Index Page

Replies to supplementary questions raised by Finance Committee Members in examining the Estimates of Expenditure 2013-14

Director of Bureau : Secretary for Development
Session No. : 9
File Name : DEVB(PL)-2S-e1.doc

Reply Serial No.	Question Serial No.	Reply Serial No.	Question Serial No.	Reply Serial No.	Question Serial No.
S-DEVB(PL)01	SV023	S-DEVB(PL)05	SV031	S-DEVB(PL)09	SV027
S-DEVB(PL)02	SV028	S-DEVB(PL)06	SV030	S-DEVB(PL)10	SV032
S-DEVB(PL)03	S144	S-DEVB(PL)07	S066	S-DEVB(PL)11	SV029
S-DEVB(PL)04	SV033	S-DEVB(PL)08	S185	S-DEVB(PL)12	S146

Replies to supplementary questions raised by Finance Committee Members in examining the Estimates of Expenditure 2013-14

Director of Bureau : Secretary for Development
Session No. : 9

Reply Serial No.	Question Serial No.	Name of Member	Head	Programme
S-DEVB(PL)01	SV023	KWOK Ka-ki	138	(2) Buildings, Lands and Planning
S-DEVB(PL)02	SV028	LO Wai-kwok	138	(2) Buildings, Lands and Planning
S-DEVB(PL)03	S144	MA Fung-kwok	138	(2) Buildings, Lands and Planning
S-DEVB(PL)04	SV033	MO, Claudia	138	(2) Buildings, Lands and Planning
S-DEVB(PL)05	SV031	SHEK Lai-him, Abraham	138	(2) Buildings, Lands and Planning
S-DEVB(PL)06	SV030	SIN Chung-kai	138	(2) Buildings, Lands and Planning
S-DEVB(PL)07	S066	WONG Kwok-hing	138	(2) Buildings, Lands and Planning
S-DEVB(PL)08	S185	LO Wai-kwok	82	(-) Buildings and Building Works
S-DEVB(PL)09	SV027	LO Wai-kwok	82	(-) Buildings and Building Works
S-DEVB(PL)10	SV032	TIEN Pei-chun, James	82	(-) Buildings and Building Works
S-DEVB(PL)11	SV029	LO Wai-kwok	33	(3) Provision of Land and Infrastructure
S-DEVB(PL)12	S146	WU Chi-wai	118	(2) District Planning

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)01

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV023

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

In connection with the discussion on measures to increase land supply, the Administration is requested to provide information on how much resources have been earmarked in 2013-14 for carrying out planning studies on the North East New Territories.

Asked by: Hon. KWOK Ka-ki

Reply:

The estimated expenditure for the North East New Territories New Development Areas (NENT NDAs) Planning and Engineering Study (the Study) being undertaken by the Civil Engineering and Development Department (CEDD) and Planning Department (PlanD) in 2013-14 is about $8.5 million. As regards manpower input, three officers of PlanD and six officers from CEDD are assigned to oversee the Study in 2013-14. Within Development Bureau, three officers are involved in overseeing various planning and engineering studies, including the Study, as part of their overall duties. In addition, some supporting staff of the Bureau and the two departments provide technical and clerical services for the Study also as part of their overall duties.

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)02

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV028

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

The Administration is requested to explain whether the targets of the Land Sale Programmes can be achieved as anticipated as the planning procedures of some of the sites have not been completed.

Asked by: Hon. LO Wai-kwok

Reply:

The Government has included in the 2013-14 Land Sale Programme sites that it anticipates can be made available for sale in the year, and plans to initiate the sale of all the sites, subject to the outcome of the necessary planning procedures for the relevant sites, to increase land supply to the greatest extent. The departments concerned will accord priority to the relevant preparatory work and strive to speed up the completion of the relevant procedures. The actual result of land sale will be subject to market conditions.

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)03

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

S144

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

Follow-up on Reply Serial No. DEVB(PL)020

It is stated in the reply that the Lands Department had received 80 applications for wholesale conversion up to end February 2013, of which 52 applications had been approved. Of the 52 approved applications, ten applied for change into "place of recreation, sports or culture" use, among other new uses. To follow up on this, how many applications for change into "place of recreation, sports or culture" use, among other new uses, have been received among the above 80 applications? How many applications for change into "place of recreation, sports or culture" use have been rejected? What are the reasons for the rejection?

Asked by: Hon. MA Fung-kwok

Reply:

Up to end February 2013, of the 80 applications relating to wholesale conversion of industrial buildings received, 13 applied for change into "place of recreation, sports or culture" use, among other new uses. Of these 13 applications, ten had been approved, two were under processing and one was withdrawn by the applicant during processing.

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)04

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV033

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

Pursuant to the reply no. DEVB(PL)043, the Administration is requested to provide the traffic impact assessment report in connection with the redevelopment of the Middle Road Car Park in Tsim Sha Tsui.

Asked by: Hon. MO, Claudia

Reply:

The report requested is attached (English version only).

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 19.4.2013

Table of Contents

List of Tables

List of Figures

List of Appendices

1. INTRODUCTION

1.1 Background

1.1.1 AECOM Asia Company Ltd. (AECOM) was commissioned by Transport Department (TD) in April 2011 to undertake the TIA for the proposed commercial development at the Middle Road Site under the Consultancy Study Agreement No. TD 11/2011 – Traffic Impact Assessment for the Proposed Development at Middle Road Public Car Park Site (hereinafter referred to as "the Study").

1.1.2 The objectives of the Study are to

i) Review existing traffic conditions and examine the capacities of the existing roads, junctions and car parking/loading/unloading facilities;
ii) Forecast future traffic flows in the vicinity of the development, identify problem areas and devise appropriate traffic improvement measures to redress the problems if any; and
iii) Assess the parking demand in the vicinity of the development, in particular the effect resulting from imminent re-opening of the public car park in New World Centre and recommend the extent of re-provision of public parking spaces at the Middle Road Site.

1.1.3 Working Paper No. 1 (WP1) was submitted in May 2011 to all relevant parties to report on modelling approach and methodology in developing the local area traffic models which will be the major tools for assessing the design year 2016 and 2021 traffic condition. It also outlined the modeling/planning assumptions to be adopted in the Study and identified the locations of the traffic surveys and the junctions to be assessed for the Study.

1.1.4 Working Paper No. 2 (WP2) was circulated in July 2011 to all relevant parties to summarize and appraise all the data collected for the Study including the development planning data for the Middle Road Site, existing road network and public transport inventories, public transport routing and existing pedestrian facilities within the area of influence (AOI). **Figure 1.1** shows the AOI of the Study. The results of the traffic survey are also summarized and reported in WP2.

1.1.5 Working Paper No. 3 (WP3) was submitted in September 2011 to all relevant parties to present the survey results of the existing parking facilities within 500m from the Middle Road Site together with their utilization rates. In addition, it also includes the assessment of forecasting the parking demand within 500m from the Middle Road Site and recommendations on the number of car parking spaces to be re-provided at the Middle Road Site upon re-development and the temporary re-provision of parking spaces during construction stage.

1.1.6 Working Paper No. 4 (WP4) was submitted in October 2011 to all relevant parties to report the analysis of the traffic impacts of the proposed commercial development and the re-provided public car park at the Middle Road Site and the study of the possibility of closing the section of Middle Road connecting Salisbury Road.

1.1.7 This report summarizes and presents the findings of the Study.

1.2 Scope of the Study

1.2.1 The scope of the Study includes the following major items:

i) to collect and review the available existing and planned data in relation to the Middle Road Site;
ii) to conduct traffic survey to establish both the existing traffic / pedestrian patterns at the identified junctions / footpaths;
iii) to produce future traffic forecast on the road network for the design years 2016 and 2021;
iv) to conduct a parking demand study to recommend the temporary re-provision of the public carparking spaces during the construction stage and the numbers of public carparking space to be re-provided at the Site upon the redevelopment;
v) to assess the traffic impact on the road network in design years 2016 and 2021 and to recommend improvement proposals to ameliorate the traffic impacts on the problematic road junctions;
vi) to produce the future pedestrian forecast on the identified footpaths and to assess the associated pedestrian impacts;
vii) to review the existing public transport facilities serving the vicinity of the Middle Road Site and to recommend improvement proposals, if necessary; and
viii) to study the possibility of closing the section of Middle /Road connecting Salisbury Road.

1.3 Structure of this Report

1.3.1 The structure of the rest of this report is as follows:

- Chapter 2 – The Proposed Development: summarises the development parameters and location of access of the Middle Road Site.
- Chapter 3 – Existing Traffic Condition: describes the existing traffic condition of the road network adjacent to the Middle Road Site and traffic surveys that were carried out for estimation of the development traffic and producing the traffic forecasts (vehicular and pedestrian) for design years 2016 and 2021.
- Chapter 4 – Traffic Modelling and Forecasts: summarises the approach and methodology of the traffic modelling and forecast.
- Chapter 5 – Parking Demand Assessment: summaries the forecasting of the parking demand within 500m from the Middle Road Site and recommends on the number of public carparking spaces to be re-provided at the Middle Road Site upon re-development, and the temporary re-provision of parking spaces during construction stage.
- Chapter 6 – Traffic Impact Assessment: presents the assessment of the traffic impact arising from the proposed commercial development at the Middle Road Site and the study of the possibility of closing the section of Middle Road connecting Salisbury Road.
- Chapter 7 – Summary and Conclusion: provides a summary of the findings and conclusions of the Study.

2. THE PROPOSED DEVELOPMENT

2.1 Development Schedules

2.1.1 The Middle Road Site, as shown in **Figure 2.1**, has a site area of 3,364m^2 with 830 number of public car parking spaces. It is currently zoned "Government, Institute or Community"("G/IC") on the Tsim Sha Tsui Outline Zoning Plan (OZP) No. S/K1/26.

2.1.2 The latest planning parameters for the Middle Road Site as stipulated in the Brief are summarized in **Table 2.1**.

Table 2.1 Development Planning Parameters for the Middle Road Site

Items	Development Parameters
Gross Site Area	3,364 m^2
Plot Ratio	12

2.2 Access to the Middle Road Site

2.2.1 The Middle Road Site is bounded by Middle Road to its north and east. It joins Nathan Road and Salisbury Road to the west and south respectively. It is anticipated that the future access to/from the Site after redevelopment will be on Middle Road, same as the existing arrangement. The ingress and egress traffic routing of the Middle Road Site upon redevelopment is illustrated in **Figure 2.2**.

3. EXISTING TRAFFIC CONDITION

3.1 Existing Road Network

Middle Road

3.1.1 Middle Road is a local road. For the section of Middle Road to the east of Nathan Road, it is a single 2-lane one-way carriageway. It connects with Nathan Road to the west and Salisbury Road to the east, providing access to the commercial buildings in the area. There is one loading/unloading area provided on the northern kerb side of the section of Middle Road along the Middle Road Site. The East Tsim Sha Tsui MTR Station and a public transport interchange is operating at the eastern end of Middle Road, opposite and next to the Middle Road Site respectively.

Nathan Road

3.1.2 Nathan Road is a primary distributor road. It is a dual 2 or 3 lanes carriageway connected Boundary Street to the north and Salisbury Road to the south. It is a major franchised bus services corridor and there are a number of on-street bus stops located in both bounds of the carriageway.

Salisbury Road

3.1.3 Salisbury Road is also a primary distributor road with a mainly dual 4-lane arrangement which provides the necessary access for the developments along both bounds of Salisbury Road. It is a major road running in an east-west direction to facilitate local traffic circulation within the AOI. There is an underpass at the junction of Salisbury Road / Chatham Road South so the straight ahead traffic movements can bypass the junction and hence relieving the traffic loads on the junction.

3.1.4 The existing traffic management within the AOI is shown in **Figure 3.1**.

3.2 Existing Pedestrian Facilities

3.2.1 A number of footbridges and subways were identified on the major roads such as Nathan Road, Salisbury Road and Chatham Road South to segregate vehicular and pedestrian traffic movements.

3.2.2 An inventory of existing pedestrian facilities within the AOI is presented in **Figure 3.2**.

3.3 Traffic Survey

3.3.1 To appraise the existing traffic condition within the AOI for facilitating the validation of the traffic model developed for the Study as well as to derive reasonable development traffic for the Middle Road Site and to predict the future pedestrian flows generated by the Middle Road Site for pedestrian assessment, the following traffic surveys were undertaken in May 2011:

- Classified Turning Movement Counts / Link Flow Counts
- Vehicular Trip Generation Survey
- Pedestrian Trip Generation Survey
- Pedestrian Flow Survey

Classified Turning Movement Counts / Link Flow Counts

3.3.2 The manual classified turning movement counts and link flow counts provide a quantified record of existing traffic volumes by vehicle types and directions of the road network within the study area. The data collected allowed the development and validation of the traffic models, which would be used to project future traffic demand in the design years 2016 and 2021. The measured traffic volumes would form the reference for comparison with the predicted traffic demands. The traffic counts were recorded under various vehicle categories and converted to passenger car units (pcus) with their corresponding pcu factors. The resulting peak hour traffic volumes, expressed in pcus/hour, would then be used in the assessment of junction

3.3.3 Morning and evening peak period vehicle counts were undertaken at 15-minute intervals at 15 road junctions and 17 major road links identified and are located in close proximity to the Middle Road Site.

3.3.4 The survey data of the road links were particularly used for development and validation of the traffic models whilst the data collected from the road junctions were used in developing the traffic model as well as for assessing the junction performances in the future year upon redevelopment of the Site. The locations of the surveyed road junctions/links are shown in **Figure 3.3** and summarized in **Table 3.1.**

Table 3.1 Locations of Surveyed Road Junctions / Links

Ref	Road Junction
J1	Austin Road/Canton Road
J2	Nathan Road/Austin Road
J3	Austin Road/Chatham Road South
J4	Kowloon Park Drive/Canton Road
J5	Granville Road/Chatham Road South
J6	Haiphong Road/Nathan Road
J7	Chatham Road South/Mody Road
J8	Middle Road/Nathan Road
J9	Middle Road T Junction
J10	Chatham Road South/Salisbury Road
J11	Salisbury Road/Kowloon Park Drive
J12	Salisbury Road/Nathan Road
J13	Peking Road/Kowloon Park Drive
J14	Peking Road/Canton Road
J15	Canton Road/Salisbury Road

Ref	Road Link
L1	Canton Road (near Austin Road)
L2	Austin Road
L3	Nathan Road (near Hillwood Road)
L4	Austin Avenue
L5	Chatham Road South (near Austin Road)
L6	Cheong Wan Road
L7	Haiphong Road
L8	Canton Road (near Peking Road)
L9	Kowloon Park Drive
L10	Nathan Road (near Mody Road)
L11	Chatham Road South (near Mody Road)
L12	Mody Road (near Chatham Road South)
L13	Peking Road
L14	Middle Road
L15	Salisbury Road (near Nathan Road)
L16	Salisbury Road (near Chatham Road South)
L17	Granville Road (near Chatham Road South)

3.3.5 Two-hour traffic counts were conducted on a typical weekday (26th May 2011) to cover both the AM and PM peak periods identified in the SATURN-based Base District Traffic Models (BDTM) developed by TD. These periods are:

- AM peak : 07:30 to 09:30, where BDTM AM peak hour is 08:00 to 09:00
- PM peak : 17:00 to 19:00, where BDTM PM peak hour is 17:30 to 18:30

Figure 3.4 presents the 2011 observed traffic flows at the identified road junctions.

Vehicular Trip Generation Survey

3.3.6 To establish suitable trip rates for estimation of the development traffic of the Middle Road Site, trip generation surveys were conducted on a typical weekday (19th July 2011) at 2 existing retail sites in Tsim Sha Tsui which are similar to the nature of the Middle Road Site (next to MTR station and close to road-based public transport services). They include:

- iSquare – Retail Development (approx. 53,050m^2 retail GFA)
- The One –Retail Development (approx. 37,500m^2 retail GFA)

3.3.7 **Figure 3.5** shows the locations of the trip generation surveys while the observed trip rates are summarized in **Tables 3.2**.

Table 3.2 Results of Trip Generation Surveys for Retail Development

Source	Trip Rates (pcus/hr/GFA m^2)			
	AM		PM	
	Gen	Att	Gen	Att
iSquare (from Survey)	0.040	0.046	0.089	0.143
The One (from Survey)	0.022	0.034	0.048	0.045
Retail + Office Development (from TPDM Vol. 1 Chapter 3 Appendix)	0.1285	0.1525	0.2360	0.2622

3.3.8 The results of the trip generation survey shown in **Table 3.4** were found to be very low and were compared with the suggested trip rates for retail & office development stated in the Appendix of TPDM Volume 1 Chapter 3. It was noted that the survey results are almost 5 to 6 times less than the suggested values of trip rates stated in TPDM. Therefore for a conservative approach, it is proposed to adopt the suggested trip rates of TPDM for retail & office development for estimating the development traffic of the Middle Road Site.

3.3.9 Apart from trip generation survey for the retail/commercial development, a trip generation at the existing Middle Road Public Car Park was also carried out for estimating the development traffic arising from the public carparking spaces to be re-provided upon the redevelopment of the Middle Road Site. The results are presented in **Table 3.3**.

Table 3.3 Results of Trip Generation Survey for the Existing Middle Road Public Car Park

Trip Rate	AM		PM	
	Gen	Att	Gen	Att
Public Car Park (pcu/hr/parking space)	0.0157	0.0735	0.1361	0.1036

3.3.10 The adopted trip rates for estimation of the development traffic of the Middle Road Site are shown in **Table 3.4**.

Table 3.4 Adopted Trips Rates for the Middle Road Site

Trip Rate	AM		PM	
	Gen	Att	Gen	Att
Retail / Commercial Development (pcus/hr/GFA m^2)	0.1285	0.1525	0.2360	0.2622
Public Car Park (pcu/hr/parking space)	0.0157	0.0735	0.1361	0.1036

Pedestrian Trip Generation Survey

3.3.11 Apart from vehicular traffic surveys, pedestrian trip generation surveys were also undertaken at "iSquare" and "The One" for retail/commercial development and the existing Middle Public Car Park for public car park development. The survey data was collected on a 5-minute interval at the following time periods to derive the peak 15-minute demand:

- AM peak: 07:30 – 09:30
- PM peak: 17:00 – 19:00

The observed pedestrian trip rates are presented in **Tables 3.5** and **3.6**.

Table 3.5 Results of Pedestrian Trip Generation Survey for iSquare and The One

Site	Observed Trip Rates (ped/hr/100 m^2 GFA)			
	AM		PM	
	Gen	Att	Gen	Att
iSquare	3.095	5.056	8.886	11.735
The One	0.205	0.635	6.270	6.025
Average	**1.650**	**2.846**	7.578	**8.880**

Table 3.6 Results of Pedestrian Trip Generation Survey for Middle Road Public Car Park

Site	Observed Pedestrian Trip Rates (ped/hr/parking space)			
	AM		PM	
	In	Out	In	Out
Middle Road Public Car Park	0.115	0.024	0.169	0.219

3.3.12 The average value of the pedestrian survey results for the retail/commercial development was adopted for estimation of the pedestrian flows to be generated by the proposed commercial development at the Middle Road Site. **Table 3.7** presents the adopted pedestrian trip rates for the Middle Road Site.

Table 3.7 Adopted Pedestrian Trip Rates for the Middle Road Site

Development	Adopted Pedestrian Trip Rates (ped/hr/100m^2 GFA or ped/hr/parking space)			
	AM		PM	
	In	Out	In	Out
Retail/Commercial Development	2.846	1.650	8.880	7.578
Public Car Park	0.115	0.024	0.169	0.219

Pedestrian Flow Survey

3.3.13 Pedestrian flows survey was also carried out on 5th July 2011 at the pedestrian facilities in close proximity to the Middle Road Site as shown in **Table 3.8** to collect the existing pedestrian data for forecasting the design year pedestrian traffic.

Table 3.8 Locations of Surveys on Pedestrian Facilities

No.(1)	Pedestrian Corridor	Footpath Width
1	Nathan Road S/B Footpath north of Middle Road	4.2m
2	Nathan Road S/B Footpath south of Middle Road	4.2m
3	Middle Road north side Footpath	4.0m
4	Middle Road south side Footpath	3.5m
5	Middle Road east side Footpath next to TST East MTR Station PTI	5.0m
6	Middle Road Pedestrian Crossing next to the Middle Road Site	4.0m
7	Middle Road Pedestrian Crossing at the entrance of the TST East MTR Station PTI	4.0m
8	Middle Road north side footpath east of the Middle Road T Junction	2.0m
9	Middle Road south side footpath east of the Middle Road T Junction	8.0m

Note: (1) Please refer to Figure 3.7 for exact location o f the assessed pedestrian facilities.

The 2011 observed peak 15-min pedestrian flows at the above locations are presented in **Figure 3.6**.

3.4 Existing Traffic Condition

3.4.1 Based on the 2011 observed peak hour traffic flows, capacity analysis was carried out for the identified 15 key junctions within the AOI. The locations of the assessed junctions are shown in **Figure 3.7** while the results of the capacity analysis are summarized in **Table 3.9**.

Table 3.9 2011 Performance of Major Junctions within the AOI

Ref. No.	Junction	Type**	Junction Capacity*	
			AM	PM
J1	Austin Road/Canton Road	S	8%	21%
J2	Nathan Road/Austin Road	S	14%	16%
J3	Austin Road/Chatham Road South	S	-2%	2%
J4	Kowloon Park Drive/Canton Road	S	16%	47%
J5	Granville Road/Chatham Road South	S	>100%	>100%
J6	Haiphong Road/Nathan Road	S	78%	64%
J7	Chatham Road South/Mody Road	S	>100%	83%
J8	Middle Road/Nathan Road	P	0.30	0.48
J9	Middle Road T Junction	S	>100%	>100%
J10	Chatham Road South/Salisbury Road	S	77%	52%
J11	Salisbury Road/Kowloon Park Drive	S	44%	47%
J12	Salisbury Road/Nathan Road	S	14%	12%
J13	Peking Road/Kowloon Park Drive	S	51%	22%
J14	Peking Road/Canton Road	S	>100%	>100%
J15	Canton Road/Salisbury Road	S	>100%	89%

* Figures in percentage represent 'Reserve Capacity" (RC) for signal controlled junctions and in decimal represent "Design Flow to Capacity" (DFC) ratio for roundabouts and priority junctions.

** S = Signal Controlled Junction
P = Priority Junction

3.4.2 From **Table 3.9**, it can be seen that all of the assessed junctions are currently operating within their design capacity during peak hours, except for the junction of Austin Road/Chatham Road South (J3) which is operating with negative reserve capacity (RC) during peak hours.

3.4.3 Apart from junction capacity analysis, assessment of the existing performance of the pedestrian facilities in the vicinity of the Middle Road Site was also carried out. The assessment framework for the pedestrian facilities is based on the Level of Service (LOS) recommended in the Highways Capacity Manual 2000 (HCM 2000).

3.4.4 The derivation of effective widths was obtained from the equation of $W_E = W_T - W_O$, where:

W_E = Effective walkway width (m)

W_T = Total walkway width (m)

W_O = sum of widths and shy distances from obstructions on the walkway (m)

3.4.5 A shy distance of 500mm (without planter / trees at side of footpath) or 700mm (with planter / trees at side of footpath) has been deducted from each side of footpaths. The determination of shy distance is in accordance with Exhibits 18-1 and 18-2 of the HCM2000.

3.4.6 **Table 3.10** below presents the effective width and the LOS of the assessed pedestrian facilities.

Table 3.10 2011 Pedestrian Facilities Assessment

No.[1]	Pedestrian Corridor	Footpath width (m)	Effective Width[2] (m)	Peak 15-min 2-way Pedestrian Flows (ped/min/m)		LOS	
				AM	PM	AM	PM
1	Nathan Road S/B Footpath north of Middle Road	4.2	2.7	5.7	9.8	A	A
2	Nathan Road S/B Footpath south of Middle Road	4.2	2.7	4.2	8.3	A	A
3	Middle Road north side Footpath	4	2.5	5.1	8.0	A	A
4	Middle Road south side Footpath	3.5	2.3	0.9	0.6	A	A
5	Middle Road east side Footpath next to TST East MTR Station PTI	5	4	1.4	2.4	A	A
6	Middle Road Pedestrian Crossing next to the Middle Road Site	4	4	1.1	1.6	A	A
7	Middle Road Pedestrian Crossing at the entrance of the TST East MTR Station PTI	4	4	4.5	4.9	A	A
8	Middle Road north side footpath east of the Middle Road T Junction	2	1	0.0	1	A	A
9	Middle Road south side footpath east of the Middle Road T Junction	8	6.8	0.4	0.3	A	A

Note: (1) Please refer to Figure 3.6 for exact location o f the assessed pedestrian facilities.
(2) The effective width is determined by the sum of widths and shy distances from obstructions on the walkway being subtracted from the total walkway width.

3.4.7 As shown in the above table, all the assessed pedestrian facilities are currently operating with satisfactory LOS "A" during peak hours.

4. TRAFFIC MODELLING AND FORECAST

4.1 Base Year Modelling Development

Base Year Modelling Approach

4.1.1 The 2011 base year model was developed using the latest 2008 Base District Traffic Model (2008 BDTM) provided by TD. The base year 2008 BDTM Traffic Model was updated to represent the present (2011) traffic conditions and used as a base year model for developing the design years 2016 and 2021 traffic models for the Study.

4.1.2 The 2008 BDTM for Kowloon West (K1 Model) was used and updated to ensure the inclusion of suitable additional details for simulating local traffic conditions to cover the AOI and to reflect any changes in critical local junctions as well as the critical proposed developments nearby the Middle Road Site, including the redeveloped Middle Road Site. The zoning system was reviewed and refined to a significant level of that adopted in the 2008 BDTM.

4.1.3 The base year road networks of the 2008 BDTM was refined and updated to the current base year 2011. The same approach of BDTM to convert the previous 2008 base year matrices to the current 2011 base year matrices was adopted. The growth factor approach was applied on the background model which derived from the Annual Traffic Census (ATC). In addition, the trip ends of the completed new developments between year 2008 and 2011 was derived and applied to the 2008 BDTM matrices. This could be achieved by reviewing various sources of data such as development programme and planning data from Planning Department (PlanD).

4.1.4 The refined 2008 base year BDTMs were re-run and model outputs were compared with the observed traffic flow data at year 2011 in the vicinity of the Middle Road Site to ensure the model adequately replicated the observed conditions. The refined BDTMs were validated against the existing data across selected screenlines and major roads to ensure the compatibility of the BDTM traffic forecasts. The validation guidelines stated in the BDTM were adopted for the 2011 base year model development.

4.1.5 The adopted approach for the base year model development is illustrated in **Figure 4.1** and further discussed in the following sub-sections.

4.1.6 The screenlines were chosen to cut the principal north-south, as well as east-west routes within the model area. The location of validated screenlines and junctions are shown in **Figure 4.2**. However, since the model has been validated previously during the development of 2008 BDTM, the identified screenlines and critical junctions are considered acceptable for re-validation purpose.

Data Collection and Review

4.1.7 Key data inputs required for the Study have been requested and they include:

- *Land use and planning data,*
- *Committed and planned transport infrastructure projects,*
- Major land use developments within the AOI,
- Traffic aids and junction layouts,
- Method of control and signal settings (if signalised) for all junctions within the AOI,
- Any relevant traffic count data available (including latest Annual Traffic Census data),
- Existing, committed and proposed public transport services and pedestrian, parking, taxi stand and servicing facilities, and
- Any traffic studies relevant to the AOI.

4.1.8 Traffic surveys were undertaken to appreciate the current traffic conditions. The surveyed locations are the key road link/junctions in the vicinity of the Middle Road Site within the AOI which are expected to be influenced by the development traffic of the Middle Road Site. **Figure 3.3** illustrates the traffic survey locations.

4.1.9 Fully classified link and turning movement counts surveys were carried out in May 2011. The time periods of the surveys were 07:30 – 09:30 in AM and 17:00 – 19:00 in PM, which covered the AM peak period (08:30 – 09:30) and PM peak period (18:00 – 19:00) of BDTM.

