

Monitoring of Chinese White Dolphins in Southwest Lantau Waters

17th Monthly Progress Report (July 2016)

submitted to Environmental Project Office for the HZMB HKLR, HZMB HKBCF and TM-CLKL – Investigation

Submitted by

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1. Introduction

- 1.1. In March 2015, Hong Kong Cetacean Research Project (HKCRP) was appointed by the Environmental Project Office for the HZMB Hong Kong Projects to undertake a monitoring study of Chinese White Dolphins in Southwest Lantau (SWL) waters.
- 1.2. The objectives of the monitoring study are to quantify the abundance and density of Chinese White Dolphins in SWL waters, to identify individuals during the monitoring surveys, and to analyze their range use and movement patterns in Hong Kong and the wider Pearl River Estuary waters.
- 1.3. The monitoring study will supplement the on-going EM&A monitoring results of the HZMB Hong Kong Projects in North and West Lantau waters, and provide a more complete picture of dolphin usage and movements between different survey areas in western Hong Kong waters.
- 1.4. The present report is the 17th monthly progress report under this dolphin monitoring study submitted to the Environmental Project Office, summarizing the survey findings during the month of July 2016.

2. Monitoring Methodology

2.1. Vessel-based Line-transect Survey

- 2.1.1. According to the requirement of the technical proposal submitted to the Environmental

Project Office, dolphin monitoring programme should cover all transect lines in SWL survey area (see Figure 1) once per month upon instruction. The co-ordinates of all transect lines conducted during the dolphin monitoring survey are shown in Table 1.

Table 1. Co-ordinates of transect lines in SWL survey area (corresponding to transect line layout as shown in Figure 1)

Line #		Northing	Easting		Line #		Northing	Easting
SWL001	1	806180	802510		SWL007	13	807380	808520
	2	804250	802510			14	805600	808520
SWL002	3	806710	803480		15	804400	808520	
	4	803450	803480		16	803000	808520	
SWL003	5	807270	804500		17	802100	808520	
	6	802690	804500		18	800470	808520	
SWL004	7	807590	805450		SWL008	19	807380	809550
	8	802295	805450			20	805050	809550
SWL005	9	808490	806500			21	804400	809550
	10	801410	806500			22	800470	809550
SWL006	11	808500	807430		SWL009	23	807380	810550
	12	801250	807430			24	800470	810550
					SWL010	25	809410	811510
						26	801470	811510

2.1.2. The HKCRP survey team used standard line-transect methods (Buckland et al. 2001) to conduct the systematic vessel surveys, and followed the same technique of data collection that has been adopted over the last 18 years of marine mammal monitoring surveys in Hong Kong developed by HKCRP (see Hung 2014). For each monitoring vessel survey, a 15-m inboard vessel with an open upper deck (about 4.5 m above water surface) was used to make observations from the flying bridge area.

2.1.3. Two experienced observers from HKCRP (a data recorder and a primary observer) made up the on-effort survey team, and the survey vessel transited different transect lines at a

constant speed of 13-15 km per hour. The data recorder searched with unaided eyes and filled out the datasheets, while the primary observer searched for dolphins and porpoises continuously through 7 x 50 *Fujinon* marine binoculars. Both observers searched the sea ahead of the vessel, between 270° and 90° (in relation to the bow, which is defined as 0°). One to two additional experienced observer was available on the boat to work in shift (i.e. rotate every 30 minutes) in order to minimize fatigue of the survey team members. All observers were experienced in small cetacean survey techniques and identifying local cetacean species.

- 2.1.4. During on-effort survey periods, the survey team recorded effort data including time, position (latitude and longitude), weather conditions (Beaufort sea state and visibility), and distance traveled in each series (a continuous period of search effort) with the assistance of a handheld GPS (*Garmin eTrex Legend*).
- 2.1.5. Data including time, position and vessel speed were also automatically and continuously logged by handheld GPS throughout the entire survey for subsequent review.
- 2.1.6. When dolphins were sighted, the survey team would end the survey effort, and immediately record the initial sighting distance and angle of the dolphin group from the survey vessel, as well as the sighting time and position. Then the research vessel was diverted from its course to approach the animals for species identification, group size estimation, assessment of group composition, and behavioural observations. The perpendicular distance (PSD) of the dolphin group to the transect line was later calculated from the initial sighting distance and angle.
- 2.1.7. Survey effort being conducted along the parallel transect lines that were perpendicular to the coastlines (as indicated in Figure 1) was labeled as “primary” survey effort, while the survey effort conducted along the connecting lines between parallel lines as well as the section around the Soko Islands was labeled as “secondary” survey effort. Both primary and secondary survey effort were presented as on-effort survey effort in this report.
- 2.1.8. Encounter rates of Chinese White Dolphins (number of on-effort sightings per 100 km of survey effort and number of dolphins from all on-effort sightings per 100 km of survey effort) were calculated in SWL survey area in relation to the amount of survey effort conducted during each month of monitoring survey. Only data collected under Beaufort 3 or below condition would be used for encounter rate analysis. Dolphin encounter rates were calculated using the combined survey effort from both primary and secondary lines for comparison to the historical data collected by HKCRP in this survey area. For the historical data, the encounter rates were calculated by pooling all relevant survey effort

and dolphin sightings to calculate a single index.

2.2. Photo-identification Work

- 2.2.1. When a group of Chinese White Dolphins were sighted during the line-transect survey, the survey team would end effort and approach the group slowly from the side and behind to take photographs of them. Every attempt was made to photograph every dolphin in the group, and even photograph both sides of the dolphins, since the colouration and markings on both sides may not be symmetrical.
- 2.2.2. A professional digital camera (*Canon EOS 7D* model), equipped with long telephoto lenses (100-400 mm zoom), were available on board for researchers to take sharp, close-up photographs of dolphins as they surfaced. The images were shot at the highest available resolution and stored on Compact Flash memory cards for downloading onto a computer.
- 2.2.3. All digital images taken in the field were first examined, and those containing potentially identifiable individuals were sorted out. These photographs would then be examined in greater detail, and were carefully compared to the existing Chinese White Dolphin photo-identification catalogue maintained by HKCRP since 1995. For individual dolphins that are not readily identifiable from the catalogue but have distinct features on their bodies, they will be placed in a pool of “potential new individuals”, with decision being made at the end of each year on whether any of them should be incorporated into the photo-ID catalogue.
- 2.2.4. Chinese White Dolphins can be identified by their natural markings, such as nicks, cuts, scars and deformities on their dorsal fin and body, and their unique spotting patterns were also used as secondary identifying features (Jefferson 2000).
- 2.2.5. All photographs of each individual were then compiled and arranged in chronological order, with data including the date and location first identified (initial sighting), re-sightings, associated dolphins, distinctive features, and age classes entered into a computer database.

3. Monitoring Results

3.1. Vessel-based Line-transect Survey

- 3.1.1. One set of systematic line-transect vessel survey was conducted under the present

monitoring study on July 8th to cover all transect lines in SWL survey area once. The route and track log of this survey are presented in Figure 2 and Appendix I respectively.

- 3.1.2. In addition, three line-transect surveys were also conducted under the AFCD long-term marine mammal monitoring programme in SWL survey area on July 6th (with lines no. SWL001 and SWL003), July 13th (with lines no. SWL002, SWL004, SWL006 and SWL008 covered) and July 19th (with lines no. SWL005, SWL007 and SWL009 covered). Such monitoring data were also incorporated into the present study for various analyses.
- 3.1.3. For the present study alone, a total of 71.47 km of survey effort was collected from 10:59 to 17:02 (i.e. 6 hours and 3 minutes of survey time) on July 8th, with 100% of the total survey effort being conducted under favourable weather conditions (i.e. Beaufort Sea State 3 or below with good visibility) (Appendix II). The total survey effort conducted on primary and secondary lines were 56.57 km and 14.90 km respectively.
- 3.1.4. For the combined monitoring dataset from both the present study and AFCD monitoring study, a total of 138.87 km of survey effort was collected in SWL waters in July 2016.
- 3.1.5. During this monitoring month, 17 groups of 42 Chinese White Dolphins were sighted from the present study's survey and the other three AFCD monitoring surveys (Appendix III). Ten of the 17 dolphin groups were sighted during on-effort search, and none of them was associated with any operating fishing vessel.
- 3.1.6. Notably, no finless porpoise was sighted at all in SWL survey area during this monitoring month.
- 3.1.7. Distribution of the 17 dolphin sightings made in July 2016 is shown in Figure 3. The dolphin groups were mostly located along the coastline from Fan Lau to Kau Ling Chau as well as near Shui Hau Peninsula (Figure 3). Some smaller dolphin groups were also sighted around the Soko Islands (Figure 3).
- 3.1.8. Encounter rates of Chinese White Dolphins deduced from the survey effort and on-effort sighting data made under favourable conditions (Beaufort 3 or below) in July 2016 are shown in Table 2. Comparison of encounter rates was also made to the one deduced in summer months (June-August) in the past decade (2005-14), as well as in July 2015 under the present study (Table 2).

Table 2. Overall dolphin encounter rates (sightings per 100 km of survey effort) from the present monitoring survey and combined database with AFCD monitoring survey conducted in July 2016 (primary lines only, as well as both primary lines and secondary lines were used) in SWL survey area in comparison to the ones deduced during summer months (June-August 2005-14) in the past decade

	Encounter rate (STG) (no. of on-effort dolphin sightings per 100 km of survey effort)		Encounter rate (ANI) (no. of dolphins from all on-effort sightings per 100 km of survey effort)	
	Primary Lines Only	Both Primary and Secondary Lines	Primary Lines Only	Both Primary and Secondary Lines
HYD-HZMB data (July 2016)	8.84	11.19	22.98	30.78
Combined data (July 2016)	4.98	7.26	12.95	20.32
Combined data (July 2015)	7.62	9.89	26.12	35.77
Historical Data (Summer 2005-14)		4.02		11.78

3.1.9. From the combined data of HYD-HZMB and AFCD monitoring surveys, the overall encounter rates based on the number of dolphin sightings (ER(STG)) and the total number of dolphins (ER(ANI)) deduced in July 2016 in SWL waters were much higher than the ones deduced from the historical data during the summer months of 2005-14, but were lower than the ones in July 2015 (Table 2).

3.1.10. The average group size of Chinese White Dolphin sighted during SWL monitoring surveys in July 2016 was 2.5 animals per group, which was lower than the average group size in summer months of 2005-14 (2.9). Fourteen of the 17 dolphin groups were composed of only 1-3 animals, while three other groups were medium in size with 5-7 animals per group (Appendix III).

3.2. Photo-identification Work

3.2.1. Attempts were made to photograph the dolphins sighted during all SWL surveys conducted in July 2016.

3.2.2. Among the 42 dolphins sighted during this month's surveys, 21 individual dolphins were identified and re-sighted 32 times in total (Appendices IV and V). Only one individual (WL238) was accompanied by an older calf.

3.2.3. The locations where all individuals were re-sighted were well within their past home ranges in Southwest and West Lantau waters, and all of them have been sighted in

Southwest Lantau waters in the past.

4. References

Buckland, S. T., Anderson, D. R., Burnham, K. P., Laake, J. L., Borchers, D. L., and Thomas, L. 2001. Introduction to distance sampling: estimating abundance of biological populations. Oxford University Press, London.

Hung, S. K. 2014. Monitoring of Marine Mammals in Hong Kong waters: final report (2013-14). An unpublished report submitted to the Agriculture, Fisheries and Conservation Department, 231 pp.

Jefferson, T. A. 2000. Population biology of the Indo-Pacific hump-backed dolphin in Hong Kong waters. Wildlife Monographs 144:1-65.

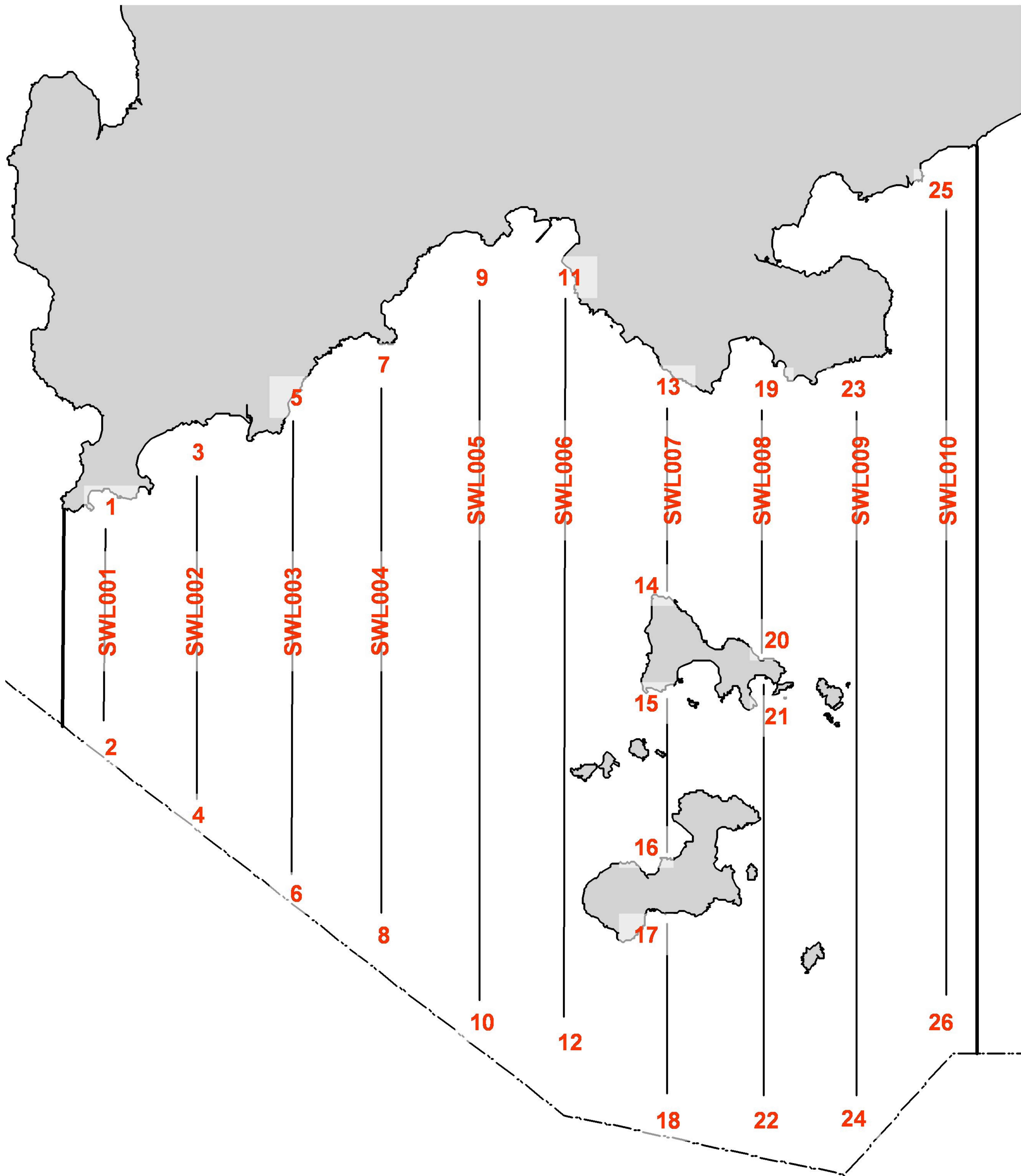


Figure 1. Survey Lines and associated coordinates in Southwest Lantau survey area

