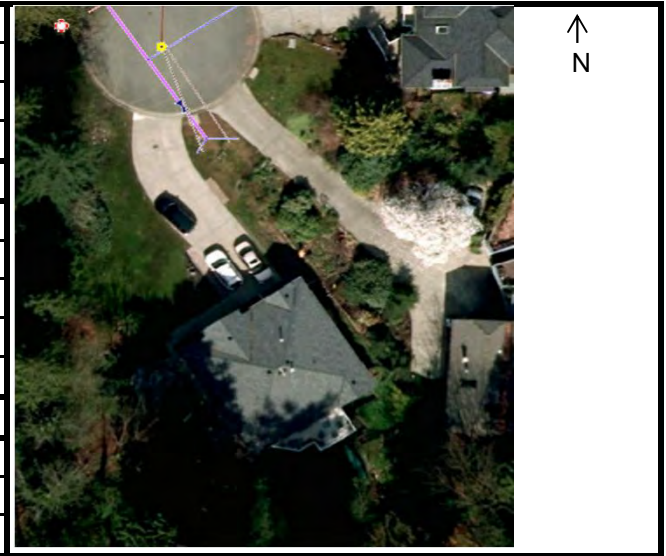
See Table 5-9.

No geotechnical assessment is recommended at this time. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2242 Park Crescent	Coquitlam
Photo frames	5325-5338, 5101-5136	
Comments		



Soil Fill

Thickness at back fence line	N/A
Thickness at slope crest	N/A
12 m downslope of crest	N/A
Fill width	N/A
Native soil at surface	

Topography

Backyard slope, direction	40-45%
Slope Above Yard	40-45%
Slope below crest, distance	

Comments House on floating concrete slab, NW corner subsided < 1 cm

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	Y	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout		N	N

Water Features

	Crest Slope	Below Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	Y
City Pipes	N	N
Groundwater seepage		

Comments

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H 7 m L	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age 25 yrs

House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	To Front

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete panels	
Swimming pool	N	
Greenhouse	Y	
Pond	N	

Main creek inlet to storm sewer has required maintenance and removal of accumulated gravel or plugging would occur.
Fallen tree displaced creek, caused erosion.
House is located about 6 m above bottom of ravine. Two tributary ravines join above house.

Comments

Main Structures

House distance to crest	10 m to forest
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard from Ravine Stream

2242 Park Cres.



View Down Ravine to House



Slope Above House To West



Slope Above To East



2242 Park Cres.

Creek Inlet to City Storm Sewer Upstream of House



Ravine Above Fallen Tree Jam and Boulders. City may have placed boulders



Creek Inlet Upstream of House

2242 Park Cres.



There is the potential that landslides or debris flows from: slope to east, ravine to southeast, and/or ravine to southwest may affect the 2242 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Crescent and Thermal Drive require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

The Property Owner at 990 Corona Crescent should have a geotechnical assessment of the pool and retaining wall completed, including stability under seismic conditions and potential impacts to houses below.

The City should have a geotechnical assessment of Chineside Ravine and Natural Area regarding the stream, ravine and slope stability, and the adequacy of the stream debris fences and stormsewer inlets.

The City should have a geotechnical assessment completed on City land south of 977 Thermal Drive where subsiding fill extends into tops of ravines which lie above 2242 Park Cres.

The City and the Property Owner of 2242 Park Cres. should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the streams, slopes and ravine crest areas during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion/deposition. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2244 Park Cres.	Coquitlam
Photo frames	5325-5338, 5137-5154	
Comments	Wet site on slope near base of hill	



Soil Fill

Thickness at back fence line	<0.5 m
Thickness at slope crest	N/A
12 m downslope of crest	N/A
Fill width	N/A
Native soil at surface	Quadra

Topography

Backyard slope, direction	20 - 40% West
Slope Above Yard	20 - 40% West
Slope below crest, distance	

Comments House is located generally downslope of a pool and steep retaining wall above.

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	N	N	N
Leaning trees		Maple	
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		>50%	
Prev. slide magnitude/runout			

Water Features

	Crest	Below
	Slope	Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	North	N
Groundwater seepage	Y	Y

Comments

Water collects on ground, east side of house.

Creep and leaning trees related to moist soils

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H 7 m L	Along side of house
Stacked blocks	N	
Concrete	Concrete walls cracked	Upper Driveway crack
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50
Deck support posts	Concrete
Driveway	Straight deck rot
Footing drains	Upper concrete cracked
Roof drainage to storm sewer?	Unknown
	Prob.

Comments Concrete walls near front stairs have wide vertical crack.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments In air photo, pile of soil and excavation at front of house from driveway fill placement.