4.1.10 In addition, an updated inventory of existing public transport services/facilities was collated based on the latest line route and usage information provided by TD within and near the AOI. The purpose of this exercise is to ensure that the public transport service information coded into the base year networks is updated and accurately reflects the 2011 situation.

Base Year Planning Assumption

4.1.11 The latest 2006-based TPEDM planning data set assumptions provided by PlanD would be adopted in this study. **Tables A1** and **A2** of **Appendix A** summarize the territory-wide planning data by district in the respective year 2006 and 2011.

Base Year Model Update – Zoning System

4.1.12 The BDTM zoning system was established to street block size level as much as possible and is generally of sufficient detail in relation to the land use data available for disaggregation. The derived matrices should therefore be fine enough to represent the traffic movements within the AOI.

4.1.13 The zoning system in close proximity to the Middle Road Site was further refined to better replicate the local traffic movements and to improve the accuracy of the modelled results near the Middle Road Site.

Base Year Model Update – Highway Network

4.1.14 The network coding was based on the 2011 situation. Updating the road networks to the base year of 2011, traffic aids, junction layouts, method of control and detailed public transport services within the AOI were obtained from relevant government departments and coded into the model network. This exercise ensures that the information drawn from the model is detailed enough for carrying out the TIA and evaluation of junction operational performance.

4.1.15 A standard set of saturation flows, as adopted by the BDTM study, for initial network coding is set out in **Table 4.1**. Some modifications to the calculated saturation flows were conducted based on the actual operation at the junction or the approach links to take account of such events as loading/unloading activities and weaving movements (especially by buses).

Table 4.1 Saturation Flows at Junction

Junction Type	Left	Straight	Right
Signals	1,650	2,000	1,850
Priority – Major Arm	1,650	2,000	800
Priority – Minor Arm	1,100	850	850
Roundabout - Dual 2-lane approach	2,200	2,200	2,200
Roundabout - Flared Approach	1,650	1,650	1,650
Roundabout - Single Lane Entry	1,100	1,100	1,100

Note: Saturation flows are in pcus/hr.

4.1.16 Stacking capacity was calculated from the length of the link and the number of lanes. This value was checked carefully as the model can easily under or over-estimate this value as the program calculations are based on the number of lanes at the junction, and take little account of the lane width and local flaring. This value would affect the calculation of queues and blocking back.

Base Year Model Update – Public Transport Network

4.1.17 Bus routes identified in data collection were coded explicitly within these models. Bus movements can have a significant impact on network capacity, which goes beyond their calculated PCU value. It is not possible to reflect explicitly the queuing actions of buses attempting to stop at bus stops and their effects on link capacity in the models. It is therefore necessary to undertake observations to identify problems and make appropriate adjustments in the model coding.

Base Year Model Update – Matrix Adjustment

4.1.18 Given that the BDTM matrices were derived for 2008, it is necessary to update the matrices to base year 2011 to replicate the current traffic conditions. Appropriate growth factor(s) were applied initially based on the historical growth rates interrogated from the Latest ATC information and the Latest planning data (in PVS 405 zones) provided by PlanD. Land use development between 2008 and 2011 were also taken into account. The trip generation growth factors were developed based on the increase in residential development within the AOI while trip attraction growth factors were developed based on the increase in commercial/industrial developments. A 'Furness' process was then carried out after the corresponding growth factors have been applied to the 2008 BDTM trip ends.

4.1.19 While the BDTM has been validated across selected screenlines and major roads, their validation cannot be guaranteed at a very local level in close proximity to the Middle Road Site. Where discrepancies were found after refinement of the network and zone system as mentioned above, adjustments to matrices and network were carried out to establish reasonably close results. Where appropriate, matrix estimation was undertaken to more accurately reflect the local traffic characteristics in the vicinity of the Middle Road Site. In addition, the distortion to the matrices due to matrix estimation was also checked carefully.

Validation Criteria

4.1.20 To ensure that all refinements and adjustments made to the 2008 BDTM will not impose undue effects on the overall model validity, comparisons was made between the 2008 model output with the set of 2011 traffic count data obtained. It is important to recognize that certain flexibility has to be allowed in interpreting the comparison results as the model was initially validated to the 2011 conditions and full compliance with the validation criteria adopted by the BDTM Study may not be able to be met for year 2011. This particularly applies to roads with relatively low traffic volumes. Hence the acceptance of comparison should consider both the numerical and geographical importance of individual locations.

4.1.21 The validation guidelines adopted are the same as those for the BDTMs shown in **Table 4.2** but some flexibility was allowed for modelled flows to have minute variation from observed counts due to valid technical reasons (i.e. low observed flows, or parallel routeings). A combination of percentage difference and GEH statistic technique was used to assess model validation. GEH is a form of the Chi-squared statistic that incorporates both relative and absolute errors. GEH values can be calculated for individual links, screenlines or network wide. GEH value of <10 was used for comparison of all links on the screenlines.

Table 4.2 Validation Guidelines

Validation Criteria	Validation Target
1. Total Screenline Flows	100% within ± 10%
2. All Count Locations	GEH 6 or less on 70% of links GEH 7 or less on 80% of links GEH 10 or less on 100% of links
3. Screenline Link Flows	85% within ± 10% 100% within ± 20%

4.1.22 The GEH statistic is a modified chi-square test of the form:

$$\sqrt{\frac{(V_2 - V_1)^2}{\frac{1}{2}(V_1 + V_2)}}$$

where V1 and V2 are the observed and modelled flows on a specific link. This is used in order to reflect the importance of a difference based on the total volume on a link. If percentages alone are examined, then there is a risk of very large percentage differences in small flow volumes appearing important when they are not. Use of the GEH value is designed to remove this risk by reducing the significance of relatively large (percentage) differences between two small numbers. For example, an absolute difference of 100 pcu/hr gives a big percentage difference if the flows are of the order of 100 pcu/hr but would be unimportant for a thousand pcu/hr. In general, a GEH statistic of less than 6.0 or 7.0 is considered adequate and less than 3.0 is very good.

4.1.23 Also, on the occasion of unacceptable discrepancies between the 2011 modelled flows and traffic count data, further network and matrix refinements were made and localized matrix estimation conducted if found necessary. Such changes made during network refinements and matrix adjustments were taken forward to the design year by a sectoral factoring approach or by disaggregating the absolute difference among the relevant BDTM zones, as appropriate.

Model Validation Results

4.1.24 The year 2011 base year model validations at the screenlines total are shown in **Table 4.3** for the morning peak and afternoon peak hours respectively. The absolute difference and GEH are also included in the table. All GEH values are shown very good performance with the values less than 5. The details screenlines results for each crossing point along with their absolute and percentage difference are shown on **Appendix C**.

Table 4.3 Screenline Total Validation Results

Screenline	Bound	AM				PM			
		Obs	Mod	Mod/Obs	GEH	Obs	Mod	Mod/Obs	GEH
A-A	NB	4,140	4,222	1.02	1	5,260	5,379	1.02	2
	SB	6,010	6,214	1.03	3	5,310	5,382	1.01	1
B-B	NB	3,270	3,276	1.00	0	3,850	3,835	1.00	0
	SB	4,200	4,197	1.00	0	4,170	4,182	1.00	0
C-C	EB	4,265	4,306	1.01	1	4,230	4,292	1.01	1
	WB	3,310	3,408	1.03	2	3,710	3,759	1.01	1
D-D	EB	4,975	5,024	1.01	1	4,320	4,332	1.00	0
	WB	2,735	2,773	1.01	1	3,475	3,564	1.03	2

4.1.25 **Table 4.4** presents the percentages of individual screenline links and they demonstrate that the GEH statistics were all within the accepted criteria.

Table 4.4 Screenline Links Validation Summary

Validation Target	Percentage of Screenline Link Flows within the Criteria	
	AM Peak	PM Peak
	Total (PV+GV+PT[1])	Total (PV+GV+PT[1])
Percent Comparison against Validation Criteria		
85% within ±10%	94%	97%
100% within ±20%	100%	100%
GEH Comparison against Validation Criteria		
70% within GEH 6	100%	100%
80% within GEH 7	100%	100%
100% within GEH10	100%	100%

Note : [1] – Modelled road-based public transport flows

Key Junction Validation Results

4.1.26 The validation of key junctions was undertaken for entry / exit flows on each arm separately. **Table 4.5** summarizes the results of the junction validation while their details are provided in **Appendix C**.

Table 4.5 Key Junctions Validation Summary

Validation Target	Percentage of Key Junction In/Out Flows Within the Criteria	
	AM Peak	PM Peak
	Total (PV+GV+PT[1])	Total (PV+GV+PT[1])
70% within GEH 6	100%	100%
80% within GEH 7	100%	100%
100% within GEH10	100%	100%

Note : [1] – Modelled road-based public transport flows

4.1.27 **Table 4.5** also shows that the key junctions were satisfactorily validated as the validation criteria for GEH 6, 7 and 10 were all met for both AM and PM peak periods.

Validation Summary

4.1.28 To conclude, both screenline and junction validations as demonstrated in above tables were compared well with observed input data, the local area traffic models developed can satisfactorily replicate the existing traffic flows pattern and shown high degree of agreement between the modelled flows and traffic count data within the AOI.

4.1.29 The accuracy obtained for the year 2011 model results demonstrate that the base year traffic model is a robust and reliable platform on which to carry out forecasting. This model in turn provides the base for developing the traffic model for the various design years.

4.2 Future Year Modelling Development

Future Year Modelling Approach

4.2.1 The refined BDTM was employed to produce traffic forecasts for the years 2016 and 2021. Forecasts for the "With" and "Without" the construction of the Middle Road Site for 2016 and "With" and "Without" the proposed commercial development at the Middle Road Site for 2021 were prepared. Since the planning data underlying the 2008 base BDTM forecasts has not included the proposed commercial development of the Middle Road Site, a trip rate approach was applied and the estimated trip generation would be added to the appropriate BDTM zone(s), using trip distribution pattern from the model.

4.2.2 The models were applied for evaluation of proposed traffic management and/or infrastructure improvement schemes that may be identified during the course of the Study.

4.2.3 The adopted approaches for the design year model development are illustrated on **Figure 4.3** and further discussed in the following sub-sections.

Design Year Planning Assumption

4.2.4 The latest 2006-based TPEDM planning data set assumptions provided by PlanD would be adopted in the Study. **Tables D1** and **D2** of **Appendix D** summarize the territory-wide planning data by district in the respective year 2016 and 2021.

Design Year Model Update – Highway Network

4.2.5 The assumptions on the planned/committed transport infrastructures in the future year need to be agreed with the relevant departments. **Tables E1** and **E2** of **Appendix E** present the strategic highway and railway network assumptions for the future year. The strategic highways relevant to the local area traffic model were coded in the relevant year road networks accordingly.

4.2.6 There is no any major committed junction improvement proposed by other studies within the AOI except for an underpass proposal at junction of Canton Road / Austin Road which is currently under study by Highways Department (HyD).

Design Year Model Update – Public Transport Network

4.2.7 Public transport services for the design year of 2016 and 2021 were updated based on the route and usage information supplied by TD, any relevant study reports and the requirements of the proposed new developments. This process has identified details of the future year services required for model coding.

Design Year Model Update - Matrix Adjustments

4.2.8 The adjustments made to produce the 2011 base year matrices from the 2008 BDTM matrices were carried through to the 2016 and 2021 design year matrices. Once again, the matrices were carefully checked to ensure that the adjustments made for year 2011 have been sensibly applied to the future year matrices.

4.2.9 The proposed and committed development has been obtained from PlanD. Those developments were incorporated into the future year model. Details of each development are shown on **Appendix F**.

4.3 Design Year Traffic Forecasts

4.3.1 The local area model developed above was employed to predict traffic conditions for the design years of 2016 for construction traffic impact assessment and 2021 for permanent traffic impact assessment.

Construction Traffic

4.3.2 It is assumed that construction traffic will travel between the Middle Road Site and Tseng Kwan O (TKO). Based on this assumption, it is anticipated that the construction traffic will mainly use Canton Road, Salisbury Road eastbound and Middle Road for accessing the Middle Road Site and use Nathan Road, Salisbury Road westbound and Kowloon Park Drive for going back to TKO. The exact arrangement for construction traffic should be reviewed and confirmed by others in a later stage of this development project. The anticipated construction traffic routing to/from the Middle Road Site is shown on **Figure 4.4**.

4.3.3 Construction traffic is principally generated by concrete delivery and spoil disposal trucks. The maximum number of trucks generated hourly from the Middle Road Site during the peak period throughout the whole construction period was estimated, based on previous experience on the development of similar scale, to be 4 construction trucks. Although it is expected that most of the construction traffic would be generated during off-peak hours, for a conservative approach to cater for the worst scenario, the construction traffic impact assessment is based on peak hour traffic flows.

4.3.4 To facilitate assessment of the capacity of the key junctions, the construction traffic generated was converted into terms of passenger car units (pcu), using a common multiplication factor of 2.5 pcu/truck for construction traffic. As such, it is anticipated that there will be 10pcu/hr generate/attract to the Middle Road Site during the construction stage.

Development Traffic

4.3.5 The development schedule of the Middle Road Site is summarized in **Table 4.6** below.

Table 4.6 Development Planning Parameters for the Middle Road Site

Development Component	Gross Site Area (m^2)	Plot Ratio	Gross Commercial GFA (m^2)	No. of Public Carparking Spaces Retained	Estimated Year of Completion
Commercial	3,346	12	40,368	-	By 2021
Public Carpark(1)	-	-	-	384(2)	By 2021

Note: (1) Based on the recommendations of WP3 for re-provisioned of public car parking spaces after upon the redevelopment of the Middle Road Site.
(2) 345 out of 384 public carparking spaces are private car parking spaces while 39 out of 384 public carparking spaces are motorcycle parking spaces.

4.3.6 A trip rate approach was applied to estimate the traffic generation by the proposed commercial development at the Middle Road Site. The adopted trip rates shown in **Table 3.4** were used to estimate the trip ends of the Middle Road Site. **Table 4.7** presents the estimated trip ends of the Middle Road Site upon redevelopment.

Table 4.7 Estimated Trip Ends for the Middle Road Site

Trip Rate	AM		PM	
	Gen	Att	Gen	Att
Car Park (pcu/hr)	6	28	52	40
Retail / Commercial Development (pcu/hr)	52	62	95	106
Total (pcu/hr)	**58**	**90**	**147**	**146**

4.3.7 From **Table 4.7**, it is estimated that the Middle Road Site will generate 58 pcus and 147 pcus during AM and PM peak hours respectively. In addition, the Middle Road Site will also attract 90 pcus and 146 pcus during the AM and PM peak hours respectively.

4.3.8 Forecasts for the "Without" and "With" the construction of the Middle Road Site in 2016 and "Without" and "With" the proposed commercial development at the Middle Road Site in 2021 were prepared taking into account of the estimated construction traffic and development traffic of the Middle Road Site. They are presented in **Figures 4.5** to **4.8** respectively.

5. PARKING DEMAND ASSESSMENT

5.1 General Study Approach

5.1.1 Currently, the Middle Road site is a public parking facility building which provides about 735 and 95 parking spaces for private car and motor cycle respectively. The major functions of the public parking facility are to be provided parking spaces for surrounding development and minimize the on-street illegal parking.

5.1.2 As specified in the Brief, a parking demand assessment shall be carried out to estimate the number of parking spaces to be re-provided during the construction stage and operation stage of the proposed commercial development at the Middle Road Site in order to maintain the level of parking service to the nearby development.

5.1.3 To achieve this, a study approach with 5 major activities was developed. It includes (1) Information Collection and Review, (2) Traffic Surveys, (3) Data Analysis, (4) Forecasting Car Parking Demand and (5) Recommending Car Parking Spaces. They are described in the sections below.

Information Collection and Review

5.1.4 Data relevant to the prediction of the future year car parking demand and provision of public car parking facilities within 500m from the Middle Road Site was collected, reviewed and compiled for further application. They include:

- *2006-based Territorial Population and Employment Data Matrix (TPEDM) within 500m from the Middle Road Site* which is for establishing a set of proper planning parameter for prediction of the future year car parking demand
- *Site inventory within 500m from the Middle Road Site* which is for obtaining the background information regarding the existing provisions of car parking spaces within 500m from the Middle Road Site
- *Middle Road Public Car Park 2010 utilisation data* which is for estimating the daily car parking profile
- *Hong Kong Planning Standard Guideline (HKPSG)*
- *Approved building plan of the proposed redevelopment at New World Centre* which is for understanding the future year new provision of public car parking facilities within 500m of the Middle Road Site

Traffic Surveys

5.1.5 It is important to obtain adequate and accurate information for the examination of existing parking demand, identifying factors closely related to parking demands and forecasting future parking demands. In this regards, car parking utilization surveys would need to be carried out to obtain the necessary information.

i) The following information was obtained in the car parking utilization surveys.
ii) number of parking facilities/parking spaces within 500m from the Middle Road Site; and
iii) daily car parking utilization profiles

5.1.6 The surveys were carried out during both weekday and weekend in order to obtain the maximum parking demands within 500 m from the Middle Road Site. Also, three types of vehicle parking demand including private car, motor cycle and coach were recorded. The survey results and findings are presented in **Chapter 5.2**.

Data Analysis

5.1.7 The methodology of data analysis and the results of key findings of the existing parking demand are given in **Chapter 5.3**. Attention was given to identifying the key factors which correlated to parking demands and formulating the existing parking demand model for the Middle Road Site.

Forecasting Car Parking Demand

5.1.8 After the existing (2011) parking demand model for the Middle Road Site has been developed based on the parking utilisation survey results, the future years planning data for year 2016 and 2021 will be applied into the parking demand model in order to estimate the future year parking demand for years 2016 and 2021.

Recommending Car Parking Spaces

5.1.9 Comparison between the future year car parking demand and future year car parking provision was carried out. As a result, the recommendation of the numbers of public car parking spaces to be re-provided during both the construction and operation stages of the proposed commercial development at the Middle Road Site was then made.

5.2 Traffic Surveys

Surveys for Private Car, Motorcycle and Goods Vehicle Parking Facilities

5.2.1 Car parking utilization surveys were undertaken at 21 off-street public car parks and on-street parking spaces at 18 locations as presented in the endorsed Final Inception Report. Further to the Middle Road Car Park utilization information provided by Management Services Division, TD, it was identified that the existing peak of private cars and motorcycles parking demand occurred at 20:30-21:30 on Saturday. Based on this finding, the parking demand survey for private cars and motorcycles was then carried out at 19:30-22:30 on 26th June 2011 (Sat).

5.2.2 Furthermore, a weekday car parking utilization survey was also carried out in order to find out the existing car park utilization during weekdays. Similarly, by referring to the Middle Road Car Park utilization information, it was identified that the peak of private cars and motorcycles parking demand on weekdays occurred at 20:30-21:30 on Friday. Therefore, the weekday car parking utilization survey for private cars and motor cycles was carried out at 19:30-22:30 on 8th July 2011(Fri). The locations of the parking utilization surveys during weekend and weekday are illustrated in **Figures 5.1** and **5.2** respectively.

Surveys for Coach Parking Facilities

5.2.3 In addition to car parking utilization survey for private cars and motorcycles, coach parking utilization survey was also undertaken. By referring to our in-house reference, Previous TD Study: Survey on Non-franchised Buses (NFBs) Providing Tour Service Operating within the Territory in Hong Kong (2010), it was identified that the peak of coaches parking demand occurred at 11:00-12:00 on Sunday. A parking utilization survey for coaches was therefore carried out at 10:00-13:00 on 26th June 2011(Sun). The locations of the parking utilization surveys during weekend are illustrated in **Figure 5.1**.

Summary of Existing Utilization of Public Car Parking Facilities

5.2.4 **Tables 5.1** to **5.5** summarize the overall utilization of car parking facilities within 500m from the Site. The detailed summaries of the survey results of individual parking location are given in **Appendix G**. A summary of overall car parking provision within 500m for the Site is enclosed in **Appendix J**.

5.2.5 Since the surveyed car parks J, K, 8, 12, 14, 16, 18, 20, 21 or their run in/out are outside 500m from the Middle Road Site. The parking spaces provision and corresponding demand have been taken out from the following summary tables. The survey locations that are used for the parking demand assessment are shown in **Figure 5.3**.

Table 5.1 Existing Weekday Private Car Parking Facilities Utilization within 500m from the Middle Road Site

Period		Total No. of Parking Space Available	Occupancy	Utilization Rate	Remaining
19:30	20:00	2,830 (735)	1,618 (469)	57.2% (63.8%)	1,212 (266)
20:00	20:30		1,720 (519)	60.8% (70.6%)	1,110 (216)
20:30	21:00		1,742 (530)	61.6% (72.1%)	1,088 (205)
21:00	21:30		1,694 (524)	59.9% (71.3%)	1,136 (211)
21:30	22:00		1,583 (491)	55.9% (66.8%)	1,247 (244)
22:00	22:30		1,337 (437)	47.2% (59.5%)	1,493 (298)

Note:The data in blanket are showing the corresponding information of the Middle Road Car Park Site

Table 5.2 Existing Weekend Private Car Parking Facilities Utilization within 500m from the Middle Road Site

Period		Total No. of Parking Space Available	Occupancy	Utilization Rate	Remaining
19:30	20:00	2,830 (735)	1,871 (462)	66.1% (62.9%)	959 (273)
20:00	20:30		1,964 (502)	69.4% (68.3%)	866 (233)
20:30	21:00		1,962 (503)	69.3% (68.4%)	868 (232)
21:00	21:30		1,847 (486)	65.3% (66.1%)	983 (249)
21:30	22:00		1,760 (444)	62.2% (60.4%)	1,070 (291)
22:00	22:30		1,498 (373)	52.9% (50.7%)	1,332 (362)

Note:The data in blanket are showing the corresponding information of the Middle Road Car Park Site

Table 5.3 Existing Weekday Motorcycle Parking Facilities Utilization within 500m from the Middle Road Site

Period		Total No. of Parking Space Available	Occupancy	Utilization Rate	Remaining
19:30	20:00	218 (95)	170 (61)	78.0% (64.2%)	48 (34)
20:00	20:30		166 (58)	76.1% (61.1%)	52 (37)
20:30	21:00		164 (58)	75.2% (61.1%)	54 (37)
21:00	21:30		160 (57)	73.4% (60.0%)	58 (38)
21:30	22:00		163 (58)	74.8% (61.1%)	55 (37)
22:00	22:30		159 (57)	72.9% (60.0%)	59 (38)

Note:The data in blanket are showing the corresponding information of the Middle Road Car Park Site

Table 5.4 Existing Weekend Motorcycle Parking Facilities Utilization within 500m from the Middle Road Site

Period		Total No. of Parking Space Available	Occupancy	Utilization Rate	Remaining
19:30	20:00	218 (95)	145 (50)	66.5% (52.6%)	73 (45)
20:00	20:30		142 (50)	65.1% (52.6%)	76 (45)
20:30	21:00		144 (49)	66.1% (51.6%)	74 (46)
21:00	21:30		142 (47)	65.1% (49.5%)	76 (48)
21:30	22:00		142 (46)	65.1% (48.4%)	76 (49)
22:00	22:30		139 (48)	63.8% (50.5%)	79 (47)

Note:The data in blanket are showing the corresponding information of the Middle Road Car Park Site

Table 5.5 Existing Weekend Coach Parking Facilities Utilization within 500m from the Middle Road Site

Period		Total No. of Parking Space Available	Occupancy	Utilization Rate	Remaining
10:00	10:30	7	1	14.3%	6
10:30	11:00		5	71.4%	2
11:00	11:30		6	85.7%	1
11:30	12:00		7	100%	0
12:00	12:30		7	100%	0
12:30	13:00		6	85.7%	1

5.2.6 From the **Tables 5.1** to **5.5**, they show that the weekend utilization rate of private car parking spaces is slightly higher than that on weekday. Almost 70% of the existing private car parking spaces were occupied during the peak half-hour weekend.

5.2.7 The weekend utilization rate of motorcycle parking spaces is lower than that on weekday. Almost 80% of the existing motorcycle parking spaces were occupied during the peak half-hour on weekday.

5.2.8 100% of the existing coach parking spaces were occupied during the peak half-hour on weekend.

5.3 Data Analysis

General

5.3.1 Data analysis was carried out to determine the car parking demand within 500m from the Middle Road Site. The data was collected and analyzed to ensure its quality and reliability. The findings established from the collated data were then used to identify the key factors that could directly correlate to the existing car parking demand.

5.3.2 As discussed in **Chapter 5.2**, there are 39 surveyed sites (18 on-street car parking areas and 21 off-street car parking sites) and the surveyed periods cover both weekday and weekend in order to obtain the maximum car parking demand.

Identification of Key Factors relating to Existing Parking Demands

5.3.3 In view of the characteristics of Tsim Sha Tsui District in which the Middle Road Site is located, it is identified that four possible planning parameters of the district may affect the car parking demand, namely population, resident worker, employment and student. **Table 5.6** below summarizes these planning parameters adopted in the 2006-based TPEDM planning data for existing year 2011 for the developments within 500m from the Middle Road Site by different car parking zones. **Figure 5.4** shows the demarcation of different car parking zones within 500m from the Middle Road Site.

Table 5.6 2011 Planning Parameters of 2006-based TPEDM for Developments within 500m from the Middle Road Site

Car Parking zone No.	Planning Parameters			
	Population	Resident Worker	Employment	Student
1	1,246	631	546	102
2	478	226	1,963	58
3	1,206	555	5,234	127
4	153	88	327	19
5	419	198	491	50
6	2,250	1,202	18,613	240
7	733	398	2,168	55
8	102	50	2,890	9
9	991	529	3,678	91
10	1,412	684	4,204	161
11	182	111	13,705	9
Total	**9,172**	**4,671**	**53,818**	**921**

5.3.4 To predict the future year car parking demand, a "regression model" method was adopted. In order to determine which of these planning parameters would be most suitably included in the regression model, the following assessments were carried out:

i) Correlation Analysis for Car Parking Demand against Employment , Resident Worker, Population and Student
iv) Two-tailed T-test (for checking significance of planning parameters selected for inclusion in the regression model after the correlation analysis)

5.3.5 The result of the correlation analysis for the car parking demand against and population, employment and student is shown in **Table 5.7**.

Table 5.7 Correlation Analysis for Car Parking Demand against Employment, Resident Worker, Population and Student

Planning Data	Correlation Values	
	Weekday Parking Demand	Weekend Parking Demand
Population	0.411	0.216
Resident Worker	0.445	0.254
Employment	**0.986**	**0.939**
Student	0.422	0.213

5.3.6 It can be seen from **Table 5.7** that except for the employment, resident worker, population and student would have very low correlation values (less than 0.5) against the car parking demand. In view of this, only employment would be further considered for inclusion in the regression model.

5.3.7 A 2-tailed T-test was then carried out to test the significance of employment for inclusion in the regression model. The result is shown in **Table 5.8**. From the table, it can be observed that employment is very significant, with p-value equals to 0.001, indicating that "the probability that the regression coefficient of employment is non-zero" is higher than 99%. Based on this p-value, employment is considered applicable for inclusion in the regression model for prediction of car parking demand (usually p-value <0.05 is considered applicable for inclusion in a regression model).

Table 5.8 Result of T-test

Planning Data	P-value of T-test	
	Weekday	Weekend
Employment	0.001	0.001

5.3.8 In view of the results of the above analyses, only the employment data of the 2006-based TPEDM for the developments within 500m from the Middle Road Site was selected for inclusion in the regression model. The predicted parking demand model for weekday and weekend were derived as shown below:

Weekday: y= -2.74 + 0.03055x * - for 500m from the Middle Road Site

Weekend: y= -8.07 + 0.03439x * - for 500m from the Middle Road Site

where x and y stand for number of employees and parking demand respectively

*Calculation for determining the above equations are enclosed in **Appendix H**.

