財務委員會
審核二零一三至一四年度開支預算
管制人員的答覆

局長：發展局局長
第 **9** 節會議

答覆編號	問題編號	委員姓名	總目	綱領
S-DEVB(PL)01	SV023	郭家麒	138	(2) 屋宇、地政及規劃
S-DEVB(PL)02	SV028	盧偉國	138	(2) 屋宇、地政及規劃
S-DEVB(PL)03	S144	馬逢國	138	(2) 屋宇、地政及規劃
S-DEVB(PL)04	SV033	毛孟靜	138	(2) 屋宇、地政及規劃
S-DEVB(PL)05	SV031	石禮謙	138	(2) 屋宇、地政及規劃
S-DEVB(PL)06	SV030	單仲偕	138	(2) 屋宇、地政及規劃
S-DEVB(PL)07	S066	王國興	138	(2) 屋宇、地政及規劃
S-DEVB(PL)08	S185	盧偉國	82	(-) 樓宇及建築工程
S-DEVB(PL)09	SV027	盧偉國	82	(-) 樓宇及建築工程
S-DEVB(PL)10	SV032	田北俊	82	(-) 樓宇及建築工程
S-DEVB(PL)11	SV029	盧偉國	33	(3) 提供土地及基礎設施
S-DEVB(PL)12	S146	胡志偉	118	(2) 地區規劃

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)01

問題編號
SV023

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

就有關增加土地供應措施的討論，請當局提供在 2013-14 年度預留了多少資源進行新界東北規劃研究。

提問人： 郭家麒議員

答覆：

土木工程拓展署和規劃署現正進行的「新界東北新發展區規劃及工程研究」(新發展區研究)在 2013-14 年度的預算開支約為 850 萬元。至於所投入的人手方面，在 2013-14 年度，規劃署有 3 名人員和土木工程拓展署有 6 名人員獲委派監督新發展區研究。發展局有 3 名人員負責監督各項規劃及工程研究，包括新發展區研究，作為其整體職務的一部分。此外，發展局和上述兩個部門亦有一些支援人員為新發展區研究提供技術及文書服務，作為其整體職務的一部分。

姓名： 周達明

職銜： 發展局常任秘書長(規劃及地政)

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)02

問題編號
SV028

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

請當局說明在個別用地的規劃程序尚未完成的情況下，是否能一如預期達到賣地計劃的目標。

提問人： 盧偉國議員

答覆：

政府已把預計可於年內出售的用地納入 2013-14 年度賣地計劃內，並計劃出售賣地計劃內所有用地，包括個別須進行所需規劃程序的用地有結果後，務求最大程度上增加土地供應。有關部門會優先處理相關工作，並致力加快完成有關程序。實際賣地結果視乎市場情況而定。

姓名： 周達明

職銜： 發展局常任秘書長 (規劃及地政)

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)03

問題編號
S144

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

跟進答覆編號 DEVB(PL)020 的問題

回覆指，地政總署截至 2013 年 2 月底共接獲 80 宗整幢改裝的申請，並已批出其中 52 宗，而獲批的 52 宗申請，有 10 宗申請的新用途包括改作「康體文娛場所」用途。想跟進的是，在上述接獲的 80 宗申請中，有多少宗申請的新用途包括改作「康體文娛場所」？不獲批准改作「康體文娛場所」的有多少宗？不獲批的原因又為何？

提問人： 馬逢國議員

答覆：

截至 2013 年 2 月底接獲共 80 宗有關工廈整幢改裝的申請中，有 13 宗申請的新用途包括改作「康體文娛場所」用途，其中 10 宗已批出，2 宗正在處理，及 1 宗在處理途中被申請人撤回。

姓名： 周達明

職銜： 發展局常任秘書長(規劃及地政)

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)04

問題編號
SV033

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

就答覆編號 DEVB(PL)043，請當局提供有關尖沙嘴中間道停車場重建計劃的交通影響評估報告。

提問人： 毛孟靜議員

答覆：

所要求的報告(只備英文版)夾附於後。

姓名： 周達明

職銜： 發展局常任秘書長(規劃及地政)

日期： 19.4.2013

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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

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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
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		REV	–

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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

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FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