Main Structures

House distance to crest	On slope
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

North Side

2244 Park Cres.



Backyard of House With Old Cedar Stumps



Slopes Below House Towards Ravine



East Side of House, Surface Water Collects



View North from about 50 m South of House



Wet Area South of House



Wet Area Trending Downhill Toward Creek Ravine



North Side of Property With Wood Retaining Wall



2244 Park Cres.

Crack in Upper Concrete Driveway Indicating Subsiding Fill



2244 Park Cres.

General Slope Area Above House



Slope Between 2242 and 2244 Park Crescent



There is the potential that landslides or debris flows from the slopes above may affect the 2244 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Crescent require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

The Property Owner at 990 Corona Crescent should have a geotechnical assessment of the pool and retaining wall completed, including stability under seismic conditions and potential impacts to houses below.

The City and the Property Owner of 2244 Park Crescent should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the streams, slopes and ravine crest areas during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion/deposition. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Sun
Address	2246 Park Crescent	Coquitlam
Photo frames	5325-5338	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	N/A
Thickness at slope crest	N/A
12 m downslope of crest	N/A
Fill width	
Native soil at surface	

Topography

Backyard slope, direction	40-45%
Slope Above Yard	40-45%
Slope below crest, distance	

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Y	N
Tension Cracks	N	N	N
Leaning trees	Y	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout		N	N

Water Features

	Crest	Below
	Slope/Roof	Slope/Roof
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	Y	Y
City Pipes	N	N
Groundwater seepage		

Comments Small surface drain pipe from unknown source. City manhole from u/g pipes.

Retaining Walls

	Size	Condition
Timber crib	Y 1 m H 7 m L	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age

House foundation	25 yrs.
Deck support posts	Concrete
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	To Front

Comments Wall and soil wet but not displaced

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	Y	
Pond	N	

Comments

Main Structures

House distance to crest	10 m to forest
City infrastructure location	Back yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

2246 Park Cres.



Wet Part of Timber Retaining Wall



Wet Part of Slope With Storm Sewer Port



South Side Yard With Timber Retaining Wall



2246 Park Cres.

Top of Wet Back Yard



Soil Fill at Upslope Fence



There is the potential that landslides or debris flows from the slopes above may affect the 2246 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Cres. require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

A geotechnical assessment of the pool and retaining wall at 990 Corona Crescent above is recommended, including stability under seismic conditions. The potential impacts to downslope properties, including 2246 Park Cres., must be evaluated.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	June 15, 2012	Overcast
Address	2247 Park Crescent	Coquitlam
Photo frames	5339-5350	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	N/A
Thickness at slope crest	
12 m downslope of crest	N/A
Fill width	
Native soil at surface	Colluvium

Topography

Backyard slope, direction	To Crest
Slope below fence	65%
Slope below crest, distance	65%

Comments Small ravine at north edge property, all trees on slope lean - creep

Instability Features

	Backyd	Crest	Below
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest			
Prev. slide magnitude/runout			

Water Features

	Crest	Below
Sources of drainage	Slope	Slope
Hydrophilic vegetation	Y	Y
Seepage	Y	Y
Yard drainage	Yard	Yard
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Y <1 m H Moist	Bows out slightly
Stacked blocks	N	
Concrete	N	
Rock / mortar	Y <1 m H	Above timber wall
Engineered	N	

House Age 40 yrs.

House foundation	Concrete
Deck support posts	N
Driveway	N
Footing drains	Unknown
Roof drainage to storm sewer?	Not to back yard

Comments Wet loving plants on slope above yard and house.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Wooden	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to crest	Est. 12 m
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Backyard

2247 Park Cres.



Slope Above Back Yard Adjoins Fence



There is the potential that landslides or debris flows from the slopes above may affect the 2247 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Crescent require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

A geotechnical assessment of the slopes at 998 Corona Crescent and 1000 Corona Crescent above is recommended, including stability under seismic conditions.

The potential impacts to downslope properties, including 2247 Park Cres., must be evaluated.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2251 Park Cres.	Coquitlam
Photo frames	5343-5344, 5160-5165	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-2 m into toe of slope
Thickness at slope crest	
12 m downslope of crest	N/A
Fill width	N/A
Native soil at surface	Quadra

Topography

Backyard slope, direction	Toward house
Slope Above Yard	Up 45%, hummocky
Slope below crest, distance	

Comments Dense, low infiltration soil at surface N half of back yard.

Instability Features

	Backyd	Base	Above
Creep	Damp	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		<10%	
Prev. slide magnitude/runout			

Water Features

	Base	Above
	Slope	Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	N/A	N
Yard drainage	N/A	N
Patio drainage	N/A	N
Pool, pond drainage	N/A	N
City Pipes	N/A	N
Groundwater seepage	Prob.	Prob.