Parking Provision at New World Centre and Sogo Store

5.3.9 New World Centre is now under construction for redevelopment to a multi-purpose development which consists of retail basement and podium with cinemas, grade A office, 5-star hotel, serviced suite hotel, serviced apartment and basement car parks. Because of the redevelopment works, the existing (2011) provision of private car park spaces in New World Centre has been substantial reduced to 63.

5.3.10 After the completion of the re-development works, although there will be basement car park of New World Centre after redevelopment, the provision of private car parking spaces will still be reduced from its original provision 1,666to the future provision of 866. **Table 5.9** summarizes the private car parking space provision of New World Centre before, during and after the redevelopment.

Table 5.9 Summary of Private Car Parking Provision in New World Centre

Period	Private Car Parking Space Provision
Before Redevelopment	1,666
During Redevelopment	63
After Redevelopment	866

5.3.11 As shown in **Table 5.9**, it can be seen that there will be significant decrease in private car parking space provision in New World Centre even after the redevelopment. Owing to the nature and scale of future redeveloped New World Centre, it is anticipated that the parking spaces provided there will be fully utilized by the new car parking demand from the future expansion of New World Centre.

5.3.12 In addition, it is expected that the 250 private car parking spaces at Sogo Store car park, which is immediate next to the basement car park of New World Centre, may also be used up by the possible parking demand surplus from the redeveloped New World Centre.

5.3.13 Therefore the parking spaces provision in New World Centre and Sogo Store is not expected to have spare capacity to absorb the car parking demand arising from the nearby vicinity. As such, the parking demand and public car parking provision at the New World Centre and Sogo Store have been excluded from the total public car parking space provision and will not be taken into account in the estimation of future parking demand in the area.

5.4 Forecasting Parking Demand

General

5.4.1 The design years for the assessment of car parking demand within 500m from the Middle Road Site are 2016 and 2021. It is necessary to assume that the driving behaviours would not be significantly changed from existing to these 2 design years. Otherwise, the parking demand model (regression model) would not be suitable to be applied in forecasting car parking demand.

Future Planning Parameter

5.4.2 The 2016 and 2021 employment data of 2006-based TPEDM for the developments within 500m from the Middle Road Site by different car parking zones are presented in **Tables 5.10** and **5.11** respectively.

Table 5.10 2016 Employment Data of 2006-based TPEDM for Developments within 500m of the Middle Road Site

Car Parking Zones*	Employment
1	500
2	1,811
3	4,829
4	302
5	453
6	17,155
7	2,014
8	2,685
9	3,465
10	3,960
11	12,884
Total	**50,057**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

Table 5.11 2021 Employment Data of 2006-based TPEDM for Developments within 500m of the Middle Road Site

Car Parking Zones*	Employment
1	**469**
2	**1,702**
3	**4,539**
4	**284**
5	**426**
6	**16,105**
7	**1,890**
8	**2,520**
9	**3,321**
10	**3,795**
11	**12,085**
Total	**47,137**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

Future Year Public Car Parking Demand

5.4.3 By applying the regression model equation identified in **Chapter 5.3.8**, the car parking demand within 500m from the Middle Road Site for years 2016 and 2021 are predicted and summarized in **Tables 5.12** and **5.13** respectively.

Table 5.12 2016 Car Parking Demand within 500m from the Middle Road Site

Year	Car Parking Zone*	Employment	Weekday Car Parking Demand	Weekend Car Parking Demand
2016	1	500	13	9
	2	1,811	53	54
	3	4,829	145	158
	4	302	6	2
	5	453	11	7
	6	17,155	521	582
	7	2,014	59	61
	8	2,685	79	84
	9	3,465	103	111
	10	3,960	118	128
	11	12,884	391	435
		Total	**1,499**	**1,633**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

Table 5.13 2021 Car Parking Demand within 500m from the Middle Road Site

Year	Car Parking Zone*	Employment	Weekday Car Parking Demand	Weekend Car Parking Demand
2021	1	469	12	8
	2	1,702	49	50
	3	4,539	136	148
	4	284	6	2
	5	426	10	7
	6	16,105	489	546
	7	1,890	55	57
	8	2,520	74	79
	9	3,321	99	106
	10	3,795	113	122
	11	12,085	366	408
		Total	**1,410**	**1,532**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

5.4.4 It is noticed from **Tables 5.12** and **5.13** that the public car parking demand in 2021 is lower than that in 2016. It is because referring to 2006-based TPEDM, the employment of the developments within 500m from the Middle Road Site will decrease from year 2016 to year 2021. Since in the car parking demand model (regression model) developed in **Chapter 5.4.8**, the car parking demand within 500m from the Middle Road Site was identified to be linearly correlated/proportion to the employment data of the developments within this area, therefore the car parking demand within 500m from the Middle Road Site will also decrease as the employment of the developments in this 500m area would decrease from 2016 to 2021.

5.5 Temporary and Permanent Demand and Provision of Public Car Parking Spaces of the Middle Road Site

Assessment for 500m from the Middle Road Site

5.5.1 As seen from **Tables 5.12** and **5.13**, the weekend car parking demand is higher than that on weekday. As such, the estimation of temporary re-provision of car parking spaces is based on the weekend parking demand. This estimated car parking spaces re-provision only refers to the re-provision of public car parking spaces and excludes those required for the proposed retail/commercial development at the Middle Road Site itself.

5.5.2 During the construction and operation stages of the proposed development at the Middle Road Site in 2016 and 2021, it will require 1,633 and 1,532 public car parking spaces respectively to satisfy the anticipated car parking demand. As mentioned in **Chapter 5.3.9** to **5.3.13**, it is anticipated that the parking spaces provided in New World Centre and Sogo Store will be fully utilized due to the new car parking demand from the future expansion of New World Centre. Therefore the provision of parking spaces in New World Centre and Sogo Store is not expected to have spare capacity to absorb the car parking demand arising from the nearby vicinity. Therefore, the public car parking spaces of the Middle Road Car Park, the redeveloped New World Centre (866 car parking spaces) and Sogo Store (250 car parking spaces) have been excluded from the total future public car parking spaces provision available to absorb the anticipated car parking demand.

5.5.3 After excluding the car parking space provision of Middle Road Car Park, New World Centre and Sogo Store, there are 1,782 public car parking spaces available to absorb the anticipated car parking demand. It is expected that there will be 149 and 250 car parking provision surplus in 2016 and 2021respectively. **Table 5.14** presents the future private car parking condition within 500m area from the Middle Road Site in 2016 and 2021.

Table 5.14 Summary of Future Private Car Parking Condition (within 500m from the Middle Road Site)

Item	Assessment Year	
	2016 (nos. of space)	2021 (nos. of space)
Estimated Car Parking Demand	1,633	1,532
Car Parking Space Provision*	1,782	1,782
Anticipated Parking Provision Surplus	149	250
Anticipated Car Parking Space Re-provision	-	-

* Exclude the car parking space provision of Middle Road Car Park, New World Centre and Sogo Store

Assessment for 300m from the Middle Road Site

5.5.4 Although it is predicted that there will be car parking provision surplus within 500m from the Middle Road Site, the walking time of 500m, which is in general 6-7 minutes, may be a less acceptable walking time for drivers who are willing to pay to drive for having a comfortable journey with minimum walking distance/time. It is because according to Travel Characteristics Study 2002 by TD, approximate 97% of drivers are expected to prefer a walking time less than 5 minutes from their alighting locations to their destinations. Therefore, it is considered that the extent of 500m may be too far away comparing to the walking distance acceptable to drivers. Thus, the result may not reflect the real driving habit of drivers.

5.5.5 In view of the above, an additional parking demand assessment focusing only 300m from the Middle Road Site was conducted, since the walking time of 300m is generally within 4-5 minutes which is more preferable to most of the drivers. **Table 5.15** summarizes the employment data of the 2006-based TPEDM for existing year 2011 for the developments within 300m from the Middle Road Site by different car parking zones.

Table 5.15 2016 Employment Data of 2006-based TPEDM for Developments within 300m of the Middle Road Site

Car Parking Zones*	Employment
1	546
2	1,963
3	5,234
4	327
5	491
6	18,613
Total	**27,173**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

5.5.6 Based on the employment data of the developments within 300m from the Middle Road Site, the parking demand model for weekday and weekend were updated as below:

Weekday: y=13.83 + 0.0294x * - for 300m from the Middle Road Site

Weekend: y=8.59 + 0.028x * - for 300m from the Middle Road Site

where x and y stand for number of employees and parking demand respectively.
*Calculation for determining the above equations are enclosed in **Appendix H**.

5.5.7 By applying the updated regression model equation above, the car parking demand within 300m from the Middle Road Site for years 2016 and 2021 are predicted and summarized in **Tables 5.16** and **5.17** respectively.

Table 5.16 2016 Car Parking Demand within 300m from the Middle Road Site

Year	Car Parking Zone*	Employment	Weekday Car Parking Demand	Weekend Car Parking Demand
2016	1	500	29	23
	2	1,811	67	59
	3	4,829	156	144
	4	302	23	17
	5	453	27	21
	6	17,155	518	489
		Total	**819**	**753**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

Table 5.17 2021 Car Parking Demand within 300m from the Middle Road Site

Year	Car Parking Zone*	Employment	Weekday Car Parking Demand	Weekend Car Parking Demand
2021	1	469	28	22
	2	1,702	64	56
	3	4,539	147	136
	4	284	22	17
	5	426	26	21
	6	16,105	487	460
		Total	**775**	**710**

Note: *Please refer to Figure 5.4 for the demarcation of the car parking zones.

5.5.8 As seen from **Tables 5.16** and **5.17**, the weekday car parking demand is higher than that on weekend. As such, the estimation of temporary re-provision of car parking spaces is based on the weekday parking demand. Similarly, this estimated car parking spaces re-provision only refers to the re-provision of public car parking spaces and excludes those required for the proposed retail/commercial development at the Middle Road Site itself. The breakdown of overall provision within 500m from the Middle Road Site is shown in **Appendix J**.

Temporary Demand and Provision of Public Car Parking Spaces of the Middle Road Site in 300m area

5.5.9 During construction stage of the proposed development at the Middle Road Site in 2016, it will require 819 public car parking spaces to satisfy the anticipated car parking demand. Since there will only be 430 public car parking spaces available within the 300m area of the Middle Road Site, therefore a shortfall of 389 public car parking spaces in 2016 is expected. As such, there shall be a minimum of 389 temporary re-provisioned public car parking spaces in the vicinity of the Middle Road Site during the construction stage in 2016 in order to cater for the anticipated car parking demand.

5.5.10 Since it is necessary to temporarily re-provide 389 private car and 46 motorcycle parking spaces for public during construction stage in 2016, availability of any vacant lands that can be used as temporary parking lots in the vicinity has been reviewed. It was found that there was no available vacant land that could be used as temporary parking lots in the vicinity.

5.5.11 District Lands Office, Kowloon West has been consulted regarding the availability of any vacant land which can be used as temporary car parking site within 700m from the Middle Road Site. They replied that they could not find any vacant land that could suit the temporary parking purpose at this stage.

5.5.12 Despite the above, 2 potential sites that can possibly be used as temporary car parking sites are still identified for consideration of relevant government departments/parties. **Table 5.18** lists out the identified sites and their corresponding pros and cons and possibility of availability in 2016. The locations of the identified sites are shown in **Figure 5.5**.

Table 5.18 Possible Temporary Car Parking Sites

Location	Pros	Cons	Possibility of Availability
Centenary Garden	•Large in space	•Outside 300m from Middle Site •Extensive road works required •Attract public objection	LOW
Salisbury Garden	•Within 300m from Middle Site	•Relatively small •Extensive road works required •Occupy existing coach loading/unloading area •Attract public objection	LOW

5.5.13 Advices from LCSD regarding the availability of the 2 identified sites in 2016 were sought. They replied that these sites are not available for the use of temporary car park re-provision site. Since these sites could not be used temporarily for providing public car parking spaces during the construction of the redevelopment at the Middle Road Site.

5.5.14 For the anticipated private car parking demand, it is proposed to use the provision in the existing car parks which are located within 500m from the Middle Road Site to absorb the anticipated parking demand. As discussed in **Section 5.5.3**, it is anticipated that there will be sufficient parking provision within 500m from the Middle Road Site which can absorb the anticipated parking demand. Although most of the parking provision is located outside the 300m but within 500m from the Middle Road Site, however, as for temporary purpose, it is still considered that the affected motorists will accept a lower level of comfort for using the public car parking spaces surplus within 500m from the Middle Road Site.

5.5.15 For the anticipated motorcycle parking demand, as shown in **Table 5.19**, there will be no motorcycle parking spaces surplus within 500m from the Middle Road Site to absorb the anticipated motorcycle parking demand. It is proposed to temporarily close the nearside lane of the section of Middle Road connecting Salisbury Road and re-provide the 46 motorcycle parking spaces on the nearside lane. The proposed arrangement is shown in **Figure 5.6**.

Table 5.19 Summary of Motorcycle Parking Demand and Provision in 2016 (within 500m and 300mfrom the Middle Road Site)

Item	2016	
	Within 500m (nos. of space)	Within 300m (nos. of space)
Estimated Motorcycle Parking Demand	159	137
Car Parking Space Provision*	123	91
Anticipated Parking Space Shortfall	36	46

* Exclude the car parking space provision of Middle Road Car Park, New World Centre and Sogo Store

Permanent Demand and Provision of Public Car Parking Spaces of the Middle Road Site in 300m area

5.5.16 During operation stage of the proposed development at the Middle Road Site in 2021, it will require 775 public car parking spaces to satisfy the anticipated car parking demand. Since there will only be 430 public car parking spaces available within the 300m area of the Middle Road Site, hence there will be a shortfalls of 345 public car parking spaces in 2021. As such, it is recommended that a minimum of 345 public car parking spaces shall be provided in the proposed commercial development at the Middle Road Site in order to cater for the anticipated car parking demand.

5.5.17 In addition to the public parking provision for private cars, the Middle Road Site shall also provide public motorcycle parking spaces to cater for the anticipated demand. Since almost half of the existing motorcycle parking spaces provision is located inside the Middle Road Car Park, it does not have enough data to carry out the regression model to estimate the future motorcycle parking demand. As such, the demand of motorcycle was estimated by referring to the percentage change in private car parking demand in 2016 and 2021 respectively.

5.5.18 Referring to the percentage change in private car parking demand, the demand will be dropped from existing by 7% and 12% in 2016 and 2021 respectively. The existing motorcycle parking demand within 300m from the Middle Road Site is 147. As such, the motorcycle parking demand will be 137 and 130 in 2016 and 2021 respectively. Since there are 91 motorcycle parking spaces (excluding the Middle Road Site) available within 300m from the Middle Road Site, 46 and 39 motorcycle parking spaces shall be re-provided in 2016 and 2021 respectively. **Table 5.20** summarizes the anticipated supply, demand, surplus and deficit of public car parking spaces within 300m from the Middle Road Site in design years 2016 and 2021.

Table 5.20 Anticipated Supply, Demand, Surplus and Deficit of Public Car Parking Spaces within 300m from the Middle Road Site

Facilities	Design Year	Demand (nos. of space)	Supply (nos. of space)	Re-provision (nos. of space)
Private Car Parking Space	2016	819	430	389
	2021	775	430	345
Motorcycle Parking Space	2016	137	91	46
	2021	130	91	39

* Exclude the car parking space provision of Middle Road Car Park, New World Centre and Sogo Store

5.5.19 In addition to satisfying the future demand of public car parking space, car parking spaces for the use of the proposed commercial development at the Middle Road Site shall also be provided separately according to the recommendation in Hong Kong Planning Standards and Guidelines (HKPSG). The recommended car parking provision solely for the commercial development of the Middle Road Site is summarized in **Table 5.21**. The overall proposed car parking provision is shown in **Table 5.22**.

Table 5.21 Recommended Permanent Parking Provision for the Middle Road Site

Type of Use	Facilities	Proposed GFA m^2	HKPSG Requirements		Proposed Provision
Car Parking Spaces					
Retail	Private Car	40,368	1 car space per 200 - 300m^2 GFA	135~202	200
	Motorcycle	40,368	5 to 10% of total provision for private cars	14~20	20
Loading / Unloading Bays					
Retail	Goods Vehicle	40,368	1 loading/unloading bay for GV for every 800-1200m^2 of GFA	34~51	43

Table 5.22 Proposed Overall Car Parking Provision in Middle Road Site

Facilities	Recommended Re-provision of Public Parking Spaces	HKPSG Requirements	Total
Car Parking Spaces			
Private Car	345	200	545
Motorcycle	37	20	57
Loading / Unloading Bays			
Goods Vehicle	-	43	43

5.5.20 Although the existing coach parking spaces occupancy is 100% during the peak half-hour in weekend, it was observed that the coaches were mainly undergoing loading / unloading passengers instead of parking. It is anticipated that the demand for coach parking will not have a significant change. As such, it is considered that it is not necessary to provide coach parking spaces at the Middle Road Site.

6. TRAFFIC IMPACT ASSESSMENT

6.1 Assessment Scenarios

6.1.1 As specified in the Brief, the Study should be carried out to assess the traffic impacts arising from the proposed commercial development at the Middle Road Site for design years 2016 and 2021. In view of this, the traffic impact assessment was undertaken under the following cases:

v) 2016 Background Case – Without the construction of proposed commercial development at the Middle Road Site;
vi) 2016 Design Case – With the construction of proposed commercial development at the Middle Road Site;
vii) 2021 Background Case – Without the proposed commercial development at the Middle Road Site;
viii) 2021 Design Case – With the proposed commercial development at the Middle Road Site;

6.2 2016 Construction Traffic Impact Assessment

6.2.1 To assess the construction traffic impact arising from the construction of proposed development at the Middle Road Site, capacity analysis was conducted for the 15 identified junctions within the AOI for the design years 2016. The results of the analysis are summarized in **Table 6.1**.

Table 6.1 2016 Performance of Major Junctions within the AOI

Ref. No.	Junction	Type**	Junction Capacity*			
			Background		Design	
			AM	PM	AM	PM
J1	Austin Road/Canton Road	S	3%	**-10%**	4%	**-8%**
J2	Nathan Road/Austin Road	S	5%	9%	6%	9%
J3	Austin Road/Chatham Road South	S	**-2%**	**0%**	**-2%**	**0%**
J4	Kowloon Park Drive/Canton Road	S	15%	41%	16%	41%
J5	Granville Road/Chatham Road South	S	>100%	>100%	>100%	>100%
J6	Haiphong Road/Nathan Road	S	68%	55%	69%	57%
J7	Chatham Road South/Mody Road	S	99%	62%	99%	62%
J8	Middle Road/Nathan Road	P	0.31	0.52	0.30	0.38
J9	Middle Road T Junction	S	>100%	>100%	>100%	>100%
J10	Chatham Road South/Salisbury Road	S	58%	38%	57%	37%
J11	Salisbury Road/Kowloon Park Drive	S	43%	47%	44%	48%
J12	Salisbury Road/Nathan Road	S	9%	8%	10%	13%
J13	Peking Road/Kowloon Park Drive	S	50%	21%	50%	24%
J14	Peking Road/Canton Road	S	>100%	86%	>100%	86%
J15	Canton Road/Salisbury Road	S	100%	76%	100%	76%

* Figures in percentage represent 'Reserve Capacity" (RC) for signal controlled junctions and in decimal represent "Design Flow to Capacity" (DFC) ratio for roundabouts and priority junctions.

** S = Signal Controlled Junction
P = Priority Junction

6.2.2 From **Table 6.1**, it can be seen that except the junctions of Austin Road/Canton Road (J1), Nathan Road/Austin Road (J2) and Austin Road/Chatham Road South (J3), all the assessed junctions will operate satisfactorily with RC greater than 5% during peak hours in 2016 with the construction traffic generated by the proposed commercial development at the Middle Road Site. In fact, these junctions would either operate with RC less than 5% or negative RC in 2016 even without the construction of the Middle Road Site. The construction traffic generated by the Middle Road Site would not worsen the performance of these junctions and thus the construction traffic impact of the Middle Road Site is considered manageable.

6.3 2021 Permanent Traffic Impact Assessment

6.3.1 Similar to the 2016 construction traffic impact assessment, capacity analysis was also carried out for the 15 identified junctions for 2021 to assessment the permanent traffic impact arising from the proposed commercial development of the Middle Road Site. The results of the analysis are summarized in **Table 6.2**.

Table 6.2 2021 Performance of Major Junctions within the AOI

Ref. No.	Junction	Type**	Junction Capacity*			
			Background		Design	
			AM	PM	AM	PM
J1	Austin Road/Canton Road	S	5%	2%	5%	2%
J2	Nathan Road/Austin Road	S	4%	6%	4%	6%
J3	Austin Road/Chatham Road South	S	**-3%**	**-5%**	**-3%**	**-5%**
J4	Kowloon Park Drive/Canton Road	S	14%	28%	13%	28%
J5	Granville Road/Chatham Road South	S	>100%	99%	>100%	98%
J6	Haiphong Road/Nathan Road	S	52%	32%	51%	31%
J7	Chatham Road South/Mody Road	S	94%	61%	94%	61%
J8	Middle Road/Nathan Road	P	0.32	0.53	0.38	0.57
J9	Middle Road T Junction	S	>100%	>100%	>100%	>100%
J10	Chatham Road South/Salisbury Road	S	56%	35%	56%	35%
J11	Salisbury Road/Kowloon Park Drive	S	34%	43%	34%	42%
J12	Salisbury Road/Nathan Road	S	7%	7%	5%	5%
J13	Peking Road/Kowloon Park Drive	S	49%	18%	48%	18%
J14	Peking Road/Canton Road	S	93%	68%	93%	68%
J15	Canton Road/Salisbury Road	S	94%	68%	94%	68%

* Figures in percentage represent 'Reserve Capacity" (RC) for signal controlled junctions and in decimal represent "Design Flow to Capacity" (DFC) ratio for roundabouts and priority junctions.

** S = Signal Controlled Junction
P = Priority Junction

6.3.2 It can be noted from **Table 6.2** that except the junctions of Austin Road/Canton Road (J1), Nathan Road/Austin Road (J2) and Austin Road/Chatham Road South (J3), all the assessed junctions will operate satisfactorily with RC greater than 5% during peak hours in 2021. Even without the proposed commercial development at the Middle Road Site, these junctions would still operate with RC less than 5% or negative RC due to natural traffic growth. The development traffic of the Middle Road Site does not worsen their performance. In view of this, it is considered that the permanent traffic impact arising from the proposed commercial development at the Middle Road Site is insignificant.

6.4 Pedestrian Facilities Assessment

Pedestrian Trips Generation of the Middle Road Site

6.4.1 A trip rate approach was adopted to estimate the volume of pedestrian movements that would be generated by the proposed commercial development at the Middle Road Site. As discussed in **Chapter 3.3.12**, the adopted pedestrian trip rates presented in Table 3.7 was used to determine the amount of pedestrians generated by the Middle Road Site. The 2-way pedestrian traffic generation of the Middle Road Site during both AM and PM peak hours are presented in **Table 6.3** below.

Table 6.3 Pedestrian Trips Generation of the Middle Road Site

Development	Adopted Pedestrian Trip Rates (ped/hr/100m² GFA or ped/hr/parking space)				Pedestrian Generation (ped/15-min.)			
	AM		PM		AM		PM	
	In	Out	In	Out	In	Out	In	Out
Retail/Commercial Development	2.846	1.650	8.880	7.578	287	167	896	765
Public Car Park	0.115	0.024	0.169	0.219	10	2	15	20
Total					**297**	**169**	**911**	**785**

6.4.2 From **Table 6.3**, it can be seen that the proposed development at the Middle Road Site would generate and attract two-way pedestrian flows of 297 peds/15-min and 169 peds/15-min respectively during the AM peak hour. For PM peak hour, the proposed development at the Middle Road Site will generate and attract two-way pedestrian flows of 911 peds/15-min and 785 peds/15-min respectively.

Pedestrian Forecast and Level of Service Assessment

6.4.3 Based on the comparison of the 2011, 2016 and 2021 population and employment planning data extracted from 2006-based TPEDM (Territorial Population and Employment Data Matrices), annual growth factors of 0.77% from 2011 to 2016 and 0.41% from 2016 to 2021 are derived. These growth factors are applied to the 2011 surveyed pedestrian flows as shown in **Figure 3.6** to obtain the 2021 forecast background pedestrian flows. **Figure 6.1** shows the 2021 forecast background peak 15-min pedestrian flows.

6.4.4 The pedestrian traffic associated with the proposed commercial development at the Middle Road Site are added onto the 2021 forecast background pedestrian flows to produce the 2021 forecast design peak 15-min pedestrian flows. They are shown in **Figure 6.2**.

6.4.5 The results of the LOS assessment for the relevant pedestrian facilities in close proximity to the Middle Road Site during peak hours in 2021 revealed that all the assessed pedestrian facilities would operate satisfactorily during peak hours in 2021 under both "Background" and "Design" scenarios. Therefore improvement for widening these pedestrian facilities is considered not required.

6.5 Review of Public Transport Services

6.5.1 The Middle Road Site is well served by road-based public transport services including the Citybus (CTB), Kowloon Motor Bus (KMB), New World First Bus (NWFB) and green minibuses (GMB). A number of bus and GMB routes run in the vicinity of the Middle Road Site along Nathan Road and Salisbury Road. Public could travel to most of the

places in Hong Kong Island, Kowloon and New Territories by these road-based public transport services. **Figure 6.3** shows the existing bus routes and GMB routes and the location of their terminus respectively. Details of road-based public transport inventories within the AOI are summarized in **Appendix I**.

6.5.2 **Tables 6.5** and **6.6** summarize the locations of the bus and GMB termini and the corresponding bus and GMB routes currently under operation respectively.

Table 6.4 Locations of Bus Termini within the AOI

Ref.	Locations of Bus Terminus	Route No. in Operation
1	Tsim Sha Tsui Public Transport Interchange	5, 28, 234X
2	Canton Road	271, 271P

Table 6.5 Locations of GMB Termini within the AOI

Ref.	Locations of Bus Terminus	Route No. in Operation
1	Haiphong Road	62S, 610S

6.5.3 In addition to road-based public transport, the Middle Road Site is also well within the catchment area of mass transit. The MTR Tsim Sha Tsui and Tsim Sha Tsui East Stations are located right next to the Middle Road Site, where only a 1 to 3 minutes walk is required. The MTR West Rail Line and East Rail Line now terminate at Hom Hung Station. Passengers could now take MTR at Tsim Sha Tsui East Station to directly access Northwest New Territories via West Rail Line; and make interchanging at Hom Hung Station to access Northeast New Territories via the East Rail Line. In addition, passengers could also take MTR to access Kowloon, Hong Kong Island and Mei Fu/Tsuen Wan via the Tsuen Wan and Kwun Tong Lines at the Tsim Sha Tsui Station.

6.5.4 In view of the development scale of the proposed retail/commercial development at the Middle Road Site, the existing public transport system, which comprises a comprehensive road-based public transport network as well as the rail-based mass transit service, is therefore considered adequate to serve the proposed commercial development at the Middle Road Site to/from other parts of the Territory.

6.6 Review of Existing Loading and Unloading Activities

6.6.1 The existing loading and unloading arrangement on the section of Middle Road in front of the Middle Road Site is illustrated in **Figure 6.4.** As seen from the figure, a designated loading/unloading bay is currently provided at the north side of the Middle Road carriageway next to the stores along the road. To tackle possible double-parking problem on the road, a. clearway restriction (7:00 – 19:00) is posted along the road on both sides.

6.6.2 According to on-site observation, heavy loading/unloading and double-parking activities were frequently observed at the loading/unloading bay during noon and afternoon periods. Occasionally, double-parking next to the loading/unloading bay was also observed (both within and outside the restriction time) despite the 7:00a.m. – 7:00p.m. clearway restriction is implemented. Most of the double-parking vehicles were observed to stop for a short while (less than 15 minutes) and wait for passengers to pick-up.

