

Table 4. Heart rate, respiration rate and cortisol levels for each dolphin.

	Puari (47813)	Timu Timu (47814)	Te Ruahine (47815)
Heart Rate (HR) (mean +/- SD)	145 +/- 19 bpm	123 +/- 30 bpm	117 +/- 20 bpm
HR range	28 to 240 bpm	15 to 240 bpm	38 to 230 bpm
Breath Interval (BI) (mean +/- SD)	3.9 +/- 3.1 sec.	8.8 +/- 7.8 sec.	5.8 +/- 3.5 sec.
BI range	1 to 35 sec.	1 to 36 sec.	1 to 24 sec.
Breaths/min.	15.4	6.8	10.3
Cortisol ($\mu\text{g}/\text{dl}$)	0.59	0.26	0.36

bpm = beats per minute

Satellite Tracking Data

Study dolphin 47813 (Puari) was tagged on 4 March 2004 and transmitted on schedule until 11 June 2004 providing a total of 21,760 total transmissions. Study dolphins 47814 (Timu Timu) and 47815 (Te Ruahine) were both tagged on 5 March 2004. The last transmission from study dolphin 47814 was received on 8 July 2004 (25,088 total transmissions) and the last transmission from study dolphin 47815 was received on 3 September 2004 (25,600 transmissions).

Accuracy of dolphin positions was of much concern in this analysis; therefore, only ARGOS position data with Location Class qualities 1, 2 and 3 were used in the analysis. Tables 5-7 list the number of positions in each category that were used in the distribution maps.

Table 5. Position data for dolphin Puari (47813) 4 March - 11 June 2004.

No. Positions	Percentage of Positions	ARGOS Position Accuracy
38	10	3
138	39	2
183	51	1

For Puari (47813):

- Furthest distance from the mean center was 32.750 km on 22 March 2004.
- Maximum distance between locations was 50.899 km on 22 March and 18 April 2004.
- Mean activity radius was 10.35 km (SE =0.443 km, n=359)
- Harmonic mean of the activity radius was 5.04 km.

Table 6. Position data for dolphin Timu Timu (47814) 5 March - 8 July 2004.

No. Positions	Percentage of Positions	ARGOS Position Accuracy
29	8	3
114	32	2
218	60	1

For Timu Timu (47814):

- Furthest distance from the mean center was 33.15 km on 11 March 2004.
- Maximum distance between locations was, straight line: 59.504 km (over land), and swimming close to shore, curvilinear: 66.4652 km on 11 March and 31 March 2004.
- Mean activity radius was 10.68 km (SE = 0.43 km, n=361)
- Harmonic mean of the activity radius was 5.342 km

Table 7. Position data for dolphin Te Ruahine (47815) 5 March – 3 September 2004.

No. Positions	Percentage of Positions	ARGOS Position Accuracy
35	8	3
155	36	2
239	56	1

For Te Ruahine (47815):

- Furthest distance from the mean center was 33.734 km on 19 March 2004.
- Maximum distance between locations was 60.6033 km on 19 April and 13 May 2004.
- Mean activity radius was 13.77 km (SE = 0.44 km, n= 429)
- Harmonic mean of the activity radius was 6.56 km

Table 8. Day and night mean centers.

Puari (47813)

Period	Count	%	Mean long.	SE (deg)	Mean lat.	SE (deg)
Day	163	45.40	173.068074	0.00796999	- 43.623822	0.00495698
Night	196	54.60	173.050847	0.00749899	- 43.605633	0.00399859

Timu Timu (47814)

Period	Count	%	Mean long.	SE (deg)	Mean lat.	SE (deg)
Day	147	40.72	173.087122	0.0086338	- 43.836415	0.00719543
Night	214	59.28	173.121229	0.00580412	- 43.833037	0.00577429

Te Ruahine (47815)

Period	Count	%	Mean long.	SE (deg)	Mean lat.	SE (deg)
Day	205	47.79	173.160982	0.0065379	- 43.835004	0.00663075
Night	224	52.21	173.160387	0.00687374	- 43.835156	0.00660294

Maps of Dolphin Movements

Figure 4. Data for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 4 March - 11 June 2004.