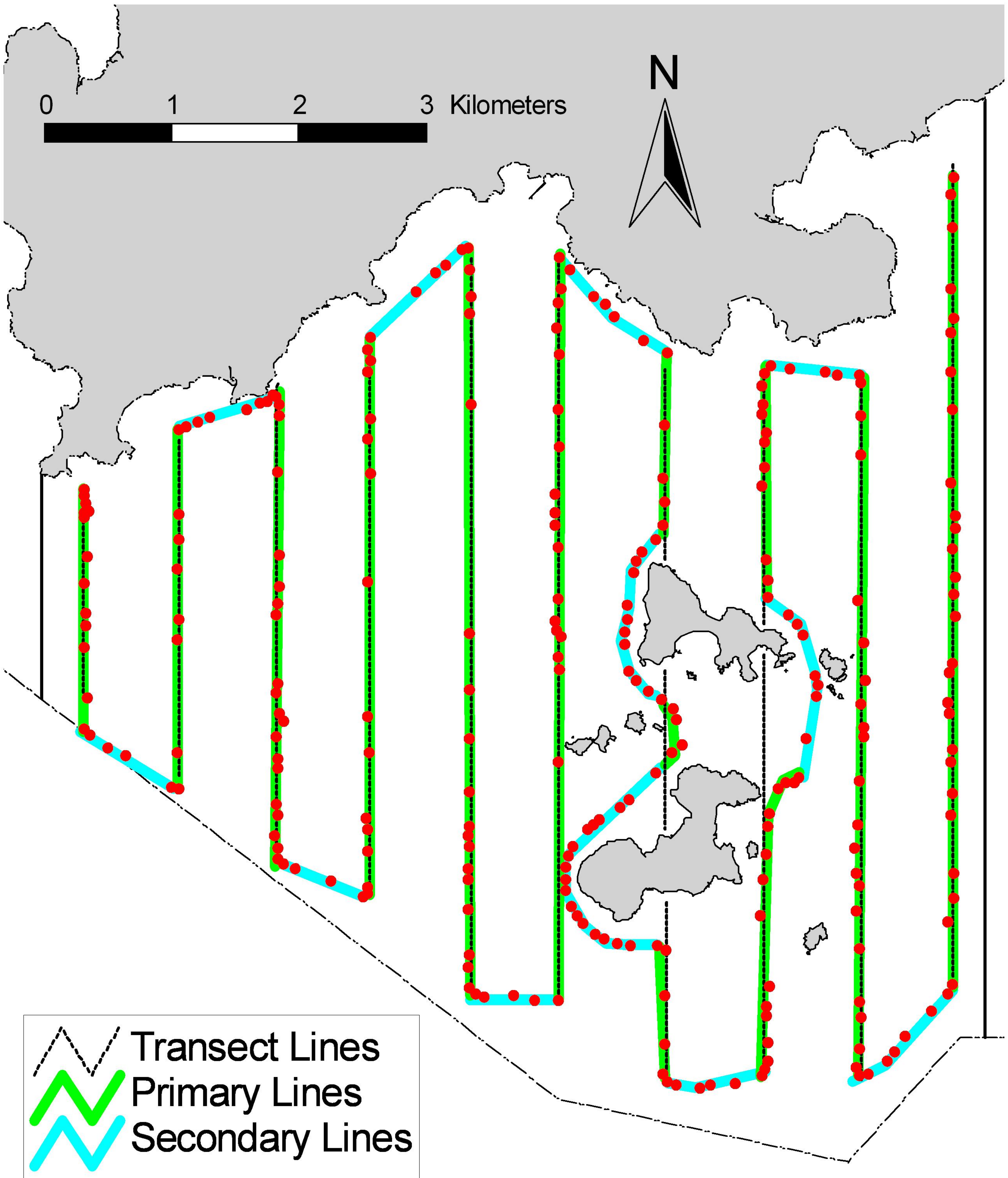


Figure 2. Survey Route on July 8th, 2016 (note: red dots represent the tracked positions of survey boat logged continuously by GPS throughout the course of the survey)

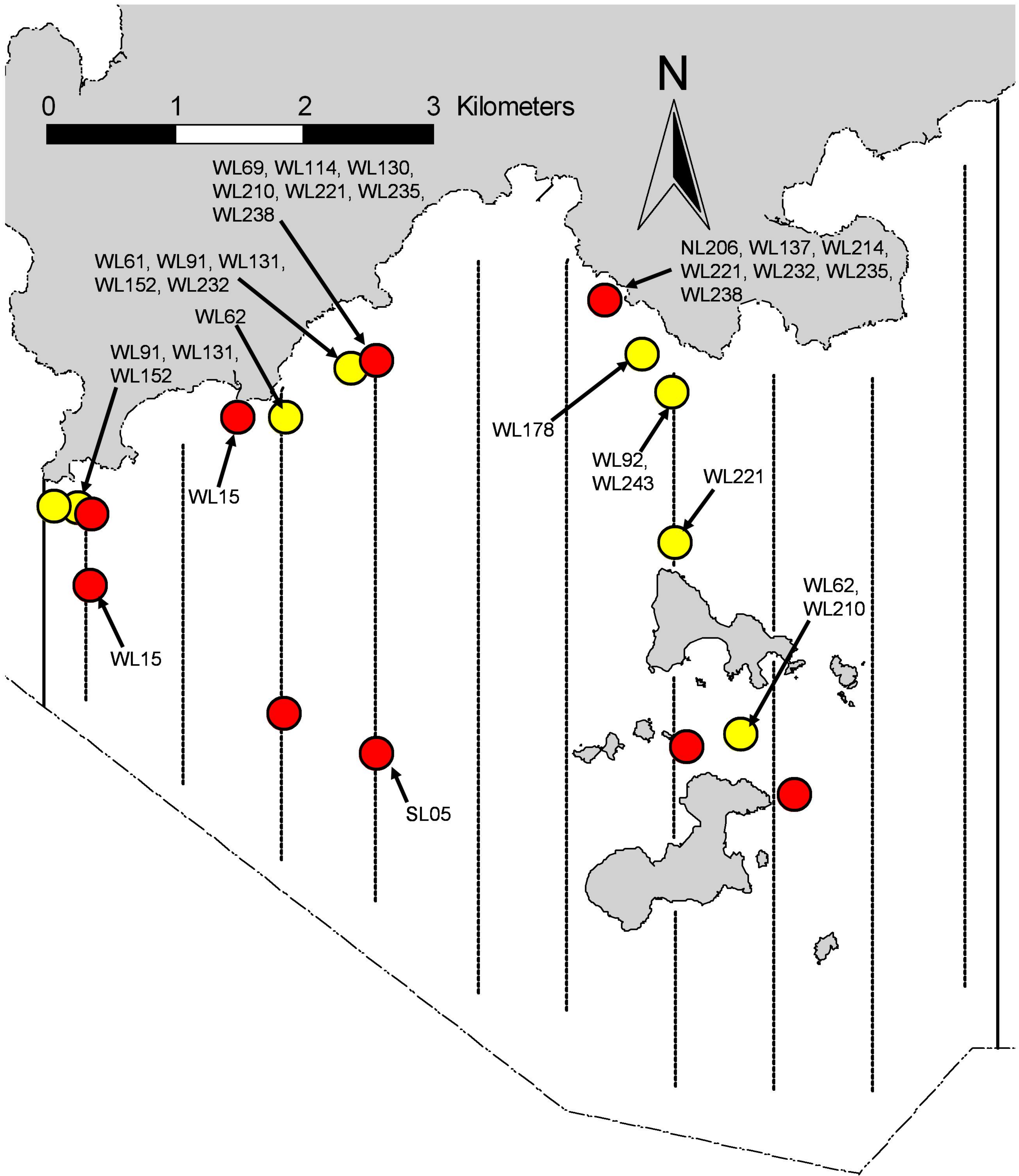


Figure 3. Distribution of Chinese White Dolphin sightings during July 2016 monitoring surveys in Southwest Lantau survey area, with identified individuals indicated for their corresponding sightings (red dot: HYD-HZMB sighting; yellow dot: AFCD sighting)