6.6.3 Due to site constraints, there is not enough room to provide an additional pick-up/drop-off bay on this section of Middle Road to tackle the double-parking problem. Thus consideration is given to strengthening the existing traffic management on the section of Middle Road in front of the Middle Road Site. Extending the clearway restriction time to

7:00 – 24:00 may help but it is more important if the enforcement officials (e.g. HKPF) could conduct suitable and timely site inspections to ensure that those who violate traffic regulation would be properly prosecuted. This would have a threatening power to stop those motorists who do not obey the rules.

6.6.4 To cater for the future loading/unloading needs of the development of Middle Road Site, sufficient internal loading/unloading facilities shall be provided within the development. Reference could be made to HKPSG. (**Table 5.20** of this report refer)

6.7 Sensitivity Test - Closing of Middle Road Section connecting Salisbury Road

6.7.1 A sensitivity test was undertaken to study the feasibility of closing the section of Middle Road connecting Salisbury Road under the "Background Case" and "Design Case" scenarios.

6.7.2 Currently, the concerned section of Middle Road, the section of Middle Road in front of the Middle Road Site, Nathan Road and Salisbury Road form a one-way gyratory loop for the vehicle access or leave the Middle Road Site and the MTR Tsim Sha Tsui East Station PTI, as shown in **Figure 6.5**.

6.7.3 If the concerned section of Middle Road connecting Salisbury Road is to be closed, the section of Middle Road in front of the Middle Road Site will have to be converted from one-way westbound to 2-way traffic in order to maintain the current accesses of the Middle Road Site and the MTR Tsim Sha Tsui East Station PTI. In order to allow for u-turning of traffic, it is considered necessary to relax the 7:00 – 24:00 access restriction of private buses and good vehicles in the MTR Tsim Sha Tsui East Station PTI such that the all vehicles could make u-turning movement along the road via the internal road of the MTR Tsim Sha Tsui East Station PTI. In addition, to avoid any possible illegal stopping of vehicles and thus the traffic jam along the section of Middle Road in front of the Middle Road Site after the conversion to 2-way traffic of the road, it is also necessary to introduce 24-hour clearway restrictions in both directions along this section of Middle Road. **Figure 6.6** illustrates the possible traffic arrangement for closing the section of Middle Road connecting Salisbury Road while **Figure 6.7** shows the traffic routing to/from the Middle Road Site/MTR Tsim Sha Tsui East Station PTI before and after the closing of the section of Middle Road connecting Salisbury Road.

6.7.4 Based on the possible traffic arrangement and traffic routing to/from the Middle Road Site/MTR Tsim Sha Tsui East Station PTI after the closing of the section of Middle Road connecting Salisbury Road presented in **Figures 6.6** and **6.7**, a traffic model-run was carried out to produce a set of traffic flows for assessing the traffic impact of closing the section of Middle Road. The traffic flows of the key junctions affected by the proposed closure of the concerned section of Middle Road for the sensitivity test are shown in **Figure 6.8**.

6.7.5 Based on the traffic flows presented in Figure 6.8, capacity analysis was conducted for the affected key junctions and the results are summarized in Table 6.7 and Table 6.8.

Table 6.6 2021 Performance of Key Junctions affected by Closing of the Section of Middle Road Connecting Salisbury Road

Ref. No.	Junction	Type**	Junction Capacity*			
			Background		Design	
			AM	PM	AM	PM
J8	Middle Road/Nathan Road	P	0.42	0.69	0.49	0.74
J11	Salisbury Road/Kowloon Park Drive	S	37%	43%	37%	42%
J12	Salisbury Road/Nathan Road	S	11%	14%	10%	14%

* Figures in percentage represent 'Reserve Capacity" (RC) for signal controlled junctions and in decimal represent "Design Flow to Capacity" (DFC) ratio for roundabouts and priority junctions.

** S = Signal Controlled Junction
P = Priority Junction

(1) Background scenario: Middle Road Section connecting Salisbury Road closed with the presence of existing Middle Road Multi-storey Car Park.

(2) Design scenario: Middle Road Section connecting Salisbury Road closed with the presence of proposed Middle Road Site development.

Table 6.7 2021 Performance of Key Junctions Comparison – With/Without Middle Road Closure

Ref. No.	Junction	Type**	Junction Capacity*			
			Without Road Closure		With Road Closure	
			AM	PM	AM	PM
J8	Middle Road/Nathan Road	P	0.38	0.57	0.49	0.74
J11	Salisbury Road/Kowloon Park Drive	S	34%	42%	37%	42%
J12	Salisbury Road/Nathan Road	S	5%	5%	10%	14%

* Figures in percentage represent 'Reserve Capacity" (RC) for signal controlled junctions and in decimal represent "Design Flow to Capacity" (DFC) ratio for roundabouts and priority junctions.

** S = Signal Controlled Junction
P = Priority Junction

6.7.6 From **Table 6.7** and **Table 6.8**, it can be seen that the junctions affected by the closure of the section of Middle Road connecting Salisbury Road would still operate within their design capacity during peak hours in 2021 under both the Background and Design scenarios. The closure of the section of Middle Road connecting Salisbury Road would not significantly worsen the performance of the affected junctions.

6.7.7 Although the affected junctions would not suffer from capacity problem due to the closure of the section of Middle Road connecting Salisbury Road, however, it is not supported from a traffic management viewpoint. Since there is not enough space for providing a u-turning facility on Middle Road, the road closure scheme as shown in **Figure 6.6** will hinge on the internal road of the MTR Tsim Sha Tsui East Station PTI which is a private road of MTRC restricted for the use of private buses and goods vehicles during 7:00 and 24:00. Therefore, public access for u-turn after implementing the scheme of closing the section of Middle Road connecting Salisbury Road will be infeasible.

6.7.8 In addition, there is not enough manoeuvring space for long vehicles turning from Nathan Road southbound to Middle Road. Kerb at the junction of Nathan Road / Middle Road has to be set back in order to provide more space for long vehicles turning. This will result in narrowing down the footpath and worsening the walking environment.

6.7.9 Furthermore, as the section of Middle Road in front of the Middle Road Site will need to be converted from 1-way traffic to 2-way traffic to maintain the current accesses of the Middle Road Site and the MTR Tsim Sha Tsui East Station PTI, only 1 traffic lane could be provided for each direction of the road under this 2-way traffic arrangement. Since double-parking activities are occasionally observed next to the loading/unloading bay on the road, the Middle Road eastbound traffic lane next to the loading/unloading bay may be occupied by the double-parking traffic and hence blocking the incoming traffic from Nathan Road to this section of Middle Road, creating traffic queue along the primary distributor Nathan Road. This non-quantifiable traffic impact will create potential traffic congestions which could not be properly represented in the junction capacity analysis and will affect the traffic circulation/operation in the area.

6.7.10 In view of above, the closure of the section of Middle road connecting Salisbury Road is not supported from a traffic and transport ground.

7. SUMMARYAND CONCLUSION

7.1 Summary

7.1.1 The objectives of the Study are to

i) Review existing traffic conditions and examine the capacities of the existing roads, junctions and car parking/loading/unloading facilities;
ii) Forecast future traffic flows in the vicinity of the development, identify problem areas and devise appropriate traffic improvement measures to redress the problems if any; and
iii) Assess the parking demand in the vicinity of the development, in particular the effect resulting from imminent re-opening of the public car park in New World Centre and recommend the extent of re-provision of public parking spaces at the Middle Road Site.

7.1.2 Traffic surveys including classified turning movement count, link flow count, trip generation survey, pedestrian trip generation survey, pedestrian flow survey as well as inventory survey on the existing pedestrian and public transport facilities were carried out to facilitate the validation of the traffic model developed for the Study; to derive reasonable development traffic for the Middle Road Site and to predict the future pedestrian flows generated by the Middle Road Site for pedestrian assessment.

7.1.3 The 2008 BDTM for Kowloon West (K1 Model) was adopted as a base with necessary refinement and updating for the traffic forecasts of the Study. The model was updated and refined to validate against 2011 observed traffic flows. The adjustments made to the base year trip matrices during the validation process were incorporated to produce the future year trip matrices for the 2016 and 2021 models.

7.1.4 A parking demand assessment was conducted to forecast the parking demand within 500m from the Middle Road Site and recommend on the number of public car parking spaces to be re-provided at the Middle Road Site upon re-development, and the temporary re-provision of parking spaces during construction stage. Although the assessment results revealed that there will be car parking provision surplus within 500m from the Middle Road Site, it is still considered that the results may not reflect the real driving habit of drivers. In view of the above, an additional parking demand assessment focusing only 300m from the Middle Road Site was also conducted.

7.1.5 According to the results of the assessment focused on 300m from the Middle Road Site, it will require 819 and 775 public car parking spaces in 2016 and 2021 respectively. Since there will only be 430 public car parking spaces provided within 300m from the Middle Road Site, a minimum of 389 and 345 public car parking spaces shall be re-provided in 2016 and 2021 respectively to satisfy the anticipated car parking demand. For the temporary private car parking spaces re-provision in 2016, it is considered tolerable to use the provision in the existing car parks which are located within 500m from the Middle Road Site to absorb the anticipated parking demand. For the permanent provision, the required private car parking spaces will be provided within the Middle Road Site.

7.1.6 In addition, a minimum of 46 and 39 motorcycle parking spaces shall be re-provided in 2016 and 2021 respectively. For the temporary motorcycle parking spaces re-provision in 2016, it is proposed to temporarily close the nearside lane of the section of Middle Road connecting Salisbury Road and re-provide the 46 motorcycle parking spaces on the nearside lane. For the permanent provision, the required motorcycle parking spaces will be provided within the Middle Road Site. **Table 7.1** below shows a summary of the results of the parking demand assessment.

Table 7.1 Summary of Parking Demand Assessment Results

Facilities	Design Year	Demand (nos. of space)	Supply (nos. of space)	Re-provision (nos. of space)
Private Car Parking Space	2016	819	430	389 (to be absorbed by other public car parks with 500m)
	2021	775	430	345 (to be provided within the Middle Road Site after redevelopment)
Motorcycle Parking Space	2016	137	91	46 (to be re-provided at the section of Middle Road connecting Salisbury Road)
	2021	130	91	39 (to be provided within the Middle Road Site after redevelopment)

7.1.7 For the parking provision solely for the commercial development of the Middle Road Site, it is proposed in accordance with HKPSG. The overall car parking provision (including public car parking spaces and car parking spaces for the commercial development) for the Middle Road Site was summarized in **Table 5.22**.

7.1.8 Traffic impact assessments were conducted to cover the following scenarios for design years 2016 and 2021:

- 2016 Background Case – Without the construction of proposed commercial development at the Middle Road Site;
- 2016 Design Case – With the construction of proposed commercial development at the Middle Road Site;
- 2021 Background Case – Without the proposed commercial development at the Middle Road Site;
- 2021 Design Case – With the proposed commercial development at the Middle Road Site

7.1.9 Fifteen (15) key junctions in close proximity to the Middle Road Site were assessed. The results of capacity analysis indicated that all the assessed junctions would operate satisfactorily with RC greater than 5% during peak hours in design years 2016 and 2021 under all scenarios except for the junctions of Austin Road/Chatham Road South (J3). In fact, even without the proposed commercial development at the Middle Road Site, this junction would still operate with negative reserve capacity due to natural traffic growth and the construction or development traffic of the Middle Road Site would not worsen its performance. In view of this, it is considered that the construction and permanent traffic impacts arising from the proposed commercial development at the Middle Road Site is insignificant.

7.1.10 Pedestrian assessment was also conducted at the several pedestrian facilities in close proximity to the Middle Road Site and the findings indicated that the performance of all the assessed pedestrian facilities is considered satisfactory even without / with the redevelopment pedestrian traffic from a pedestrian point of view.

7.1.11 In view of the development scales of the Middle Road Site, the existing public transport system, which comprises a comprehensive road-based public transport network as well

as the rail-based mass transit service, is therefore considered adequate to serve the Middle Road Site to/from other parts of the Territory.

7.1.12 A sensitivity test was also conducted to study the possibility of closing the section of Middle Road connecting Salisbury Road. The results indicated that the closure of the section of Middle Road connecting Salisbury Road would be infeasible. Furthermore, it will create non-quantifiable traffic impact resulting in traffic queue on Nathan Road. Thus, it is not supported from a traffic and transport ground.

7.2 Conclusion

7.2.1 Based on the traffic assessment findings of the Study, the proposed commercial development at the Middle Road Site is sustainable from traffic points of view in the design years 2016 and 2021.

7.2.2 The results of parking demand assessment revealed that a minimum of 389 and 345 public car parking spaces shall be re-provided in 2016 and 2021 respectively to satisfy the anticipated car parking demand. In addition, a minimum of 46 and 39 motorcycle parking spaces shall be re-provided in 2016 and 2021 respectively. For the temporary private car parking spaces re-provision in 2016, it is considered tolerable to use the provision in the existing car parks within 500m from the Middle Road Site to absorb the anticipated parking demand. For the temporary motorcycle parking spaces re-provision in 2016, it is proposed to temporarily close the nearside lane of the section of Middle Road connecting Salisbury Road and re-provide the 46 motorcycle parking spaces on the nearside lane. For the permanent provision, the required private car and motorcycle parking spaces will be provided within the Middle Road Site.

7.2.3 For the parking provision solely for the commercial development of the Middle Road Site, it is recommended in accordance with HKPSG. A total of 200 private car parking spaces, 40 motorcycle parking spaces and 23 loading/unloading bays for goods vehicle are proposed.

7.2.4 The result of the sensitivity test for the possibility of closing the section of Middle Road connecting Salisbury Road indicated that the closure of the section of Middle Road connecting Salisbury Road is not supported from a traffic and transport ground.

Figures

835000 E

835600 E

836200 E

836800 E

N

818000 N

817400 N

AUSTIN ROAD

HILLWOOD ROAD

KIMBERLEY ROAD

GRANVILLE ROAD

CAMERON ROAD

CANTON ROAD

NATHAN ROAD

HAIPHONG ROAD

KOWLOON PARK DRIVE

MODY ROAD

CHATHAM ROAD SOUTH

PEKING ROAD

MIDDLE ROAD

THE MIDDLE ROAD SITE

SALISBURY ROAD

LEGEND:

MIDDLE ROAD CAR PARK

AREA OF INFLUENCE

AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

AREA OF INFLUENCE OF THE STUDY

SCALE	A3 1 : 6000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 1.1
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\501.dwg 01/12/2011 14:34 LIML

835000 E

835600 E

836200 E

836800 E

N

818000 N

817400 N

AUSTIN ROAD

HILLWOOD ROAD

KIMBERLEY ROAD

GRANVILLE ROAD

CAMERON ROAD

NATHAN ROAD

CANTON ROAD

HAIPHONG ROAD

KOWLOON PARK DRIVE

PEKING ROAD

MODY ROAD

CHATHAM ROAD SOUTH

MIDDLE ROAD

THE MIDDLE ROAD SITE

SALISBURY ROAD

LEGEND:

MIDDLE ROAD CAR PARK

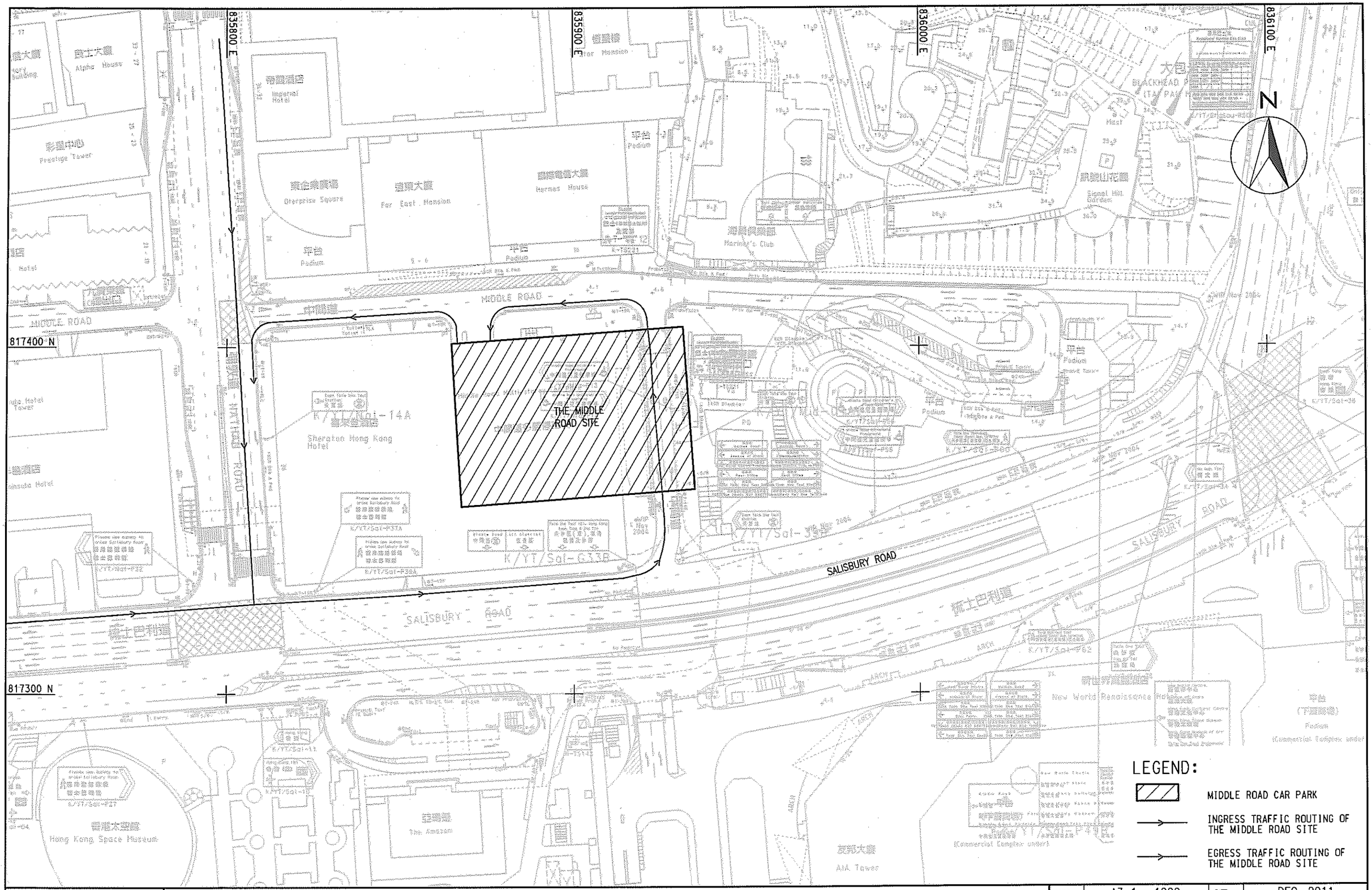
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

SITE LOCATION PLAN

SCALE	A3 1 : 6000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 2.1
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\502.dwg 01/12/2011 15:58 LEIGJS



AECOM

AGREEMENT NO. TO 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

INGRESS / EGRESS TRAFFIC ROUTING OF THE MIDDLE ROAD SITE UPON REDEVELOPMENT

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 2.2
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\503.dwg 02/12/2011 13:32 LEIGJS

835000 E
835500 E
836000 E
836500 E
818000 N
817500 N
AUSTIN ROAD
HILLWOOD ROAD
KIMBERLEY ROAD
GRANVILLE ROAD
CAMERON ROAD
NATHAN ROAD
CANTON ROAD
HAIPHONG ROAD
KOWLOON PARK DRIVE
MODY ROAD
CHATHAM ROAD SOUTH
PEKING ROAD
MIDDLE ROAD
THE MIDDLE ROAD SITE
SALISBURY ROAD
N

LEGEND:

- MIDDLE ROAD CAR PARK
- AREA OF INFLUENCE
- SIGNAL JUNCTION
- PRIORITY JUNCTION

AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING TRAFFIC MANAGEMENT WITHIN AOI

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.1
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\504.dwg 01/12/2011 15:05 LIML

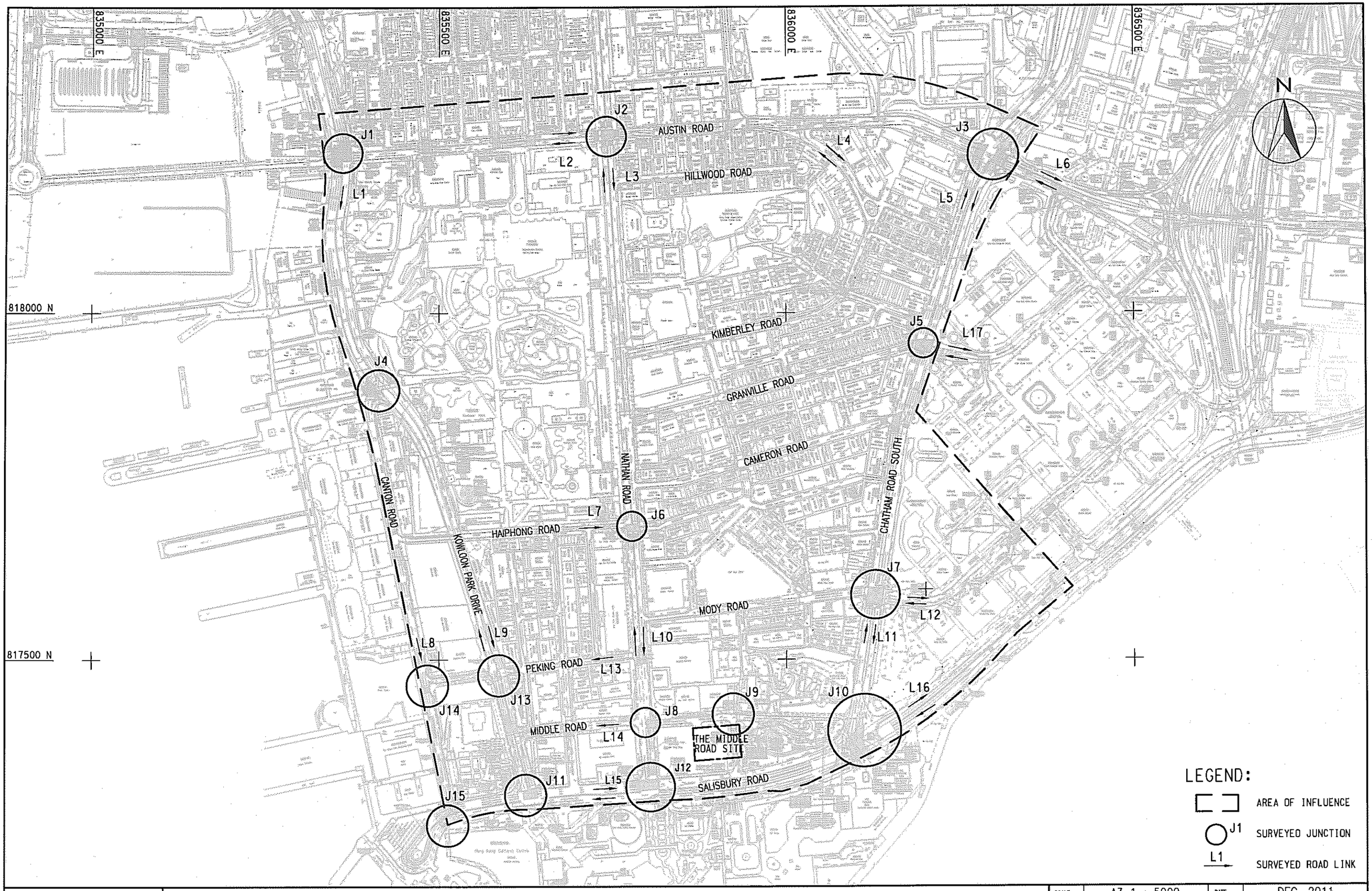
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING PEDESTRIAN FACILITIES WITHIN AOI

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.2
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\505.dwg 01/12/2011 15:42 LEIGJS



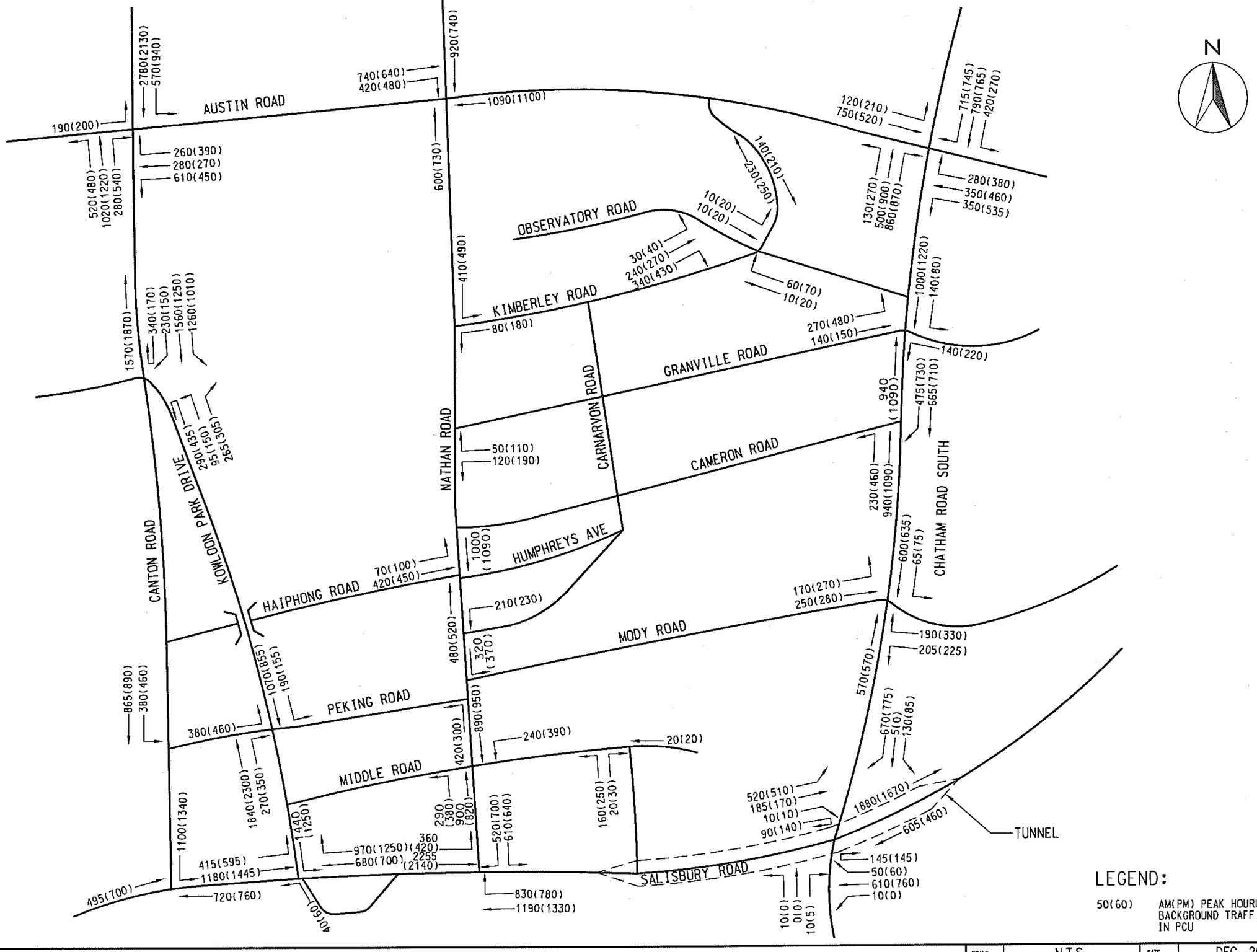
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF SURVEYED JUNCTIONS AND ROAD LINKS

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.3
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\506.dwg 01/12/2011 15:20 LML



LEGEND:

50(60) AM(PM) PEAK HOURLY BACKGROUND TRAFFIC FLOWS IN PCU

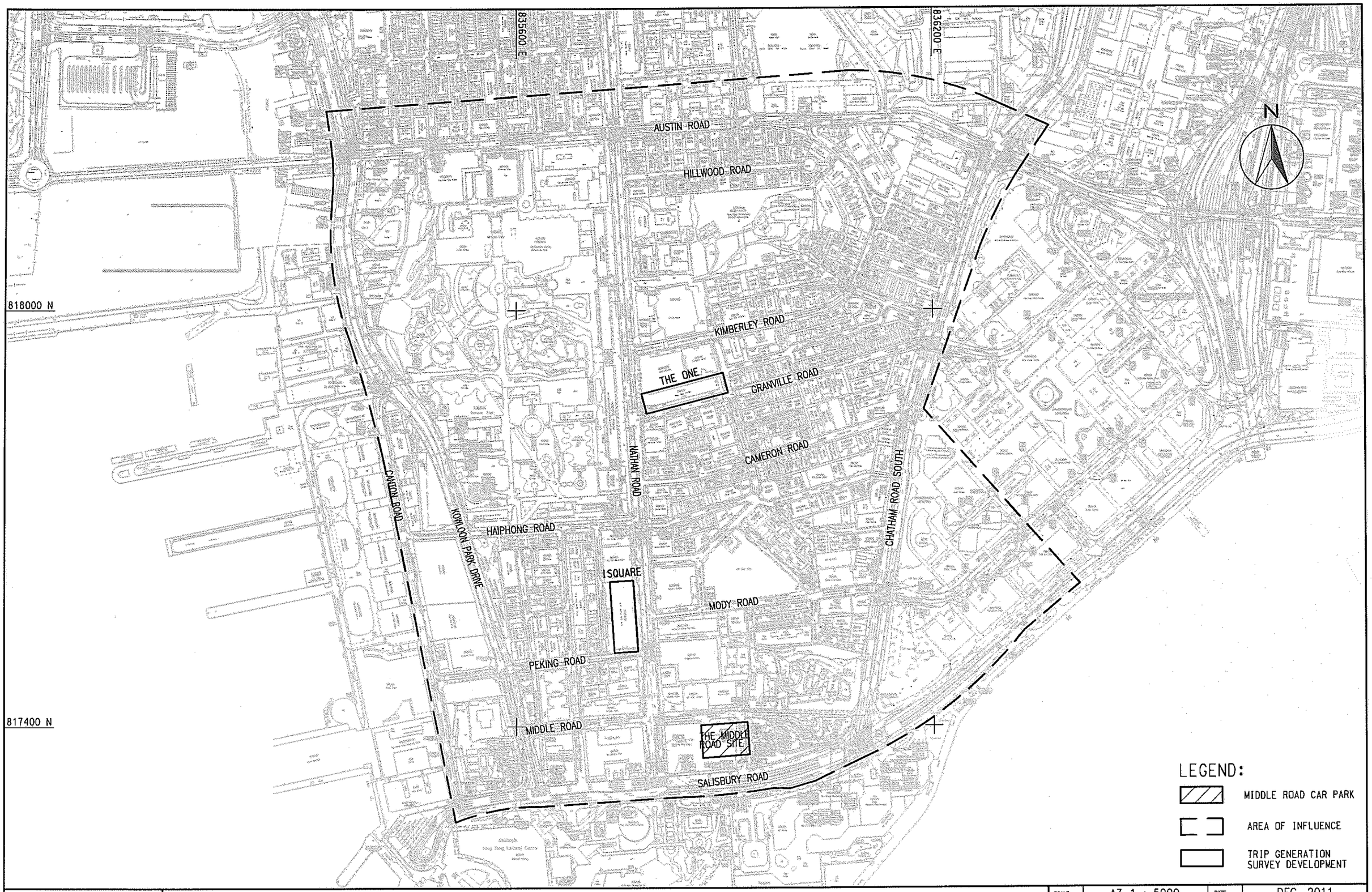
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2011 OBSERVED PEAK HOUR TRAFFIC FLOWS WITHIN THE AOI

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	LEIM
JOB No.	60214565	DRAWING No.	FIG 3.4
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\507.dwg 01/12/2011 15:53 LEIGJS



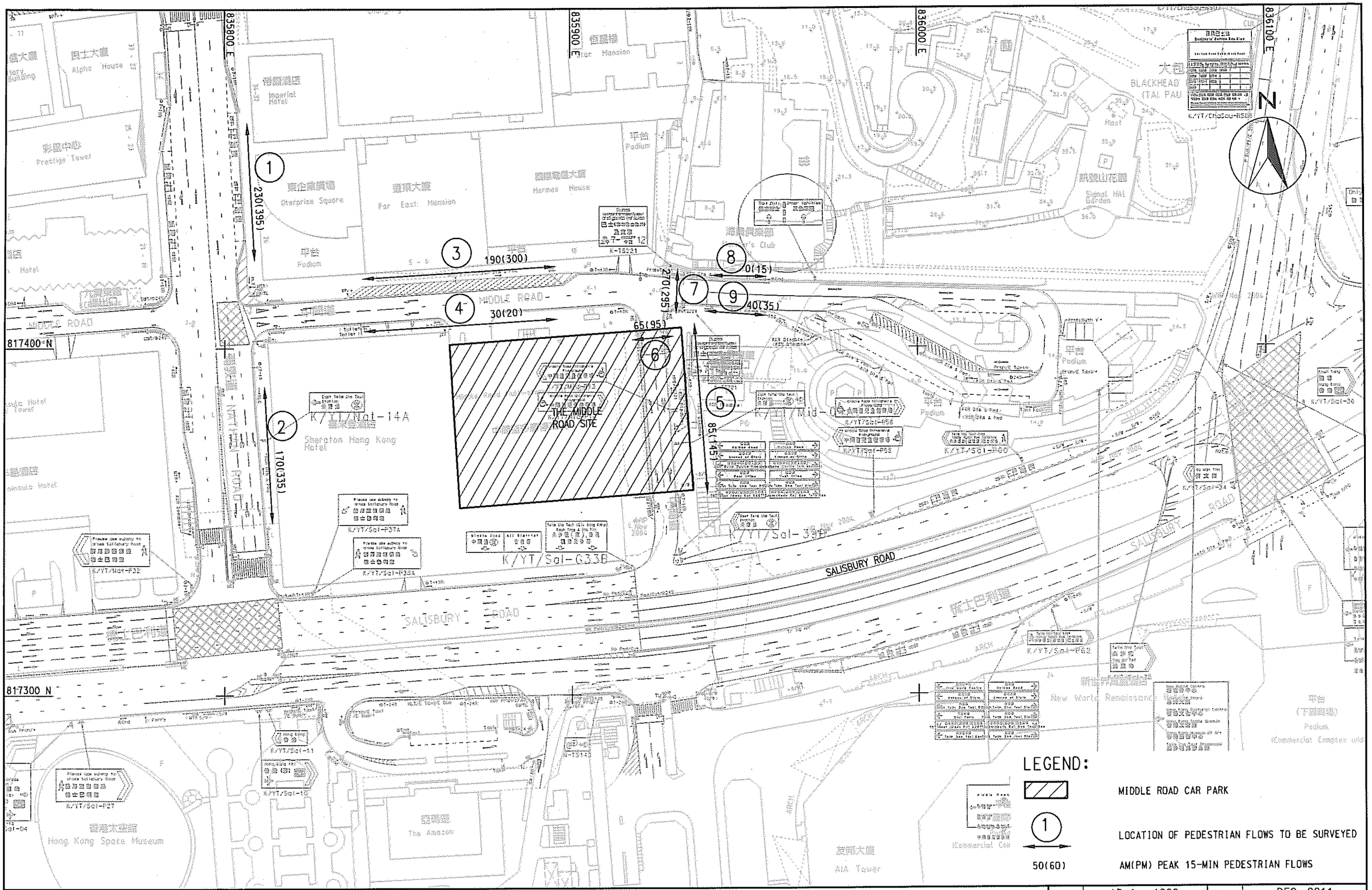
AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF TRIP GENERATION SURVEY

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.5
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\531.dwg 02/12/2011 15:04 LIML



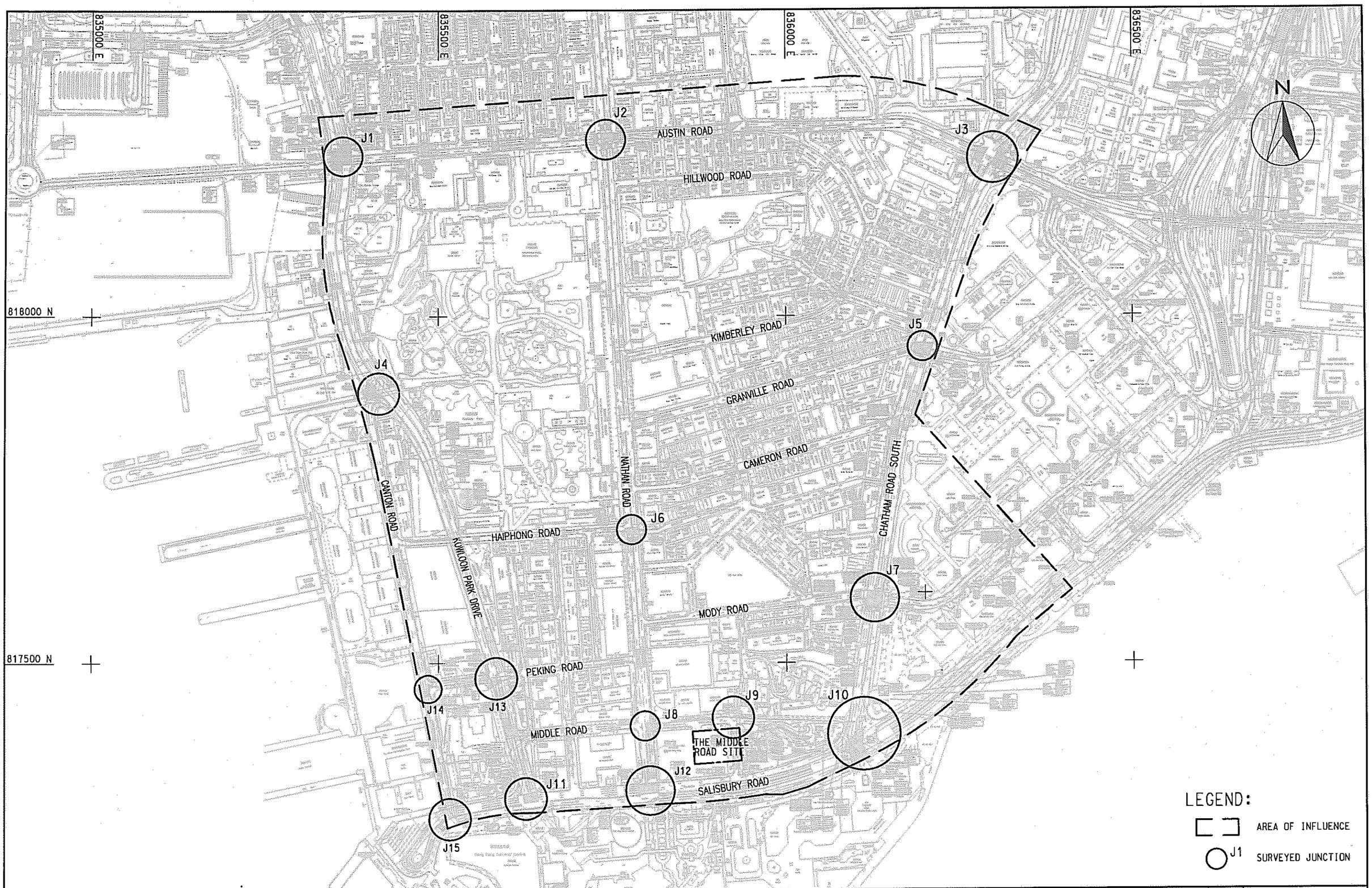
AECOM

AGREEMENT NO. TO 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2011 OBSERVED PEAK 15-MIN PEDESTRIAN FLOWS

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.6
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\509.dwg 01/12/2011 15:57 LIML



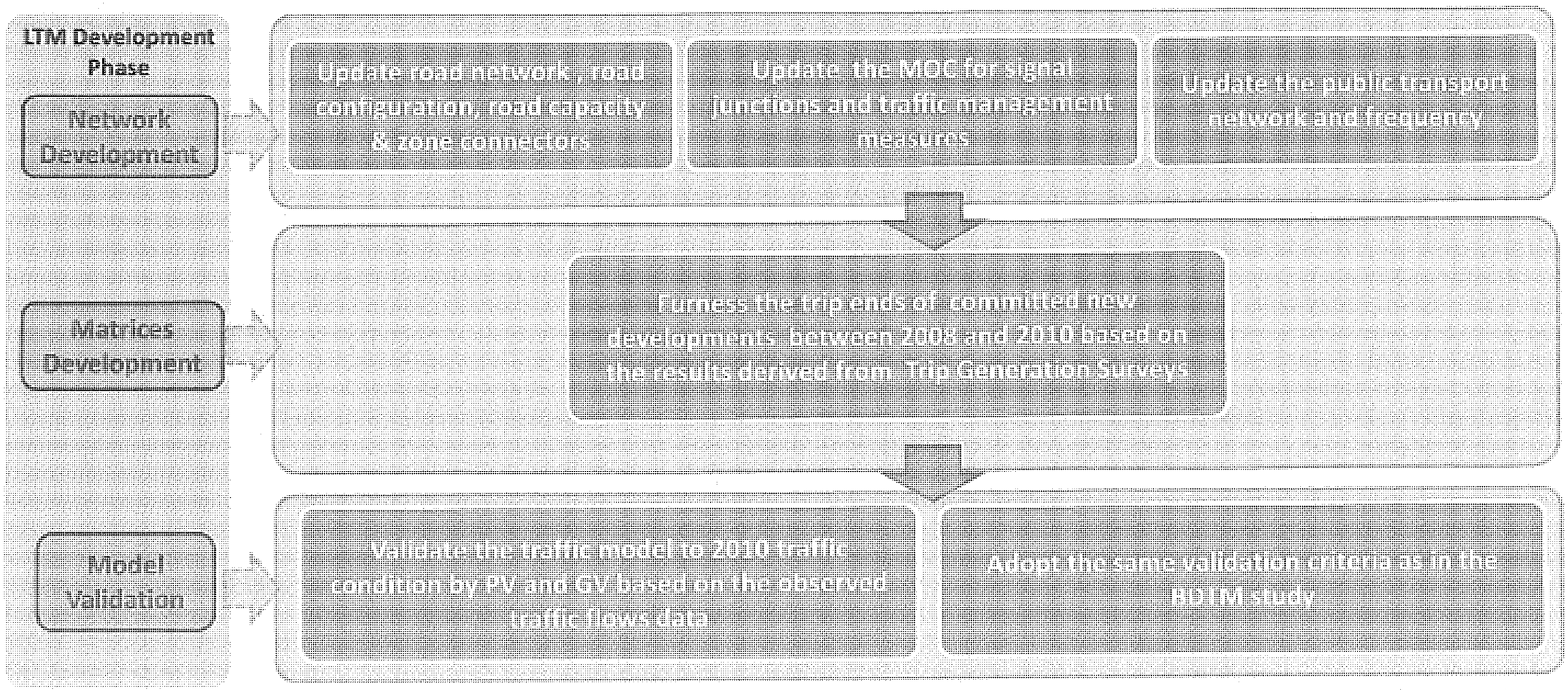
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATION OF ASSESSSD JUNCTIONS

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 3.7
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\510.dwg 01/12/2011 16:10 LEIGJS

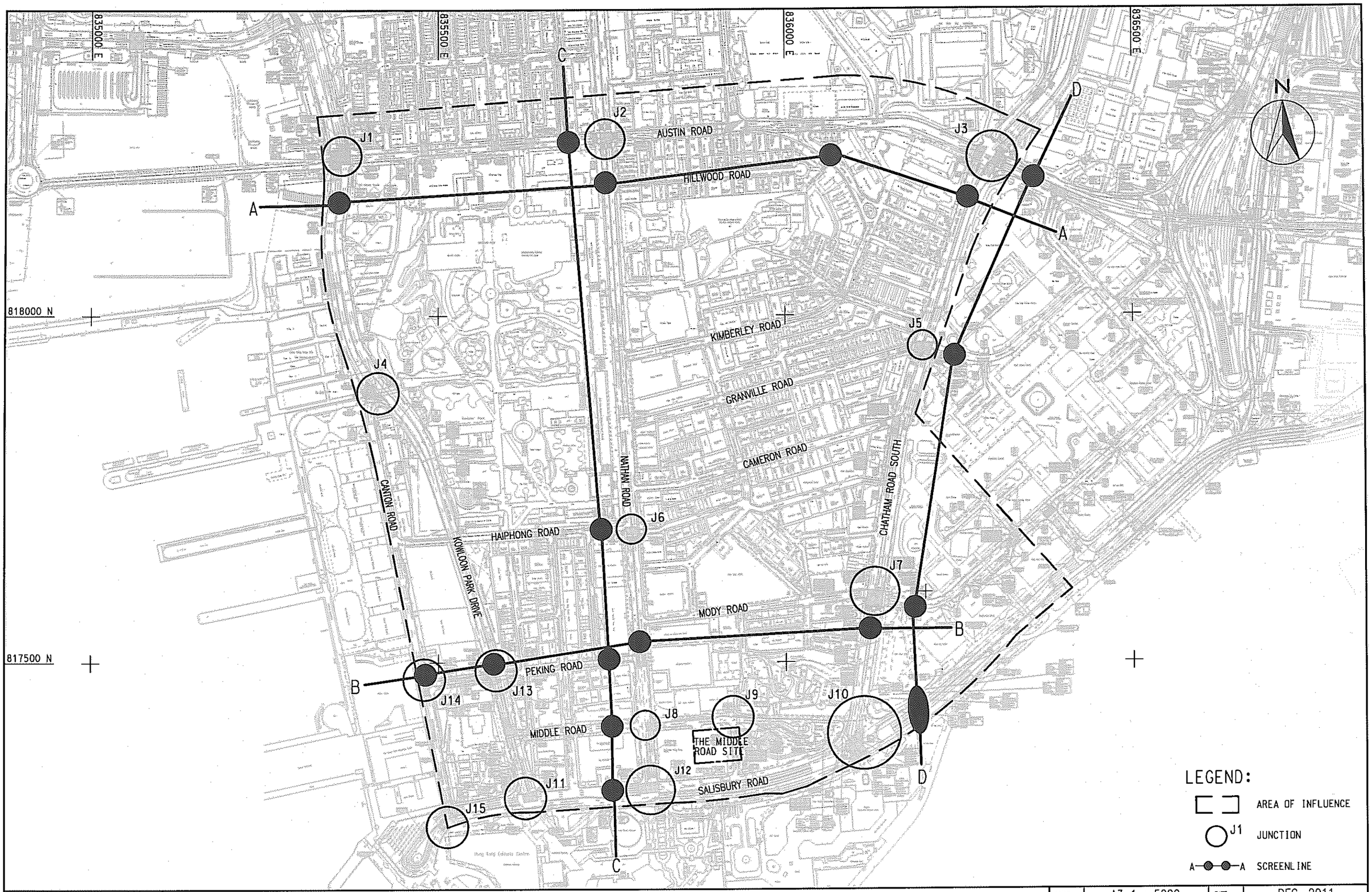


AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE
MODELLING APPROACH FLOW
DIAGRAM FOR BASE YEAR MODEL DEVELOPMENT

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	LML
JOB No.	60214565	DRAWING No. FIG 4.1	REV –

P:\Projects\60214565\DRAWING\REPORT\DF\511.dwg 01/12/2011 16:55 LML



AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATION OF VALIDATED SCREENLINES AND JUNCTIONS

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 4.2
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\512.dwg 01/12/2011 14:17 WANGHC

Future Year Network Development

Update future road network according to the obtain planned & committed road schemes

Refine zones and connectors according to the future year development plan

Update PT route & frequency (if any) additional services

Future Year Reference Matrices Development

Apply validation adjustment factors to reflect the 2010 validation changes

Calculate future year background development trip ends within study area

Planning data for committed developments

Trip Gen/Att

Furness initial future year BiPTW matrices to revised trip ends

Design Year Reference Matrices

LATM Assignment (Reference Scenario)

Design Year Design Matrices Development

Design year reference matrices

Calculate subject development trip ends of the Area

Development parameters for the Area

Trip Gen/Att

Furness the future year reference matrices to revised trip ends of the Area

Future Year Design Matrices

LATM Assignment (Design Scenario)

AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

MODELLING APPROACH FLOW
DIAGRAM FOR DESIGN YEAR MODEL DEVELOPMENT

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	LML
JOB No.	60214565	DRAWING No.	FIG 4.3
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\513.dwg 01/12/2011 16:57 LML

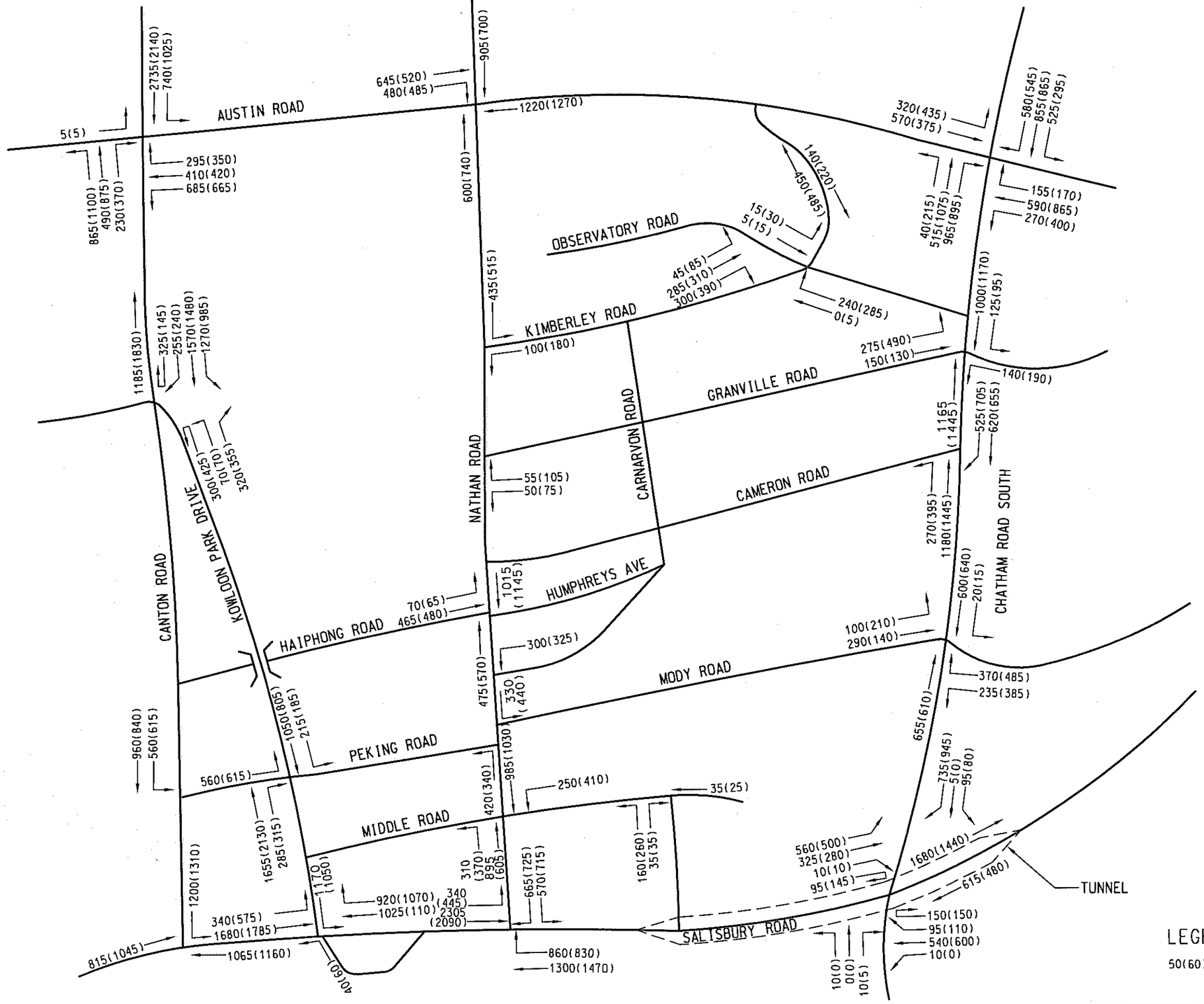
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

ANTICIPATED CONSTRUCTION TRAFFIC ROUTINGS

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 4.4
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\514.dwg 01/12/2011 16:00 LEIGJS



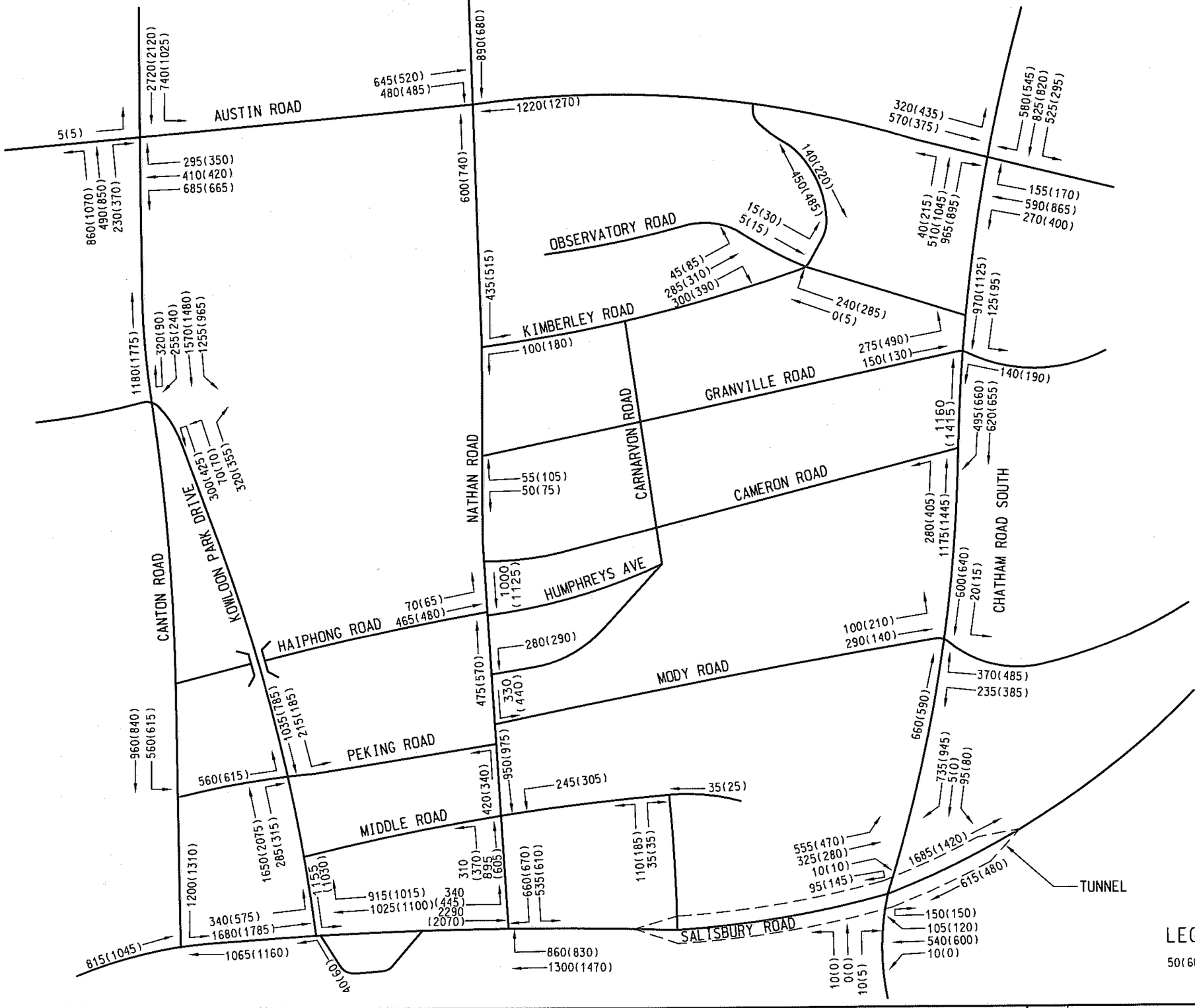
AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2016 FORECAST BACKGROUND PEAK HOUR TRAFFIC FLOWS - WITHOUT CONSTRUCTION