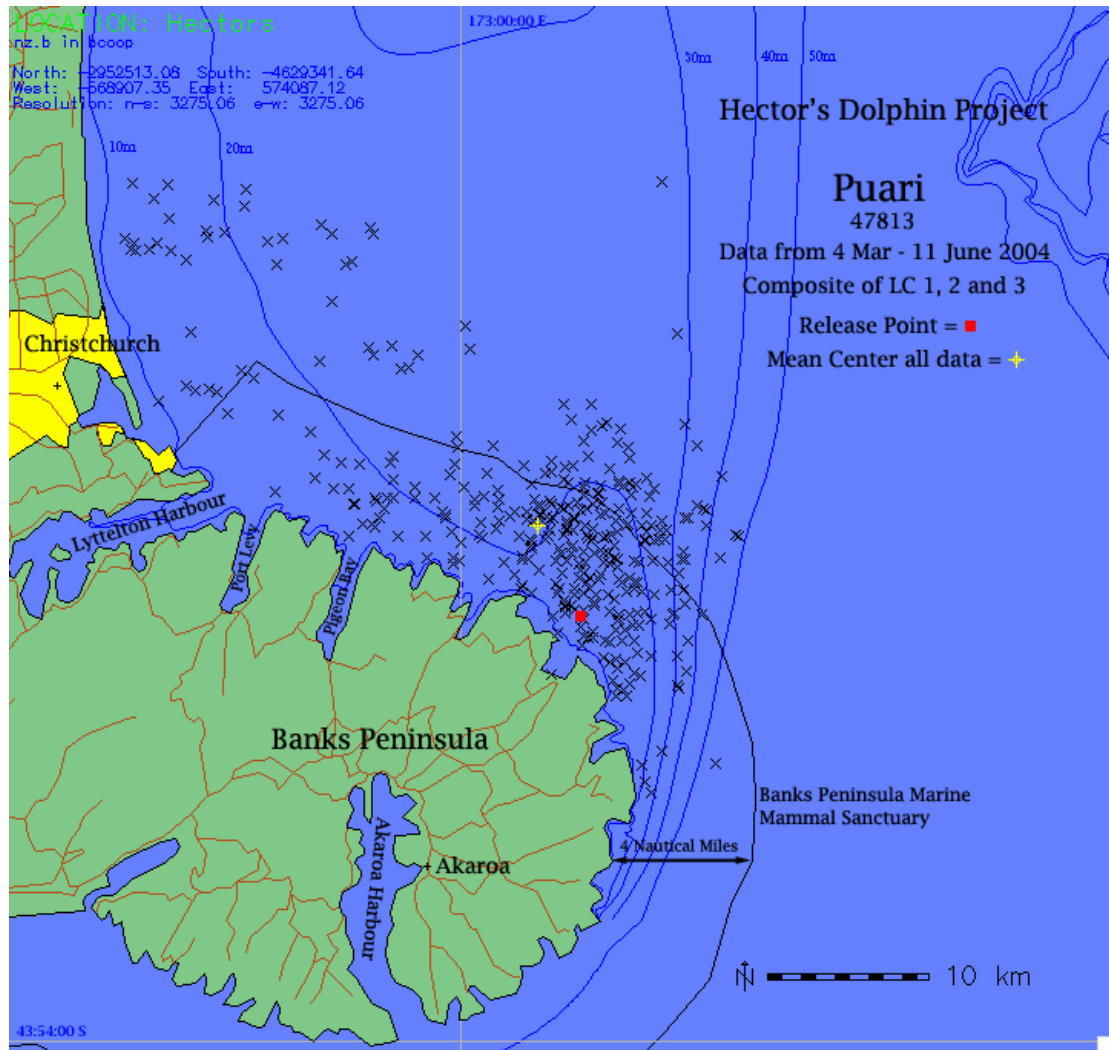


Figure 5. Monthly data for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 4-31 March 2004.