Comments Previous water erosion notch, south side 0.5 m W, trickles over horizontally laminated clay silt

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts		N
Driveway		Front
Footing drains	Old, concrete	
Roof drainage to storm sewer?	Old concrete	

Backyard Structures

	Size	Location
Garden shed	Small	Near house
Patio, material	Sunken, paver bricks	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to base of slope	11 m	21 m W
City infrastructure location		Front
St. drains into d'way, bkyd.		N
Buried irrig, electric cables		Unknown

Site Photographs

View Of Back Yard And slopes Above

2251 Park Cres.



View In To Lower Part Of Slope



Water Notch Sediments



Water Notch With Added Armour Cobbles, Boulders

2251 Park Cres.



1000 and 1004 Corona Are Potential Source Areas, Both Moderate Risk

2251 Park Cres.

There is the potential that landslides or debris flows from the slopes above may affect the 2251 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Cres. require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

A geotechnical assessment of the slopes at 1000 Corona Crescent above is recommended, including stability under seismic conditions.

The potential impacts to downslope properties, including 2251 Park Crescent must be evaluated.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2255 Park Cres.	Coquitlam
Photo frames	5166-5178	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-2 m into toe of slope
Thickness at slope crest	N/A
12 m downslope of crest	N/A
Fill width	N/A
Native soil at surface	Quadra

Topography

Backyard slope, direction	Gentle to N
Slope Above Yard	Up 45%, hummocky
Slope below crest, distance	

Comments Young maple on hummocky slope above

Instability Features

	Backyd	Crest	Above
Creep	N	Yes	Yes
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest		None	
Prev. slide magnitude/runout			

Water Features

Sources of drainage
Hydrophilic vegetation
Seepage
Yard drainage
Patio drainage
Pool, pond drainage
City Pipes
Groundwater seepage

	Base	Above
	Slope	Slope
	Y	Y
	Y	Y
	N/A	N
	N/A	N
	N/A	N
	N/A	N
		N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	1 m H, base of slope	Okay
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts		N
Driveway		Front
Footing drains	Old, concrete	
Roof drainage to storm sewer?	Old concrete	

Comments Front driveway wall shows long term seepage out of pipes. Whole slope area damp.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

Main Structures

House distance to base of slope	5 m	19 m W
City infrastructure location		Front
St. drains into d'way, bkyd.		N
Buried irrig, electric cables		Unknown

Site Photographs

View Of Back Yard

2255 Park Cres.



Lower Part Of Slope



Wall At Front Of House With Drainage Features



2255 Park Cres.

There is the potential that landslides or debris flows from the slopes above may affect the 2255 Park Crescent house.

This Property is Exposed.

See Table 5-9.

Other properties along Corona Crescent require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

A geotechnical assessment of the slopes at 1000 Corona Crescent and 1004 Corona Crescent above is recommended, including stability under seismic conditions.

The potential impacts to downslope properties, including 2255 Park Crescent must be evaluated.

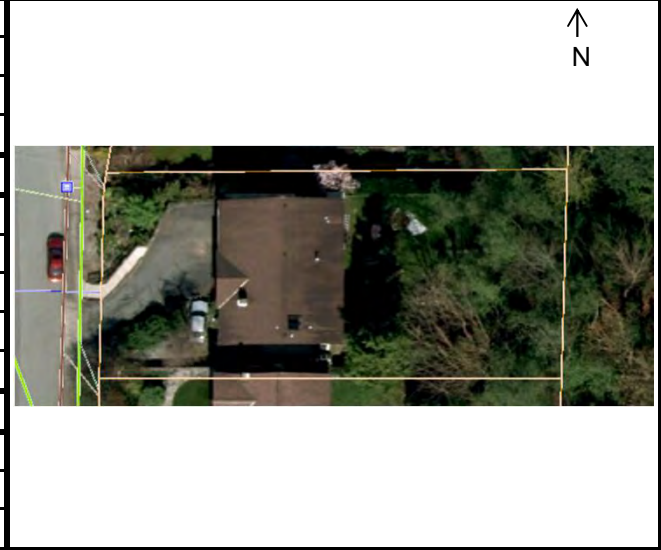
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2259 Park Cres.	Coquitlam
Photo frames	5179-5193, 5189-5193 Upper	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-3 m into toe of slope
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	Quadra

Topography

Backyard slope, direction	5-6 m H slope back yard
Slope Above Yard	About 60%, hummocky
Slope below crest, distance	

Comments Young maple on hummocky slope above

Instability Features

	Backyd	Base	Above
Creep		Prob.	Yes
Tension Cracks		N	N
Leaning trees		N	Y
Pistol-butt trees		N	N
Shallow failures		N	N
Deep failures		N	N
% conifer cover at crest		None	
Prev. slide magnitude/runout			

Water Features

	Base	Above
	Slope	Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	N/A	N/A
Yard drainage	N/A	N/A
Patio drainage	N/A	N/A
Pool, pond drainage	N/A	N/A
City Pipes	N/A	N/A
Groundwater seepage	Prob.	Prob.

