



Project Baseline Wellington Kelp Survey Update – 02 June 2018

Kau Bay Kelp Observation – D07 (02 Jun 2018)

Reference: KB D07

Date: 02 Jun 2018

Time: 2.30pm – 2.45 pm

Route: From Kau Bay into Mahanga Bay

Surface snorkel observation plus dive

Snorkeler: Nicole Miller & Lynne Robertson

Method: GPS tracking with Garmin etrex 20x in waterproof housing. No kelp on Kau Bay side, so started survey on the point. Distinct lack of kelp in the sheltered area on the SE of the point. First time snorkelling right along the rocks right up north!

Visibility: 2-3m (at surface, estimated)

Surface Temp: 11° C (Nicole's Perdig)

Tide: Incoming (low tide approx. 1.53pm, 0.7m, Linz)

Conditions: calm

Kelp pushed into the harbour.



Comparison Kelp Bed June 2017 (Blue) Area 1,935m² with June 2018 (Yellow/Green) Area 1,590m².

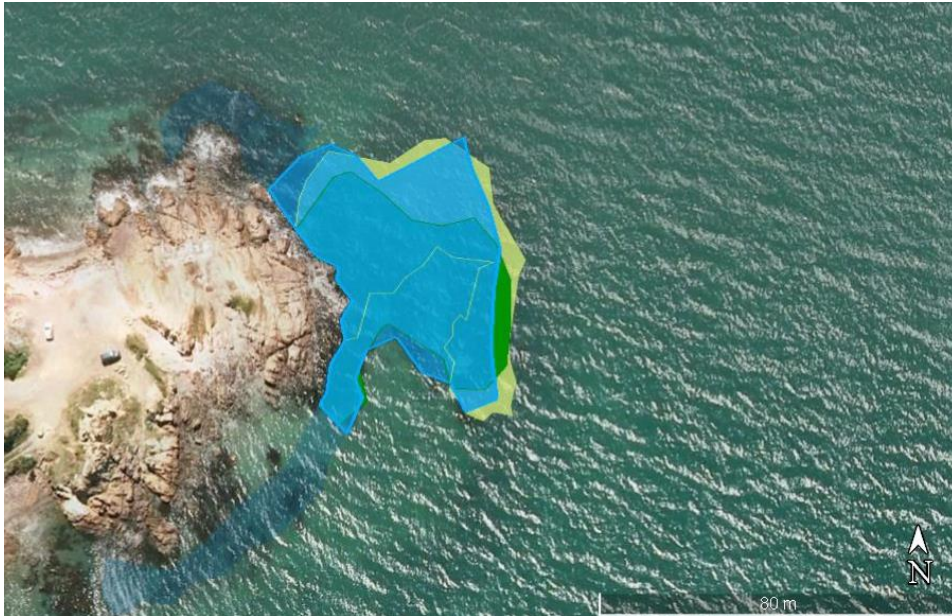




Comparison Kelp Bed June 2016 (Green) Area 1,439m² with June 2018 (Yellow/Green) Area 1,590m².



Comparison Kelp Bed June 2016 (Green) Area 1,439m² with June 2017 (Blue) Area 1,935m².



Comparison June 2016, 2017 & 2018.

Kau Bay Kelp Observation – D06 (6 Feb 2018) (additional measurement)

Reference: KB D06

Date: 06 Feb 2018

Time: 5.15pm – 5.45 pm

Route: From Kau Bay into Mahanga Bay

Surface snorkel observation

Snorkeler: Nicole Miller & Roberta D'Archino (with Luca)

Method: GPS tracking with phone in splash proof bag on top of free diving buoy behind snorkeler.

Accuracy of iPhone 5S GPS combined with iHike NZ application (about +/- 5m). Snorkeler following the weed line around the point towards dense part of the kelp forest, then following on the outside boundary of the floating kelp strands

Visibility: 0-7m

Surface Temp: 20° C (Nicole's Perdix)

Tide: incoming (low tide approx. 5.05pm, 0.5m, Linz)

Conditions: sheltered and good viz on Kau Bay side, less viz on Mahanga Bay side





Kau Bay Kelp Observation – D05 (26 Nov 2017)

Reference: KB D05

Date: 26 Nov 2017

Time: 6.05pm – 6.30pm

Route: From Kau Bay into Mahanga Bay

Surface snorkel observation

Snorkeler: Nicole Miller, Matthew Rolfe

Method: GPS tracking with phone in splash proof bag on top of free diving buoy behind snorkeler.

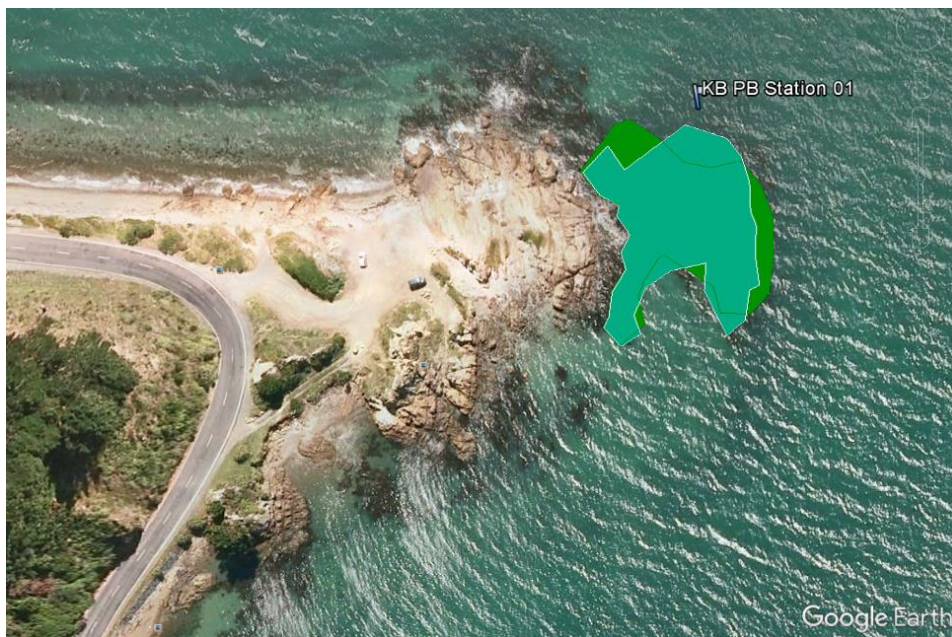
Accuracy of iPhone 5S GPS combined with iHike NZ application (about +/- 5m). Snorkeler following the weed line around the point towards dense part of the kelp forest, then following on the outside boundary of the floating kelp strands.

Visibility: 3-5m (at surface, estimated)

Surface Temp: 17° C (Nicole's Perdix)

Tide: incoming (low tide approx. 5.55pm, 0.7m, Linz)

Conditions: calm



Comparison of kelp beds in June 2016 (forest green, bottom layer, 1,439m²) and December 2016 (jade, top layer, 1,377m²); Google Earth view.





Comparison Kelp Bed June 2017 (lighter blue, 1,935m²) with Nov 2017 (darker blue, 2,043m², plus extension).

Note: Surface area measurement by GPS is an indication of kelp coverage, but it doesn't reflect the thickness of the kelp strands. We are now exploring arial monotoring (Drone images) in addition to GPS monitoring.