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	LEIM
JOB No.	60214565	DRAWING No.	FIG 4.5
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\515.dwg 01/12/2011 14:07 WANGHC



LEGEND:

50(60) AM(PM) PEAK HOURLY TRAFFIC FLOWS IN PCU

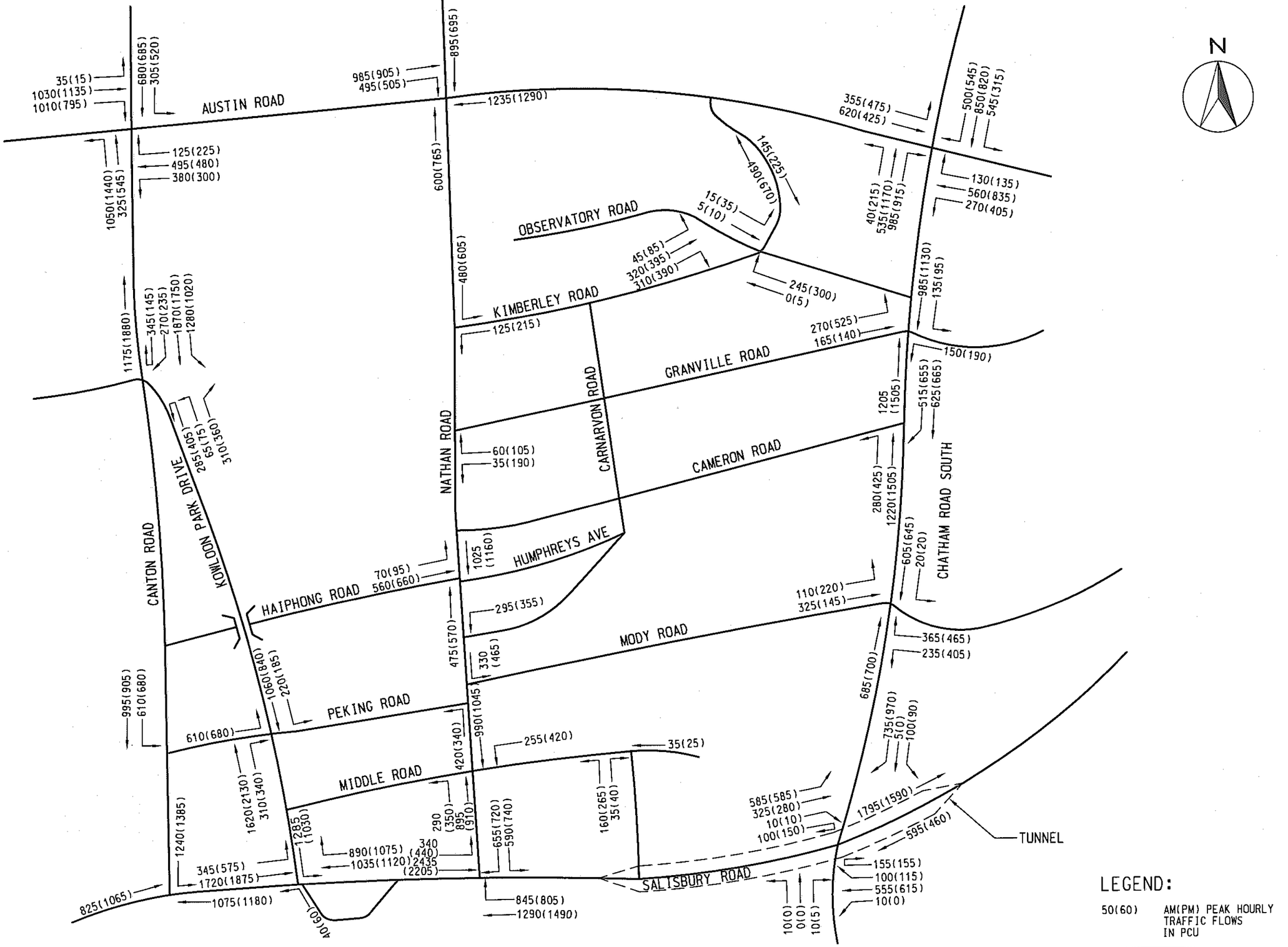
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2016 FORECAST DESIGN PEAK HOUR TRAFFIC FLOWS – WITH CONSTRUCTION

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	LEIM
JOB No.	60214565	DRAWING No.	FIG 4.6
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\516.dwg 02/12/2011 13:29 LEIGJS



LEGEND:

50(60) AM(PM) PEAK HOURLY TRAFFIC FLOWS IN PCU

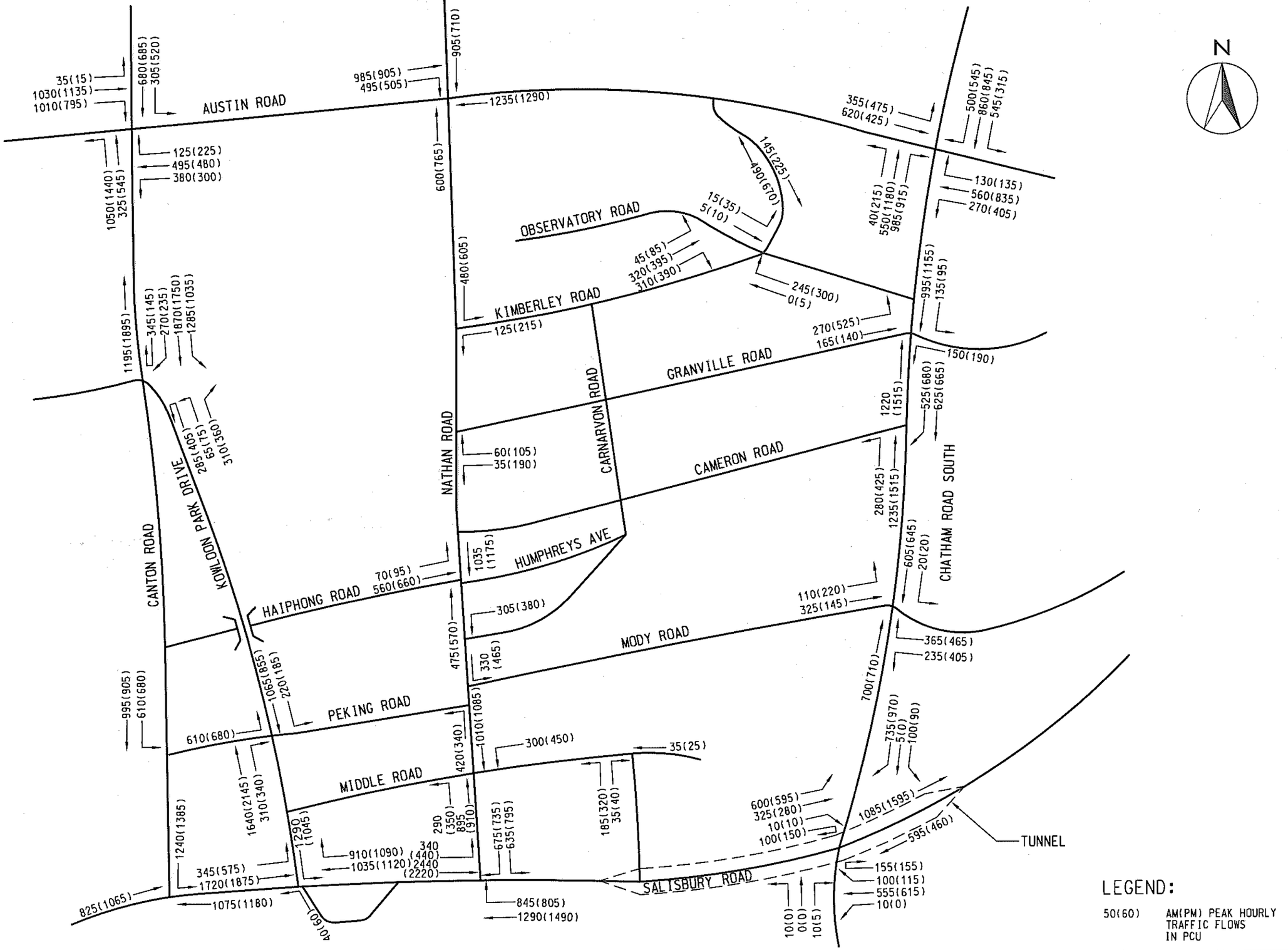
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2021 FORECAST BACKGROUND PEAK HOUR TRAFFIC FLOWS – WITHOUT DEVELOPMENT PROPOSED

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	MLY
JOB No.	60214565	DRAWING No.	FIG 4.7
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\517.dwg 02/12/2011 10:35 ZHANGH3



LEGEND:

50(60) AM(PM) PEAK HOURLY TRAFFIC FLOWS IN PCU

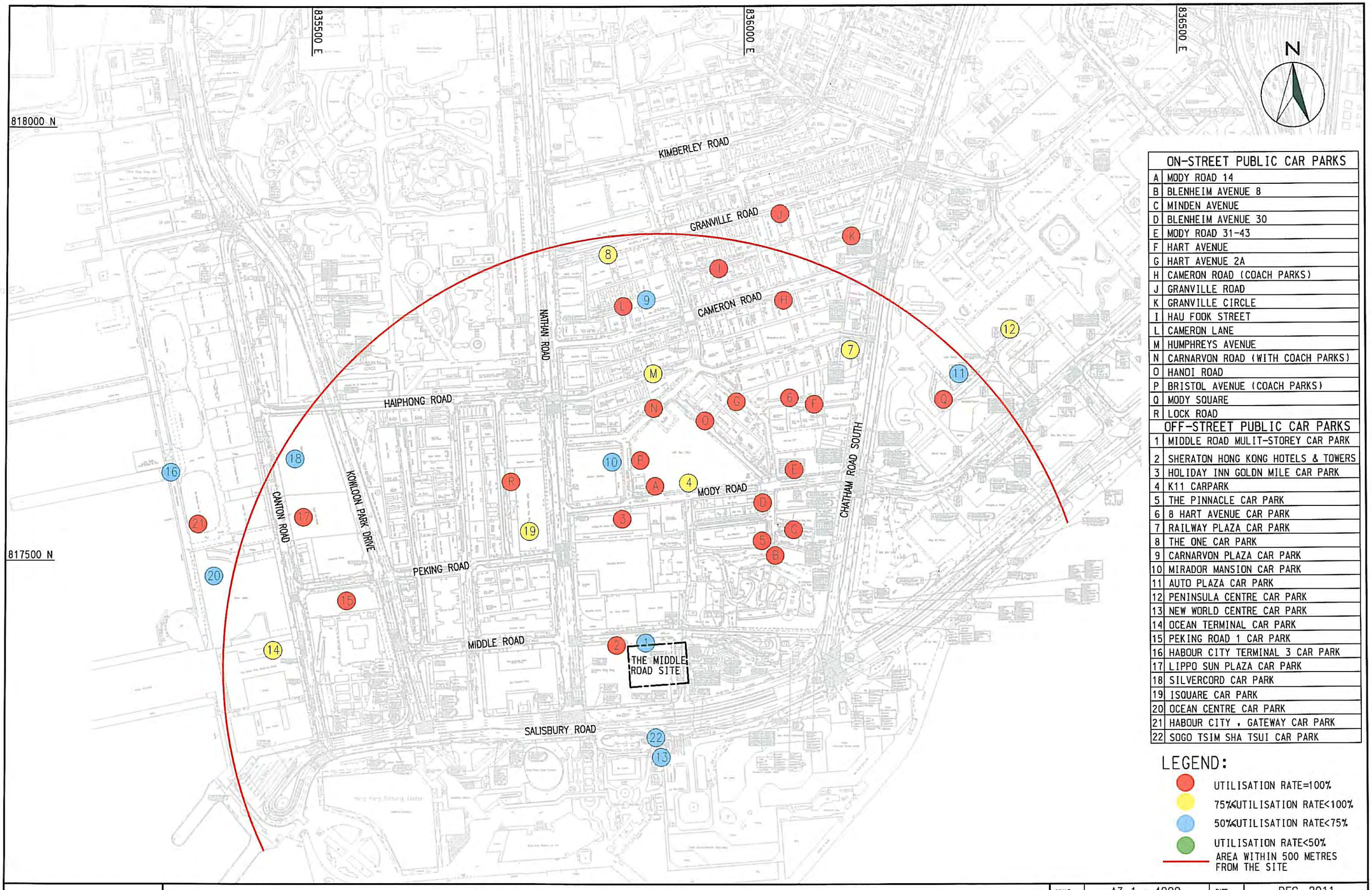
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2021 FORECAST DESIGN PEAK HOUR TRAFFIC FLOWS – WITH PROPOSED DEVELOPMENT

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	–	DRAWN	MLY
JOB No.	60214565	DRAWING No.	FIG 4.8
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\518.dwg 02/12/2011 10:36 ZHANGH3



ON-STREET PUBLIC CAR PARKS	
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
J	GRANVILLE ROAD
K	GRANVILLE CIRCLE
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
O	HANOI ROAD
P	BRISTOL AVENUE (COACH PARKS)
Q	MODY SQUARE
R	LOCK ROAD
OFF-STREET PUBLIC CAR PARKS	
1	MIDDLE ROAD MULIT-STOREY CAR PARK
2	SHERATON HONG KONG HOTELS & TOWERS
3	HOLIDAY INN GOLDN MILE CAR PARK
4	K11 CARPARK
5	THE PINNACLE CAR PARK
6	8 HART AVENUE CAR PARK
7	RAILWAY PLAZA CAR PARK
8	THE ONE CAR PARK
9	CARNARVON PLAZA CAR PARK
10	MIRADOR MANSION CAR PARK
11	AUTO PLAZA CAR PARK
12	PENINSULA CENTRE CAR PARK
13	NEW WORLD CENTRE CAR PARK
14	OCEAN TERMINAL CAR PARK
15	PEKING ROAD 1 CAR PARK
16	HABOUR CITY TERMINAL 3 CAR PARK
17	LIPPO SUN PLAZA CAR PARK
18	SILVERCORD CAR PARK
19	ISQUARE CAR PARK
20	OCEAN CENTRE CAR PARK
21	HABOUR CITY , GATEWAY CAR PARK
22	SOGO TSIM SHA TSUI CAR PARK

LEGEND:

- UTILISATION RATE=100%
- 75%≤UTILISATION RATE<100%
- 50%≤UTILISATION RATE<75%
- UTILISATION RATE<50%
- AREA WITHIN 500 METRES FROM THE SITE

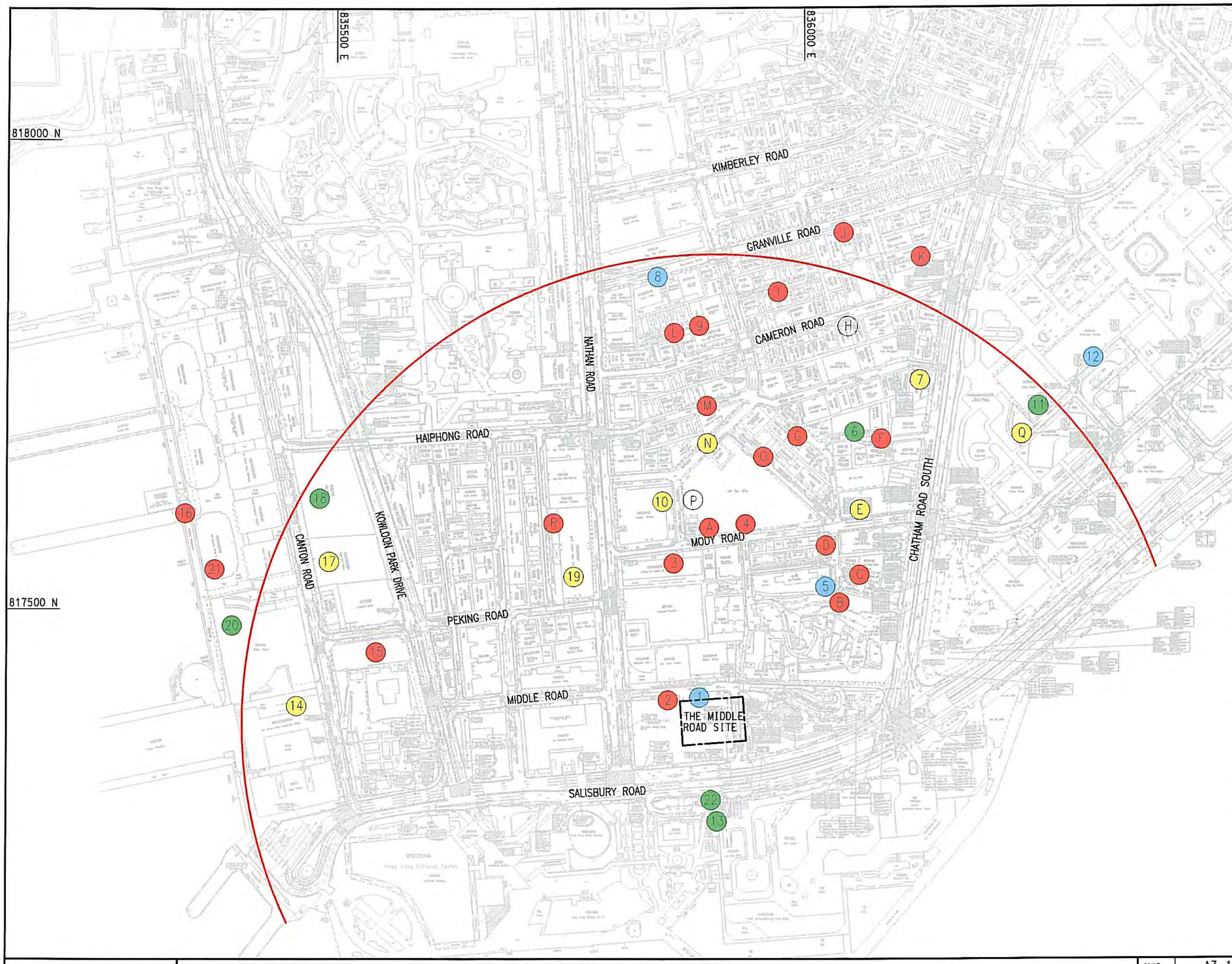
AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF SURVEYED PUBLIC CARPARK WITHIN 500m RADIUS OF THE MIDDLE ROAD SITE AND UTILISATION RATE ON WEEKEND

SCALE	A3 1 : 4000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 5.1
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\519.dwg 01/12/2011 14:11 WANGHC



ON-STREET PUBLIC CAR PARKS	
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
J	GRANVILLE ROAD
K	GRANVILLE CIRCLE
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
O	HANOI ROAD
P	BRISTOL AVENUE (COACH PARKS)
Q	MODY SQUARE
R	LOCK ROAD
OFF-STREET PUBLIC CAR PARKS	
1	MIDDLE ROAD MULIT-STOREY CAR PARK
2	SHERATON HONG KONG HOTELS & TOWERS
3	HOLIDAY INN GOLDN MILE CAR PARK
4	K11 CARPARK
5	THE PINNACLE CAR PARK
6	8 HART AVENUE CAR PARK
7	RAILWAY PLAZA CAR PARK
8	THE ONE CAR PARK
9	CARNARVON PLAZA CAR PARK
10	MIRADOR MANSION CAR PARK
11	AUTO PLAZA CAR PARK
12	PENINSULA CENTRE CAR PARK
13	NEW WORLD CENTRE CAR PARK
14	OCEAN TERMINAL CAR PARK
15	PEKING ROAD 1 CAR PARK
16	HABOUR CITY TERMINAL 3 CAR PARK
17	LIPPO SUN PLAZA CAR PARK
18	SILVERCORD CAR PARK
19	ISQUARE CAR PARK
20	OCEAN CENTRE CAR PARK
21	HABOUR CITY , GATEWAY CAR PARK
22	SOGO TSIM SHA TSUI CAR PARK

LEGEND:

- UTILISATION RATE=100%
- 75%≤UTILISATION RATE<100%
- 50%≤UTILISATION RATE<75%
- UTILISATION RATE<50%
- AREA WITHIN 500 METRES FROM THE SITE

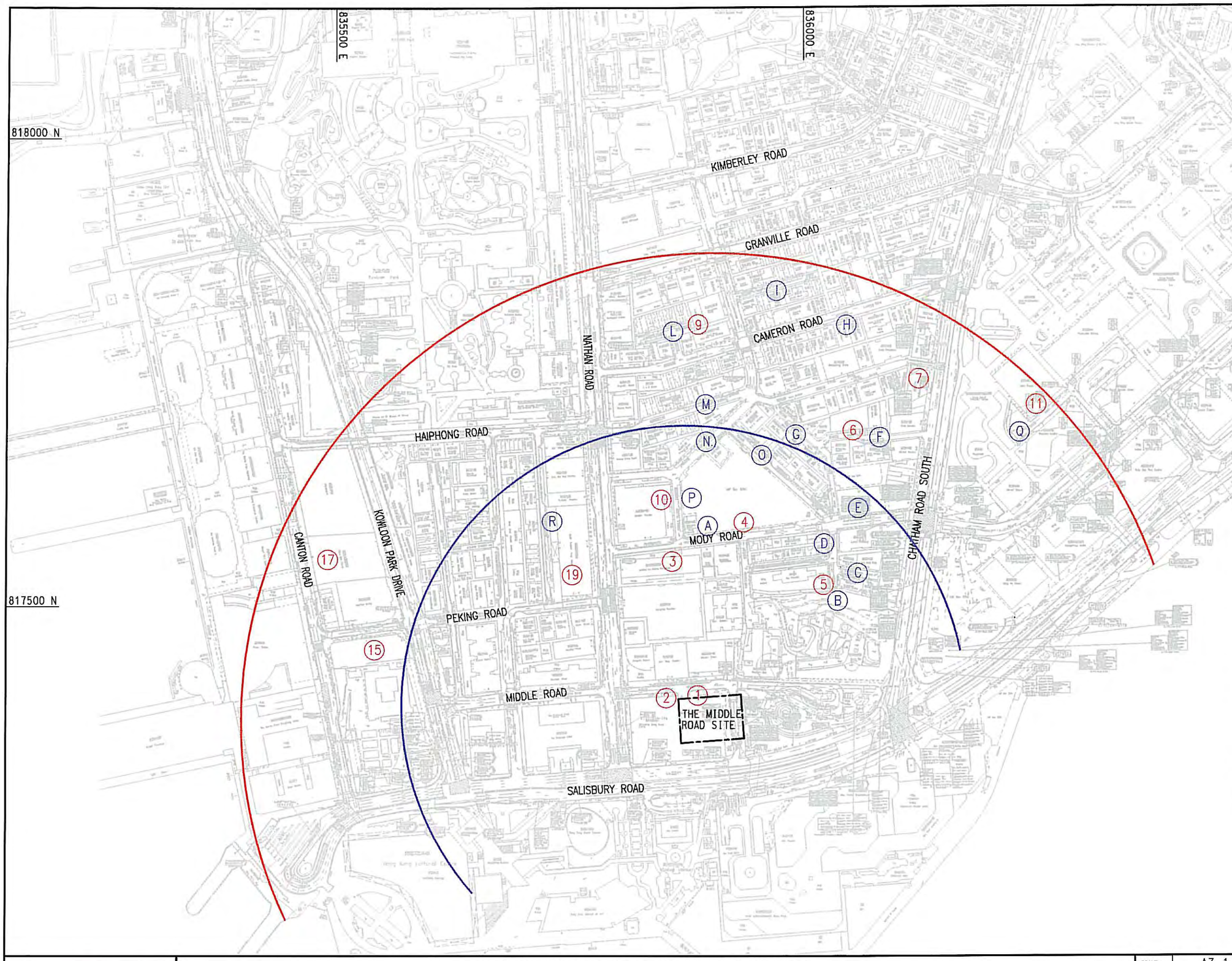
AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF SURVEYED PUBLIC CARPARK WITHIN 500m RADIUS OF THE MIDDLE ROAD SITE AND UTILISATION RATE ON WEEKDAY

SCALE	A3 1 : 4000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 5.2
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\520.dwg 02/12/2011 10:38 ZHANGH3



	ON-STREET PUBLIC CAR PARKS
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
O	HANOI ROAD
P	BRISTOL AVENUE (COACH PARKS)
Q	MODY SQUARE
R	LOCK ROAD
	OFF-STREET PUBLIC CAR PARKS
1	MIDDLE ROAD MULIT-STOREY CAR PARK
2	SHERATON HONG KONG HOTELS & TOWERS
3	HOLIDAY INN GOLDN MILE CAR PARK
4	K11 CARPARK
5	THE PINNACLE CAR PARK
6	8 HART AVENUE CAR PARK
7	RAILWAY PLAZA CAR PARK
9	CARNARVON PLAZA CAR PARK
10	MIRADOR MANSION CAR PARK
11	AUTO PLAZA CAR PARK
13	NEW WORLD CENTRE CAR PARK
15	PEKING ROAD 1 CAR PARK
17	LIPPO SUN PLAZA CAR PARK
19	ISQUARE CAR PARK

LEGEND:

- (A) ON-STREET PUBLIC CAR PARKS
- (1) OFF-STREET PUBLIC CAR PARKS
- AREA WITHIN 500 METRES FROM THE SITE
- AREA WITHIN 300M METRES FROM THE SITE

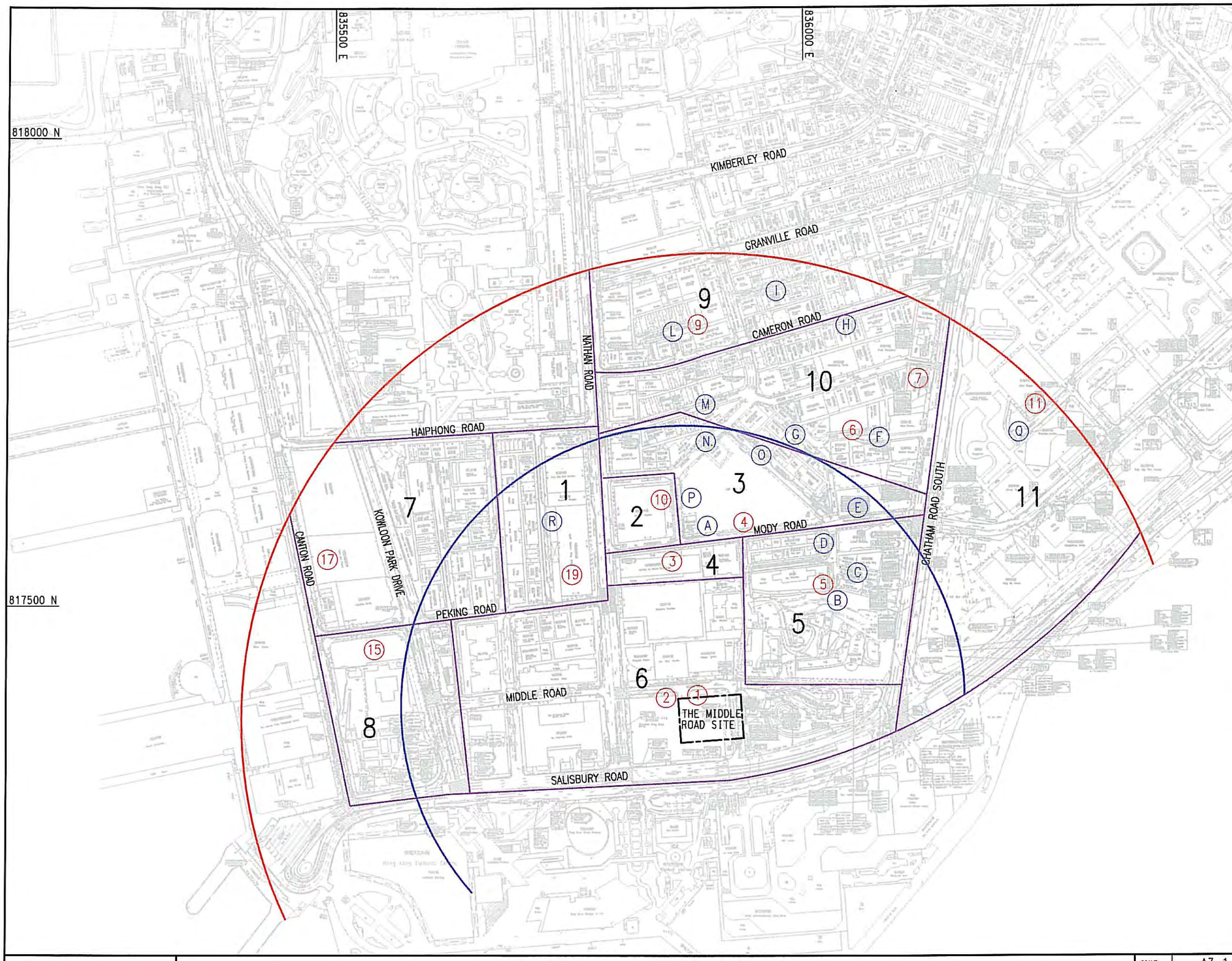
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF PUBLIC CARPARKS TO BE USED FOR PARKING DEMAND ASSESSMENT