Comments Under deck is clayey silt and sand cut into for yard construction.

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	1 m H, back of lot	Okay
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts	New	Okay
Driveway		Front
Footing drains		Front
Roof drainage to storm sewer?		Front

Comments Along north side of back yard, subsidence along tie retaining wall

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

During recent rainy period, surface water carried silt and clay down to back yard, deposited a thin layer below raised patio.

Main Structures

House distance to crest	14 m	19 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

North Half Of Back Yard

2259 Park Cres.



South Half of Back Yard



Slope Above Property



Slope Above Yard Southeast Corner

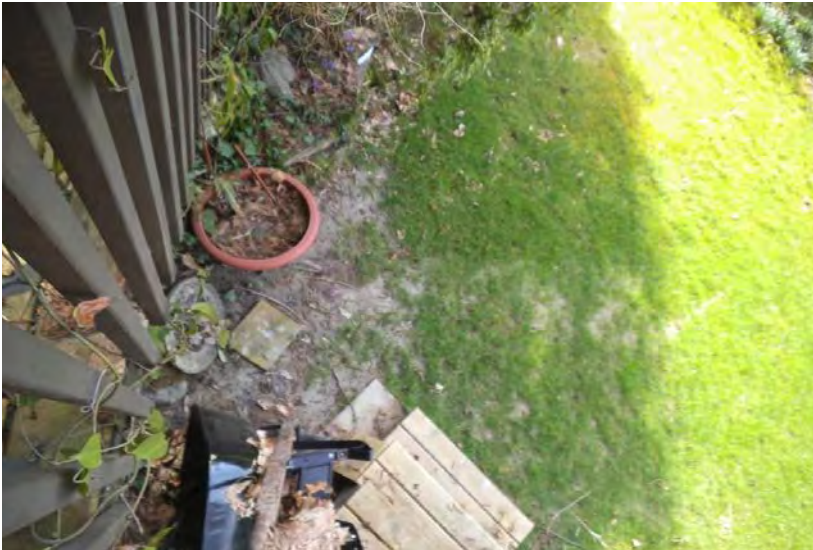


2259 Park Cres.

Quadra Sediments Form Slope Above Yard



Sediment On Surface From Recent Overland Flow Off Slope



**Landslides starting from an upslope property may affect this downslope property.
This Property is Exposed.
See Table 5-9.**

Other properties along Corona Crescent require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

A geotechnical assessment of the slopes at 1004 Corona Crescent above is recommended, including stability under seismic conditions.

The potential impacts to downslope properties, including 2259 Park Crescent must be evaluated.

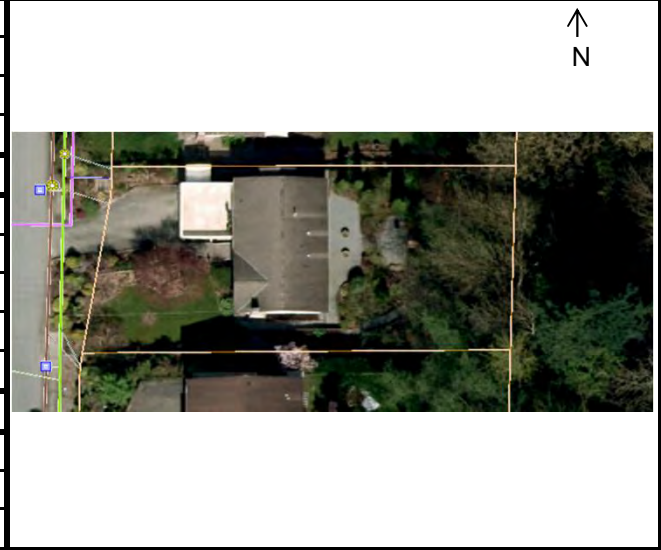
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2263 Park Cres.	Coquitlam
Photo frames	5200-5210	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-3 m into toe of slope
Thickness at slope crest	
12 m downslope of crest	
Fill width	N/A
Native soil at surface	Quadra

Topography

Backyard slope, direction	Multi Level
Slope Above Yard	About 60%, hummocky
Slope above base, distance	

Comments Young to older maple on hummocky slope above

Instability Features

	Backyd	Base	Above
Creep		Yes	Yes
Tension Cracks		N	N
Leaning trees		N	Y
Pistol-butt trees		N	N
Shallow failures		N	N
Deep failures		N	N
% conifer cover at crest		None	<10%
Prev. slide magnitude/runout			

Water Features

	Base	Above
Sources of drainage	Slope	Slope
Hydrophilic vegetation	Y	Y
Seepage	Prob.	Y
Yard drainage	N/A	N
Patio drainage	N/A	N
Pool, pond drainage	N/A	N
City Pipes	N/A	N
Groundwater seepage	Prob.	Y

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	Y	Good
Concrete	N	
Rock / mortar	1 m H, back of lot	Good
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts		
Driveway		Front
Footing drains		Front
Roof drainage to storm sewer?		Front

Comments

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Gravel	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Behind house is ridge on slope which would likely divert landslides from above.