Appendix I. Track Log of Southwest Lantau Survey on July 8th, 2016

<u>Date & Time</u>	<u>EFFORT</u>	<u>Position</u>	<u>Leg Length</u>	<u>Leg Time</u>	<u>Leg Speed</u>
8/7/2016 10:59	ON	N22.19432 E113.84942			
8/7/2016 11:00	ON	N22.19366 E113.84942	73 m	0:00:23	11 kph
8/7/2016 11:00	ON	N22.19300 E113.84962	76 m	0:00:25	11 kph
8/7/2016 11:00	OFF	N22.19268 E113.84976	38 m	0:00:24	6 kph
8/7/2016 11:01	OFF	N22.19253 E113.84982	19 m	0:00:21	3 kph
8/7/2016 11:01	OFF	N22.19241 E113.84987	14 m	0:00:23	2 kph
8/7/2016 11:02	OFF	N22.19235 E113.84988	6 m	0:00:22	1.0 kph
8/7/2016 11:02	OFF	N22.19230 E113.84987	6 m	0:00:09	2 kph
8/7/2016 11:02	ON	N22.19219 E113.84954	36 m	0:00:19	7 kph
8/7/2016 11:02	ON	N22.19178 E113.84945	47 m	0:00:19	9 kph
8/7/2016 11:03	ON	N22.19095 E113.84952	92 m	0:00:26	13 kph
8/7/2016 11:03	ON	N22.19009 E113.84948	97 m	0:00:27	13 kph
8/7/2016 11:04	ON	N22.18934 E113.84951	83 m	0:00:23	13 kph
8/7/2016 11:04	ON	N22.18828 E113.84965	119 m	0:00:31	14 kph
8/7/2016 11:05	ON	N22.18724 E113.84951	117 m	0:00:30	14 kph
8/7/2016 11:05	ON	N22.18692 E113.84952	36 m	0:00:09	14 kph
8/7/2016 11:05	OFF	N22.18649 E113.84955	48 m	0:00:16	11 kph
8/7/2016 11:05	OFF	N22.18608 E113.84959	47 m	0:00:26	6 kph
8/7/2016 11:06	OFF	N22.18571 E113.84943	45 m	0:00:19	8 kph
8/7/2016 11:06	OFF	N22.18540 E113.84921	40 m	0:00:15	10 kph
8/7/2016 11:06	OFF	N22.18506 E113.84896	46 m	0:00:16	10 kph
8/7/2016 11:07	OFF	N22.18458 E113.84871	59 m	0:00:24	9 kph
8/7/2016 11:07	OFF	N22.18439 E113.84883	25 m	0:00:22	4 kph
8/7/2016 11:07	OFF	N22.18432 E113.84898	17 m	0:00:23	3 kph
8/7/2016 11:08	OFF	N22.18432 E113.84913	15 m	0:00:28	2 kph
8/7/2016 11:08	OFF	N22.18435 E113.84923	12 m	0:00:24	2 kph
8/7/2016 11:09	OFF	N22.18437 E113.84929	6 m	0:00:16	1.4 kph
8/7/2016 11:09	OFF	N22.18441 E113.84934	7 m	0:00:05	5 kph
8/7/2016 11:09	OFF	N22.18451 E113.84942	14 m	0:00:06	8 kph
8/7/2016 11:09	OFF	N22.18523 E113.84939	81 m	0:00:24	12 kph
8/7/2016 11:10	OFF	N22.18612 E113.84902	106 m	0:00:28	14 kph
8/7/2016 11:10	ON	N22.18681 E113.84887	78 m	0:00:25	11 kph
8/7/2016 11:10	ON	N22.18668 E113.84916	34 m	0:00:15	8 kph
8/7/2016 11:11	ON	N22.18597 E113.84940	82 m	0:00:23	13 kph
8/7/2016 11:11	ON	N22.18531 E113.84950	74 m	0:00:20	13 kph
8/7/2016 11:11	ON	N22.18438 E113.84957	104 m	0:00:27	14 kph
8/7/2016 11:12	ON	N22.18343 E113.84963	105 m	0:00:27	14 kph
8/7/2016 11:12	ON	N22.18228 E113.84957	129 m	0:00:33	14 kph
8/7/2016 11:13	ON	N22.18141 E113.84959	96 m	0:00:25	14 kph
8/7/2016 11:13	ON	N22.18034 E113.84950	119 m	0:00:30	14 kph
8/7/2016 11:14	ON	N22.17922 E113.84958	125 m	0:00:31	15 kph
8/7/2016 11:14	ON	N22.17794 E113.84962	143 m	0:00:36	14 kph
8/7/2016 11:15	ON	N22.17692 E113.84957	114 m	0:00:29	14 kph
8/7/2016 11:15	ON	N22.17587 E113.84965	117 m	0:00:30	14 kph
8/7/2016 11:16	ON	N22.17478 E113.84963	121 m	0:00:31	14 kph
8/7/2016 11:16	ON	N22.17391 E113.84955	97 m	0:00:25	14 kph
8/7/2016 11:17	ON	N22.17313 E113.84950	88 m	0:00:23	14 kph
8/7/2016 11:17	ON	N22.17258 E113.85010	86 m	0:00:23	14 kph
8/7/2016 11:18	ON	N22.17206 E113.85096	106 m	0:00:26	15 kph
8/7/2016 11:18	ON	N22.17153 E113.85190	114 m	0:00:28	15 kph
8/7/2016 11:18	ON	N22.17108 E113.85281	106 m	0:00:26	15 kph
8/7/2016 11:19	ON	N22.17067 E113.85366	98 m	0:00:24	15 kph
8/7/2016 11:19	ON	N22.17000 E113.85482	142 m	0:00:34	15 kph
8/7/2016 11:20	ON	N22.16941 E113.85581	120 m	0:00:29	15 kph
8/7/2016 11:20	ON	N22.16887 E113.85677	117 m	0:00:28	15 kph
8/7/2016 11:21	ON	N22.16843 E113.85756	95 m	0:00:23	15 kph
8/7/2016 11:21	ON	N22.16801 E113.85830	89 m	0:00:22	15 kph
8/7/2016 11:21	ON	N22.16789 E113.85896	69 m	0:00:21	12 kph
8/7/2016 11:22	ON	N22.16843 E113.85900	60 m	0:00:19	11 kph
8/7/2016 11:22	ON	N22.16931 E113.85888	99 m	0:00:26	14 kph
8/7/2016 11:23	ON	N22.17016 E113.85886	95 m	0:00:25	14 kph
8/7/2016 11:23	ON	N22.17099 E113.85888	93 m	0:00:24	14 kph
8/7/2016 11:23	ON	N22.17177 E113.85889	87 m	0:00:23	14 kph
8/7/2016 11:24	ON	N22.17259 E113.85890	91 m	0:00:24	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 11:24	ON	N22.17344 E113.85892	94 m	0:00:25	14 kph
8/7/2016 11:25	ON	N22.17447 E113.85884	116 m	0:00:30	14 kph
8/7/2016 11:25	ON	N22.17553 E113.85883	118 m	0:00:30	14 kph
8/7/2016 11:26	ON	N22.17638 E113.85889	95 m	0:00:24	14 kph
8/7/2016 11:26	ON	N22.17724 E113.85884	96 m	0:00:25	14 kph
8/7/2016 11:27	ON	N22.17816 E113.85884	103 m	0:00:26	14 kph
8/7/2016 11:27	ON	N22.17887 E113.85885	79 m	0:00:20	14 kph
8/7/2016 11:27	ON	N22.17951 E113.85885	71 m	0:00:18	14 kph
8/7/2016 11:27	ON	N22.18021 E113.85884	78 m	0:00:20	14 kph
8/7/2016 11:28	ON	N22.18102 E113.85878	90 m	0:00:23	14 kph
8/7/2016 11:28	ON	N22.18188 E113.85882	97 m	0:00:25	14 kph
8/7/2016 11:29	ON	N22.18280 E113.85889	103 m	0:00:27	14 kph
8/7/2016 11:29	ON	N22.18362 E113.85887	91 m	0:00:24	14 kph
8/7/2016 11:30	ON	N22.18487 E113.85890	139 m	0:00:36	14 kph
8/7/2016 11:30	ON	N22.18610 E113.85890	137 m	0:00:35	14 kph
8/7/2016 11:31	ON	N22.18732 E113.85883	135 m	0:00:34	14 kph
8/7/2016 11:32	ON	N22.18872 E113.85892	157 m	0:00:38	15 kph
8/7/2016 11:32	ON	N22.18987 E113.85900	128 m	0:00:31	15 kph
8/7/2016 11:32	ON	N22.19088 E113.85893	113 m	0:00:28	15 kph
8/7/2016 11:33	ON	N22.19207 E113.85889	133 m	0:00:32	15 kph
8/7/2016 11:34	ON	N22.19334 E113.85886	141 m	0:00:34	15 kph
8/7/2016 11:34	ON	N22.19458 E113.85887	138 m	0:00:33	15 kph
8/7/2016 11:35	ON	N22.19585 E113.85891	141 m	0:00:34	15 kph
8/7/2016 11:35	ON	N22.19697 E113.85885	125 m	0:00:30	15 kph
8/7/2016 11:36	ON	N22.19837 E113.85887	156 m	0:00:36	16 kph
8/7/2016 11:36	ON	N22.19952 E113.85890	128 m	0:00:30	15 kph
8/7/2016 11:37	ON	N22.19994 E113.85966	91 m	0:00:22	15 kph
8/7/2016 11:37	ON	N22.20024 E113.86082	125 m	0:00:28	16 kph
8/7/2016 11:38	ON	N22.20069 E113.86212	143 m	0:00:32	16 kph
8/7/2016 11:38	ON	N22.20100 E113.86342	138 m	0:00:32	16 kph
8/7/2016 11:39	ON	N22.20112 E113.86421	83 m	0:00:25	12 kph
8/7/2016 11:39	OFF	N22.20117 E113.86475	56 m	0:00:29	7 kph
8/7/2016 11:40	OFF	N22.20123 E113.86510	37 m	0:00:28	5 kph
8/7/2016 11:40	OFF	N22.20126 E113.86531	22 m	0:00:21	4 kph
8/7/2016 11:40	OFF	N22.20130 E113.86552	22 m	0:00:21	4 kph
8/7/2016 11:41	OFF	N22.20136 E113.86575	26 m	0:00:25	4 kph
8/7/2016 11:41	OFF	N22.20147 E113.86591	20 m	0:00:26	3 kph
8/7/2016 11:41	ON	N22.20168 E113.86636	52 m	0:00:22	9 kph
8/7/2016 11:42	ON	N22.20187 E113.86709	77 m	0:00:20	14 kph
8/7/2016 11:42	ON	N22.20211 E113.86777	76 m	0:00:19	14 kph
8/7/2016 11:43	ON	N22.20257 E113.86854	94 m	0:00:23	15 kph
8/7/2016 11:43	ON	N22.20253 E113.86884	31 m	0:00:13	9 kph
8/7/2016 11:43	ON	N22.20240 E113.86894	18 m	0:00:18	4 kph
8/7/2016 11:43	ON	N22.20231 E113.86895	10 m	0:00:07	5 kph
8/7/2016 11:43	ON	N22.20180 E113.86899	57 m	0:00:19	11 kph
8/7/2016 11:44	ON	N22.20093 E113.86896	96 m	0:00:26	13 kph
8/7/2016 11:44	ON	N22.20009 E113.86892	94 m	0:00:24	14 kph
8/7/2016 11:45	ON	N22.19926 E113.86889	93 m	0:00:24	14 kph
8/7/2016 11:45	ON	N22.19847 E113.86885	87 m	0:00:22	14 kph
8/7/2016 11:45	ON	N22.19772 E113.86889	84 m	0:00:21	14 kph
8/7/2016 11:46	ON	N22.19680 E113.86887	103 m	0:00:26	14 kph
8/7/2016 11:46	ON	N22.19575 E113.86888	116 m	0:00:29	14 kph
8/7/2016 11:47	ON	N22.19481 E113.86892	106 m	0:00:27	14 kph
8/7/2016 11:47	ON	N22.19376 E113.86894	117 m	0:00:30	14 kph
8/7/2016 11:48	ON	N22.19281 E113.86892	106 m	0:00:27	14 kph
8/7/2016 11:48	ON	N22.19185 E113.86897	107 m	0:00:27	14 kph
8/7/2016 11:49	ON	N22.19079 E113.86900	118 m	0:00:30	14 kph
8/7/2016 11:49	ON	N22.19001 E113.86896	87 m	0:00:22	14 kph
8/7/2016 11:49	ON	N22.18936 E113.86904	73 m	0:00:19	14 kph
8/7/2016 11:50	ON	N22.18852 E113.86907	94 m	0:00:25	13 kph
8/7/2016 11:50	ON	N22.18757 E113.86907	105 m	0:00:28	14 kph
8/7/2016 11:51	ON	N22.18670 E113.86899	98 m	0:00:26	14 kph
8/7/2016 11:51	ON	N22.18577 E113.86904	104 m	0:00:27	14 kph
8/7/2016 11:51	ON	N22.18508 E113.86893	77 m	0:00:21	13 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 11:52	ON	N22.18421 E113.86886	98 m	0:00:26	14 kph
8/7/2016 11:52	ON	N22.18332 E113.86879	99 m	0:00:26	14 kph
8/7/2016 11:53	ON	N22.18250 E113.86882	92 m	0:00:24	14 kph
8/7/2016 11:53	ON	N22.18159 E113.86886	101 m	0:00:26	14 kph
8/7/2016 11:54	ON	N22.18079 E113.86892	90 m	0:00:23	14 kph
8/7/2016 11:54	ON	N22.17982 E113.86885	108 m	0:00:28	14 kph
8/7/2016 11:54	ON	N22.17893 E113.86888	99 m	0:00:25	14 kph
8/7/2016 11:55	ON	N22.17806 E113.86888	97 m	0:00:25	14 kph
8/7/2016 11:55	ON	N22.17708 E113.86895	109 m	0:00:28	14 kph
8/7/2016 11:56	ON	N22.17630 E113.86882	88 m	0:00:23	14 kph
8/7/2016 11:56	OFF	N22.17545 E113.86889	94 m	0:00:24	14 kph
8/7/2016 11:57	OFF	N22.17488 E113.86900	65 m	0:00:24	10 kph
8/7/2016 11:57	OFF	N22.17449 E113.86913	45 m	0:00:32	5 kph
8/7/2016 11:58	OFF	N22.17429 E113.86925	26 m	0:00:28	3 kph
8/7/2016 11:58	OFF	N22.17417 E113.86934	16 m	0:00:21	3 kph
8/7/2016 11:58	OFF	N22.17407 E113.86944	15 m	0:00:23	2 kph
8/7/2016 11:58	OFF	N22.17403 E113.86949	8 m	0:00:13	2 kph
8/7/2016 11:59	OFF	N22.17394 E113.86949	10 m	0:00:06	6 kph
8/7/2016 11:59	ON	N22.17330 E113.86913	80 m	0:00:25	11 kph
8/7/2016 11:59	ON	N22.17243 E113.86881	103 m	0:00:28	13 kph
8/7/2016 12:00	ON	N22.17144 E113.86894	110 m	0:00:28	14 kph
8/7/2016 12:00	ON	N22.17051 E113.86898	104 m	0:00:26	14 kph
8/7/2016 12:01	ON	N22.16965 E113.86889	96 m	0:00:24	14 kph
8/7/2016 12:01	ON	N22.16874 E113.86889	101 m	0:00:25	15 kph
8/7/2016 12:02	ON	N22.16762 E113.86885	125 m	0:00:31	14 kph
8/7/2016 12:02	ON	N22.16646 E113.86880	129 m	0:00:32	14 kph
8/7/2016 12:03	ON	N22.16558 E113.86893	99 m	0:00:24	15 kph
8/7/2016 12:03	ON	N22.16475 E113.86889	93 m	0:00:23	15 kph
8/7/2016 12:03	ON	N22.16371 E113.86874	116 m	0:00:29	14 kph
8/7/2016 12:04	ON	N22.16261 E113.86888	124 m	0:00:30	15 kph
8/7/2016 12:04	ON	N22.16170 E113.86893	101 m	0:00:25	15 kph
8/7/2016 12:05	ON	N22.16127 E113.86950	75 m	0:00:20	14 kph
8/7/2016 12:05	ON	N22.16091 E113.87069	130 m	0:00:30	16 kph
8/7/2016 12:06	ON	N22.16044 E113.87200	144 m	0:00:33	16 kph
8/7/2016 12:06	ON	N22.16001 E113.87324	136 m	0:00:31	16 kph
8/7/2016 12:07	ON	N22.15968 E113.87428	114 m	0:00:26	16 kph
8/7/2016 12:07	ON	N22.15920 E113.87543	130 m	0:00:30	16 kph
8/7/2016 12:08	ON	N22.15875 E113.87654	125 m	0:00:29	16 kph
8/7/2016 12:08	ON	N22.15840 E113.87755	111 m	0:00:26	15 kph
8/7/2016 12:08	ON	N22.15858 E113.87802	52 m	0:00:18	10 kph
8/7/2016 12:09	ON	N22.15917 E113.87806	65 m	0:00:19	12 kph
8/7/2016 12:09	ON	N22.16005 E113.87796	99 m	0:00:26	14 kph
8/7/2016 12:10	ON	N22.16075 E113.87800	78 m	0:00:20	14 kph
8/7/2016 12:10	ON	N22.16161 E113.87795	96 m	0:00:25	14 kph
8/7/2016 12:10	ON	N22.16243 E113.87795	91 m	0:00:24	14 kph
8/7/2016 12:11	ON	N22.16333 E113.87810	102 m	0:00:26	14 kph
8/7/2016 12:11	ON	N22.16425 E113.87808	103 m	0:00:27	14 kph
8/7/2016 12:12	ON	N22.16530 E113.87792	117 m	0:00:31	14 kph
8/7/2016 12:12	ON	N22.16622 E113.87794	103 m	0:00:27	14 kph
8/7/2016 12:13	ON	N22.16708 E113.87801	96 m	0:00:25	14 kph
8/7/2016 12:13	ON	N22.16804 E113.87803	107 m	0:00:28	14 kph
8/7/2016 12:14	ON	N22.16914 E113.87805	122 m	0:00:32	14 kph
8/7/2016 12:14	ON	N22.17013 E113.87805	111 m	0:00:29	14 kph
8/7/2016 12:15	ON	N22.17110 E113.87808	108 m	0:00:28	14 kph
8/7/2016 12:15	OFF	N22.17176 E113.87815	73 m	0:00:26	10 kph
8/7/2016 12:15	OFF	N22.17208 E113.87826	38 m	0:00:28	5 kph
8/7/2016 12:16	OFF	N22.17227 E113.87841	26 m	0:00:27	3 kph
8/7/2016 12:16	OFF	N22.17240 E113.87857	22 m	0:00:27	3 kph
8/7/2016 12:17	OFF	N22.17248 E113.87873	19 m	0:00:27	3 kph
8/7/2016 12:17	OFF	N22.17253 E113.87878	8 m	0:00:10	3 kph
8/7/2016 12:17	OFF	N22.17264 E113.87876	13 m	0:00:10	5 kph
8/7/2016 12:17	OFF	N22.17267 E113.87872	5 m	0:00:03	6 kph
8/7/2016 12:18	OFF	N22.17281 E113.87833	43 m	0:00:20	8 kph