SITE LOCATION PLAN

SCALE	A3 1 : 6000	DATE	DEC. 2011
CHECK	–	DRAWN	CFM
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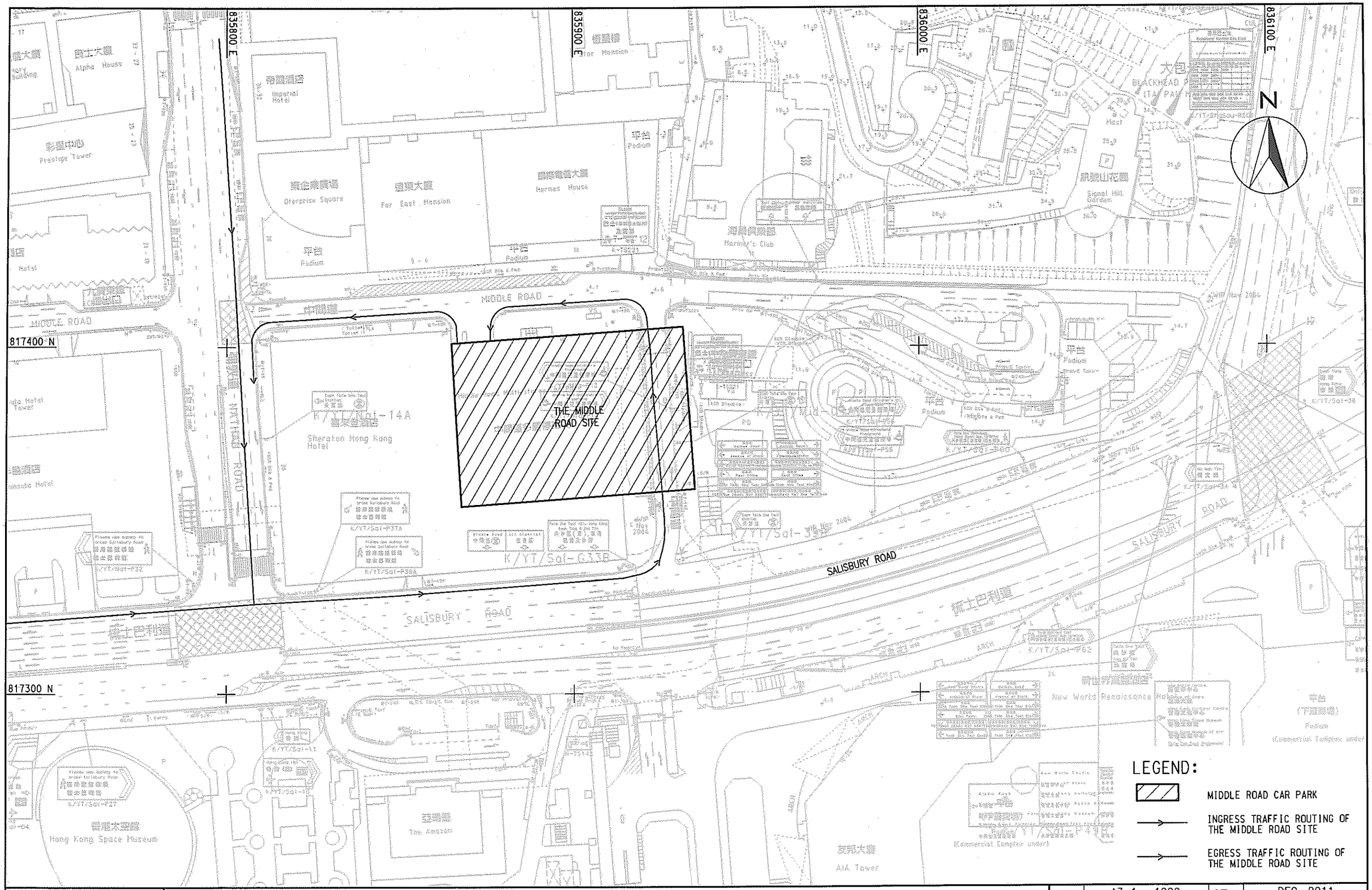

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AGREEMENT NO. TO 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

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

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

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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

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FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING TRAFFIC MANAGEMENT WITHIN AOI

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

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FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