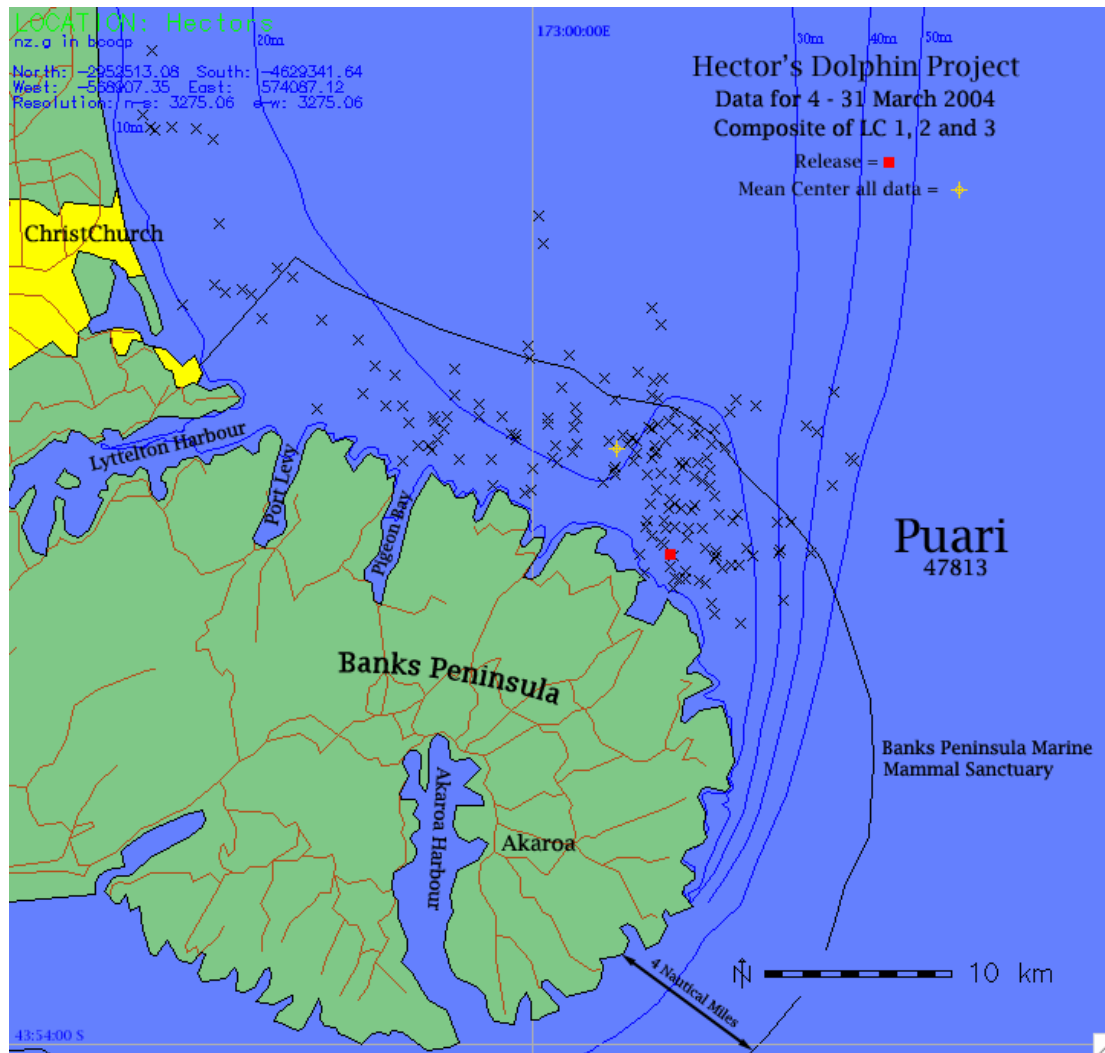


Figure 6. Monthly data for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 1-30 April 2004.

