

Appendix 14C.3 Road Population Estimation and Site Survey Data

1. Traffic data of roads near SCISTW were obtained from the Annual Traffic Census 2005 of Transport Department to estimate the road population. For Lai Po Road, Ngong Shung Road, Mei Ching Road and Hing Wah Street West, traffic data was not available from the Traffic Census. Therefore, traffic population of these roads was estimated based on data obtained from site survey conducted by the Consultants during the peak hour (8am to 9am). Raw data of the site traffic survey is presented in **Table 1**.
2. Speed limit is 100km/hr on West Kowloon Highway and 50km/hr on other roads. The road population was estimated based on the following equation:

Traffic Population

$$= \text{“No. of person per vehicle”} \times \text{“No. of vehicles per hr”} \times \text{“Road Length that could be affected by the ADF hazardous events”} / \text{“Speed of vehicles”}$$

3. Number of people per vehicle was estimated with reference to the Annual Traffic Census. Traffic breakdown (average number of people per vehicle) of the main roads was used to project the traffic breakdown of the roads nearby. According to the Annual Traffic Census 2005, the “Vehicle classification and occupancy” data (enclosed at the end of this Appendix) of the Container Port Road South, Lin Cheung Road and West Kowloon Highway was adopted to estimate the number of people per vehicle. The estimated figure for Container Port Road South was adopted for nearby Ngong Shung Road, Hing Wah Street West, Lai Po Road and Mei Ching Road; figure for Lin Cheung Road is also adopted for the nearby Sham Mong Road. The number of people per vehicle was calculated by the equation:

$$\text{No. of ppl per vehicle} = \sum_{1}^{n} \text{Pro}_i * \text{Ocp}_i$$

Where Pro_i is the proportion of vehicle type i in %
 Ocp_i is the average occupancy of vehicle type i

4. Number of vehicle per hour (during daytime) was calculated with reference to the Annual Traffic Census 2005, the “Traffic Characteristics (By Direction)”. It was calculated based on the following equation:

No. of vehicle per hour (during daytime)
= AADT ^a x (Day: Night ratio ^b/ 12 hours)

Note:

^a AADT - Annual Average Daily Traffic

^b Day: Night ratio was obtained from the average of All-Day R12/24 (%)

5. A section of KCRC West Rail is located within the assessment area. The daily passenger flow within the assessment area was estimated based on the KCRC Annual Report 2005 and calculated by the equation below:

Railway Population

= “no. of people travelled along West Rail per hr” ^a x “railway alignment length that could be affected by ADF hazardous events” / “speed of train” ^b

Note:

^a No. of people travelled along West Rail per hr = (Average Daily Ridership of West Rail) x (Day: Night ratio/12 hrs), where Day: Night ratio was assumed to be 70%

^b Speed of train was assumed to be 50km/hr

The estimated road and railway population is presented in **Table 2** below.

Table 1 Raw Data of Traffic Survey

Traffic Survey for Mei Ching Road

ROAD NAME:	Mei Ching Road		
LOCATION:	Interchange of Mei Ching Road and Container Port Road South		
TIME/DATE:	From 8:00am to 9:00am / 23 Feb 2007		
NO OF LANES:	6		
	NUMBER OF VEHICLES PASSING		
TIME (mins)	From West Kowloon Highway to Container Rd	From Container Rd to West Kowloon Highway	TOTAL
10 (8:00 – 8:10)	87	56	143
10 (8:15 – 8:25)	78	70	148
10 (8:30 – 8:40)	88	72	160
10 (8:45 – 8:55)	76	58	134

Traffic Survey for Ngong Shung Road

ROAD NAME:	Ngong Shung Road		
LOCATION:	End of Ngong Shung Road (near to Container Port Road South)		
TIME/DATE:	From 8:00am to 9:00am / 23 Feb 2007		
NO OF LANES:	2		
	NUMBER OF VEHICLES PASSING		
TIME (mins)	Out	In	TOTAL
10 (8:00 – 8:10)	5	8	13
10 (8:15 – 8:25)	7	9	16
10 (8:30 – 8:40)	5	11	16
10 (8:45 – 8:55)	6	10	16

Traffic Survey for Lai Po Road

ROAD NAME:	Lai Po Road		
LOCATION:	Interchange of Lai Po Road and Hing Wah Street West		
TIME/DATE:	From 8:00am to 9:00am / 23 Feb 2007		
NO OF LANES:	2		
TIME (mins)	NUMBER OF VEHICLES PASSING		
	To Hing Wah St W	From Hing Wah St W	TOTAL
10 (8:00 – 8:10)	37	31	68
10 (8:15 – 8:25)	31	34	65
10 (8:30 – 8:40)	28	39	67
10 (8:45 – 8:55)	20	44	64

Traffic Survey for Hing Wah Street West

ROAD NAME:	Hing Wah Street West		
LOCATION:	Interchange of Lai Po Road and Hing Wah Street West		
TIME/DATE:	From 8:00am to 9:00am / 23 Feb 2007		
NO OF LANES:	2		
TIME (mins)	NUMBER OF VEHICLES PASSING		
	To Lai Po Rd	From Lai Po Rd	TOTAL
10 (8:00 – 8:10)	11	34	45
10 (8:15 – 8:25)	10	15	25
10 (8:30 – 8:40)	15	28	43
10 (8:45 – 8:55)	9	14	23

Table 2 Road and Railway Population within the Assessment Area

Location	AADT	Length (m)	No. of ppl / vehicle	Day:Night ratio (%)	Population during Daytime	Remarks
Container Port Road South	36960	1481	1.6	75.5	110.2	Data obtained from Annual Traffic Census Station Number S6214
Hing Wah Street West	4896	1509	1.6	75.5	14.9	a) AADT was calculated based on the vehicles counted in the Traffic Survey (average number of vehicle during peak hour x 24) b) No. of ppl/vehicle obtained from data of Container Port Road South
Lai Po Road	9504	2963	1.6	75.5	56.7	a) AADT was calculated based on the vehicles counted in the Traffic Survey b) No. of ppl/vehicle obtained from data of Container Port Road South
Ngong Shung Road	2196	1111	1.6	75.5	4.9	a) AADT was calculated based on the vehicles counted in the Traffic Survey b) No. of ppl/vehicle obtained from data of Container Port Road South
Lin Cheung Road	10500	1481	2.5	68.9	44.6	Data obtained from Annual Traffic Census Station Number S3025
West Kowloon Highway	75880	1528	4.1	68.7	272.2	Data obtained from Annual Traffic Census Station Number S3024
Mei Ching Road	21060	556	1.6	75.5	23.6	a) AADT was calculated based on the vehicles counted in the Traffic Survey 1 b) No. of ppl/vehicles obtained from data of Container Port Road South
Sham Mong Road	10460	463	2.5	70.6	14.2	a) AADT obtained from Annual Traffic Census Station Number S3296 b) No. of vehicle data obtained from Lin Cheung Road
KCRC West Rail (Nam Cheong Station to Mei Foo Station)	6 (per hour)	1509	-	70.0	78.9	According to KCRC Annual Report 2005, Daily Average Ridership of West Rail is 179200. It was conservatively assumed that ridership between Nam Cheong Station and Mei Foo Station was 1/4 of the total ridership.