EXISTING PEDESTRIAN FACILITIES WITHIN AOI

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

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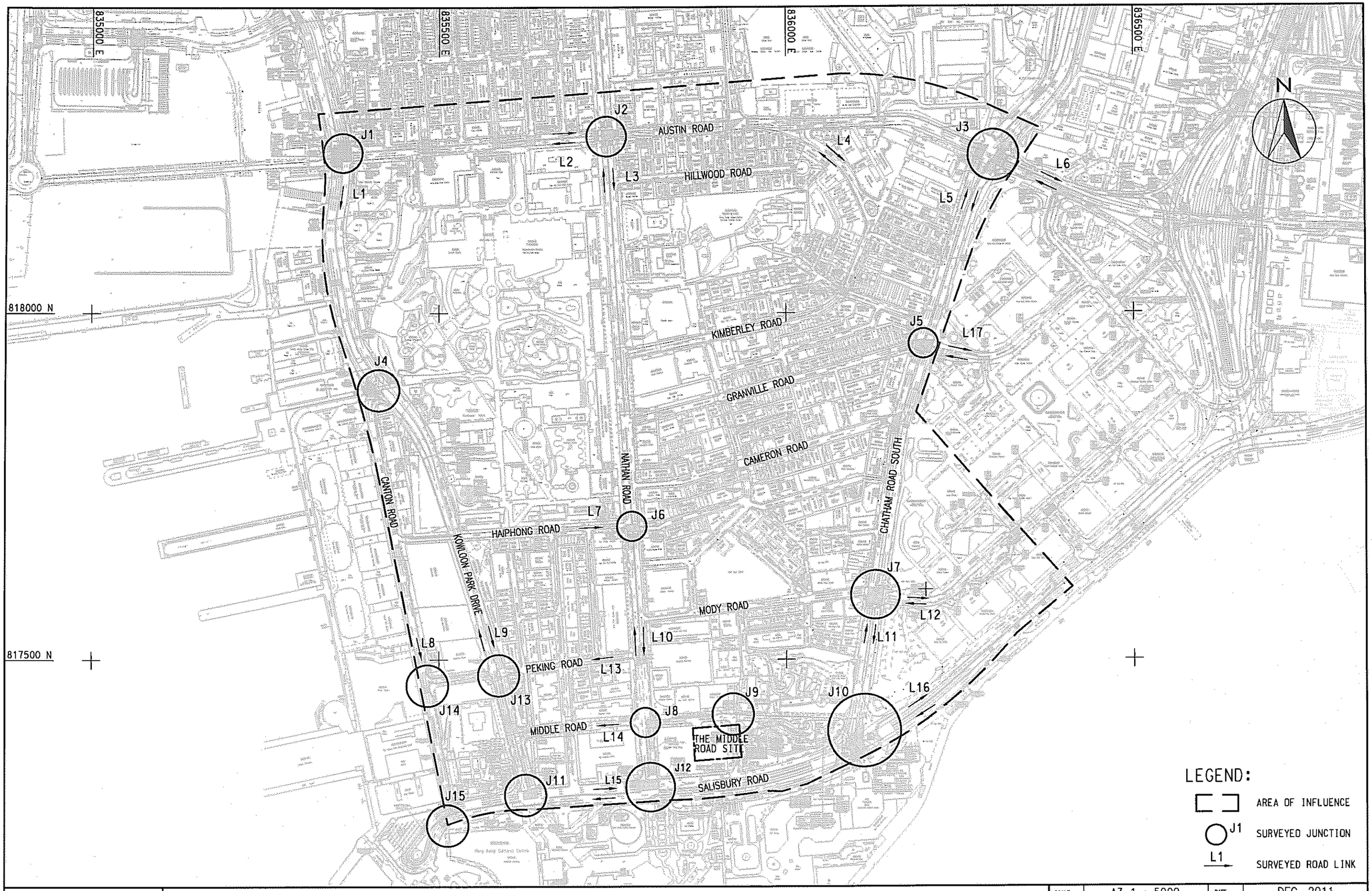

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FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF SURVEYED JUNCTIONS AND ROAD LINKS

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JOB No.	60214565	DRAWING No.	FIG 3.3
		REV	–