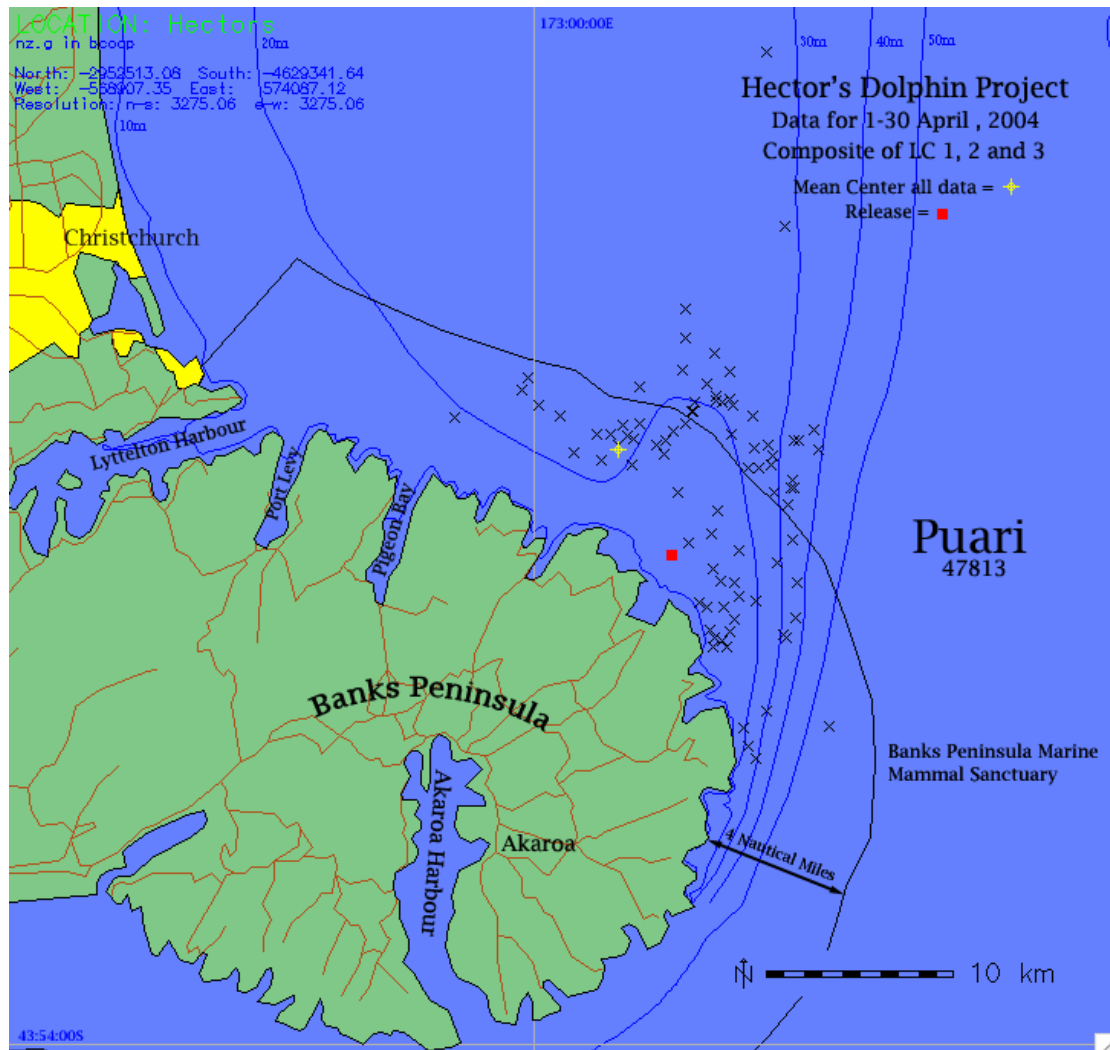


Figure 7. Monthly data for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 1-31 May 2004.