Comments

Main Structures

House distance to crest	Est. 20 m	19 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

North Half Of Back Yard

2263 Park Cres.



South Half of Back Yard



Slope Above Yard Southeast Corner



2263 Park Cres.

Slope Above Yard Northeast Corner



Eastern Section of Rock and Mortar Wall Near Base of Slope



**Landslides starting from an upslope property may affect this downslope property.
This Property is Exposed.
See Table 5-9.**

Other properties along Corona Crescent require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

**A geotechnical assessment of the slopes at 1008 Corona Crescent above is recommended, including stability under seismic conditions.
The potential impacts to downslope properties, including 2263 Park Crescent must be evaluated.**

The City and the Property Owners should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2267 Park Cres.	Coquitlam
Photo frames	5212-5222	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-3 m into toe of slope
Thickness at slope crest	
12 m downslope of crest	
Fill width	
Native soil at surface	Quadra

Topography

Backyard slope, direction	Multi Level
Slope Above Yard	About 60%, hummocky
Slope below crest, distance	

Comments Young to older maple on hummocky slope above

Instability Features

	Backyd	Base	Above
Creep			Yes
Tension Cracks		N	N
Leaning trees		N	Y
Pistol-butt trees		N	N
Shallow failures		N	N
Deep failures		N	N
% conifer cover at crest		None	10%
Prev. slide magnitude/runout			

Water Features

	Base	Above
Sources of drainage	Slope	Slope
Hydrophilic vegetation	Y	Y
Seepage	Prob.	Prob.
Yard drainage	N/A	N
Patio drainage	N/A	N
Pool, pond drainage	N/A	N
City Pipes	N/A	N
Groundwater seepage	Prob.	Prob.

Comments

Retaining Walls

	Size	Condition
Timber crib	N Side 1 m H	
Stacked blocks	Y	Good
Concrete	N	
Rock / mortar	1.6 m H, north side of lot	Good
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts		
Driveway		Front
Footing drains		Front
Roof drainage to storm sewer?		Front

No entry to private land above with fences.

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Y Wood	Beside House
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments Possible roof or foundation water flows into stormsewer at front of house.

Main Structures

House distance to crest	Est. 25 m 21 m W
City infrastructure location	Front
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

2267 Park Cres.



Slope Above Back Yard



Slope Above Yard to Southeast



Moist Back Yard

2267 Park Cres.



Drainage At Front Of House To Storm Sewer



2267 Park Cres.

**Landslides starting from an upslope property may affect this downslope property.
This Property is Exposed.
See Table 5-9.**

Other properties along Corona Cres. require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

This property could be affected by a landslide or debris flow caused by fill failure, or by water from rupture of underground City pipes at 1008 Corona Crescent or other location.

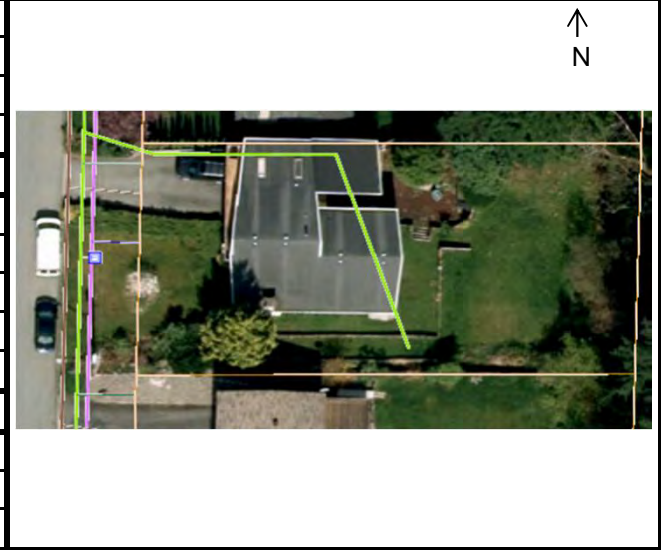
The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	2271 Park Cres.	Coquitlam
Photo frames	5223-5234	
Comments		



Soil Fill Site at base of hill

Thickness at back fence line	Cut 1-3 m into toe of slope
Thickness at slope crest	
12 m downslope of crest	
Fill width	N/A
Native soil at surface	Quadra