8/7/2016 12:18	OFF	N22.17279 E113.87774	60 m	0:00:24	9 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 12:18	OFF	N22.17276 E113.87766	9 m	0:00:06	6 kph
8/7/2016 12:18	OFF	N22.17265 E113.87752	19 m	0:00:21	3 kph
8/7/2016 12:19	OFF	N22.17253 E113.87750	13 m	0:00:25	2 kph
8/7/2016 12:19	OFF	N22.17242 E113.87758	15 m	0:00:24	2 kph
8/7/2016 12:20	OFF	N22.17233 E113.87769	15 m	0:00:23	2 kph
8/7/2016 12:20	OFF	N22.17227 E113.87781	15 m	0:00:23	2 kph
8/7/2016 12:20	OFF	N22.17222 E113.87795	15 m	0:00:23	2 kph
8/7/2016 12:21	OFF	N22.17216 E113.87811	18 m	0:00:26	2 kph
8/7/2016 12:21	OFF	N22.17213 E113.87818	8 m	0:00:12	2 kph
8/7/2016 12:21	OFF	N22.17206 E113.87819	8 m	0:00:06	5 kph
8/7/2016 12:21	OFF	N22.17188 E113.87781	44 m	0:00:23	7 kph
8/7/2016 12:22	OFF	N22.17208 E113.87730	57 m	0:00:24	9 kph
8/7/2016 12:22	OFF	N22.17217 E113.87708	25 m	0:00:20	4 kph
8/7/2016 12:23	OFF	N22.17231 E113.87693	22 m	0:00:30	3 kph
8/7/2016 12:23	OFF	N22.17247 E113.87702	21 m	0:00:29	3 kph
8/7/2016 12:23	OFF	N22.17253 E113.87709	9 m	0:00:11	3 kph
8/7/2016 12:24	OFF	N22.17279 E113.87726	35 m	0:00:23	5 kph
8/7/2016 12:24	OFF	N22.17302 E113.87749	34 m	0:00:23	5 kph
8/7/2016 12:24	OFF	N22.17316 E113.87765	24 m	0:00:21	4 kph
8/7/2016 12:25	OFF	N22.17329 E113.87784	24 m	0:00:26	3 kph
8/7/2016 12:25	OFF	N22.17337 E113.87802	20 m	0:00:24	3 kph
8/7/2016 12:26	OFF	N22.17343 E113.87820	20 m	0:00:27	3 kph
8/7/2016 12:26	OFF	N22.17347 E113.87836	17 m	0:00:26	2 kph
8/7/2016 12:27	OFF	N22.17349 E113.87854	19 m	0:00:27	2 kph
8/7/2016 12:27	OFF	N22.17354 E113.87856	6 m	0:00:07	3 kph
8/7/2016 12:27	OFF	N22.17356 E113.87856	2 m	0:00:02	4 kph
8/7/2016 12:27	OFF	N22.17360 E113.87846	11 m	0:00:09	4 kph
8/7/2016 12:27	OFF	N22.17317 E113.87845	47 m	0:00:20	9 kph
8/7/2016 12:28	OFF	N22.17243 E113.87869	87 m	0:00:23	14 kph
8/7/2016 12:28	ON	N22.17197 E113.87834	63 m	0:00:22	10 kph
8/7/2016 12:28	ON	N22.17238 E113.87828	46 m	0:00:18	9 kph
8/7/2016 12:29	ON	N22.17319 E113.87807	92 m	0:00:26	13 kph
8/7/2016 12:29	ON	N22.17430 E113.87801	124 m	0:00:32	14 kph
8/7/2016 12:30	ON	N22.17525 E113.87805	106 m	0:00:27	14 kph
8/7/2016 12:30	ON	N22.17626 E113.87807	112 m	0:00:29	14 kph
8/7/2016 12:31	ON	N22.17709 E113.87809	93 m	0:00:24	14 kph
8/7/2016 12:31	ON	N22.17805 E113.87808	107 m	0:00:28	14 kph
8/7/2016 12:32	ON	N22.17902 E113.87809	108 m	0:00:28	14 kph
8/7/2016 12:32	ON	N22.18003 E113.87809	113 m	0:00:29	14 kph
8/7/2016 12:32	ON	N22.18089 E113.87802	96 m	0:00:25	14 kph
8/7/2016 12:33	ON	N22.18202 E113.87796	125 m	0:00:32	14 kph
8/7/2016 12:34	ON	N22.18329 E113.87801	142 m	0:00:36	14 kph
8/7/2016 12:34	ON	N22.18420 E113.87799	101 m	0:00:26	14 kph
8/7/2016 12:35	ON	N22.18524 E113.87804	116 m	0:00:29	14 kph
8/7/2016 12:35	ON	N22.18618 E113.87803	104 m	0:00:26	14 kph
8/7/2016 12:35	ON	N22.18726 E113.87808	120 m	0:00:30	14 kph
8/7/2016 12:36	ON	N22.18823 E113.87807	108 m	0:00:27	14 kph
8/7/2016 12:36	ON	N22.18912 E113.87806	99 m	0:00:25	14 kph
8/7/2016 12:37	ON	N22.18978 E113.87807	74 m	0:00:19	14 kph
8/7/2016 12:37	ON	N22.19056 E113.87813	87 m	0:00:22	14 kph
8/7/2016 12:37	ON	N22.19131 E113.87812	84 m	0:00:22	14 kph
8/7/2016 12:38	ON	N22.19221 E113.87814	99 m	0:00:26	14 kph
8/7/2016 12:38	ON	N22.19300 E113.87809	89 m	0:00:23	14 kph
8/7/2016 12:39	ON	N22.19398 E113.87806	109 m	0:00:28	14 kph
8/7/2016 12:39	ON	N22.19485 E113.87812	98 m	0:00:25	14 kph
8/7/2016 12:39	ON	N22.19574 E113.87816	98 m	0:00:25	14 kph
8/7/2016 12:40	ON	N22.19663 E113.87805	100 m	0:00:26	14 kph
8/7/2016 12:40	ON	N22.19766 E113.87803	114 m	0:00:29	14 kph
8/7/2016 12:41	ON	N22.19866 E113.87795	112 m	0:00:28	14 kph
8/7/2016 12:41	ON	N22.19962 E113.87806	107 m	0:00:26	15 kph
8/7/2016 12:42	ON	N22.20056 E113.87815	105 m	0:00:26	15 kph
8/7/2016 12:42	ON	N22.20172 E113.87815	129 m	0:00:32	14 kph
8/7/2016 12:43	ON	N22.20269 E113.87809	108 m	0:00:27	14 kph
8/7/2016 12:43	ON	N22.20363 E113.87816	105 m	0:00:26	15 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 12:44	ON	N22.20472 E113.87803	122 m	0:00:31	14 kph
8/7/2016 12:44	ON	N22.20578 E113.87801	118 m	0:00:29	15 kph
8/7/2016 12:45	ON	N22.20632 E113.87802	60 m	0:00:24	9 kph
8/7/2016 12:45	OFF	N22.20645 E113.87802	15 m	0:00:09	6 kph
8/7/2016 12:45	OFF	N22.20652 E113.87804	8 m	0:00:06	5 kph
8/7/2016 12:45	OFF	N22.20684 E113.87788	40 m	0:00:25	6 kph
8/7/2016 12:46	OFF	N22.20647 E113.87747	59 m	0:00:23	9 kph
8/7/2016 12:46	OFF	N22.20583 E113.87716	78 m	0:00:25	11 kph
8/7/2016 12:46	ON	N22.20524 E113.87738	69 m	0:00:21	12 kph
8/7/2016 12:47	ON	N22.20469 E113.87771	70 m	0:00:23	11 kph
8/7/2016 12:47	ON	N22.20442 E113.87802	44 m	0:00:26	6 kph
8/7/2016 12:47	ON	N22.20436 E113.87816	16 m	0:00:11	5 kph
8/7/2016 12:47	ON	N22.20434 E113.87823	8 m	0:00:06	5 kph
8/7/2016 12:48	ON	N22.20434 E113.87853	31 m	0:00:28	4 kph
8/7/2016 12:48	ON	N22.20435 E113.87870	18 m	0:00:16	4 kph
8/7/2016 12:48	ON	N22.20431 E113.87892	23 m	0:00:15	6 kph
8/7/2016 12:49	ON	N22.20412 E113.87927	42 m	0:00:23	7 kph
8/7/2016 12:49	ON	N22.20387 E113.87973	55 m	0:00:25	8 kph
8/7/2016 12:50	ON	N22.20357 E113.88039	76 m	0:00:23	12 kph
8/7/2016 12:50	ON	N22.20349 E113.88082	45 m	0:00:21	8 kph
8/7/2016 12:50	ON	N22.20340 E113.88119	40 m	0:00:23	6 kph
8/7/2016 12:50	ON	N22.20339 E113.88126	7 m	0:00:05	5 kph
8/7/2016 12:51	ON	N22.20337 E113.88147	22 m	0:00:18	4 kph
8/7/2016 12:51	ON	N22.20336 E113.88168	22 m	0:00:21	4 kph
8/7/2016 12:51	ON	N22.20350 E113.88206	42 m	0:00:21	7 kph
8/7/2016 12:52	ON	N22.20399 E113.88194	56 m	0:00:19	11 kph
8/7/2016 12:52	ON	N22.20416 E113.88116	82 m	0:00:23	13 kph
8/7/2016 12:53	ON	N22.20416 E113.88042	76 m	0:00:21	13 kph
8/7/2016 12:53	ON	N22.20423 E113.87959	86 m	0:00:24	13 kph
8/7/2016 12:53	ON	N22.20450 E113.87869	97 m	0:00:27	13 kph
8/7/2016 12:54	ON	N22.20493 E113.87814	75 m	0:00:23	12 kph
8/7/2016 12:54	ON	N22.20574 E113.87816	91 m	0:00:23	14 kph
8/7/2016 12:55	ON	N22.20671 E113.87801	109 m	0:00:27	14 kph
8/7/2016 12:55	ON	N22.20776 E113.87833	121 m	0:00:29	15 kph
8/7/2016 12:56	ON	N22.20859 E113.87932	138 m	0:00:31	16 kph
8/7/2016 12:56	ON	N22.20954 E113.88031	147 m	0:00:34	16 kph
8/7/2016 12:57	ON	N22.21032 E113.88118	125 m	0:00:29	15 kph
8/7/2016 12:57	ON	N22.21102 E113.88201	116 m	0:00:27	15 kph
8/7/2016 12:58	ON	N22.21180 E113.88285	123 m	0:00:29	15 kph
8/7/2016 12:58	ON	N22.21268 E113.88382	140 m	0:00:32	16 kph
8/7/2016 12:59	ON	N22.21347 E113.88477	131 m	0:00:30	16 kph
8/7/2016 12:59	ON	N22.21417 E113.88576	128 m	0:00:30	15 kph
8/7/2016 13:00	ON	N22.21482 E113.88651	106 m	0:00:25	15 kph
8/7/2016 13:00	ON	N22.21554 E113.88745	126 m	0:00:30	15 kph
8/7/2016 13:00	ON	N22.21569 E113.88813	72 m	0:00:22	12 kph
8/7/2016 13:01	ON	N22.21522 E113.88808	53 m	0:00:20	10 kph
8/7/2016 13:01	ON	N22.21462 E113.88806	66 m	0:00:19	13 kph
8/7/2016 13:02	ON	N22.21369 E113.88818	105 m	0:00:29	13 kph
8/7/2016 13:02	ON	N22.21298 E113.88819	79 m	0:00:22	13 kph
8/7/2016 13:02	ON	N22.21216 E113.88822	91 m	0:00:25	13 kph
8/7/2016 13:03	ON	N22.21141 E113.88829	84 m	0:00:23	13 kph
8/7/2016 13:03	ON	N22.21073 E113.88826	75 m	0:00:21	13 kph
8/7/2016 13:03	ON	N22.20987 E113.88816	96 m	0:00:27	13 kph
8/7/2016 13:04	ON	N22.20907 E113.88823	90 m	0:00:25	13 kph
8/7/2016 13:04	ON	N22.20825 E113.88826	91 m	0:00:25	13 kph
8/7/2016 13:05	ON	N22.20744 E113.88830	90 m	0:00:25	13 kph
8/7/2016 13:05	ON	N22.20651 E113.88828	104 m	0:00:29	13 kph
8/7/2016 13:06	ON	N22.20582 E113.88823	77 m	0:00:21	13 kph
8/7/2016 13:06	ON	N22.20516 E113.88826	74 m	0:00:20	13 kph
8/7/2016 13:06	ON	N22.20420 E113.88823	107 m	0:00:29	13 kph
8/7/2016 13:07	ON	N22.20337 E113.88820	93 m	0:00:25	13 kph
8/7/2016 13:07	ON	N22.20247 E113.88826	101 m	0:00:27	13 kph
8/7/2016 13:08	ON	N22.20183 E113.88833	71 m	0:00:19	13 kph
8/7/2016 13:08	ON	N22.20100 E113.88827	93 m	0:00:25	13 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 13:08	ON	N22.20019 E113.88824	90 m	0:00:24	13 kph
8/7/2016 13:09	ON	N22.19924 E113.88824	106 m	0:00:28	14 kph
8/7/2016 13:09	ON	N22.19856 E113.88832	76 m	0:00:20	14 kph
8/7/2016 13:10	ON	N22.19776 E113.88825	90 m	0:00:24	14 kph
8/7/2016 13:10	ON	N22.19701 E113.88824	83 m	0:00:22	14 kph
8/7/2016 13:10	ON	N22.19624 E113.88828	87 m	0:00:23	14 kph
8/7/2016 13:11	ON	N22.19531 E113.88830	104 m	0:00:27	14 kph
8/7/2016 13:11	ON	N22.19426 E113.88821	116 m	0:00:31	14 kph
8/7/2016 13:12	ON	N22.19331 E113.88822	107 m	0:00:28	14 kph
8/7/2016 13:12	ON	N22.19251 E113.88826	88 m	0:00:23	14 kph
8/7/2016 13:13	ON	N22.19172 E113.88826	88 m	0:00:23	14 kph
8/7/2016 13:13	ON	N22.19089 E113.88819	92 m	0:00:24	14 kph
8/7/2016 13:13	ON	N22.18988 E113.88824	113 m	0:00:29	14 kph
8/7/2016 13:14	ON	N22.18887 E113.88825	113 m	0:00:29	14 kph
8/7/2016 13:14	ON	N22.18783 E113.88823	116 m	0:00:30	14 kph
8/7/2016 13:15	ON	N22.18682 E113.88828	113 m	0:00:29	14 kph
8/7/2016 13:15	ON	N22.18582 E113.88829	111 m	0:00:29	14 kph
8/7/2016 13:16	ON	N22.18484 E113.88824	109 m	0:00:29	14 kph
8/7/2016 13:16	ON	N22.18385 E113.88825	111 m	0:00:29	14 kph
8/7/2016 13:17	ON	N22.18264 E113.88821	135 m	0:00:36	13 kph
8/7/2016 13:17	ON	N22.18163 E113.88818	112 m	0:00:30	13 kph
8/7/2016 13:18	ON	N22.18061 E113.88822	114 m	0:00:30	14 kph
8/7/2016 13:18	ON	N22.17963 E113.88819	109 m	0:00:29	13 kph
8/7/2016 13:19	ON	N22.17868 E113.88827	106 m	0:00:27	14 kph
8/7/2016 13:19	ON	N22.17763 E113.88829	117 m	0:00:30	14 kph
8/7/2016 13:20	ON	N22.17657 E113.88832	118 m	0:00:31	14 kph
8/7/2016 13:20	ON	N22.17556 E113.88821	113 m	0:00:30	14 kph
8/7/2016 13:21	ON	N22.17441 E113.88827	129 m	0:00:33	14 kph
8/7/2016 13:21	ON	N22.17345 E113.88819	107 m	0:00:28	14 kph
8/7/2016 13:22	ON	N22.17238 E113.88815	119 m	0:00:31	14 kph
8/7/2016 13:22	ON	N22.17130 E113.88816	120 m	0:00:31	14 kph
8/7/2016 13:23	ON	N22.17044 E113.88815	96 m	0:00:25	14 kph
8/7/2016 13:23	ON	N22.16956 E113.88825	99 m	0:00:25	14 kph
8/7/2016 13:24	ON	N22.16869 E113.88825	97 m	0:00:25	14 kph
8/7/2016 13:24	ON	N22.16774 E113.88827	106 m	0:00:27	14 kph
8/7/2016 13:25	ON	N22.16665 E113.88822	121 m	0:00:31	14 kph
8/7/2016 13:25	ON	N22.16562 E113.88829	116 m	0:00:29	14 kph
8/7/2016 13:26	ON	N22.16462 E113.88829	110 m	0:00:28	14 kph
8/7/2016 13:26	ON	N22.16373 E113.88806	102 m	0:00:27	14 kph
8/7/2016 13:26	ON	N22.16277 E113.88831	110 m	0:00:27	15 kph
8/7/2016 13:27	ON	N22.16192 E113.88819	95 m	0:00:24	14 kph
8/7/2016 13:27	ON	N22.16091 E113.88813	113 m	0:00:28	15 kph
8/7/2016 13:28	ON	N22.15991 E113.88820	111 m	0:00:27	15 kph
8/7/2016 13:28	ON	N22.15908 E113.88818	92 m	0:00:23	14 kph
8/7/2016 13:29	ON	N22.15819 E113.88818	99 m	0:00:24	15 kph
8/7/2016 13:29	ON	N22.15721 E113.88810	110 m	0:00:27	15 kph
8/7/2016 13:29	ON	N22.15628 E113.88815	104 m	0:00:25	15 kph
8/7/2016 13:30	ON	N22.15526 E113.88827	114 m	0:00:27	15 kph
8/7/2016 13:30	ON	N22.15429 E113.88823	108 m	0:00:26	15 kph
8/7/2016 13:31	ON	N22.15323 E113.88831	119 m	0:00:28	15 kph
8/7/2016 13:31	ON	N22.15223 E113.88819	112 m	0:00:27	15 kph
8/7/2016 13:32	ON	N22.15120 E113.88816	114 m	0:00:27	15 kph
8/7/2016 13:32	ON	N22.15025 E113.88826	106 m	0:00:25	15 kph
8/7/2016 13:32	ON	N22.14979 E113.88885	80 m	0:00:19	15 kph
8/7/2016 13:33	ON	N22.14951 E113.88982	105 m	0:00:24	16 kph
8/7/2016 13:33	ON	N22.14947 E113.89095	117 m	0:00:27	16 kph
8/7/2016 13:34	ON	N22.14961 E113.89180	89 m	0:00:21	15 kph
8/7/2016 13:34	ON	N22.14956 E113.89280	103 m	0:00:24	15 kph
8/7/2016 13:34	ON	N22.14929 E113.89381	108 m	0:00:24	16 kph
8/7/2016 13:35	ON	N22.14918 E113.89478	101 m	0:00:23	16 kph
8/7/2016 13:35	ON	N22.14917 E113.89555	79 m	0:00:18	16 kph
8/7/2016 13:36	ON	N22.14921 E113.89661	110 m	0:00:25	16 kph
8/7/2016 13:36	ON	N22.14934 E113.89732	74 m	0:00:20	13 kph