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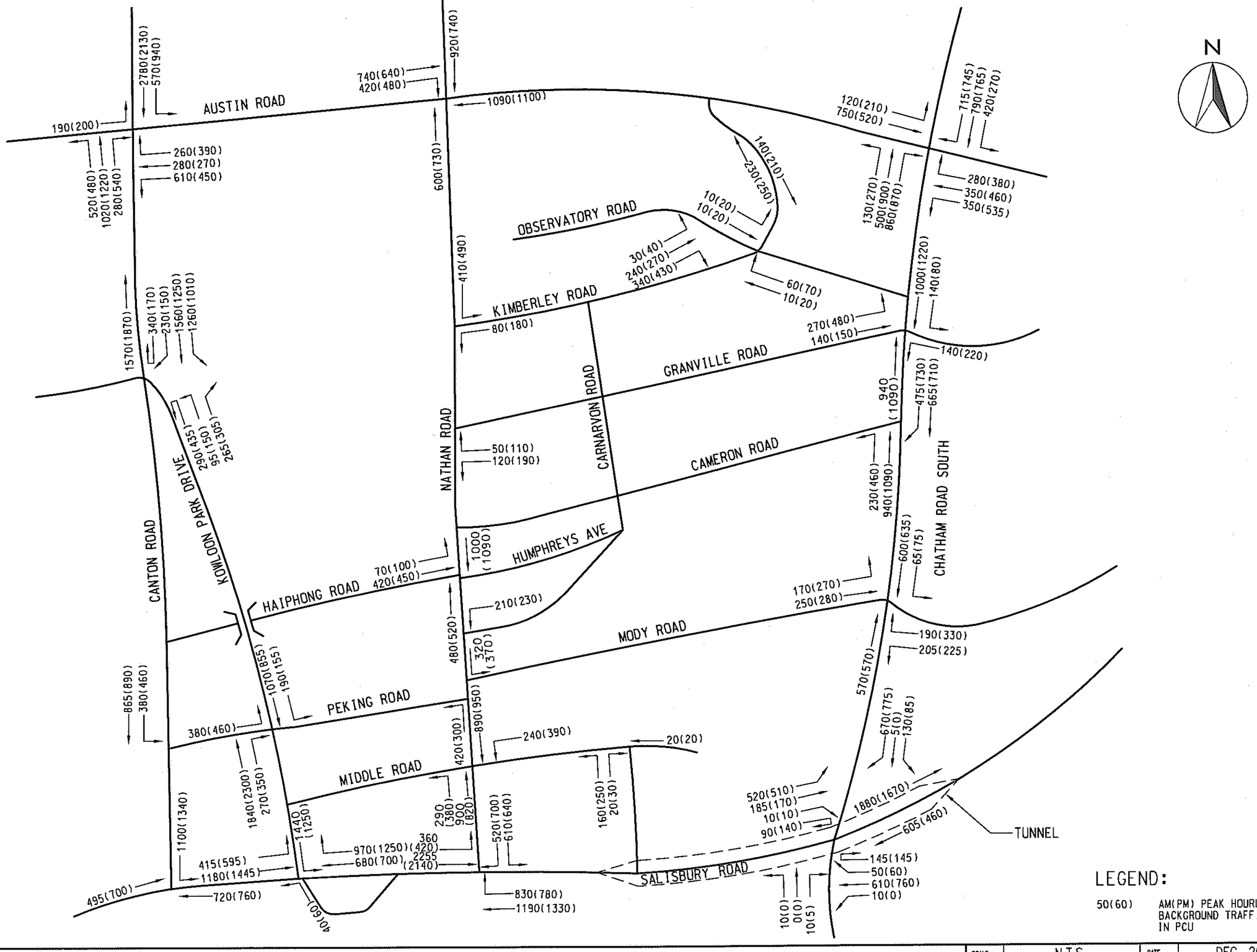

LEGEND:

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

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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
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JOB No.	60214565	DRAWING No.	FIG 3.4
		REV	–