Topography

Backyard slope, direction	Multi level, slopes to north
Slope Above Yard	About 60%, hummocky
Slope below crest, distance	

Comments Young to older maple on hummocky slope above

Instability Features

	Backyd	Base	Above
Creep	N	Yes	Yes
Tension Cracks	N	N	N
Leaning trees	N	N	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	None	20%
Prev. slide magnitude/runout			

Water Features

	Base	Above
	Slope	Slope
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	N/A	N/A
Yard drainage	N/A	N/A
Patio drainage	N/A	N/A
Pool, pond drainage	N/A	N/A
City Pipes	N/A	N/A
Groundwater seepage	Prob.	Y

Comments

Retaining Walls

	Size	Condition
Timber crib	N Side 1 m H	Leans
Stacked blocks	Y	Good
Concrete	N	
Rock / mortar	1.6 m H, north side of lot	Good
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts		
Driveway		Front
Footing drains		Front
Roof drainage to storm sewer?		Front

Comments

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Sunken	Patio St. Beside House
Swimming pool	N	
Greenhouse	N	
Pond	N	

No entry to private land above.

Stream has little evidence of flashy flow or high sediment influx.

Stream receives water from City pipe above.

Comments

Main Structures

House distance to crest	Est 19 m	21 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Stream From City Drainage in Ditch in Back Ya

2271 Park Cres.



Head of Stream In Back Yard



Stream At Northeast Corner of Yard And Slope Above





**Landslides starting from an upslope property may affect this downslope property.
This Property is Exposed.
See Table 5-9.**

The slope morphology would tend to direct surface flows or landslides northwards and eventually down the stream track in this property's back yard.

Other properties along Corona Cres. require geotechnical assessment of the ravine crest areas to determine if fill or native soils may become unstable due to rain and snow water, seismic action or pipe rupture.

This property could be affected by a landslide or debris flow caused by fill failure, or by water from rupture of underground City pipes at 1008 to 1020 Corona Crescent or other locations.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the Property Owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	1000 Thermal Drive	Coquitlam
Photo frames	5268-5315	
Comments		



Soil Fill

Thickness at back fence line	Est. 2 - 3 m
Thickness at slope crest	Est. 2 - 3 m
12 m downslope of crest	Fringe of fill, organic material
Fill width	Whole property width
Native soil at surface	Quadra

Topography

Backyard slope, direction	Slope to ravine
Slope Below Yard	55 - 60%
Slope below crest, distance	80% edge of fill above wet zone

Comments

Instability Features

	Backyd	Crest	Below
Creep	Y	Y	Y
Tension Cracks	Y	Y	Y
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	Y	Y	Y
Deep failures	Y	Y	Y
% conifer cover at crest	0	0	0
Prev. slide magnitude/runout	N	N	N

Comments

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	Y	Y
Hydrophilic vegetation	Y	Y
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	N
Groundwater seepage	Prob.	Prob.

Drainage pipes exit below wall and fill deposit

Retaining Walls

	Size	Condition
Timber crib	Several	Old and Newer
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Comments Walls range from straight to bulging out.

House

Age	40 - 50
House foundation	Concrete Okay
Deck support posts	N
Driveway	Front
Footing drains	To ravine
Roof drainage to storm sewer?	To ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	8x8 brick	Near house
Swimming pool	N	
Greenhouse	N	
Pond	N	

Comments

City map indicates that a tributary of Correl Brook starts downslope of property.

Main Structures

House distance to crest	5 m	Close
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

Site Photographs

Back Yard, View North



View South Along North Half of Old and Newer Walls



Back Yard, View South



View South Along Walls From Centre to South



View North Across Back Fence / Wall Area



1000 Thermal Drive

Fill Above Wet Area With Skunk Cabbage



View Down Wet Area Towards Correl Creek and Right-of-way



Tipped Maples on South Side of Wide Wet and Cleared Area



View North Along Wall with Bulge in Centre



South End of Wall With Tension Crack (Pencil)



South Property Boundary With Timber Wall/Terraces



Steep Unsupported Soil Face Southwest Corner of Yard



Old Cedar Stump, Now Tipped, At South Edge Wet/Cleared Area



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

The City had Horizon Engineering prepare a geotechnical survey and report regarding the March 2013 subsidence and tension cracking. Summit's slope risk analysis does not preclude or replace any of Horizon's observations or recommendations.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

The property owner and the City must work together regarding disposal of roof and foundation water as piping it to the steep slope behind the house is unsuitable and may lead to erosion or landslide conditions. The property owner and the City must work together regarding the removal of fill material and construction of any replacement retaining wall.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	967 Thermal Drive	Coquitlam
Photo frames	5250 - 5264	
Comments		



Soil Fill

Thickness at back fence line	Est. 1 m
Thickness at slope crest	Est. 1 m
12 m downslope of crest	None
Fill width	Across lot.
Native soil at surface	Quadra

Topography

Backyard slope, direction	Gentle slope to ravine
Slope Below Yard	
Slope below crest, distance	70%

Comments

Instability Features

	Backyd	Crest	Above
Creep	N	Y	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	100%	100%
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Northwest	Northwest
Groundwater seepage		Y

Comments

City pipe along north boundary.