8/7/2016 13:36	ON	N22.14989 E113.89728	61 m	0:00:21	10 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 13:37	ON	N22.15076 E113.89723	97 m	0:00:28	13 kph
8/7/2016 13:37	ON	N22.15174 E113.89723	109 m	0:00:31	13 kph
8/7/2016 13:38	ON	N22.15276 E113.89728	113 m	0:00:32	13 kph
8/7/2016 13:38	ON	N22.15369 E113.89726	104 m	0:00:30	12 kph
8/7/2016 13:39	ON	N22.15454 E113.89728	94 m	0:00:27	13 kph
8/7/2016 13:39	ON	N22.15537 E113.89725	93 m	0:00:27	12 kph
8/7/2016 13:40	ON	N22.15612 E113.89726	83 m	0:00:24	12 kph
8/7/2016 13:40	ON	N22.15687 E113.89729	83 m	0:00:24	12 kph
8/7/2016 13:40	ON	N22.15771 E113.89732	94 m	0:00:27	12 kph
8/7/2016 13:41	ON	N22.15866 E113.89733	106 m	0:00:31	12 kph
8/7/2016 13:41	ON	N22.15941 E113.89721	85 m	0:00:25	12 kph
8/7/2016 13:42	ON	N22.16033 E113.89720	102 m	0:00:29	13 kph
8/7/2016 13:42	ON	N22.16132 E113.89717	111 m	0:00:31	13 kph
8/7/2016 13:43	ON	N22.16221 E113.89725	99 m	0:00:27	13 kph
8/7/2016 13:43	ON	N22.16330 E113.89727	122 m	0:00:33	13 kph
8/7/2016 13:44	ON	N22.16437 E113.89724	118 m	0:00:32	13 kph
8/7/2016 13:44	ON	N22.16538 E113.89724	112 m	0:00:30	13 kph
8/7/2016 13:45	ON	N22.16634 E113.89718	107 m	0:00:29	13 kph
8/7/2016 13:45	ON	N22.16742 E113.89722	121 m	0:00:32	14 kph
8/7/2016 13:46	ON	N22.16852 E113.89718	123 m	0:00:33	13 kph
8/7/2016 13:46	ON	N22.16936 E113.89718	93 m	0:00:25	13 kph
8/7/2016 13:47	ON	N22.17030 E113.89716	104 m	0:00:28	13 kph
8/7/2016 13:47	ON	N22.17124 E113.89722	105 m	0:00:28	13 kph
8/7/2016 13:48	ON	N22.17214 E113.89723	100 m	0:00:27	13 kph
8/7/2016 13:48	ON	N22.17289 E113.89721	83 m	0:00:22	14 kph
8/7/2016 13:49	ON	N22.17388 E113.89723	111 m	0:00:29	14 kph
8/7/2016 13:49	ON	N22.17489 E113.89720	112 m	0:00:29	14 kph
8/7/2016 13:50	ON	N22.17583 E113.89728	106 m	0:00:27	14 kph
8/7/2016 13:50	ON	N22.17666 E113.89731	92 m	0:00:24	14 kph
8/7/2016 13:50	ON	N22.17762 E113.89727	107 m	0:00:28	14 kph
8/7/2016 13:51	ON	N22.17845 E113.89727	92 m	0:00:24	14 kph
8/7/2016 13:51	ON	N22.17952 E113.89716	120 m	0:00:32	13 kph
8/7/2016 13:52	ON	N22.18061 E113.89730	122 m	0:00:32	14 kph
8/7/2016 13:52	ON	N22.18136 E113.89735	84 m	0:00:23	13 kph
8/7/2016 13:53	ON	N22.18191 E113.89700	70 m	0:00:21	12 kph
8/7/2016 13:53	ON	N22.18272 E113.89678	93 m	0:00:26	13 kph
8/7/2016 13:53	ON	N22.18368 E113.89690	108 m	0:00:28	14 kph
8/7/2016 13:54	ON	N22.18471 E113.89709	117 m	0:00:30	14 kph
8/7/2016 13:55	ON	N22.18589 E113.89710	131 m	0:00:34	14 kph
8/7/2016 13:55	ON	N22.18707 E113.89711	132 m	0:00:34	14 kph
8/7/2016 13:56	ON	N22.18815 E113.89714	120 m	0:00:31	14 kph
8/7/2016 13:56	ON	N22.18924 E113.89723	122 m	0:00:31	14 kph
8/7/2016 13:57	ON	N22.19011 E113.89710	97 m	0:00:26	13 kph
8/7/2016 13:57	ON	N22.19124 E113.89691	127 m	0:00:34	13 kph
8/7/2016 13:58	ON	N22.19234 E113.89692	122 m	0:00:32	14 kph
8/7/2016 13:58	ON	N22.19315 E113.89688	91 m	0:00:24	14 kph
8/7/2016 13:58	ON	N22.19392 E113.89686	86 m	0:00:23	13 kph
8/7/2016 13:59	ON	N22.19499 E113.89706	121 m	0:00:31	14 kph
8/7/2016 14:00	ON	N22.19613 E113.89719	127 m	0:00:33	14 kph
8/7/2016 14:00	ON	N22.19695 E113.89724	92 m	0:00:24	14 kph
8/7/2016 14:00	ON	N22.19808 E113.89732	126 m	0:00:33	14 kph
8/7/2016 14:01	ON	N22.19916 E113.89724	120 m	0:00:32	14 kph
8/7/2016 14:02	ON	N22.20024 E113.89715	121 m	0:00:32	14 kph
8/7/2016 14:02	ON	N22.20148 E113.89709	138 m	0:00:36	14 kph
8/7/2016 14:03	ON	N22.20228 E113.89711	89 m	0:00:23	14 kph
8/7/2016 14:03	ON	N22.20320 E113.89715	102 m	0:00:26	14 kph
8/7/2016 14:04	ON	N22.20433 E113.89707	126 m	0:00:33	14 kph
8/7/2016 14:04	ON	N22.20537 E113.89714	116 m	0:00:30	14 kph
8/7/2016 14:04	ON	N22.20629 E113.89719	103 m	0:00:27	14 kph
8/7/2016 14:05	ON	N22.20731 E113.89708	114 m	0:00:30	14 kph
8/7/2016 14:06	ON	N22.20855 E113.89703	138 m	0:00:35	14 kph
8/7/2016 14:06	ON	N22.20954 E113.89702	111 m	0:00:28	14 kph
8/7/2016 14:07	ON	N22.21084 E113.89710	144 m	0:00:36	14 kph
8/7/2016 14:07	ON	N22.21211 E113.89738	144 m	0:00:36	14 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 14:08	ON	N22.21346 E113.89736	151 m	0:00:39	14 kph
8/7/2016 14:09	ON	N22.21478 E113.89728	147 m	0:00:39	14 kph
8/7/2016 14:09	ON	N22.21513 E113.89713	42 m	0:00:12	13 kph
8/7/2016 14:09	ON	N22.21522 E113.89748	37 m	0:00:19	7 kph
8/7/2016 14:09	ON	N22.21503 E113.89752	22 m	0:00:09	9 kph
8/7/2016 14:10	ON	N22.21428 E113.89768	85 m	0:00:25	12 kph
8/7/2016 14:10	ON	N22.21367 E113.89829	92 m	0:00:22	15 kph
8/7/2016 14:10	ON	N22.21308 E113.89899	97 m	0:00:23	15 kph
8/7/2016 14:11	ON	N22.21243 E113.89968	102 m	0:00:24	15 kph
8/7/2016 14:11	ON	N22.21177 E113.90030	97 m	0:00:24	15 kph
8/7/2016 14:12	OFF	N22.21142 E113.90066	55 m	0:00:23	9 kph
8/7/2016 14:12	OFF	N22.21121 E113.90096	39 m	0:00:28	5 kph
8/7/2016 14:12	OFF	N22.21106 E113.90120	30 m	0:00:30	4 kph
8/7/2016 14:13	OFF	N22.21090 E113.90147	33 m	0:00:27	4 kph
8/7/2016 14:13	OFF	N22.21081 E113.90169	24 m	0:00:25	3 kph
8/7/2016 14:14	OFF	N22.21074 E113.90185	19 m	0:00:20	3 kph
8/7/2016 14:14	ON	N22.21033 E113.90213	53 m	0:00:18	11 kph
8/7/2016 14:14	ON	N22.20956 E113.90283	112 m	0:00:27	15 kph
8/7/2016 14:15	ON	N22.20882 E113.90379	129 m	0:00:30	16 kph
8/7/2016 14:15	ON	N22.20822 E113.90479	123 m	0:00:28	16 kph
8/7/2016 14:16	ON	N22.20757 E113.90573	122 m	0:00:28	16 kph
8/7/2016 14:16	OFF	N22.20703 E113.90639	91 m	0:00:24	14 kph
8/7/2016 14:17	OFF	N22.20670 E113.90676	53 m	0:00:21	9 kph
8/7/2016 14:17	OFF	N22.20652 E113.90708	39 m	0:00:24	6 kph
8/7/2016 14:17	OFF	N22.20638 E113.90735	31 m	0:00:23	5 kph
8/7/2016 14:18	OFF	N22.20626 E113.90760	30 m	0:00:28	4 kph
8/7/2016 14:18	OFF	N22.20617 E113.90781	24 m	0:00:26	3 kph
8/7/2016 14:19	OFF	N22.20609 E113.90799	20 m	0:00:25	3 kph
8/7/2016 14:19	OFF	N22.20600 E113.90814	19 m	0:00:22	3 kph
8/7/2016 14:19	OFF	N22.20592 E113.90826	15 m	0:00:20	3 kph
8/7/2016 14:20	OFF	N22.20585 E113.90838	15 m	0:00:21	3 kph
8/7/2016 14:20	OFF	N22.20577 E113.90853	17 m	0:00:24	3 kph
8/7/2016 14:21	OFF	N22.20568 E113.90872	23 m	0:00:29	3 kph
8/7/2016 14:21	OFF	N22.20563 E113.90891	20 m	0:00:26	3 kph
8/7/2016 14:22	OFF	N22.20558 E113.90913	23 m	0:00:30	3 kph
8/7/2016 14:22	OFF	N22.20553 E113.90939	28 m	0:00:33	3 kph
8/7/2016 14:23	OFF	N22.20551 E113.90963	25 m	0:00:28	3 kph
8/7/2016 14:23	OFF	N22.20550 E113.90986	24 m	0:00:26	3 kph
8/7/2016 14:24	OFF	N22.20547 E113.91009	24 m	0:00:31	3 kph
8/7/2016 14:24	OFF	N22.20543 E113.91004	7 m	0:00:10	2 kph
8/7/2016 14:24	OFF	N22.20583 E113.90961	64 m	0:00:26	9 kph
8/7/2016 14:25	ON	N22.20637 E113.90873	109 m	0:00:34	12 kph
8/7/2016 14:25	ON	N22.20651 E113.90813	63 m	0:00:25	9 kph
8/7/2016 14:26	ON	N22.20578 E113.90811	82 m	0:00:24	12 kph
8/7/2016 14:26	ON	N22.20495 E113.90803	93 m	0:00:25	13 kph
8/7/2016 14:26	ON	N22.20430 E113.90796	73 m	0:00:20	13 kph
8/7/2016 14:27	ON	N22.20315 E113.90795	128 m	0:00:34	14 kph
8/7/2016 14:27	ON	N22.20221 E113.90793	104 m	0:00:27	14 kph
8/7/2016 14:28	ON	N22.20118 E113.90790	115 m	0:00:30	14 kph
8/7/2016 14:28	ON	N22.20003 E113.90778	129 m	0:00:34	14 kph
8/7/2016 14:29	ON	N22.19874 E113.90780	143 m	0:00:37	14 kph
8/7/2016 14:30	ON	N22.19759 E113.90772	128 m	0:00:34	14 kph
8/7/2016 14:30	ON	N22.19651 E113.90776	121 m	0:00:32	14 kph
8/7/2016 14:31	ON	N22.19536 E113.90770	128 m	0:00:34	14 kph
8/7/2016 14:31	ON	N22.19426 E113.90776	122 m	0:00:32	14 kph
8/7/2016 14:32	ON	N22.19327 E113.90782	110 m	0:00:29	14 kph
8/7/2016 14:32	ON	N22.19230 E113.90777	108 m	0:00:29	13 kph
8/7/2016 14:33	ON	N22.19121 E113.90768	122 m	0:00:33	13 kph
8/7/2016 14:33	ON	N22.19045 E113.90729	94 m	0:00:28	12 kph
8/7/2016 14:34	ON	N22.18988 E113.90685	78 m	0:00:24	12 kph
8/7/2016 14:34	ON	N22.18937 E113.90625	84 m	0:00:27	11 kph
8/7/2016 14:34	ON	N22.18883 E113.90561	89 m	0:00:28	11 kph
8/7/2016 14:35	ON	N22.18803 E113.90509	104 m	0:00:31	12 kph
8/7/2016 14:36	ON	N22.18704 E113.90479	115 m	0:00:33	12 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 14:36	ON	N22.18601 E113.90458	117 m	0:00:33	13 kph
8/7/2016 14:37	ON	N22.18507 E113.90441	107 m	0:00:30	13 kph
8/7/2016 14:37	ON	N22.18405 E113.90422	114 m	0:00:32	13 kph
8/7/2016 14:38	ON	N22.18287 E113.90410	132 m	0:00:36	13 kph
8/7/2016 14:38	ON	N22.18175 E113.90387	126 m	0:00:34	13 kph
8/7/2016 14:39	ON	N22.18067 E113.90382	120 m	0:00:32	14 kph
8/7/2016 14:39	ON	N22.17950 E113.90399	132 m	0:00:33	14 kph
8/7/2016 14:40	ON	N22.17840 E113.90434	128 m	0:00:31	15 kph
8/7/2016 14:40	ON	N22.17746 E113.90501	125 m	0:00:29	15 kph
8/7/2016 14:41	ON	N22.17654 E113.90615	156 m	0:00:35	16 kph
8/7/2016 14:42	ON	N22.17584 E113.90760	169 m	0:00:37	16 kph
8/7/2016 14:42	ON	N22.17504 E113.90866	141 m	0:00:32	16 kph
8/7/2016 14:43	ON	N22.17404 E113.90901	117 m	0:00:29	15 kph
8/7/2016 14:43	ON	N22.17296 E113.90916	122 m	0:00:33	13 kph
8/7/2016 14:44	OFF	N22.17210 E113.90899	97 m	0:00:31	11 kph
8/7/2016 14:44	OFF	N22.17180 E113.90918	40 m	0:00:29	5 kph
8/7/2016 14:45	OFF	N22.17174 E113.90942	25 m	0:00:22	4 kph
8/7/2016 14:45	OFF	N22.17181 E113.90972	32 m	0:00:32	4 kph
8/7/2016 14:46	OFF	N22.17193 E113.90997	29 m	0:00:32	3 kph
8/7/2016 14:46	OFF	N22.17202 E113.91020	26 m	0:00:33	3 kph
8/7/2016 14:47	OFF	N22.17209 E113.91040	22 m	0:00:31	3 kph
8/7/2016 14:47	OFF	N22.17214 E113.91056	17 m	0:00:24	3 kph
8/7/2016 14:47	OFF	N22.17244 E113.91059	34 m	0:00:21	6 kph
8/7/2016 14:48	ON	N22.17234 E113.91017	45 m	0:00:18	9 kph
8/7/2016 14:48	ON	N22.17190 E113.90959	77 m	0:00:24	12 kph
8/7/2016 14:49	ON	N22.17120 E113.90873	118 m	0:00:35	12 kph
8/7/2016 14:49	ON	N22.17020 E113.90780	147 m	0:00:42	13 kph
8/7/2016 14:50	ON	N22.16935 E113.90697	128 m	0:00:35	13 kph
8/7/2016 14:51	ON	N22.16858 E113.90616	119 m	0:00:32	13 kph
8/7/2016 14:51	ON	N22.16772 E113.90522	136 m	0:00:36	14 kph
8/7/2016 14:52	ON	N22.16699 E113.90441	117 m	0:00:31	14 kph
8/7/2016 14:52	ON	N22.16625 E113.90344	130 m	0:00:34	14 kph
8/7/2016 14:53	ON	N22.16568 E113.90244	121 m	0:00:31	14 kph
8/7/2016 14:53	ON	N22.16518 E113.90140	121 m	0:00:31	14 kph
8/7/2016 14:54	ON	N22.16478 E113.90067	87 m	0:00:22	14 kph
8/7/2016 14:54	ON	N22.16425 E113.90006	86 m	0:00:22	14 kph
8/7/2016 14:54	ON	N22.16355 E113.89933	108 m	0:00:27	14 kph
8/7/2016 14:55	ON	N22.16276 E113.89868	110 m	0:00:27	15 kph
8/7/2016 14:55	ON	N22.16196 E113.89824	99 m	0:00:24	15 kph
8/7/2016 14:56	ON	N22.16102 E113.89796	109 m	0:00:26	15 kph
8/7/2016 14:56	ON	N22.15994 E113.89786	120 m	0:00:28	15 kph
8/7/2016 14:57	ON	N22.15903 E113.89795	102 m	0:00:23	16 kph
8/7/2016 14:57	ON	N22.15867 E113.89804	41 m	0:00:09	16 kph
8/7/2016 14:57	ON	N22.15761 E113.89849	127 m	0:00:28	16 kph
8/7/2016 14:58	ON	N22.15667 E113.89914	123 m	0:00:27	16 kph
8/7/2016 14:58	ON	N22.15597 E113.89979	103 m	0:00:22	17 kph
8/7/2016 14:59	ON	N22.15512 E113.90094	152 m	0:00:32	17 kph
8/7/2016 14:59	ON	N22.15469 E113.90179	100 m	0:00:21	17 kph
8/7/2016 14:59	ON	N22.15432 E113.90308	139 m	0:00:29	17 kph
8/7/2016 15:00	ON	N22.15413 E113.90425	122 m	0:00:25	18 kph
8/7/2016 15:00	ON	N22.15410 E113.90454	30 m	0:00:06	18 kph
8/7/2016 15:00	ON	N22.15405 E113.90577	128 m	0:00:26	18 kph
8/7/2016 15:01	ON	N22.15408 E113.90721	149 m	0:00:30	18 kph
8/7/2016 15:01	ON	N22.15372 E113.90808	98 m	0:00:22	16 kph
8/7/2016 15:02	ON	N22.15305 E113.90803	75 m	0:00:22	12 kph
8/7/2016 15:02	ON	N22.15232 E113.90795	82 m	0:00:22	13 kph
8/7/2016 15:02	ON	N22.15150 E113.90801	91 m	0:00:23	14 kph
8/7/2016 15:03	ON	N22.15058 E113.90798	102 m	0:00:26	14 kph
8/7/2016 15:03	ON	N22.14972 E113.90788	97 m	0:00:25	14 kph
8/7/2016 15:04	ON	N22.14881 E113.90792	101 m	0:00:25	15 kph
8/7/2016 15:04	ON	N22.14786 E113.90796	107 m	0:00:26	15 kph
8/7/2016 15:04	ON	N22.14711 E113.90787	83 m	0:00:21	14 kph
8/7/2016 15:05	ON	N22.14621 E113.90785	101 m	0:00:25	15 kph