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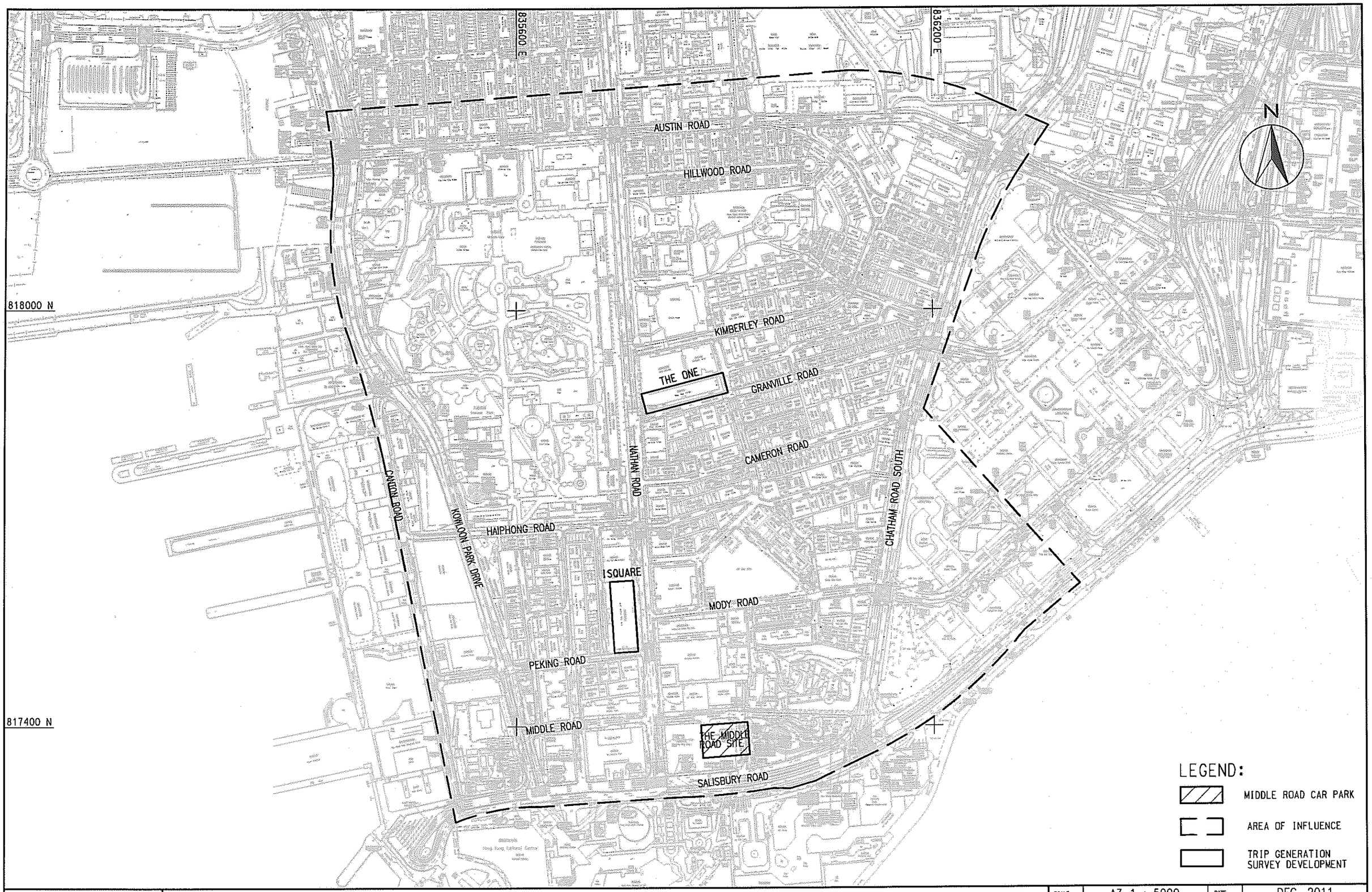

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AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATIONS OF TRIP GENERATION SURVEY

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JOB No.	60214565	DRAWING No.	FIG 3.5
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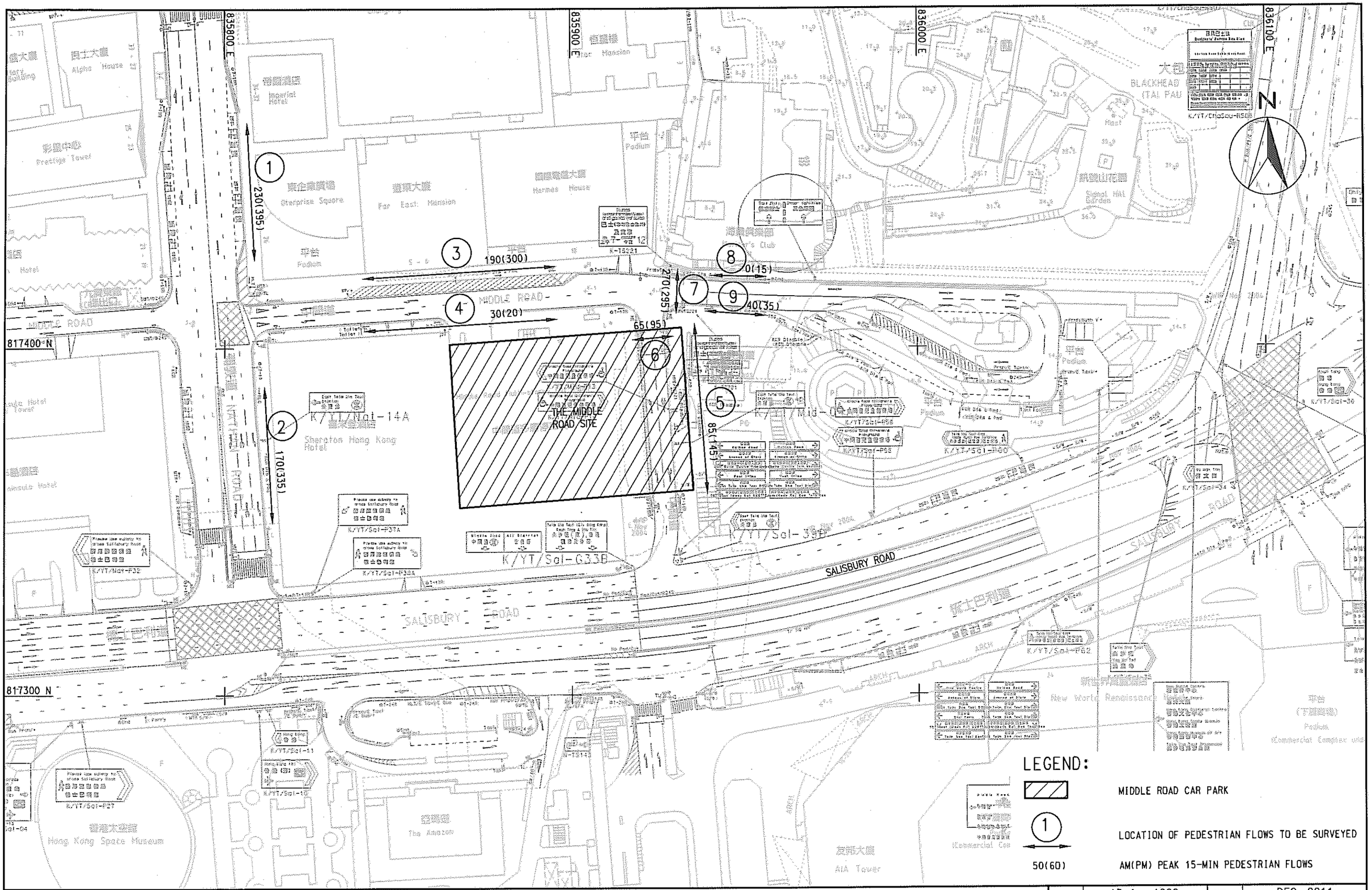