House	Age	40 - 50
House foundation	Concrete	Okay
Deck support posts	Straight	
Driveway	Front	
Footing drains	To ravine	
Roof drainage to storm sewer?	To ravine	

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

Backyard Structures

	Size	Location
Garden shed	Near House	
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Southeast of property, at crest, odd excavation and pipes, logs in slope, for private drainage.

Property is just south of head of Suter Brook.

Comments

Main Structures

House distance to crest	Est. 15 m
City infrastructure location	Crest Area
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

967 Thermal Drive



Slope Below South Side



Concrete in Fill Below Crest





Head of Suter Brook, Excavation At Crest For Private Land Drainage Pipes



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

Ravine head comes to edge of back yard - keep under observation.

Downstream along Suter Brook are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	969 Thermal Drive	Coquitlam
Photo frames	5022-5028	
Comments		



Soil Fill

Thickness at back fence line	< 1 m
Thickness at slope crest	< 1 m
12 m downslope of crest	None
Fill width	About 12 m
Native soil at surface	Quadra

Topography

Backyard slope, direction	Gentle slope to ravine
Slope Below Yard	65 - 80%
Slope below crest, distance	65 - 80% over 30 m

Comments

Instability Features

	Backyd	Crest	Above
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	100%	100%
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
Pipes	See comment below	
Groundwater seepage		Y

Comments

Retaining Walls

	Size	Condition
Timber crib	Rail tie 1 m H	Rotted, sags
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House

Age	40 - 50
House foundation	Concrete Okay
Deck support posts	N
Driveway	Front
Footing drains	To ravine
Roof drainage to storm sewer?	To ravine

Comments

Backyard Structures

	Size	Location
Garden shed	Playhouse	Crest
Patio, material	N	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Black drain pipe with ?roof, foundation water is 20 m above shallow failure scar noted previously.

Comments

Main Structures

House distance to crest	4 m	22 m W
City infrastructure location	Front	
St. drains into d'way, bkyd.	N	
Buried irrig, electric cables	Unknown	

House is close to slope crest.

Site Photographs

Narrow Back Yard

969 Thermal Drive



Slope At North End With Drainage Pipe



Slope At South End, View of Head of Suter Brook



Wood Tie Wall, Northeast Corner, With Drainage Pipe

969 Thermal Drive



Northeast Corner of Yard With Wood Tie Wall



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
Moderate.**

See Table 5-9.

Ravine comes to edge of back yard - keep under observation.

Downstream along Suter Brook are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	971 Thermal Drive	Coquitlam
Photo frames	5003-5021	
Comments		



Soil Fill

Thickness at back fence line	About 1 m
Thickness at slope crest	About 1 m
12 m downslope of crest	None
Fill width	13 m W
Native soil at surface	Quadra

Topography

Backyard slope, direction	Gentle slope to ravine
Slope Below Yard	65-85%
Slope below crest, distance	65-85%

Comments

Instability Features

	Backyd	Crest	Above
Creep	N	Tr.	Tr.
Tension Cracks	N	N	N
Leaning trees	N	N	N
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	>50%	N
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	Underground in back	
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	<0,5 m H	Sags
Stacked blocks	N	
Concrete	N	
Rock / mortar	On South Side at Crest	Cracked
Engineered	N	

House Age

House foundation	40 - 50
Deck support posts	Concrete Okay
Driveway	At front
Footing drains	To ravine
Roof drainage to storm sewer?	To ravine

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	By house	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Surface fill, northeast corner, 1 m thick

Comments

Main Structures

House distance to crest	12 m 26 m W
City infrastructure location	Front; Sanitary Thru Back Yard
St. drains into d'way, bkyd.	N
Buried irrig, electric cables	Unknown

Site Photographs

Back Yard

971 Thermal Drive



Back Yard, South Side



Downslope North End





Slope Below Northwest Corner



Probability of a specific hazardous landslide starting from this property affecting downslope properties:

Moderate.

See Table 5-9.

Ravine comes to edge of back yard - keep under observation.

Downstream along Suter Brook are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	977 Thermal Drive	Coquitlam
Photo frames	4965-4979	
Comments		



Soil Fill House will be listed for sale.