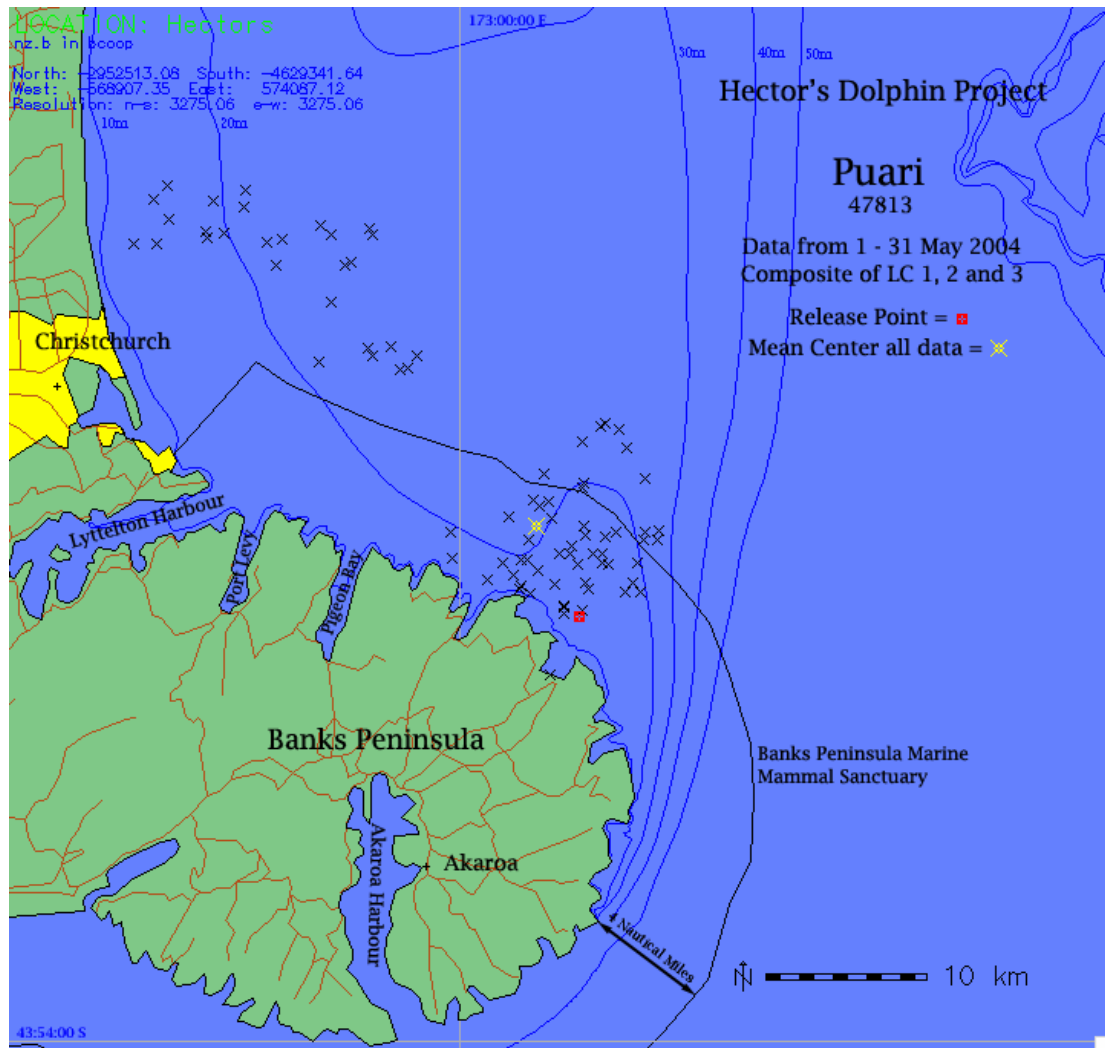


Figure 8. Monthly data for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 1-11 June 2004.