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AGREEMENT NO. TO 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

2011 OBSERVED PEAK 15-MIN PEDESTRIAN FLOWS

SCALE	A3 1 : 1000	DATE	DEC. 2011
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JOB No.	60214565	DRAWING No.	FIG 3.6
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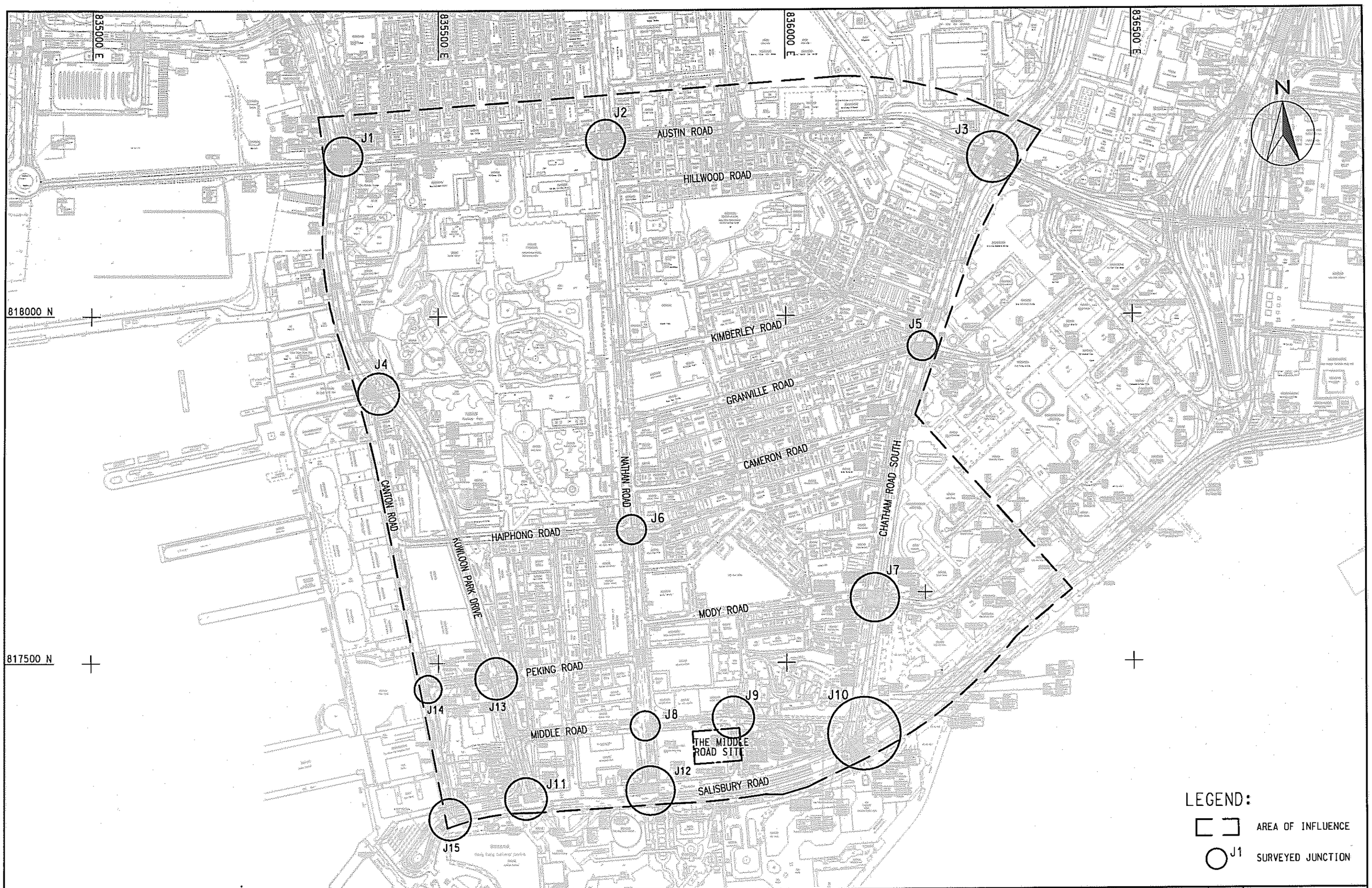