SCALE	A3 1 : 4000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 5.3
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\521.dwg 01/12/2011 13:43 ZHANGH3



	ON-STREET PUBLIC CAR PARKS
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD
O	HANOI ROAD
P	BRISTOL AVENUE
Q	MODY SQUARE
R	LOCK ROAD
	OFF-STREET PUBLIC CAR PARKS
1	MIDDLE ROAD MULIT-STOREY CAR PARK
2	SHERATON HONG KONG HOTELS & TOWERS
3	HOLIDAY INN GOLDN MILE CAR PARK
4	K11 CARPARK
5	THE PINNACLE CAR PARK
6	8 HART AVENUE CAR PARK
7	RAILWAY PLAZA CAR PARK
9	CARNARVON PLAZA CAR PARK
10	MIRADOR MANSION CAR PARK
11	AUTO PLAZA CAR PARK
13	NEW WORLD CENTRE CAR PARK
15	PEKING ROAD 1 CAR PARK
17	LIPPO SUN PLAZA CAR PARK
19	ISQUARE CAR PARK

LEGEND:

- (A) ON-STREET PUBLIC CAR PARKS
- (1) OFF-STREET PUBLIC CAR PARKS
- 1 CAR PARKING ZONE NUMBER
- AREA WITHIN 500 METRES FROM THE SITE
- AREA WITHIN 300 METRES FROM THE SITE

AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

DEMARCATION OF CAR PARKING ZONES WITH 300m AND 500m FROM THE MIDDLE ROAD SITE

SCALE	A3 1 : 4000	DATE	DEC. 2011
CHECK	–	DRAWN	LML
JOB No.	60214565	DRAWING No.	FIG 5.4
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\522.dwg 01/12/2011 16:14 LIML

835000 E

835600 E

836200 E

836800 E

N

818000 N

817400 N

AUSTIN ROAD

HILLWOOD ROAD

KIMBERLEY ROAD

GRANVILLE ROAD

CAMERON ROAD

NATHAN ROAD

CANTON ROAD

HAIPHONG ROAD

KOWLOON PARK DRIVE

MODY ROAD

CHATHAM ROAD SOUTH

PEKING ROAD

MIDDLE ROAD

THE MIDDLE ROAD SITE

SALISBURY ROAD

LEGEND:

THE MIDDLE ROAD SITE

POTENTIAL LOCATION OF TEMPORARILY REPROVIDED CAR PARKS

AREA WITHIN 700 METRES FROM THE SITE

AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

POTENTIAL LOCATION OF TEMPORARILY REPROVIDED CAR PARKS DURING CONSTRUCTION

SCALE	A3 1 : 6000	DATE	FEB. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 5.5
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\532.dwg 03/02/2012 13:19 LIML

835800 E
835850 E
835900 E
835950 E
817400 N
817350 N
817300 N
MIDDLE ROAD
NATHAN ROAD
SALISBURY ROAD
Sheraton Hong Kong Hotel
Middle Road Multi-storey Car Park
THE MIDDLE ROAD SITE
K/YT/Mid-P13
K/YT/Mid-P14
K/YT/Sal-P37A
K/YT/Sal-P38A
TS 2137(7)
N
46 NOS. OF MOTOCYCLE PARKING TO BE TEMPORARILY REPROVIDED
EXISTING ROAD MARKING TO BE TEMPORARILY REMOVED

LEGEND:

MIDDLE ROAD CAR PARK

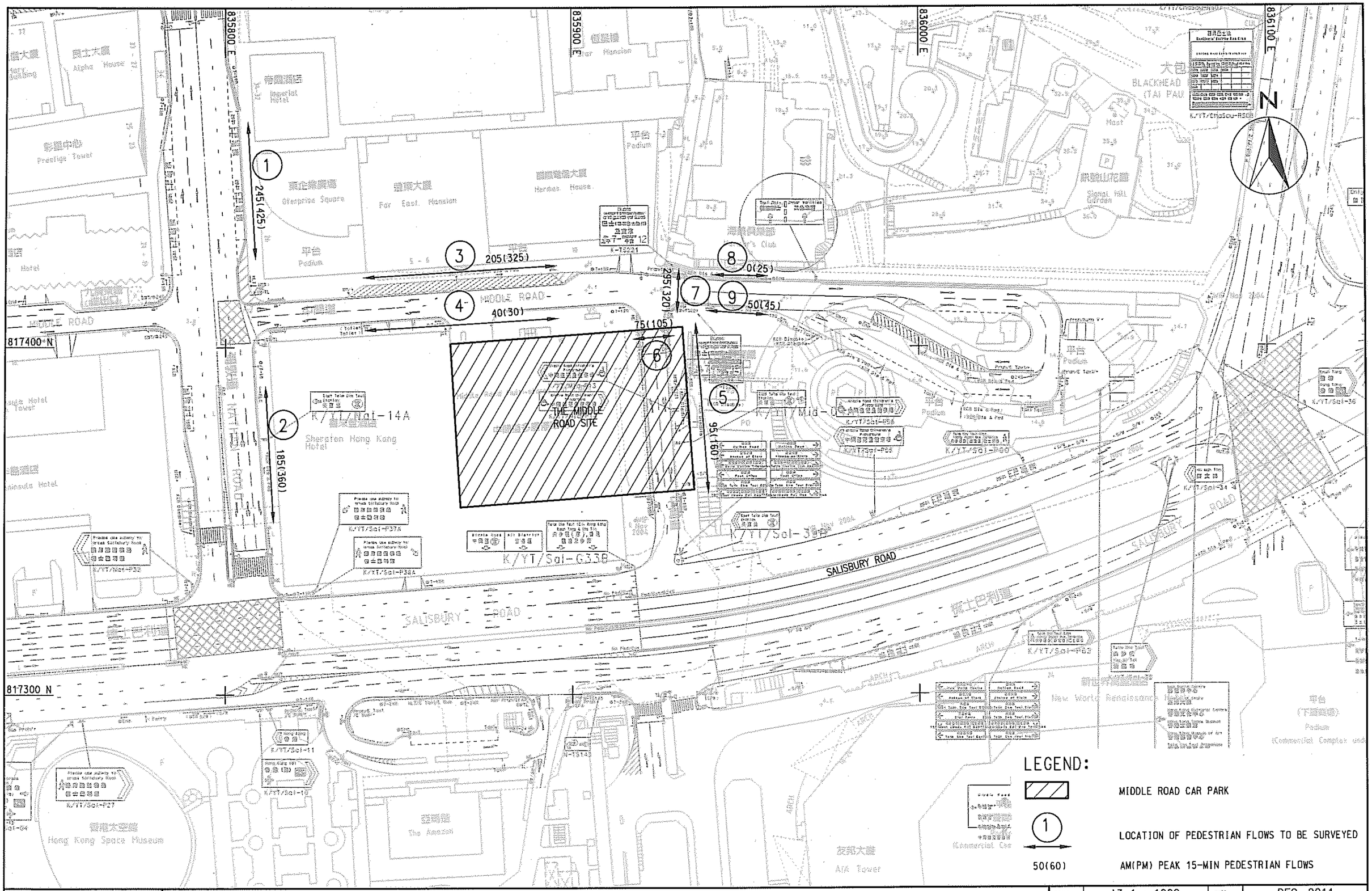
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

POTENTIAL LOCATIONS OF TEMPORARILY REPROVIDED MOTOCYCLE PARKING DURING CONSTRUCTION

SCALE	A3 1 : 500	DATE	FEB. 2012
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 5.6
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\533.dwg 28/02/2012 17:16 DUW



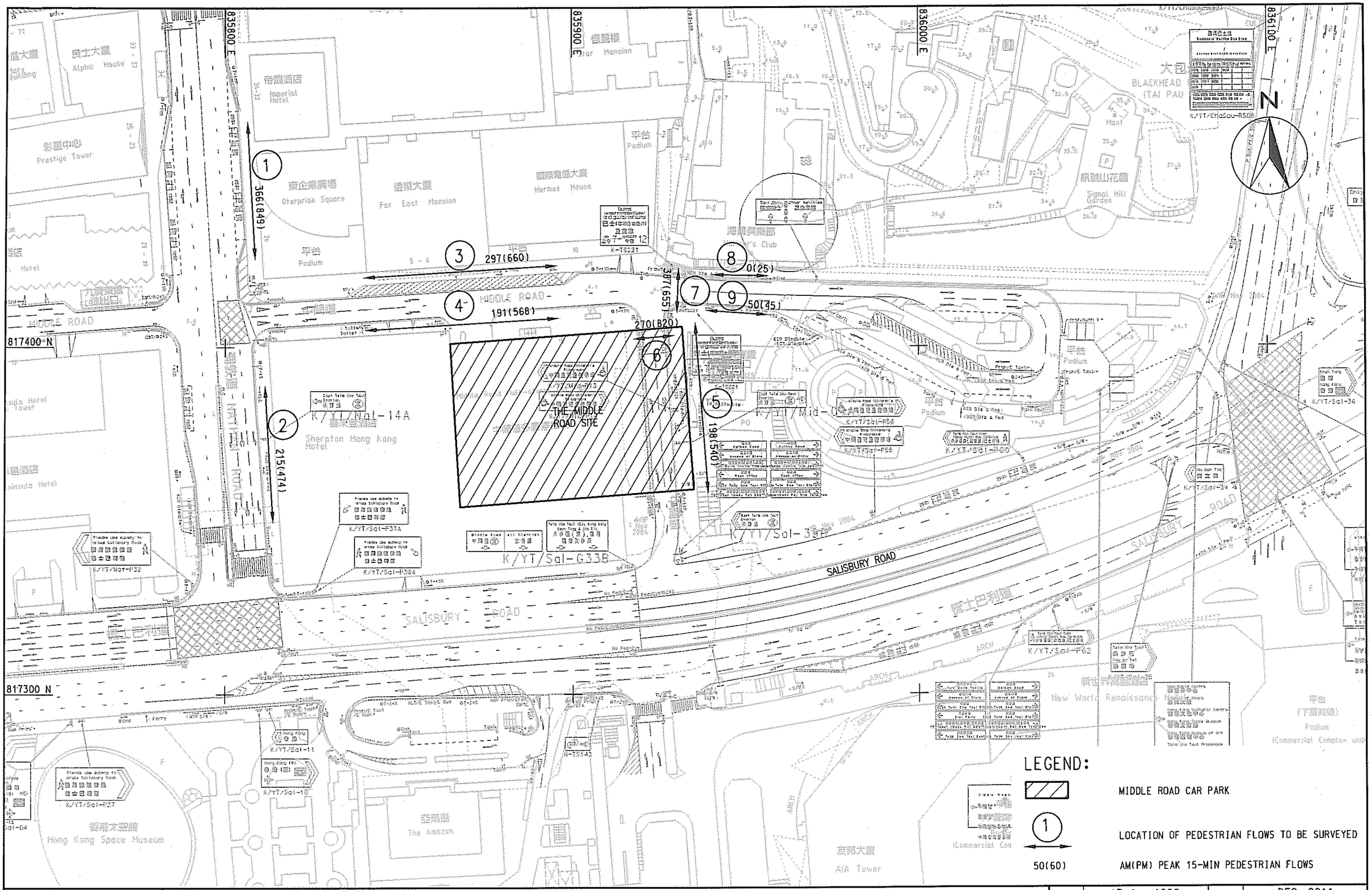
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2021 FORECAST BACKGROUND PEAK 15 – MIN PEDESTRIAN FLOWS

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.1
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\523.dwg 01/12/2011 15:50 LIML



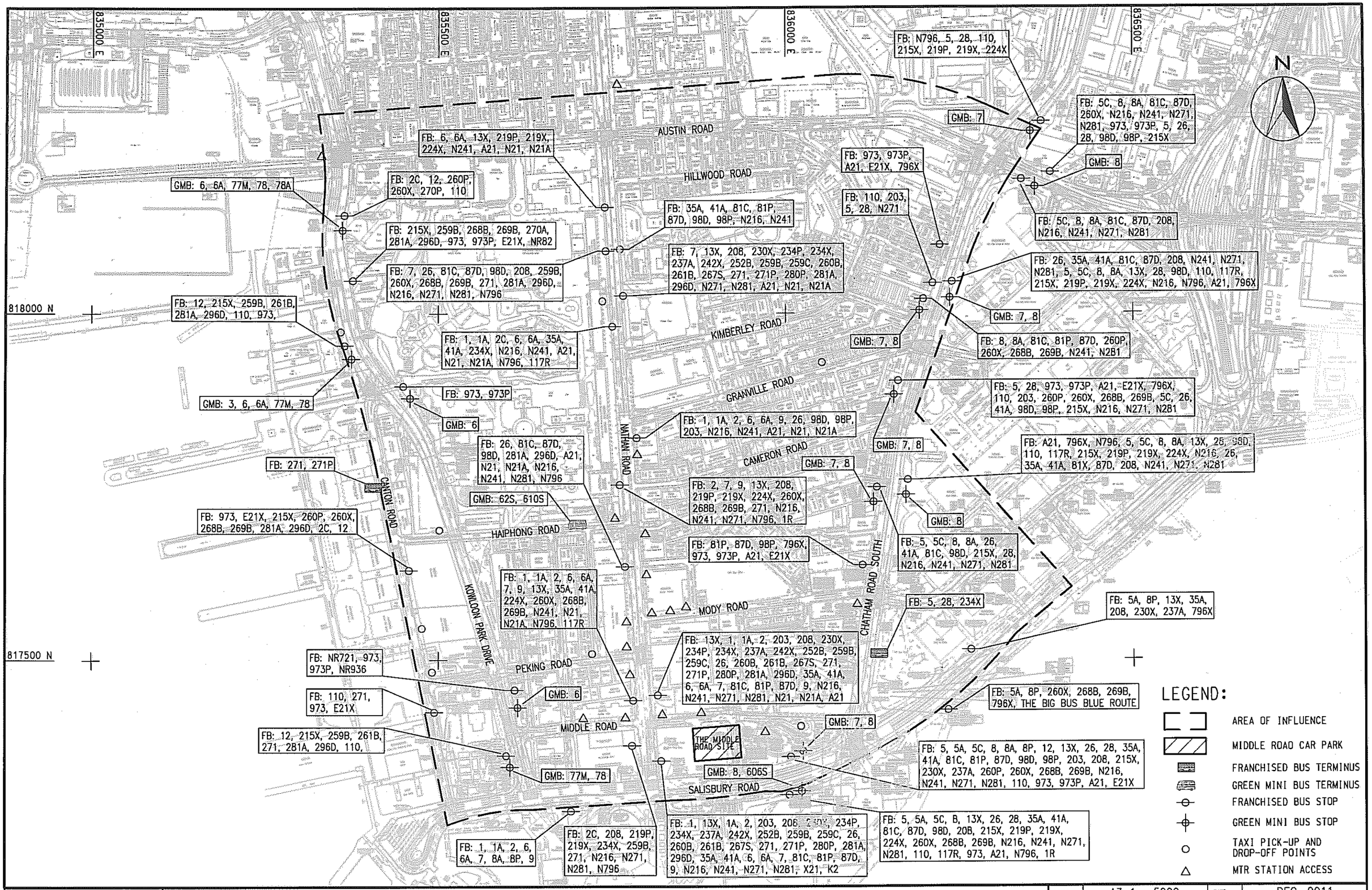
AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2021 FORECAST DESIGN PEAK 15-MIN PEDESTRIAN FLOWS

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.2
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\524.dwg 01/12/2011 14:06 ZHANGH3



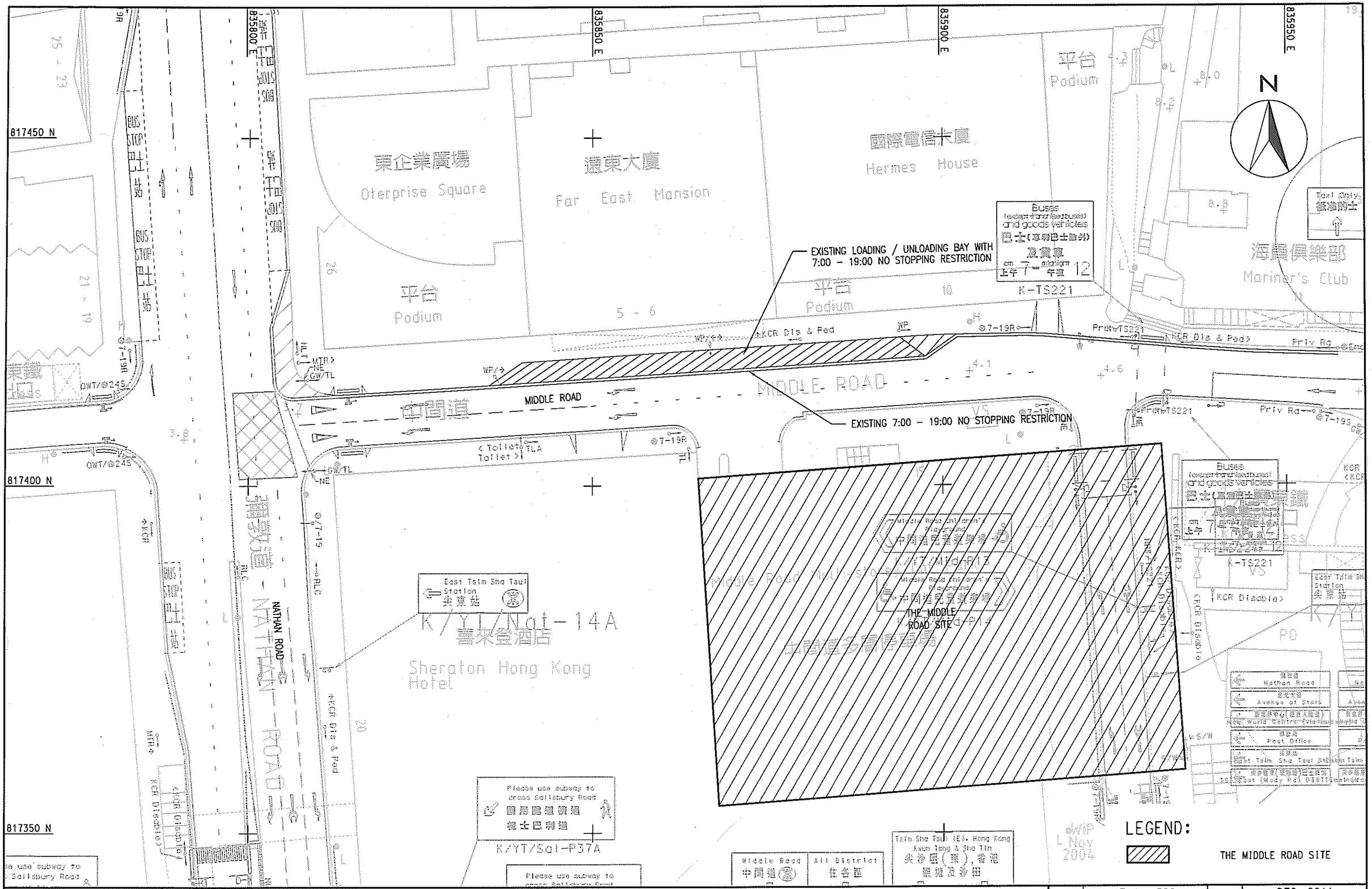
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING PUBLIC TRANSPORT FACILITIES WITHIN THE AOI

SCALE	A3 1 : 5000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.3
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\525.dwg 01/12/2011 14:09 ZHANGH3



AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED OEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING LOADING / UNLOADING ARRANGEMENT IN FRONT OF THE MIDDLE ROAD SITE

SCALE	A3 1 : 500	DATE	DEC. 2011
CHECK	-	DRAWN	LML
JOB No.	60214565	DRAWING No.	FIG 6.4
		REV	-

P:\Projects\60214565\DRAWING\REPORT\DF\526.dwg 01/12/2011 14:17 ZHANGH3

835800 E

835900 E

836000 E

836100 E

N

WESTBOUND ONE WAY TRAFFIC

EASTBOUND AND WESTBOUND TWO WAY TRAFFIC

NORTHBOUND AND SOUTHBOUND TWO WAY TRAFFIC

817400 N

THE MIDDLE ROAD SITE

MIDDLE ROAD

SALISBURY ROAD

817300 N

EASTBOUND AND WESTBOUND TWO WAY TRAFFIC

LEGEND:

MIDDLE ROAD CAR PARK

TRAFFIC DIRECTION

AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING TRAFFIC CIRCULATION IN THE VICINITY OF THE SECTION OF MIDDLE ROAD CONNECTING SALISBURY ROAD

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.5
			REV –

P:\Projects\60214565\DRAWING\REPORT\DF\527.dwg 01/12/2011 15:56 LEIGJS

835800 E

836000 E

836100 E

817400 N

NORTHBOUND AND SOUTHBOUND TWO WAY TRAFFIC

TO MATCH WITH EXISTING

EXISTING ROAD MARKING TO BE REMOVED

TO MATCH WITH EXISTING

KERB TO BE SET BACK. FOOTPATH WILL BE NARROWED DOWN AND WALKING ENVIRONMENT WILL BE WORSENED.

EASTBOUND AND WESTBOUND TWO WAY TRAFFIC

RESTRICTION ON BUSES AND GOODS VEHIDES TO BE RELAXED ALL VEHICLES WILL MAKE USE OF THE EXISTING PTI FOR U-TURNING

RM1040

EXISTING MTRC PRIVATE ROAD. RELAXATION FOR THE USE OF ALL VEHICLES FOR U-TURNING WILL BE SUBJECT TO THE AGREEMENT OF MTRC WHICH IS UNCERTAINED AND INSECURE.

THE MIDDLE ROAD SITE

THE SECTION OF MIDDLE ROAD CONNECTING SALISBURY ROAD TO BE CLOSED

SALISBURY ROAD

LEGEND:

MIDDLE ROAD CAR PARK

TRAFFIC DIRECTION

SWEPT PATH ANALYSIS OF 12m COACH TO MATCH WITH EXISTING

EXISTING ROAD MARKING TO BE REMOVED

TO MATCH WITH EXISTING

RM104D

SWEPT PATH ANALYSIS
SCALE 1 : 500

EASTBOUND AND WESTBOURD TWO WAY TRAFFIC

SWEPT PATH ANALYSIS OF 12m COACH

SWEPT PATH ANALYSIS
SCALE 1 : 600

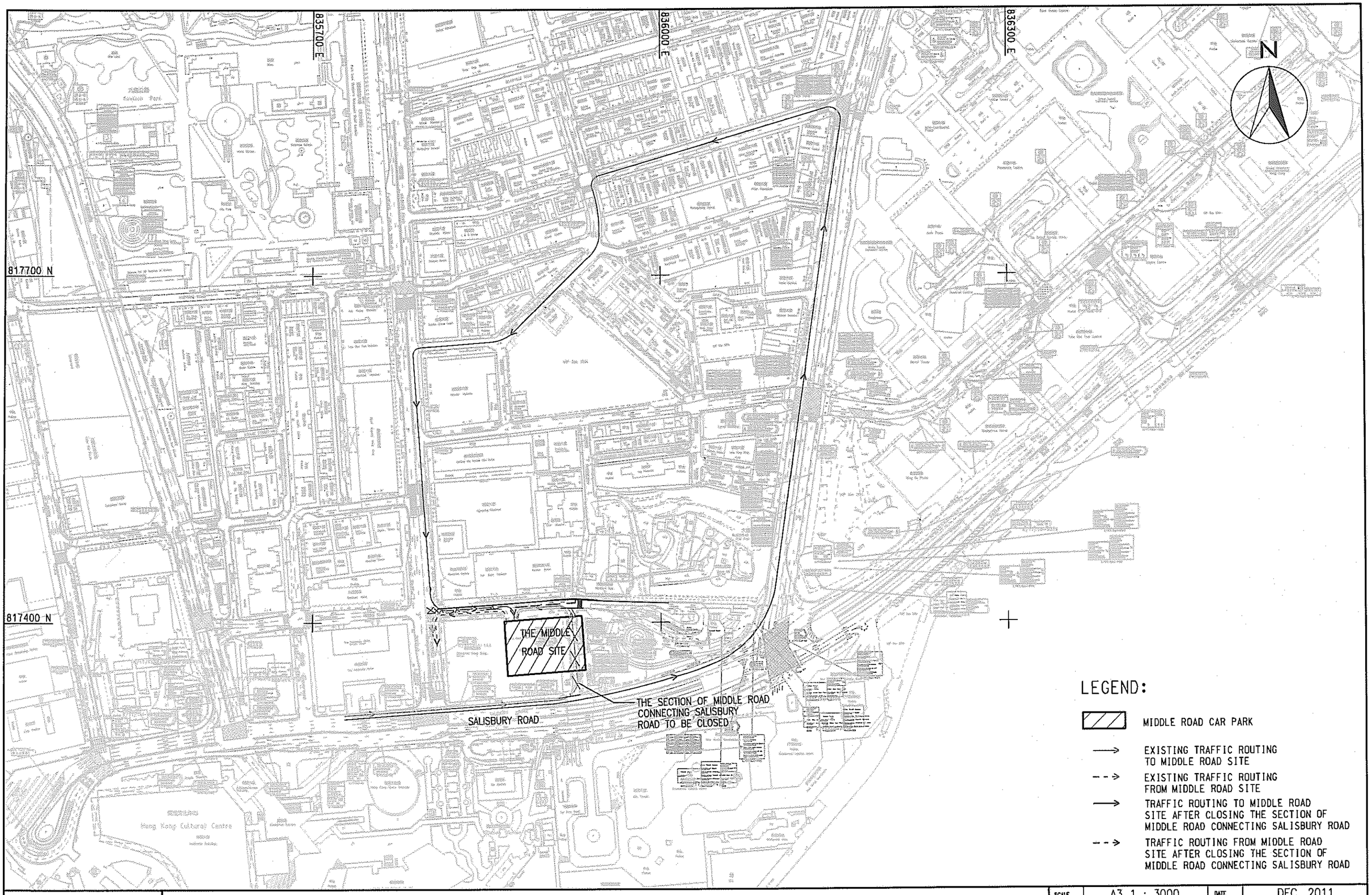
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

POSSIBLE TRAFFIC CIRCULATION AND ARRANGEMANT FOR CLOSING THE SECTION OF MIDDLE ROAD CONNECTING SALISBURY ROAD

SCALE	A3 1 : 1000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.6
			REV –