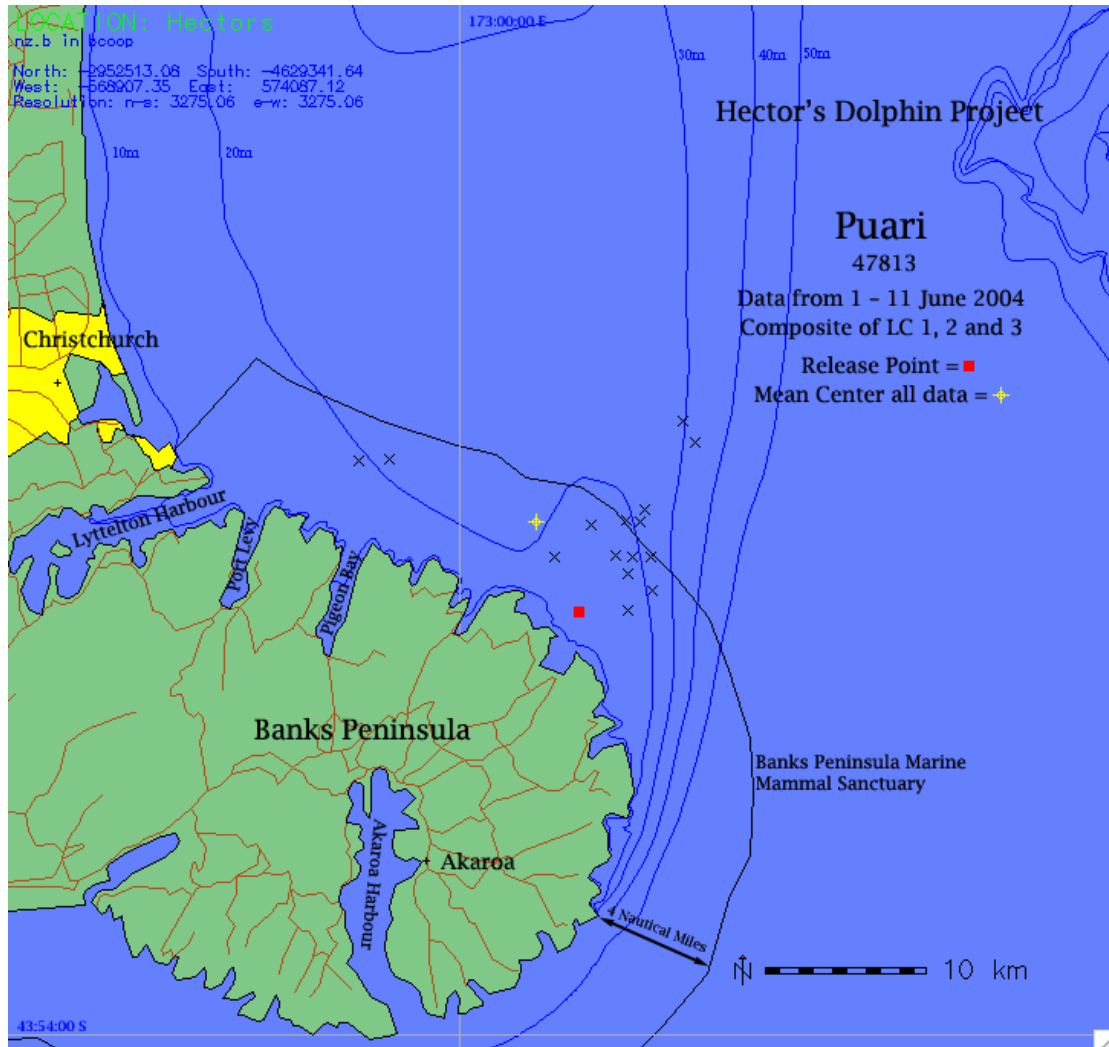


Figure 9. Mean activity radius for study dolphin 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 4 March - 11 June 2004.

