

# LGP Baseline Measurements 07/08 Season

## General Site Description

Site Name: Darwin Glacier Surface - E of Lake Wilson



Geographical coordinates	Latitude and Longitude S79 48.932 E159 41.589	From GPS
Elevation	62m above sea level	GPS
Slope	Degrees 0°	Estimated
Date(s) visited: 22 Dec & 24 Dec 2007		
Aspect: Flat glacial surface		
Samples taken: Yes		
Photos taken: Yes		
Aerial Photos available: Yes		
Notes taken by: Jenny Webster-Brown (University of Auckland)		

## Surface Parameters

Geomorphological characteristics	Glacial ice surface	
Rock Lithology	N/A	
Soil Typology	N/A	
Surface Lithology	<input type="checkbox"/> Outcropping Rock <input type="checkbox"/> Loose Material <input type="checkbox"/> Glacial ICE <input type="checkbox"/> Fluvial <input type="checkbox"/> Eolic <input type="checkbox"/> Coastal <input type="checkbox"/> Scree Slope, Debris	
Surface Texture	Glassy ice	

## Vegetation

Plants and Lichens	None
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## Fauna

Mammals	None
Birds	None
Invertebrates	None

## Glacial

Ablation/accumulation	unknown
Ice temperature	not measured
Snow pit measurements	

## Aquatic Non-Marine Systems

The intention here is to document the distribution of melt pools, ephemeral streams, ponds and lakes, their melting characteristics and basic limnological features. Required observations combine both one-off and time series and are designed to characterise the pond and its biota as far as is possible without resorting to specialised techniques and equipment (beyond a temperature/conductivity meter).

Type of water body	Lakes, ponds, cryoconites and streams
	<p><i>Cryoconites in ice base of supraglacial lake</i></p> 
Size and depth: Cryoconites: 0.5-1m <sup>2</sup> , 0.5-0.75m deep. Ponds & lakes: Up to 200,000m <sup>2</sup> , depth unknown.	Measured
Inflows and outflows (for non running systems): Inflow streams: up to 1m wide and 1 deep. Duration of flow unknown. Discharge estimate: 1 - 10L/sec.	

Duration and spatial distribution of free water: Probably seasonal	
Evidence of water level variation: No evidence available	
Isolated habitat or part of a connected network: Some connected by surface flows	
Proximity to other aquatic systems: 1 to 1.5 km between major lakes	
Any sign of salt or vegetation accumulation around margins: No	
Range of levels over season (peg or otherwise reference the margin): Unknown	
Water sources	<ul style="list-style-type: none"> <li>- &lt;10% Snow,</li> <li>- &gt;90% Glacier</li> <li>- 0 % Non-glacial Ice</li> </ul>
Catchment:	<ul style="list-style-type: none"> <li>- Size : Not possible to assess</li> <li>- Vegetation: None</li> <li>- Geology N/A</li> <li>- Geomorphology N/A</li> <li>- Animal influence - None</li> <li>- Ice and some snow drift</li> </ul>
Ice cover: (to be recorded at intervals over the season)	<ul style="list-style-type: none"> <li>- permanent ice likely on some features?</li> <li>- 0-100% of coverage (anchored on side &amp; loose)</li> <li>- Thickness: 1cm – 750cm</li> <li>- Transparency: clear - opaque</li> </ul>
Water properties. (to be recorded at intervals over the season)	<ul style="list-style-type: none"> <li>- Clarity (estimated): 100%</li> <li>- Colour: None</li> <li>- Foams: None</li> <li>- Conductivity (measured): all &lt; 10 uS.cm<sup>-1</sup></li> <li>- Temperature (measured): all &lt; 1°C</li> </ul>
Bed characteristics	<ul style="list-style-type: none"> <li>- Substrate (%): Seen in cryoconites &amp; streams - up to; <ul style="list-style-type: none"> <li>o 10% Gravel</li> <li>o 10% Sand</li> </ul> </li> <li>- Vegetated (% cover) <ul style="list-style-type: none"> <li>o cyanobacterial mats: None seen but evidence of photosynthesis in pH variation through day.</li> <li>o mosses: None</li> <li>o green algae: None recognised</li> </ul> </li> </ul>
Others	Animal observations: Unknown
Sample collection and preservation	Water samples collected from ponds for chemical and biological analysis

Aquatic Marine Systems

N/A

Environmental (AWS)

See short-term AWS data taken from AWS sites at Roadend Nunatak and on the Hatherton Glacier. Go to: <http://www.lgp.aq/article/6341.html#8809>