8/7/2016 15:05	ON	N22.14540 E113.90792	90 m	0:00:22	15 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 15:05	ON	N22.14456 E113.90795	94 m	0:00:23	15 kph
8/7/2016 15:06	ON	N22.14368 E113.90789	98 m	0:00:25	14 kph
8/7/2016 15:06	ON	N22.14278 E113.90782	100 m	0:00:26	14 kph
8/7/2016 15:07	ON	N22.14209 E113.90815	85 m	0:00:23	13 kph
8/7/2016 15:07	ON	N22.14177 E113.90919	112 m	0:00:25	16 kph
8/7/2016 15:08	ON	N22.14158 E113.91040	126 m	0:00:27	17 kph
8/7/2016 15:08	ON	N22.14154 E113.91152	116 m	0:00:25	17 kph
8/7/2016 15:08	ON	N22.14183 E113.91264	119 m	0:00:26	16 kph
8/7/2016 15:09	ON	N22.14195 E113.91399	140 m	0:00:30	17 kph
8/7/2016 15:09	ON	N22.14195 E113.91513	118 m	0:00:25	17 kph
8/7/2016 15:10	ON	N22.14222 E113.91645	139 m	0:00:30	17 kph
8/7/2016 15:10	ON	N22.14264 E113.91765	132 m	0:00:29	16 kph
8/7/2016 15:11	ON	N22.14316 E113.91805	71 m	0:00:19	14 kph
8/7/2016 15:11	ON	N22.14390 E113.91830	86 m	0:00:22	14 kph
8/7/2016 15:11	ON	N22.14473 E113.91830	93 m	0:00:25	13 kph
8/7/2016 15:12	ON	N22.14559 E113.91841	96 m	0:00:25	14 kph
8/7/2016 15:12	ON	N22.14636 E113.91840	86 m	0:00:23	13 kph
8/7/2016 15:13	ON	N22.14726 E113.91829	101 m	0:00:27	13 kph
8/7/2016 15:13	ON	N22.14794 E113.91824	76 m	0:00:20	14 kph
8/7/2016 15:13	ON	N22.14882 E113.91815	98 m	0:00:26	14 kph
8/7/2016 15:14	ON	N22.14975 E113.91828	104 m	0:00:26	14 kph
8/7/2016 15:14	ON	N22.15059 E113.91835	95 m	0:00:24	14 kph
8/7/2016 15:15	ON	N22.15159 E113.91820	112 m	0:00:30	13 kph
8/7/2016 15:15	ON	N22.15264 E113.91806	118 m	0:00:32	13 kph
8/7/2016 15:16	ON	N22.15360 E113.91793	107 m	0:00:29	13 kph
8/7/2016 15:16	ON	N22.15473 E113.91791	126 m	0:00:33	14 kph
8/7/2016 15:17	ON	N22.15579 E113.91771	120 m	0:00:32	13 kph
8/7/2016 15:17	ON	N22.15682 E113.91763	116 m	0:00:32	13 kph
8/7/2016 15:18	ON	N22.15789 E113.91773	119 m	0:00:33	13 kph
8/7/2016 15:18	ON	N22.15887 E113.91782	110 m	0:00:31	13 kph
8/7/2016 15:19	ON	N22.16002 E113.91793	128 m	0:00:36	13 kph
8/7/2016 15:20	ON	N22.16110 E113.91807	122 m	0:00:34	13 kph
8/7/2016 15:20	ON	N22.16216 E113.91823	119 m	0:00:33	13 kph
8/7/2016 15:21	ON	N22.16334 E113.91832	132 m	0:00:36	13 kph
8/7/2016 15:21	ON	N22.16466 E113.91827	146 m	0:00:38	14 kph
8/7/2016 15:22	ON	N22.16583 E113.91854	133 m	0:00:34	14 kph
8/7/2016 15:23	ON	N22.16699 E113.91896	136 m	0:00:35	14 kph
8/7/2016 15:23	ON	N22.16802 E113.91939	123 m	0:00:32	14 kph
8/7/2016 15:23	OFF	N22.16835 E113.91971	50 m	0:00:21	8 kph
8/7/2016 15:24	OFF	N22.16856 E113.92009	45 m	0:00:30	5 kph
8/7/2016 15:24	OFF	N22.16865 E113.92042	36 m	0:00:30	4 kph
8/7/2016 15:25	OFF	N22.16867 E113.92076	35 m	0:00:31	4 kph
8/7/2016 15:25	OFF	N22.16864 E113.92104	29 m	0:00:27	4 kph
8/7/2016 15:26	OFF	N22.16898 E113.92137	50 m	0:00:22	8 kph
8/7/2016 15:26	ON	N22.16980 E113.92156	94 m	0:00:28	12 kph
8/7/2016 15:27	ON	N22.17063 E113.92173	94 m	0:00:28	12 kph
8/7/2016 15:27	ON	N22.17155 E113.92193	105 m	0:00:31	12 kph
8/7/2016 15:28	ON	N22.17238 E113.92214	94 m	0:00:28	12 kph
8/7/2016 15:28	ON	N22.17340 E113.92241	117 m	0:00:34	12 kph
8/7/2016 15:29	ON	N22.17423 E113.92269	97 m	0:00:28	12 kph
8/7/2016 15:29	ON	N22.17516 E113.92301	109 m	0:00:31	13 kph
8/7/2016 15:30	ON	N22.17606 E113.92322	102 m	0:00:29	13 kph
8/7/2016 15:30	ON	N22.17706 E113.92327	111 m	0:00:32	13 kph
8/7/2016 15:31	ON	N22.17798 E113.92313	103 m	0:00:29	13 kph
8/7/2016 15:31	ON	N22.17916 E113.92271	139 m	0:00:38	13 kph
8/7/2016 15:32	ON	N22.18052 E113.92228	157 m	0:00:39	14 kph
8/7/2016 15:33	ON	N22.18157 E113.92188	125 m	0:00:31	14 kph
8/7/2016 15:33	ON	N22.18247 E113.92125	120 m	0:00:30	14 kph
8/7/2016 15:34	ON	N22.18332 E113.92044	126 m	0:00:32	14 kph
8/7/2016 15:34	ON	N22.18410 E113.91942	137 m	0:00:35	14 kph
8/7/2016 15:35	ON	N22.18494 E113.91829	149 m	0:00:39	14 kph
8/7/2016 15:35	ON	N22.18549 E113.91821	61 m	0:00:20	11 kph
8/7/2016 15:36	ON	N22.18636 E113.91833	98 m	0:00:28	13 kph
8/7/2016 15:36	ON	N22.18722 E113.91820	97 m	0:00:26	13 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 15:37	ON	N22.18824 E113.91809	115 m	0:00:32	13 kph
8/7/2016 15:37	ON	N22.18906 E113.91811	91 m	0:00:27	12 kph
8/7/2016 15:37	ON	N22.18972 E113.91800	74 m	0:00:24	11 kph
8/7/2016 15:38	ON	N22.19050 E113.91794	87 m	0:00:27	12 kph
8/7/2016 15:38	ON	N22.19123 E113.91789	81 m	0:00:25	12 kph
8/7/2016 15:39	ON	N22.19185 E113.91778	70 m	0:00:22	11 kph
8/7/2016 15:39	ON	N22.19250 E113.91780	73 m	0:00:22	12 kph
8/7/2016 15:39	ON	N22.19321 E113.91780	79 m	0:00:24	12 kph
8/7/2016 15:40	ON	N22.19397 E113.91768	86 m	0:00:27	11 kph
8/7/2016 15:40	ON	N22.19474 E113.91765	85 m	0:00:26	12 kph
8/7/2016 15:41	ON	N22.19557 E113.91781	95 m	0:00:27	13 kph
8/7/2016 15:41	ON	N22.19637 E113.91789	90 m	0:00:26	12 kph
8/7/2016 15:42	ON	N22.19713 E113.91795	84 m	0:00:25	12 kph
8/7/2016 15:42	ON	N22.19776 E113.91787	71 m	0:00:22	12 kph
8/7/2016 15:42	ON	N22.19855 E113.91790	88 m	0:00:26	12 kph
8/7/2016 15:43	ON	N22.19944 E113.91806	100 m	0:00:28	13 kph
8/7/2016 15:43	ON	N22.20014 E113.91792	79 m	0:00:25	11 kph
8/7/2016 15:44	ON	N22.20109 E113.91773	108 m	0:00:33	12 kph
8/7/2016 15:44	ON	N22.20193 E113.91776	94 m	0:00:27	12 kph
8/7/2016 15:45	ON	N22.20266 E113.91770	81 m	0:00:24	12 kph
8/7/2016 15:45	ON	N22.20353 E113.91771	97 m	0:00:28	12 kph
8/7/2016 15:46	ON	N22.20470 E113.91801	133 m	0:00:36	13 kph
8/7/2016 15:46	ON	N22.20539 E113.91853	95 m	0:00:25	14 kph
8/7/2016 15:47	ON	N22.20525 E113.91935	85 m	0:00:21	15 kph
8/7/2016 15:47	ON	N22.20513 E113.92050	120 m	0:00:26	17 kph
8/7/2016 15:47	ON	N22.20505 E113.92166	120 m	0:00:26	17 kph
8/7/2016 15:48	ON	N22.20490 E113.92289	129 m	0:00:28	17 kph
8/7/2016 15:48	ON	N22.20481 E113.92396	110 m	0:00:24	17 kph
8/7/2016 15:49	ON	N22.20453 E113.92518	130 m	0:00:28	17 kph
8/7/2016 15:49	ON	N22.20452 E113.92536	18 m	0:00:04	17 kph
8/7/2016 15:49	ON	N22.20449 E113.92568	33 m	0:00:07	17 kph
8/7/2016 15:49	ON	N22.20451 E113.92667	103 m	0:00:22	17 kph
8/7/2016 15:50	ON	N22.20446 E113.92745	80 m	0:00:19	15 kph
8/7/2016 15:50	ON	N22.20392 E113.92762	62 m	0:00:21	11 kph
8/7/2016 15:50	ON	N22.20301 E113.92764	102 m	0:00:30	12 kph
8/7/2016 15:51	ON	N22.20202 E113.92758	110 m	0:00:32	12 kph
8/7/2016 15:52	ON	N22.20094 E113.92763	120 m	0:00:34	13 kph
8/7/2016 15:52	ON	N22.20010 E113.92761	93 m	0:00:27	12 kph
8/7/2016 15:52	ON	N22.19932 E113.92755	87 m	0:00:26	12 kph
8/7/2016 15:53	ON	N22.19841 E113.92759	102 m	0:00:29	13 kph
8/7/2016 15:53	ON	N22.19746 E113.92763	106 m	0:00:30	13 kph
8/7/2016 15:54	ON	N22.19660 E113.92753	95 m	0:00:28	12 kph
8/7/2016 15:54	ON	N22.19566 E113.92752	105 m	0:00:30	13 kph
8/7/2016 15:55	ON	N22.19479 E113.92758	98 m	0:00:27	13 kph
8/7/2016 15:55	ON	N22.19401 E113.92752	87 m	0:00:25	12 kph
8/7/2016 15:56	ON	N22.19314 E113.92746	97 m	0:00:28	13 kph
8/7/2016 15:56	ON	N22.19218 E113.92746	107 m	0:00:30	13 kph
8/7/2016 15:57	ON	N22.19150 E113.92742	76 m	0:00:22	12 kph
8/7/2016 15:57	ON	N22.19049 E113.92742	112 m	0:00:31	13 kph
8/7/2016 15:58	ON	N22.18953 E113.92738	107 m	0:00:30	13 kph
8/7/2016 15:58	ON	N22.18867 E113.92743	96 m	0:00:26	13 kph
8/7/2016 15:59	ON	N22.18768 E113.92741	110 m	0:00:30	13 kph
8/7/2016 15:59	ON	N22.18678 E113.92741	100 m	0:00:26	14 kph
8/7/2016 16:00	ON	N22.18565 E113.92741	126 m	0:00:32	14 kph
8/7/2016 16:00	ON	N22.18462 E113.92734	115 m	0:00:31	13 kph
8/7/2016 16:01	ON	N22.18336 E113.92752	142 m	0:00:38	13 kph
8/7/2016 16:01	ON	N22.18213 E113.92787	141 m	0:00:38	13 kph
8/7/2016 16:02	ON	N22.18088 E113.92800	140 m	0:00:37	14 kph
8/7/2016 16:02	ON	N22.17977 E113.92801	124 m	0:00:33	14 kph
8/7/2016 16:03	ON	N22.17862 E113.92802	128 m	0:00:35	13 kph
8/7/2016 16:04	ON	N22.17748 E113.92807	127 m	0:00:35	13 kph
8/7/2016 16:04	ON	N22.17647 E113.92788	114 m	0:00:33	12 kph
8/7/2016 16:05	ON	N22.17546 E113.92769	114 m	0:00:32	13 kph
8/7/2016 16:05	ON	N22.17441 E113.92789	119 m	0:00:32	13 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 16:06	ON	N22.17337 E113.92802	117 m	0:00:30	14 kph
8/7/2016 16:06	ON	N22.17255 E113.92802	90 m	0:00:24	14 kph
8/7/2016 16:07	ON	N22.17154 E113.92789	114 m	0:00:31	13 kph
8/7/2016 16:07	ON	N22.17072 E113.92777	92 m	0:00:25	13 kph
8/7/2016 16:08	ON	N22.16984 E113.92763	98 m	0:00:27	13 kph
8/7/2016 16:08	ON	N22.16872 E113.92751	126 m	0:00:34	13 kph
8/7/2016 16:09	ON	N22.16768 E113.92748	115 m	0:00:31	13 kph
8/7/2016 16:09	ON	N22.16667 E113.92743	113 m	0:00:30	14 kph
8/7/2016 16:10	ON	N22.16578 E113.92741	100 m	0:00:26	14 kph
8/7/2016 16:10	ON	N22.16484 E113.92742	104 m	0:00:27	14 kph
8/7/2016 16:11	ON	N22.16381 E113.92724	116 m	0:00:31	13 kph
8/7/2016 16:11	ON	N22.16266 E113.92706	129 m	0:00:32	14 kph
8/7/2016 16:12	ON	N22.16162 E113.92714	117 m	0:00:29	15 kph
8/7/2016 16:12	ON	N22.16054 E113.92723	120 m	0:00:30	14 kph
8/7/2016 16:13	ON	N22.15941 E113.92747	129 m	0:00:32	14 kph
8/7/2016 16:13	ON	N22.15837 E113.92733	116 m	0:00:29	14 kph
8/7/2016 16:14	ON	N22.15719 E113.92728	131 m	0:00:33	14 kph
8/7/2016 16:14	ON	N22.15622 E113.92735	108 m	0:00:28	14 kph
8/7/2016 16:15	ON	N22.15516 E113.92753	119 m	0:00:30	14 kph
8/7/2016 16:15	ON	N22.15393 E113.92763	137 m	0:00:35	14 kph
8/7/2016 16:16	ON	N22.15278 E113.92760	127 m	0:00:32	14 kph
8/7/2016 16:16	ON	N22.15175 E113.92752	116 m	0:00:29	14 kph
8/7/2016 16:17	ON	N22.15083 E113.92764	103 m	0:00:25	15 kph
8/7/2016 16:17	ON	N22.14996 E113.92755	97 m	0:00:25	14 kph
8/7/2016 16:17	ON	N22.14912 E113.92750	94 m	0:00:24	14 kph
8/7/2016 16:18	ON	N22.14848 E113.92766	73 m	0:00:17	16 kph
8/7/2016 16:18	ON	N22.14776 E113.92772	80 m	0:00:19	15 kph
8/7/2016 16:18	ON	N22.14679 E113.92763	108 m	0:00:27	14 kph
8/7/2016 16:19	ON	N22.14574 E113.92761	118 m	0:00:28	15 kph
8/7/2016 16:19	ON	N22.14495 E113.92754	88 m	0:00:22	14 kph
8/7/2016 16:20	ON	N22.14417 E113.92742	87 m	0:00:22	14 kph
8/7/2016 16:20	ON	N22.14329 E113.92725	99 m	0:00:25	14 kph
8/7/2016 16:20	ON	N22.14274 E113.92751	68 m	0:00:19	13 kph
8/7/2016 16:21	ON	N22.14283 E113.92842	94 m	0:00:22	15 kph
8/7/2016 16:21	ON	N22.14341 E113.92956	134 m	0:00:30	16 kph
8/7/2016 16:22	ON	N22.14394 E113.93036	101 m	0:00:23	16 kph
8/7/2016 16:22	ON	N22.14465 E113.93107	108 m	0:00:26	15 kph
8/7/2016 16:22	ON	N22.14540 E113.93158	99 m	0:00:25	14 kph
8/7/2016 16:23	ON	N22.14614 E113.93213	100 m	0:00:25	14 kph
8/7/2016 16:23	ON	N22.14690 E113.93300	123 m	0:00:29	15 kph
8/7/2016 16:24	ON	N22.14758 E113.93388	118 m	0:00:27	16 kph
8/7/2016 16:24	ON	N22.14832 E113.93490	134 m	0:00:30	16 kph
8/7/2016 16:25	ON	N22.14915 E113.93585	135 m	0:00:30	16 kph
8/7/2016 16:25	ON	N22.14985 E113.93651	103 m	0:00:23	16 kph
8/7/2016 16:26	ON	N22.15067 E113.93691	100 m	0:00:25	14 kph
8/7/2016 16:26	ON	N22.15162 E113.93689	106 m	0:00:28	14 kph
8/7/2016 16:27	ON	N22.15254 E113.93685	103 m	0:00:27	14 kph
8/7/2016 16:27	ON	N22.15342 E113.93676	98 m	0:00:26	14 kph
8/7/2016 16:27	ON	N22.15436 E113.93662	106 m	0:00:28	14 kph
8/7/2016 16:28	ON	N22.15530 E113.93654	105 m	0:00:28	13 kph
8/7/2016 16:28	ON	N22.15630 E113.93650	111 m	0:00:29	14 kph
8/7/2016 16:29	ON	N22.15733 E113.93670	117 m	0:00:31	14 kph
8/7/2016 16:29	ON	N22.15833 E113.93698	116 m	0:00:31	13 kph
8/7/2016 16:30	ON	N22.15941 E113.93700	119 m	0:00:32	13 kph
8/7/2016 16:31	ON	N22.16045 E113.93710	117 m	0:00:33	13 kph
8/7/2016 16:31	ON	N22.16132 E113.93700	97 m	0:00:30	12 kph
8/7/2016 16:32	ON	N22.16227 E113.93697	106 m	0:00:33	12 kph
8/7/2016 16:32	ON	N22.16311 E113.93699	94 m	0:00:29	12 kph
8/7/2016 16:33	ON	N22.16393 E113.93693	92 m	0:00:28	12 kph
8/7/2016 16:33	ON	N22.16479 E113.93689	95 m	0:00:29	12 kph
8/7/2016 16:34	ON	N22.16567 E113.93679	99 m	0:00:30	12 kph
8/7/2016 16:34	ON	N22.16672 E113.93684	116 m	0:00:34	12 kph
8/7/2016 16:35	ON	N22.16764 E113.93689	103 m	0:00:30	12 kph
8/7/2016 16:35	ON	N22.16849 E113.93686	94 m	0:00:28	12 kph