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AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

LOCATION OF ASSESSSD JUNCTIONS

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

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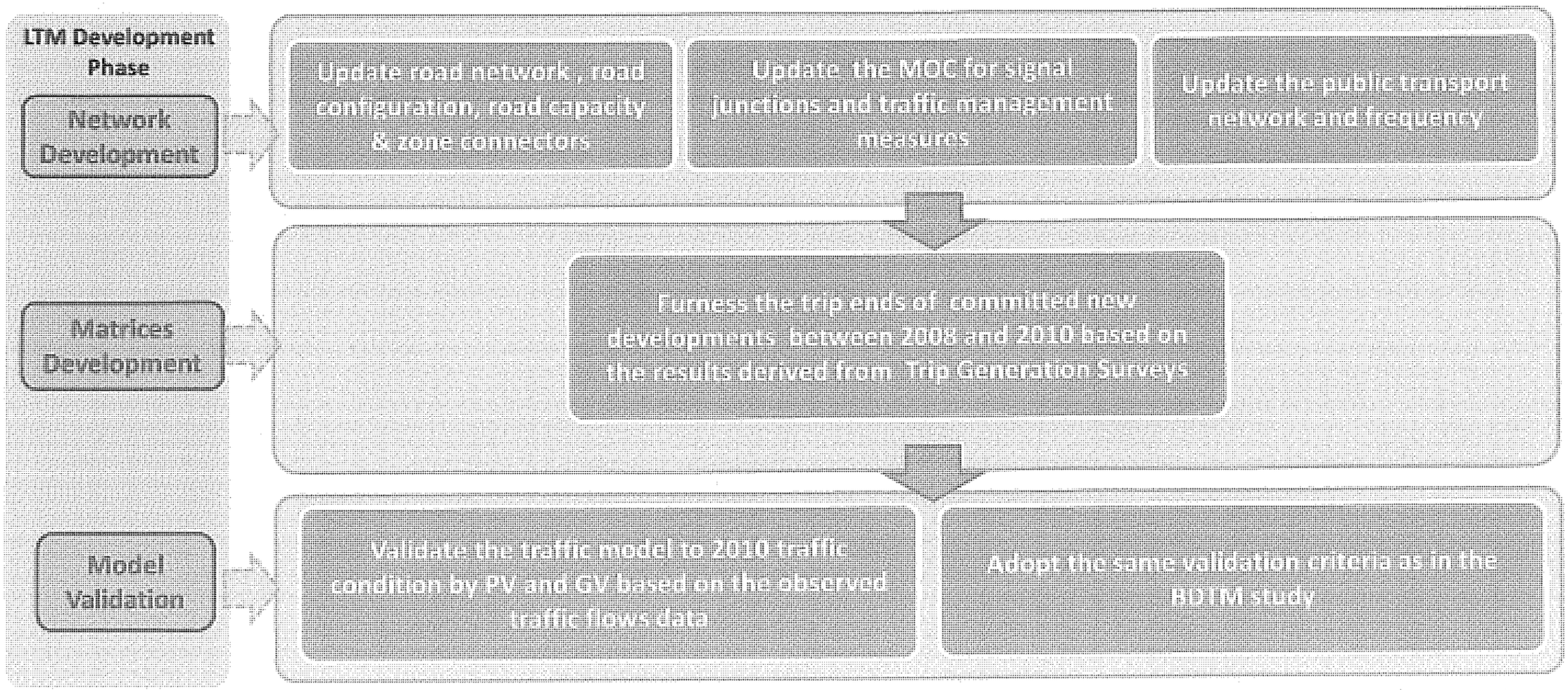

