


# LGP Baseline Measurements 07/08 Season

## General Site Description

Site Name: Diamond Hill Peninsula (NE end)		
		
Geographical coordinates <i>(for camp at end of peninsula)</i>	Latitude and Longitude S79 49.726 E159 38.163	Note if from GPS or Not GPS GPS.
Elevation:	31m asl	GPS
Slope:	Degrees: Variable	Estimated
Date (s) visited: 19 Dec 2007 – 29 Dec 2007		
Aspect: NE mainly		
Samples taken? Yes		
Photos taken? Yes		
Aerial Photos available? Yes		
Notes taken by: Jenny Webster-Brown (University of Auckland)		

## Soil Parameters

Geomorphological characteristics	<input type="checkbox"/> Pro-Glacial <input type="checkbox"/> Nival - Chionophilous <input type="checkbox"/> Periglacial <input type="checkbox"/> Fluvial <input type="checkbox"/> Coastal <input type="checkbox"/> Fell-Field	<input type="checkbox"/> Slope <input type="checkbox"/> Plateau <input type="checkbox"/> Valley <input type="checkbox"/> Landslide <input type="checkbox"/> Scree slope <input type="checkbox"/> Rock wall
Rock Lithology	<input type="checkbox"/> Siliceous rock <input type="checkbox"/> Calcareous rock	Rock type
Soil Typology	<input type="checkbox"/> Soil Absence <input type="checkbox"/> Soil Presence	<input type="checkbox"/> Mineral soil <input type="checkbox"/> Organic soil <input type="checkbox"/> Other

Surface Lithology	<input type="checkbox"/> Outcropping Rock (rare) <input type="checkbox"/> Loose Material <input type="checkbox"/> Glacial <input type="checkbox"/> Fluvial <input type="checkbox"/> Eolic <input type="checkbox"/> Coastal <input type="checkbox"/> Scree Slope, Debris
Surface Texture	50 % Blocks ( $\varnothing > 25\text{cm}$ ) 20 % Pebbles ( $5\text{cm} < \varnothing < 25\text{cm}$ ) 10% Gravel ( $0.2\text{cm} < \varnothing < 5\text{cm}$ ) 20 % Sand and finer material ( $\varnothing < 0.2\text{cm}$ )

### Vegetation

Plants and Lichens: Yes	Unknown species, but mosses occasionally seen in soil and lichens on rocks. $\ll 1\%$ cover.
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### Fauna

Mammals	Just us
Birds	None seen
Invertebrates	None seen

### Glacial

Ablation/accumulation	N/A
Ice temperature	N/A
Snow pit measurements	N/A

## Aquatic Non-Marine Systems

<p>Type of water body :</p> <p>Occasional terrestrial ponds are present in gullies or low-lying places on the peninsula</p>	<p>Small ponds (and dried pond sites)</p> 
<p>Size and depth : Mainly 100-300m<sup>2</sup></p>	<p>Estimate or actual: measured</p>
<p>Inflows and outflows (for non running systems): None observed – nourished from adjacent snow banks</p>	
<p>Duration and spatial distribution of free water: Duration may be &lt; 15yrs (some have dried up since 1993 when last visited by us); some smaller ponds may be seasonal?</p>	
<p>Evidence of water level variation? Previous pond edges evident up to 2m above current level or base of dry pond. The evidence includes discoloured rock, salt precipitation and dried cyanobacterial mat on soil surface.</p>	
<p>Isolated habitat or part of a connected network? Isolated</p>	
<p>Proximity to other aquatic systems: Spacing between ponds 500m to 2km (or more)</p>	
<p>Any sign of salt or vegetation accumulation around margins? Yes (see above)</p>	
<p>Range of levels over season (peg or otherwise reference the margin): Not measured.</p>	
<p>Water sources</p>	<ul style="list-style-type: none"> <li>- 100% Snow,</li> <li>- % Glacier</li> <li>- % Non-glacial Ice</li> <li>- % Other</li> </ul>
<p>Catchment:</p>	<ul style="list-style-type: none"> <li>- Size variable: up to 1km<sup>2</sup>?</li> <li>- Vegetation: nil other than pond mats</li> <li>- Geology (siliceous rock, glacial moraine)</li> <li>- Geomorphology (see Soils section)</li> <li>- Animal influence: None</li> <li>- Snow and Ice: Snow banks present</li> </ul>
<p>Ice cover:</p>	<ul style="list-style-type: none"> <li>- permanent ice may be present - unknown</li> <li>- 0% - 80% of coverage (anchored on one side) in Dec</li> <li>- Thickness: 1-1.5m</li> <li>- Transparency (opaque ice, some snow cover)</li> </ul>
<p>Water properties. (to be recorded at intervals over the season)</p>	<ul style="list-style-type: none"> <li>- Clarity: Close to 100% (estimated)</li> <li>- Colour: None</li> <li>- Foams : None</li> </ul>

	<ul style="list-style-type: none"> <li>- Conductivity (measured): up to 120mS.cm<sup>-1</sup></li> <li>- Temperature (measured): up to 11°C (usually 0 – 5°C)</li> </ul>
Bed characteristics	<ul style="list-style-type: none"> <li>- Substrate (%) <ul style="list-style-type: none"> <li>o Cobbles 20%</li> <li>o Gravel 30%</li> <li>o Sand 40%</li> <li>o Silt 10%</li> </ul> </li> <li>- Vegetated (% cover) Variable 0 - 100% <ul style="list-style-type: none"> <li>o cyanobacterial mats <ul style="list-style-type: none"> <li>▪ Colour - brown</li> <li>▪ Thickness – 2mm</li> <li>▪ Gross morphology (flat)</li> </ul> </li> <li>o Encrusting salts in dried ponds</li> <li>o Mosses - None</li> <li>o green algae - None recognised</li> </ul> </li> </ul>
Others	Animal observations (rare rotifers, nematodes, tardigrades)
Sample collection and preservation	Samples of water, sediment, salt and mats were collected as part of our research. Chemical and biological analysis is being undertaken

Aquatic Marine Systems

N/A

Environmental (AWS)

Brown Hills AWS the most relevant. Go to LGP Website Darwin Data Products at:

<http://www.lgp.aq/article/6341.html#8809>