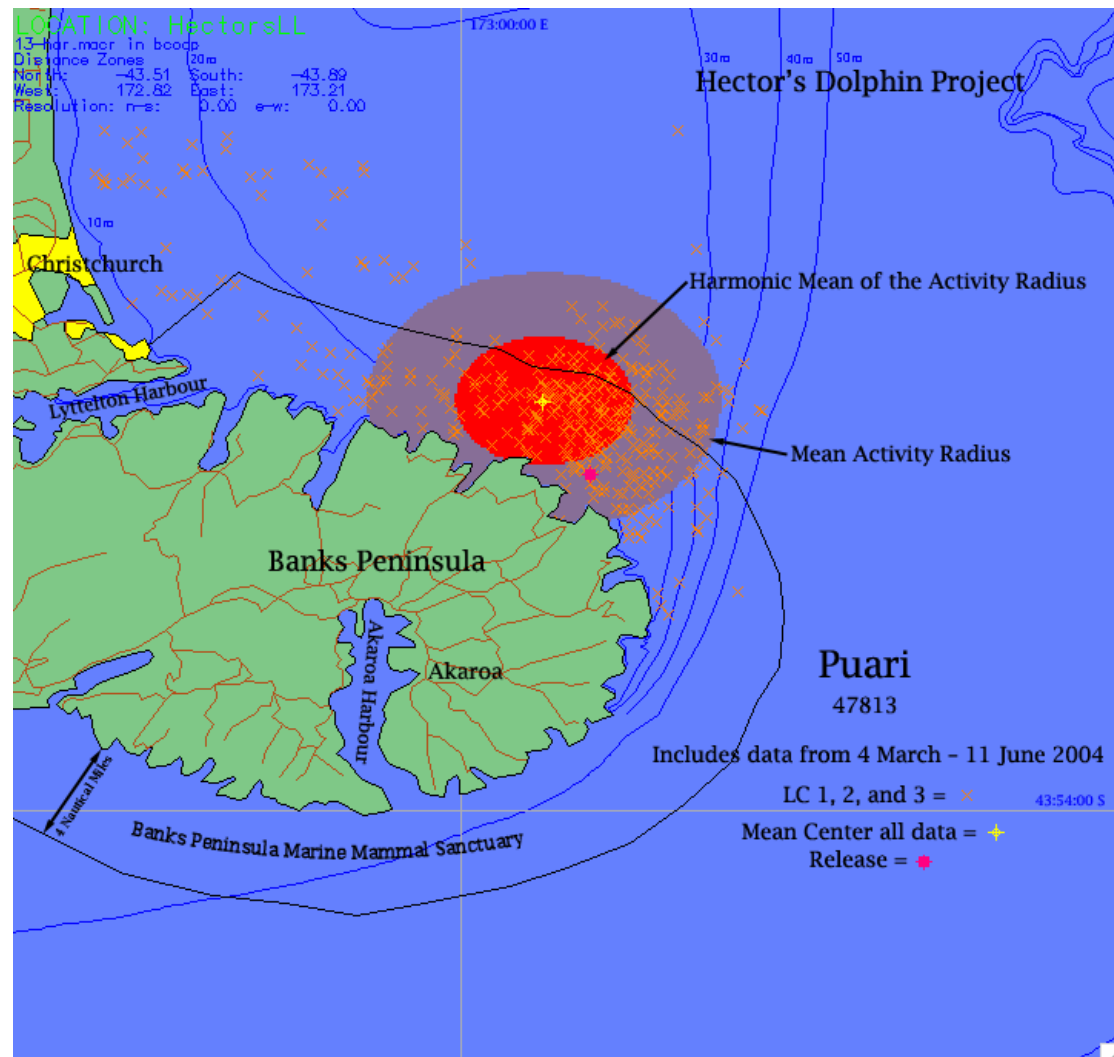


Figure 10. Minimum Convex Polygon for 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 4 March – 11 June 2004.