Appendix I. (cont'd)

Date & Time	EFFORT	Position	Leg Length	Leg Time	Leg Speed
8/7/2016 16:36	ON	N22.16939 E113.93671	101 m	0:00:31	12 kph
8/7/2016 16:36	ON	N22.17032 E113.93674	104 m	0:00:30	12 kph
8/7/2016 16:37	ON	N22.17138 E113.93685	119 m	0:00:33	13 kph
8/7/2016 16:37	ON	N22.17243 E113.93674	117 m	0:00:33	13 kph
8/7/2016 16:38	ON	N22.17357 E113.93661	128 m	0:00:35	13 kph
8/7/2016 16:38	ON	N22.17455 E113.93648	110 m	0:00:28	14 kph
8/7/2016 16:39	ON	N22.17561 E113.93642	117 m	0:00:29	15 kph
8/7/2016 16:39	ON	N22.17666 E113.93654	117 m	0:00:29	15 kph
8/7/2016 16:40	ON	N22.17738 E113.93653	80 m	0:00:20	14 kph
8/7/2016 16:40	ON	N22.17821 E113.93660	93 m	0:00:23	15 kph
8/7/2016 16:40	ON	N22.17910 E113.93685	102 m	0:00:25	15 kph
8/7/2016 16:41	ON	N22.18019 E113.93692	121 m	0:00:29	15 kph
8/7/2016 16:41	ON	N22.18126 E113.93704	120 m	0:00:29	15 kph
8/7/2016 16:42	ON	N22.18224 E113.93713	110 m	0:00:28	14 kph
8/7/2016 16:42	ON	N22.18325 E113.93718	112 m	0:00:30	13 kph
8/7/2016 16:43	ON	N22.18426 E113.93707	113 m	0:00:32	13 kph
8/7/2016 16:43	ON	N22.18516 E113.93701	100 m	0:00:28	13 kph
8/7/2016 16:44	ON	N22.18602 E113.93712	97 m	0:00:26	13 kph
8/7/2016 16:44	ON	N22.18673 E113.93710	80 m	0:00:23	12 kph
8/7/2016 16:44	ON	N22.18749 E113.93697	85 m	0:00:25	12 kph
8/7/2016 16:45	ON	N22.18841 E113.93696	102 m	0:00:29	13 kph
8/7/2016 16:45	ON	N22.18920 E113.93682	89 m	0:00:26	12 kph
8/7/2016 16:46	ON	N22.19004 E113.93703	96 m	0:00:25	14 kph
8/7/2016 16:46	ON	N22.19102 E113.93724	111 m	0:00:30	13 kph
8/7/2016 16:47	ON	N22.19212 E113.93713	123 m	0:00:35	13 kph
8/7/2016 16:47	ON	N22.19312 E113.93706	111 m	0:00:31	13 kph
8/7/2016 16:48	ON	N22.19401 E113.93689	101 m	0:00:29	13 kph
8/7/2016 16:48	ON	N22.19502 E113.93673	114 m	0:00:32	13 kph
8/7/2016 16:49	ON	N22.19610 E113.93673	120 m	0:00:32	13 kph
8/7/2016 16:50	ON	N22.19735 E113.93679	140 m	0:00:37	14 kph
8/7/2016 16:50	ON	N22.19835 E113.93669	112 m	0:00:31	13 kph
8/7/2016 16:51	ON	N22.19953 E113.93666	131 m	0:00:36	13 kph
8/7/2016 16:51	ON	N22.20064 E113.93675	124 m	0:00:33	14 kph
8/7/2016 16:52	ON	N22.20145 E113.93675	89 m	0:00:24	13 kph
8/7/2016 16:52	ON	N22.20247 E113.93670	114 m	0:00:31	13 kph
8/7/2016 16:53	ON	N22.20366 E113.93664	133 m	0:00:37	13 kph
8/7/2016 16:53	ON	N22.20482 E113.93656	129 m	0:00:36	13 kph
8/7/2016 16:54	ON	N22.20593 E113.93660	124 m	0:00:33	14 kph
8/7/2016 16:55	ON	N22.20723 E113.93674	145 m	0:00:37	14 kph
8/7/2016 16:55	ON	N22.20832 E113.93669	121 m	0:00:32	14 kph
8/7/2016 16:56	ON	N22.20945 E113.93691	128 m	0:00:34	14 kph
8/7/2016 16:56	ON	N22.21081 E113.93689	151 m	0:00:41	13 kph
8/7/2016 16:57	ON	N22.21217 E113.93673	152 m	0:00:42	13 kph
8/7/2016 16:58	ON	N22.21346 E113.93670	144 m	0:00:40	13 kph
8/7/2016 16:58	ON	N22.21489 E113.93677	160 m	0:00:44	13 kph
8/7/2016 16:59	ON	N22.21629 E113.93678	155 m	0:00:43	13 kph
8/7/2016 17:00	ON	N22.21757 E113.93679	143 m	0:00:39	13 kph
8/7/2016 17:01	ON	N22.21899 E113.93668	158 m	0:00:43	13 kph
8/7/2016 17:01	ON	N22.22049 E113.93662	167 m	0:00:45	13 kph
8/7/2016 17:02	ON	N22.22199 E113.93689	169 m	0:00:45	14 kph