P:\Projects\60214565\DRAWING\REPORT\DF\528.dwg 15/12/2011 13:13 ZHANGH3



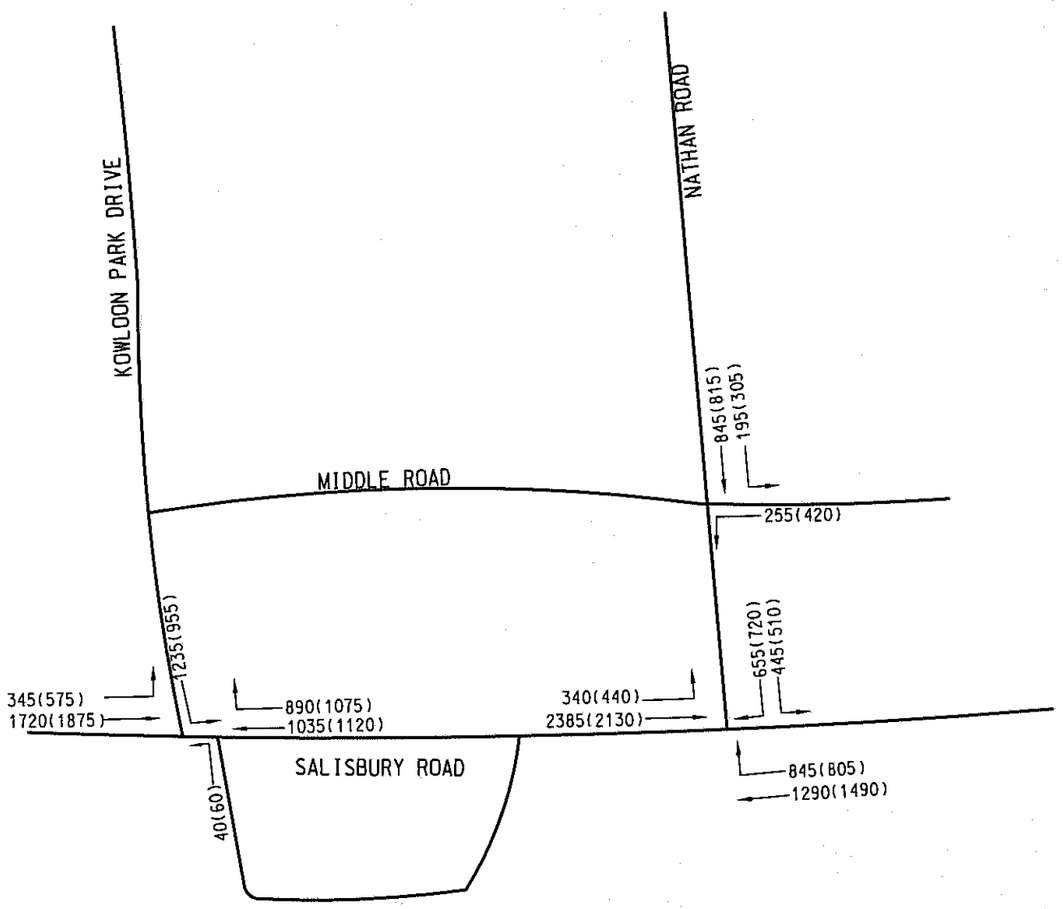
AECOM

AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

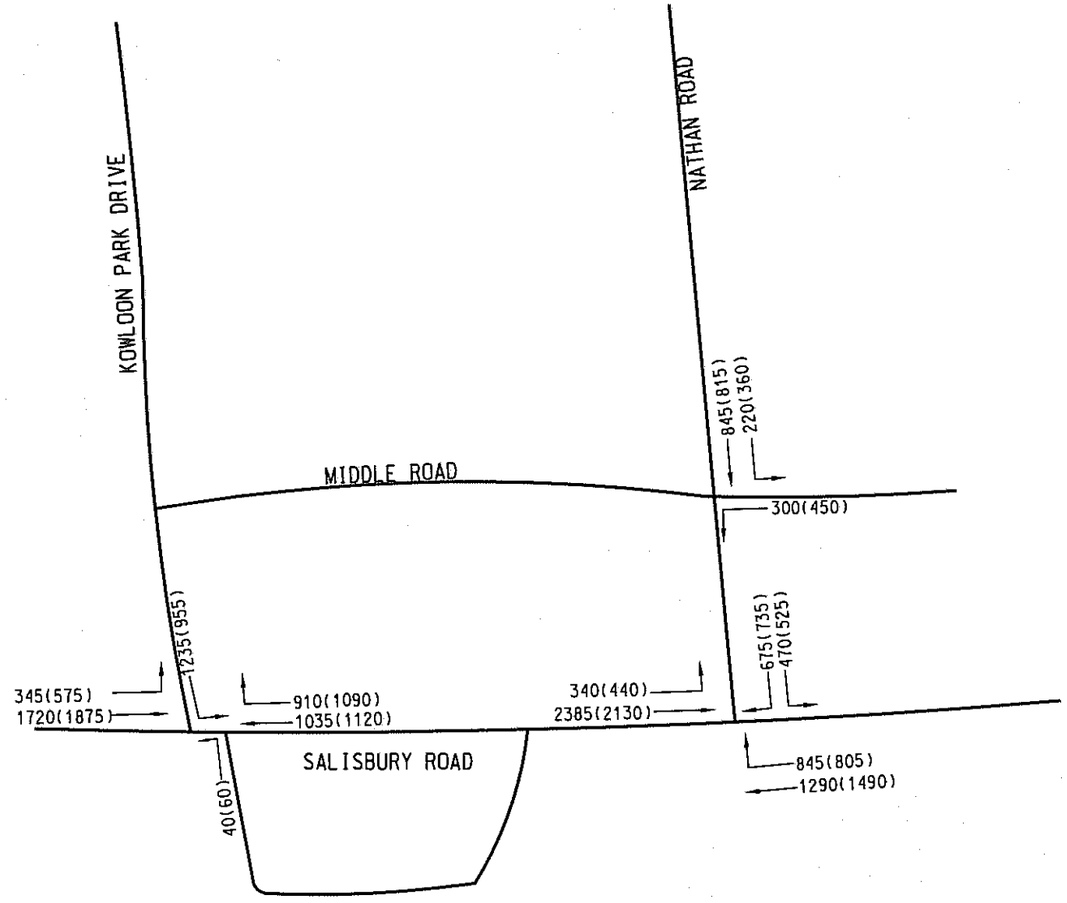
TRAFFIC ROUTING TO / FROM MIDDLE ROAD SITE AND MTR TST EAST STATION PTI BEFORE AND AFTER CLOSING THE SECTION OF MIDDLE ROAD CONNECTING SALISBURY ROAD

SCALE	A3 1 : 3000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
JOB No.	60214565	DRAWING No.	FIG 6.7
		REV	–

P:\Projects\60214565\DRAWING\REPORT\DF\529.dwg 02/12/2011 13:59 LIML



BACKGROUD CASE - WITHOUT PROPOSED DEVELOPMENT AT THE MIDDLE ROAD SITE



DESIGN CASE - WITH PROPOSED DEVELOPMENT AT THE MIDDLE ROAD SITE

LEGEND:

50(60) AM(PM) PEAK HOURLY TRAFFIC FLOWS IN PCU

AECOM

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2021 FORECAST PEAK HOUR TRAFFIC FLOWS - WITH CLOSING OF THE SECTION OF MIDDLE ROAD CONNECTING SALISBURY ROAD

SCALE	N.T.S.	DATE	DEC. 2011
CHECK	-	DRAWN	LEIM
JOB No.	60214565	DRAWING No.	FIG 6.8
		REV	-

P:\Projects\60214565\DRAWING\REPORT\DF\530.dwg 02/12/2011 10:44 ZHANGH3

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)05

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV031

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

Pursuant to the discussion on the measures to increase land supply, the Administration is requested to explain whether conditions on plot ratios could be imposed on applications for amendments to land leases. The Administration is also requested to explain whether land along West Rail held by the MTR Corporation could be used for public housing development.

Asked by: Hon. SHEK Lai-him, Abraham

Reply:

In processing applications for lease modification other than those of minor or technical nature, the Lands Department will generally incorporate a maximum gross floor area provision in the modified lease conditions.

The West Rail property development projects are taken forward by the West Rail Property Development Limited, a company jointly founded by the Government and the Kowloon-Canton Railway Corporation, for the purpose of developing the West Rail property sites. The MTR Corporation Limited (MTRCL) is the agent for implementing and conducting the tendering for such projects.

The West Rail property development projects are an important source of land supply for private housing. We are actively implementing these projects in collaboration with the MTRCL. The Government does not rule out the possibility of converting land originally designated for private housing as necessary for the development of subsidised housing where appropriate after review.

Name in block letters:	Thomas Chow
Post Title:	Permanent Secretary for Development (Planning and Lands)
Date:	17.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)06

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV030

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

Pursuant to reply no. DEVB(PL)069, the Administration is requested to provide information on the success rate by which the Government claimed reimbursement of the cost of demolishing unauthorised signboards on behalf of the owners.

Asked by: Hon. SIN Chung-kai

Reply:

Where dangerous or abandoned signboards are found, the Buildings Department (BD) will issue advisory letters to the signboard owners (or to the Owners' Corporations/management companies of the buildings in cases where the signboard owners cannot be identified) to demand voluntary removal of the signboards. If the dangerous or abandoned signboards have not been removed or repaired after a specified period, the BD will carry out enforcement action by issuing Dangerous Structure Removal Notices (DSRNs) under section 105 of the Public Health and Municipal Services Ordinance (Cap 132), requiring the signboard owners concerned to remove or repair their signboards within a specified period. Where the DSRNs have not been complied with after the expiry of the DSRNs, the BD may arrange consultants and contractors to remove the dangerous or abandoned signboards concerned and recover any expenses incurred in the removal and in the disposal of the materials from the owners afterwards. The BD will also employ contractors to remove any dangerous or abandoned signboards identified in case of emergency. If the owner concerned is unknown to the BD, or cannot be readily found or ascertained or is absent from Hong Kong, the BD may sell the materials and, after deducting from the proceeds of such sale such expenses, shall pay the surplus, if any, into the Treasury.

Most of the dangerous or abandoned signboards identified were removed voluntarily by the signboard owners concerned upon verbal advice of the BD or receipt of advisory letters from the BD. In the past three years, the number of dangerous or abandoned signboards so removed or repaired, the number of DSRNs issued, the number of DSRNs enforced by the BD's consultants and contractors in default of the signboard owners, and the percentage of the cases with cost recoverable from owners are tabulated below:

Year	**No. of dangerous/ bandoned signboards removed/ epaired by the signboard owners voluntarily upon receipt of advisory letters or upon the BD's verbal advice**	**No. of DSRNs issued**	**No. of dangerous/ abandoned signboards removed/ repaired by the BD's contractors/consultants in default of the signboard owners (A)** Note 3	**No. of dangerous/ abandoned signboards removed/ repaired by the BD's contractors in case of emergency (B)** Note 3	**No. of default DSRN cases with cost recoverable from owners (C)** Note 4	**No. of emergency cases with cost recoverable from owners (D)** Note 4	**% of cases with cost recoverable from owners = (C)+(D) / (A)+(B) x 100%** Note 5
2010-11 Note 1	1 982	1 245	695	17	2	3	0.70%
2011-12	952	249	317	9	6	3	2.76%
2012-13 Note 2	997	249	128	10	1	5	4.35%
Total	**3 931**	**1 743**	**1 140**	**36**	**9**	**11**	**1.70%**

Note:

1. The number of DSRNs issued and the number of dangerous or abandoned signboards removed in 2010-11 are larger due to the special operations for removal of signboards conducted by the BD in 2009 and 2010.
2. Figures as at March 2013.
3. The number of dangerous/abandoned signboards removed/repaired in compliance with the DSRNs and the number of DSRNs enforced by the BD in default of the signboard owners in one year may not necessarily correspond to the DSRNs issued in the same year.
4. It should be noted that the figures do not include the number of cases where the owners could not be found and the BD recovered all or part of the expenses by selling the materials after engaging contractors or consultants to carry out the required works as the BD does not have readily available information on it.
5. There are only a few cases where the removal costs were recoverable from the owners as most of the signboards removed in default of the owners were abandoned and the owners could not be identified.

Apart from dangerous and abandoned signboards abovementioned, BD also takes enforcement action against unauthorised signboards upon receipt of reports from the public, and during the large scale operation against large unauthorised signboards. Where unauthorised signboards are found, the BD will issue removal orders against the signboard owners in accordance with the Buildings Ordinance (Cap 123), requiring the signboard owners concerned to remove their signboards within a specified period. Upon issue of a removal order, the BD will take action to demand compliance by the owners themselves. The BD will also consider engaging contractors or consultants to carry out the required works in the owners' default and recover the cost of such works, plus supervision charge and surcharge from the owners afterwards. In the past three years, the number of removal orders issued against unauthorised signboards, the number of unauthorised signboards removed in compliance with the orders served and the number of unauthorised signboards removed by the BD's consultants and contractors in default of the signboard owners are as follows:

Year	**No. of removal orders issued against unauthorised signboards**	**No. of unauthorised signboards removed in compliance with orders served** Note 7	**No. of unauthorised signboards removed by the BD's consultants and contractors in default of the signboard owners**
2010-11	190	190	0
2011-12	109	125	0
2012-13 Note 6	205	150	1 Note 8
Total	**504**	**465**	**1**

Note:

6. Figures as at March 2013.
7. The number of unauthorised signboards removed in compliance with the removal orders may not necessarily correspond to the removal orders served in the same year.
8. Cost recovery from the signboard owner concerned is still ongoing.

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)07

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

S066

Head: 138 Government Secretariat: Development Bureau (Planning and Lands Branch)

Subhead (No. & title): 000 Operational expenses

Programme: (2) Buildings, Lands and Planning

Controlling Officer: Permanent Secretary for Development (Planning and Lands)

Director of Bureau: Secretary for Development

Question:

To follow up the question on increasing supply of housing land in short to medium term at the special meeting of the Finance Committee, please advise on the following:

(1) the total area of the 65 sites covering three categories of land;

(2) the proportion of public housing to private housing to be provided by these 65 sites;

(3) for the sites allocated for public housing, the proportion of public rental housing units to public housing units to be put up for sale; and

(4) the number of vacant government properties or sites not among the above 65 sites.

Asked by: Hon. WONG Kwok-hing

Reply:

As mentioned in the 2013 Policy Address, the Government will continue to adopt a multi-pronged approach to increase land supply in the short to medium term so as to meet the housing and other needs of Hong Kong. Among the ten initiatives put forward in the 2013 Policy Address, we are pressing ahead with the conversion of 36 Government, Institution or Community and other Government sites, 13 devegetated, deserted or formed Green Belt sites, and 16 industrial sites to residential use.

(1) The total area of the 65 sites covering the above three categories of land is about 114 hectares.

(2) The proportion of public housing to private housing to be provided by the sites is subject to detailed studies and hence not available at this juncture. The Government has an established mechanism to allocate suitable sites for public and private housing, with a view to achieving the set targets for subsidised housing production as well as maintaining the annual average capacity for private housing land supply.

(3) As many of the sites are still subject to the Housing Department's further studies, the proportion of public rental housing units to public housing units to be put up for sale is not available at this juncture.

(4) The Administration does not have ready statistics on all vacant government sites. For government sites with potential for development, they will be assessed through the established mechanisms within the Government for determining the appropriate use. Where a government site is not yet required for any planned permanent development, we will try to put it out for temporary use such as through Government Land Allocation for works sites of public projects or short term tenancy for various uses. For sites required for designated permanent development but without the necessary supporting infrastructure, we will plan for the implementation of the infrastructure accordingly.

According to the Government Property Agency (GPA), there are currently three vacant government properties under its management which may be used for housing development. Their details are as follows:

	Property	**Proposed Use**
(a)	Block B, Ex-Kennedy Town Police Married Quarters	The Planning Department is considering the site for public housing development
(b)	Ex-Lok Fu Staff Quarters	Reserved for development of disciplined services quarters
(c)	Abattoir, 737 Lai Chi Kok Road	Earmarked for future public housing development

Name in block letters: Thomas Chow

Post Title: Permanent Secretary for Development (Planning and Lands)

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)08

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

S185

Head: 82 Buildings Department Subhead (No. & title):

Programme: Buildings and Building Works

Controlling Officer: Director of Buildings

Director of Bureau: Secretary for Development

Question:

According to the reply under Serial No. DEVB(PL)095 and the oral reply from the Administration at the Special Meeting of the Finance Committee, there are currently about 190 000 unauthorised signboards in Hong Kong and about 1 600 signboards will be removed each year. However, there is no plan to increase the manpower for the task at this stage and no specific target is set on the timeframe for the removal work. Please advise:

(a) Has consideration been given to formulating a plan to speed up the removal of unauthorised signboards? If yes, what are the details? If no, what are the reasons?

(b) As it cannot be ruled out that new unauthorised signboards will continue to emerge in the future possibly leading to the scenario of "slow removal, quick erection" of signboards, has prior assessment been conducted and preparation been made accordingly? If yes, what are the details? If no, what are the reasons?

Asked by: Hon. LO Wai-kwok

Reply:

(a) As mentioned in the reply under Serial No. DEVB(PL)095, for existing unauthorised signboards within stipulated dimensional requirements and meeting other specified criteria, the Administration plans to introduce legislative amendments to implement the Signboard Control System (SBCS) to allow the continued use of such existing unauthorised signboards after safety checks, strengthening (if necessary) and certification by registered building professionals or registered contractors. Unauthorised signboards not joining the SBCS will be subject to the Buildings Department (BD)'s enforcement action.

Apart from taking necessary action upon receiving reports on unauthorised signboards from the public, the BD will continue to launch its large scale operation on removal of large unauthorised signboards. In 2013-14, the BD plans to issue 250 removal orders against large unauthorised signboards and it is expected that 125 large unauthorised signboards will be removed either by the owners voluntarily upon receipt of advisory letters, by the owners in compliance with removal orders, or by the BD's consultants and contractors in default of the signboard owners. The BD will also continue to take necessary enforcement action against dangerous or abandoned signboards. The target number of dangerous or abandoned signboards to be removed by the BD will increase from 1 200 in 2012-13 to 1 600 in 2013-14.

The BD is now conducting a stock taking exercise to record all unauthorised building works (UBWs) including unauthorised signboards erected on the exterior of private buildings. The stock taking exercise is expected to be completed in the second half of 2013. The results of the stock taking exercise will assist the BD in planning and taking enforcement action against unauthorised signboards.

The BD will keep under review the effectiveness of the SBCS, the enforcement action against unauthorised and dangerous or abandoned signboards, as well as the adequacy of the resources from time to time.

(b) Apart from the abovementioned measures for removal of unauthorised and dangerous or abandoned signboards, the BD has also employed outsourced consultants for regular patrol inspection and investigation of reports on unauthorised signboards under construction. Immediate enforcement action will be taken against actionable unauthorised signboards under construction or unauthorised signboards constituting obvious hazard or imminent danger to life or property in accordance with the prevailing enforcement policy against UBWs.

Name in block letters: AU Choi-kai

Post Title: Director of Buildings

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)09

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV027

Head: 82 Buildings Department Subhead (No. & title):

Programme: Buildings and Building Works

Controlling Officer: Director of Buildings

Director of Bureau: Secretary for Development

Question:

Pursuant to reply no. DEVB(PL)095, the Administration is requested to provide information on the strategy that would be adopted to step up clearance of large unauthorized signboards, and the staffing and financial resources involved.

Asked by: Hon. LO Wai-kwok

Reply:

In 2013-14, apart from taking necessary action upon receiving reports on unauthorised signboards from the public, the Buildings Department (BD) will continue its large scale operation (LSO) on removal of large unauthorised signboards. The BD plans to issue 250 removal orders and it is expected that 125 large unauthorised signboards will be removed either by the owners voluntarily upon receipt of advisory letters, by the owners in compliance with removal orders, or by the BD's consultants and contractors in default of the signboard owners.

The BD is now conducting a stock taking exercise to record all unauthorised building works including large unauthorised signboards erected on the exterior of private buildings. The stock taking exercise is expected to be completed in the second half of 2013. The results of the stock taking exercise will assist the BD in planning and taking enforcement action against large unauthorised signboards.

The LSO on removal of large unauthorised signboards and the enforcement action against unauthorised signboards will continue to be carried out in 2013-14 using the existing resources. The BD will keep under review the effectiveness of the LSO and the adequacy of the resources from time to time.

Name in block letters: AU Choi-kai

Post Title: Director of Buildings

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)10

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV032

Head: 82 Buildings Department Subhead (No. & title):

Programme: Buildings and Building Works

Controlling Officer: Director of Buildings

Director of Bureau: Secretary for Development

Question:

Pursuant to the reply no. DEVB(PL)102, the Administration is requested to provide information on the justifications for creating 41 professional, technical and clerical staff in the Village Houses Section of the Buildings Department in connection with the implementation of the enhanced enforcement strategy against unauthorised building works in New Territories exempted houses.

Asked by: Hon. TIEN Pei-chun, James

Reply:

Before implementation of the enhanced enforcement strategy against unauthorised building works (UBWs) in New Territories exempted houses (NTEHs) on 1 April 2012, immediate enforcement actions had only been taken against those UBWs constituting obvious hazard or imminent danger to life and property and those found under construction or newly completed. Therefore, a substantial number of the existing UBWs in NTEHs were not subject to enforcement actions in the past.

To ensure building and public safety and compliance with the legislation, the Administration implemented on 1 April 2012 the enhanced enforcement strategy against UBWs in NTEHs through categorisation for control and management as well as prioritisation for progressive enforcement. Under the enhanced enforcement strategy, the Buildings Department (BD) has strengthened the control of UBWs in NTEHs by categorising all existing UBWs by reference to the severity of their breach of the law and the risks to building and public safety, and adopting corresponding measures for progressive enforcement in line with the order of priority. The enhanced enforcement strategy includes large scale operations for removal of existing UBWs in NTEHs that constitute serious contravention of the law and pose higher potential risks to building safety, a Reporting Scheme for existing UBWs in NTEHs that constitute less serious contravention of the law and pose lower potential risks to building safety, and immediate enforcement actions against other UBWs in NTEHs which constitute imminent danger or are newly erected or found under construction.

Having regard to a suitable pace of progressive enforcement commensurate with the current situation of UBWs in NTEHs and public aspirations, the BD has set up a dedicated Village Houses Section comprising 41 professional, technical and clerical staff for implementing the enhanced enforcement strategy against UBWs in NTEHs since 1 April 2012. The manpower requirements for the smooth, effective and efficient implementation of the enhanced enforcement strategy will be kept under review.

Name in block letters: AU Choi-kai

Post Title: Director of Buildings

Date: 16.4.2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)11

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

SV029

Head: 33 Civil Engineering and Development Department

Subhead (No. & title):

Programme: (3) Provision of Land and Infrastructure

Controlling Officer: Director of Civil Engineering and Development

Director of Bureau: Secretary for Development

Question:

Pursuant to reply no. DEVB(PL)129, the Administration is requested to explain in further details the reasons for the anticipated decrease in the area of land formed in 2013-14 compared with the previous year, notwithstanding the increase in the estimated expenditure.

Asked by: Hon. LO Wai-kwok

Reply:

As explained in the reply serial no. DEVB(PL)129, some major projects involving land formation and engineering infrastructure works, such as Central Reclamation Phase III and Tseung Kwan O Further Development, had been substantially completed in 2012. These projects would not contribute to land formation in 2013. In 2013, the infrastructure projects that will contribute to land formation are listed below:

Project Title	**Estimated area of land formed in 2013 (ha)**
Wan Chai Development Phase II	0.5
Development at Anderson Road	11.8
Infrastructure works in Tuen Mun Area 54	4.2
Total	**16.5**

On the other hand, the estimated yearly expenditure on land formation and infrastructure works depends on the cashflow requirement of the construction contracts which bears no direct relationship with the amount of land formed each year. In 2013, we plan to commence the following new major construction contracts which will lead to an increase in expenditure while their contributions to land formation, if any, will be realised only after 2013.

Major construction contracts to commence in 2013 under the following projects	**Estimated expenditure in 2013 ($million)**
Liantang/Heung Yuen Wai Boundary Control Point and associated works - site formation and infrastructure works	147.2
Kai Tak development - stages 3A and 4 infrastructure works at the north apron area of Kai Tak Airport	141.2
Kai Tak development - reconstruction and upgrading of Kai Tak Nullah	113.3
Infrastructure works for housing sites adjacent to Lung Ping Road at Tai Wo Ping, Shek Kip Mei	62.3
Total	**464.0**

Name in block letters: C K HON

Post Title: Director of Civil Engineering and Development

Date: 17 April 2013

Examination of Estimates of Expenditure 2013-14

Reply Serial No.

S-DEVB(PL)12

CONTROLLING OFFICER'S REPLY TO SUPPLEMENTARY QUESTION

Question Serial No.

S146

Head: 118 Planning Department Subhead (No. & title):

Programme: (2) District Planning

Controlling Officer: Director of Planning

Director of Bureau: Secretary for Development

Question:

The Planning Department had completed the Planning Study on Future Land Use at Anderson Road Quarry. On 26 March this year, it presented the Final Recommended Outline Development Plan (RODP) to the Legislative Council. The RODP proposed to further extend the planned network of the Study Site to Kwun Tong town centre by footbridges with lift towers and/or escalators. However, the Transport Department advised that this proposal was not covered by the Ranking System on Provision of Hillside Escalator Links and Elevator Systems.

1. Is the automatic passenger mover system as preliminarily proposed in the RODP not covered by the ranking system of the Transport Department for hillside escalator links and elevator systems, such that this proposal in the RODP will be implemented by the Transport Department or the concerned operational departments separately as a designated project?

2. When is it expected to consult the public on the proposed system and commence the construction?

3. Apart from the passenger mover system proposed in the RODP, does the Planning Department have any proposals to facilitate the pedestrian and traffic flow generated by the proposed new developments in the Anderson Road Quarry?

Asked by: Hon. WU Chi-wai

Reply:

1. Several pedestrian routes of footbridges with lift towers and/or escalators are proposed in the Planning Study on Future Land Use at Anderson Road Quarry (the Planning Study) to connect the Anderson Road Quarry (ARQ) site to Kwun Tong town centre via the Development of Anderson Road (DAR). All the proposed routes are now being

further studied by the Civil Engineering and Development Department (CEDD) in the follow-up Engineering Study for proposed development at ARQ. As these pedestrian facilities are considered contingent upon the future development at ARQ, they would be independent from the Transport Department's Ranking System on Provision of Hillside Escalator Links and Elevator Systems. In CEDD's Engineering Study, a Pedestrian Connectivity Assessment (the Assessment) will be conducted to (i) evaluate the merits and demerits on each of the proposed routes in terms of land requirement, cost, relative attractiveness in priority and convenience to nearby residents within their catchment areas; (ii) amend the routes as necessary; and (iii) recommend one or several routes for implementation. The Assessment will take account of the social and economic contributions and environmental sustainability of the routes, as well as their possible improvement to the traffic and pedestrian flow in the area.

2. The Assessment is expected to be completed by end 2013. The Kwun Tong District Council will be consulted on the findings and recommendations of the Assessment in due course. Works for the first package of the facilities are targeted to commence in mid 2016 for completion in 2018-19 to tie in with the expected population in-take of ARQ.

3. Apart from the aforementioned proposed pedestrian connection facilities, the following major recommendations are made in the Traffic Assessments undertaken in the Planning Study to address the future traffic impacts to be generated by the proposed development at ARQ:

   (i) to encourage future ARQ residents to use the southern vehicular access to relieve the traffic burdens on Kwun Tong town centre and Choi Hung Interchange;

   (ii) to undertake large-scale improvement measures for four major roads and junctions in the area in addition to the five road and junction improvement works already identified for DAR;

   (iii) to encourage residents in the area to use more public transport; and

   (iv) to encourage future ARQ residents to use Lam Tin and Yau Tong MTR Stations so as not to further overload the already congested Kwun Tong MTR Station at peak hours.

Name in block letters: K. K. LING

Post Title: Director of Planning

Date: 16.4.2013