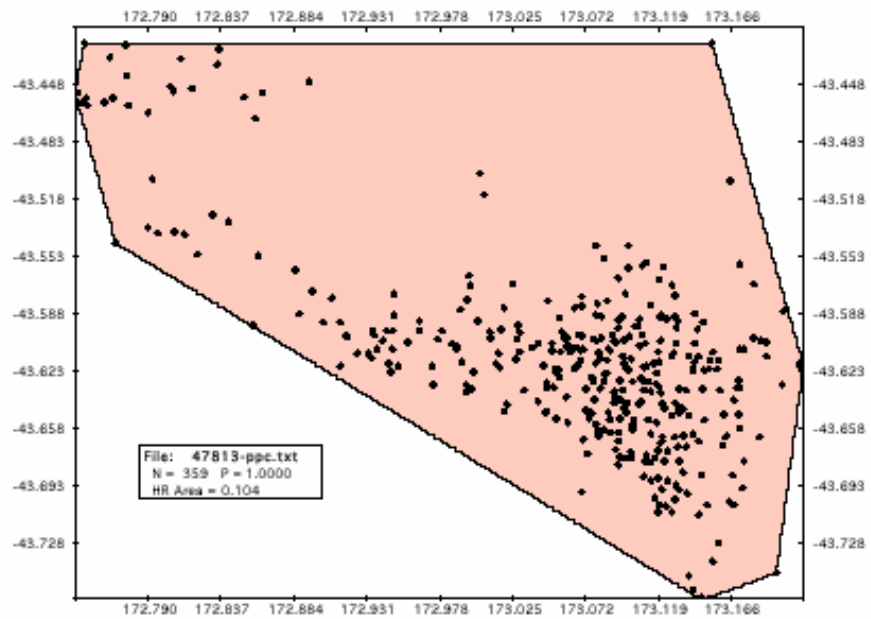


Figure 11. Anderson Fourier Home Range for 47813 (Puari), includes all mapped satellite data (LC 1, 2 and 3) from 4 March – 11 June 2004.

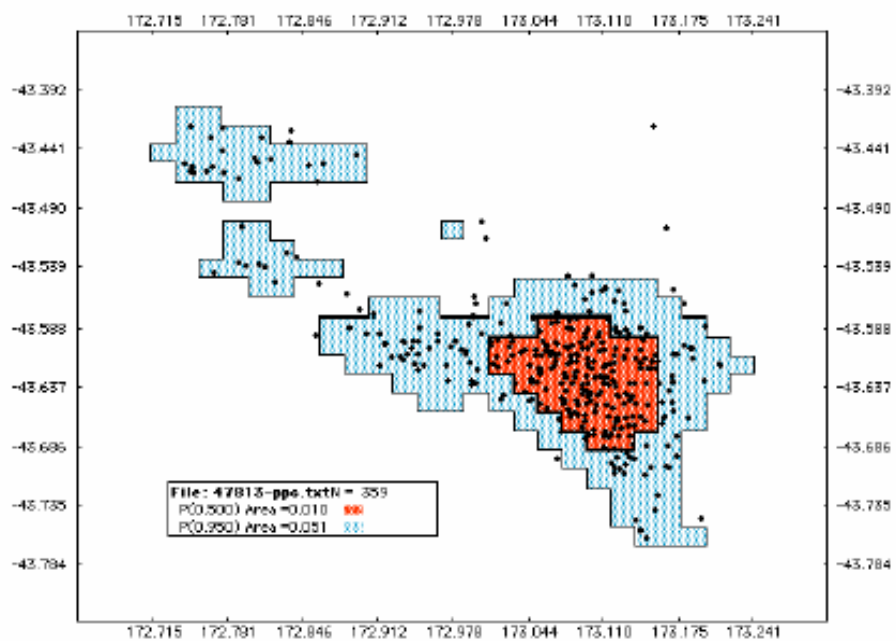


Figure 12. Maximum distance from mean center and maximum distance between positions for study dolphin 47813 (Puari) shown within minimum convex polygon.