Appendix II. Survey Effort Database in SWL (July 2016)

(Abbreviations: BEAU = Beaufort Sea State; P = Primary Line Effort; S = Secondary Line Effort)

DATE	AREA	BEAU	EFFORT	SEASON	VESSEL	TYPE	P/S
6-Jul-16	SW LANTAU	1	1.70	SUMMER	STANDARD31516	HKCRP	P
6-Jul-16	SW LANTAU	2	3.46	SUMMER	STANDARD31516	HKCRP	P
6-Jul-16	SW LANTAU	3	1.45	SUMMER	STANDARD31516	HKCRP	P
6-Jul-16	SW LANTAU	2	3.14	SUMMER	STANDARD31516	HKCRP	S
8-Jul-16	SW LANTAU	2	48.38	SUMMER	STANDARD31516	HyD-HZMB	P
8-Jul-16	SW LANTAU	3	8.19	SUMMER	STANDARD31516	HyD-HZMB	P
8-Jul-16	SW LANTAU	2	14.90	SUMMER	STANDARD31516	HyD-HZMB	S
13-Jul-16	SW LANTAU	1	2.32	SUMMER	STANDARD31516	HKCRP	P
13-Jul-16	SW LANTAU	2	17.94	SUMMER	STANDARD31516	HKCRP	P
13-Jul-16	SW LANTAU	1	2.42	SUMMER	STANDARD31516	HKCRP	S
13-Jul-16	SW LANTAU	2	6.02	SUMMER	STANDARD31516	HKCRP	S
19-Jul-16	SW LANTAU	2	4.95	SUMMER	STANDARD31516	HKCRP	P
19-Jul-16	SW LANTAU	3	11.97	SUMMER	STANDARD31516	HKCRP	P
19-Jul-16	SW LANTAU	2	3.23	SUMMER	STANDARD31516	HKCRP	S
19-Jul-16	SW LANTAU	3	7.70	SUMMER	STANDARD31516	HKCRP	S
19-Jul-16	SW LANTAU	4	1.10	SUMMER	STANDARD31516	HKCRP	S

Appendix III. Chinese White Dolphin Sighting Database in SWL (July 2016)

(Abbreviations: STG# = Sighting Number; HRD SZ = Dolphin Herd Size; BEAU = Beaufort Sea State; PSD = Perpendicular Distance; ND = Not Determined; BOAT ASSOC. = Fishing Boat Association; P/S: Sighting Made on Primary/Secondary Line)

DATE	STG #	TIME	HRD SZ	AREA	BEAU	PSD	EFFORT	TYPE	NORTHING	EASTING	SEASON	BOAT ASSOC.	P/S
6-Jul-16	1	1421	3	SW LANTAU	2	ND	OFF	HKCRP	806106	802384	SUMMER	NONE	
6-Jul-16	2	1504	2	SW LANTAU	2	ND	OFF	HKCRP	806976	804520	SUMMER	NONE	
6-Jul-16	3	1523	5	SW LANTAU	2	52	ON	HKCRP	807462	805191	SUMMER	NONE	S
6-Jul-16	4	1556	3	SW LANTAU	2	ND	OFF	HKCRP	807223	808491	SUMMER	NONE	
8-Jul-16	1	1100	2	SW LANTAU	2	206	ON	HYD-HZMB	806050	802528	SUMMER	NONE	P
8-Jul-16	2	1105	1	SW LANTAU	3	281	ON	HYD-HZMB	805353	802506	SUMMER	NONE	P
8-Jul-16	3	1139	1	SW LANTAU	2	126	ON	HYD-HZMB	806977	804035	SUMMER	NONE	S
8-Jul-16	4	1156	1	SW LANTAU	2	ND	OFF	HYD-HZMB	804119	804504	SUMMER	NONE	
8-Jul-16	5	1215	1	SW LANTAU	2	235	ON	HYD-HZMB	803730	805452	SUMMER	NONE	P
8-Jul-16	6	1245	7	SW LANTAU	2	143	ON	HYD-HZMB	807539	805449	SUMMER	NONE	P
8-Jul-16	7	1411	7	SW LANTAU	2	263	ON	HYD-HZMB	808110	807791	SUMMER	NONE	S
8-Jul-16	8	1444	1	SW LANTAU	2	210	ON	HYD-HZMB	803790	808639	SUMMER	NONE	S
8-Jul-16	9	1523	2	SW LANTAU	2	400	ON	HYD-HZMB	803334	809742	SUMMER	NONE	P
13-Jul-16	1	1341	1	SW LANTAU	2	ND	OFF	HKCRP	806118	802146	SUMMER	NONE	
19-Jul-16	1	1345	1	SW LANTAU	2	ND	OFF	HKCRP	805773	808519	SUMMER	NONE	
19-Jul-16	2	1413	1	SW LANTAU	2	8	ON	HKCRP	807589	808182	SUMMER	NONE	S
19-Jul-16	3	1537	3	SW LANTAU	1	ND	OFF	HKCRP	803911	809196	SUMMER	NONE	

Appendix IV. Individual dolphins identified during HYD-HZMB and AFCD monitoring surveys in SWL waters in July 2016

ID#	DATE	STG#	TYPE	AREA
NL206	08/07/16	7	HYD-HZMB	SW LANTAU
SL05	08/07/16	5	HYD-HZMB	SW LANTAU
WL15	08/07/16	2	HYD-HZMB	SW LANTAU
	08/07/16	3	HYD-HZMB	SW LANTAU
WL61	06/07/16	3	HKCRP	SW LANTAU
WL62	06/07/16	2	HKCRP	SW LANTAU
	19/07/16	3	HKCRP	SW LANTAU
WL69	08/07/16	6	HYD-HZMB	SW LANTAU
WL91	06/07/16	1	HKCRP	SW LANTAU
	06/07/16	3	HKCRP	SW LANTAU
WL92	06/07/16	4	HKCRP	SW LANTAU
WL114	08/07/16	6	HYD-HZMB	SW LANTAU
WL130	08/07/16	6	HYD-HZMB	SW LANTAU
WL131	06/07/16	1	HKCRP	SW LANTAU
	06/07/16	3	HKCRP	SW LANTAU
WL137	08/07/16	7	HYD-HZMB	SW LANTAU
WL152	06/07/16	1	HKCRP	SW LANTAU
	06/07/16	3	HKCRP	SW LANTAU
WL178	19/07/16	2	HKCRP	SW LANTAU
WL210	08/07/16	6	HYD-HZMB	SW LANTAU
	19/07/16	3	HKCRP	SW LANTAU
WL215	08/07/16	7	HYD-HZMB	SW LANTAU
WL221	08/07/16	6	HYD-HZMB	SW LANTAU
	08/07/16	7	HYD-HZMB	SW LANTAU
	19/07/16	1	HKCRP	SW LANTAU
WL232	06/07/16	3	HKCRP	SW LANTAU
	08/07/16	7	HYD-HZMB	SW LANTAU
WL235	08/07/16	6	HYD-HZMB	SW LANTAU
	08/07/16	7	HYD-HZMB	SW LANTAU
WL238	08/07/16	6	HYD-HZMB	SW LANTAU
	08/07/16	7	HYD-HZMB	SW LANTAU
WL243	06/07/16	4	HKCRP	SW LANTAU



Appendix V. Photographs of Identified Individual Dolphins in July 2016 in SWL waters

WL92_20160706_4



WL243_20160706_4



WL15_20160708_2



WL15_20160708_3



SL05_20160708_5



WL69_20160708_6



WL114_20160708_6



WL130_20160708_6



WL210_20160708_6





Appendix V (cont'd).

WL238_20160708_7



WL221_20160719_1



WL178_20160719_2



WL62_20160719_3



WL210_20160719_3



Appendix V (cont'd).