Thickness at back fence line	Up to 1 m
Thickness at slope crest	Up to 1 m
12 m downslope of crest	Fringe of fill
Fill width	Property
Native soil at surface	Quadra

Topography

Backyard slope, direction	Gentle slope to ravine
Slope Below Yard	80-100%
Slope below crest, distance	80-100%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	Tr.	Y
Tension Cracks	N	N	N
Leaning trees	N	Y	Y
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	Old
% conifer cover at crest	N	<10%	N
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	N
Hydrophilic vegetation	N	N
Seepage	N	N
Yard drainage	Y	Y
Patio drainage	Y	Y
Pool, pond drainage	N	N
Pipes	N	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	N	
Stacked blocks	N	
Concrete	N	
Rock / mortar	N	
Engineered	N	

House Age 40 - 50

House foundation	Concrete	Okay
Deck support posts	Straight	
Driveway	At front	
Footing drains	To ravine	
Roof drainage to storm sewer?	To ravine	

Comments

Backyard Structures

	Size	Location
Garden shed	Garage at crest	
Patio, material	By house, concrete	
Swimming pool	N	
Greenhouse	N	
Pond	N	

House very close to crest.
Fill on City property to east of site.

Comments

Main Structures

House distance to crest	3 - 7 m	close
City infrastructure location		Front
St. drains into d'way, bkyd.		N
Buried irrig, electric cables		Unknown

Site Photographs

Back Yard

977 Thermal Drive



Crest Centre



Centre Area Drainage Pipe



Swale Centre of Property

977 Thermal Drive



Drainage South Edge, Onto Ridge Between Swales. Some Erosion.



**Probability of a specific hazardous landslide starting from this property affecting downslope properties:
High.**

See Table 5-9.

Ravine comes to edge of back yard - keep under observation.

Downstream along Suter Brook are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**

The Property Owner and the City must work together regarding disposal of roof and foundation water as piping it to the steep slope behind the house is unsuitable and may lead to erosion or landslide conditions.

Site Observation Form

Site Air Photo

Date/Weather	March 26, 2013	Sun
Address	983 Thermal Drive	Coquitlam
Photo frames	4982 - 5002	
Comments		



Soil Fill

Thickness at back fence line	Up to 1 m
Thickness at slope crest	
12 m downslope of crest	None
Fill width	Part of property width
Native soil at surface	Quadra

Topography

Backyard slope, direction	Slope to ravine
Slope Below Yard	30 - 65%
Slope below crest, distance	30 - 65%

Comments

Instability Features

	Backyd	Crest	Below
Creep	N	N	Y
Tension Cracks	N	N	N
Leaning trees	N	N	Maple
Pistol-butt trees	N	N	N
Shallow failures	N	N	N
Deep failures	N	N	N
% conifer cover at crest	N	N	N
Prev. slide magnitude/runout	N	N	N

Water Features

	Crest	Below
	Yard/Roof	Yard/Roof
Sources of drainage	N	In hollow
Hydrophilic vegetation	N	N
Seepage	Y	Y
Yard drainage	N	N
Patio drainage	N	N
Pool, pond drainage	N	N
City Pipes	N	Y
Groundwater seepage	N	N

Comments

Retaining Walls

	Size	Condition
Timber crib	Several	Newer, Straight
Stacked blocks	N	
Concrete	Y	Near house, straight
Rock / mortar	N	
Engineered	N	

House Age

House foundation	40 - 50
Deck support posts	Concrete Okay
Driveway	Straight
Footing drains	See comment below
Roof drainage to storm sewer?	To ravine
	To ravine

Comments

Backyard Structures

	Size	Location
Garden shed	N	
Patio, material	Concrete below deck	
Swimming pool	N	
Greenhouse	N	
Pond	N	

Driveway at front, steep, drains towards house
 Most large trees below removed
 Back yard has terraced gardens

Comments

Main Structures

House distance to crest	More than 10 m - house on slope
City infrastructure location	Midslope and Below
St. drains into d'way, bkyd.	Slight lip on street to dway
Buried irrig, electric cables	Unknown



Downslope Centre



Downslope North End



Wet Area East of Property And Slope Above



983 Thermal Drive

Stairs and Wood Retaining Wall On Slope Below House



Probability of a specific hazardous landslide starting from this property affecting downslope properties: Moderate.

See Table 5-9.

House is at edge of ravine - keep under observation.

Downstream along Suter Brook are properties which could be affected by floods and debris flows.

The City and the Property Owner should share relevant engineering and surveying reports.

The Property Owner must be pro-active and review the slopes and ravine crest area during and after **times of heavy rainfall or snowmelt to monitor slope stability and check for erosion. If there is any evidence of slope movement, water erosion or drainage problems on the property or nearby, we recommend that the property owner immediately contact the City and also immediately engage a geotechnical engineer to conduct an assessment.**