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AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE
MODELLING APPROACH FLOW
DIAGRAM FOR BASE YEAR MODEL DEVELOPMENT

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

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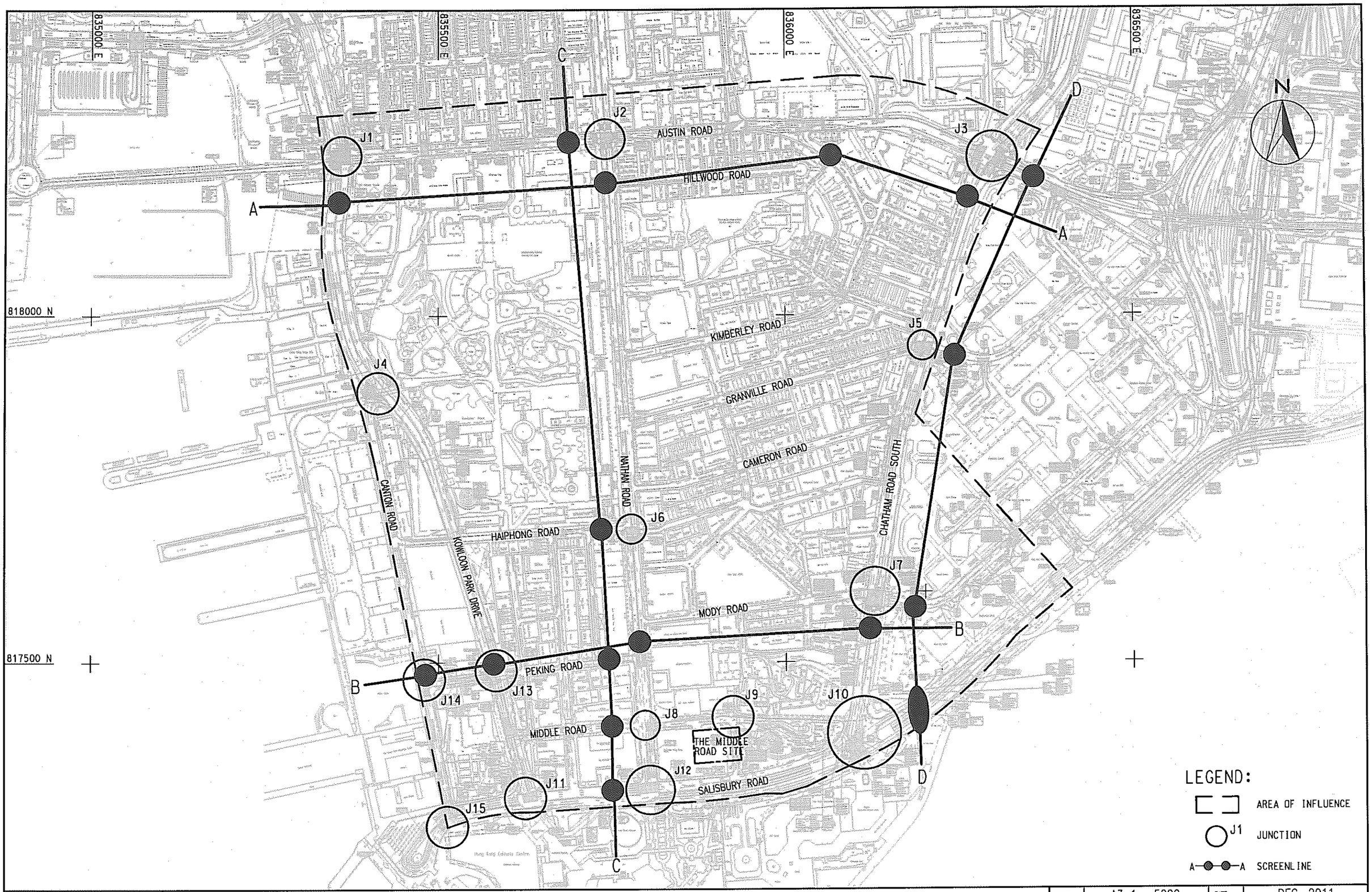

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AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

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	–

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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	–

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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	–

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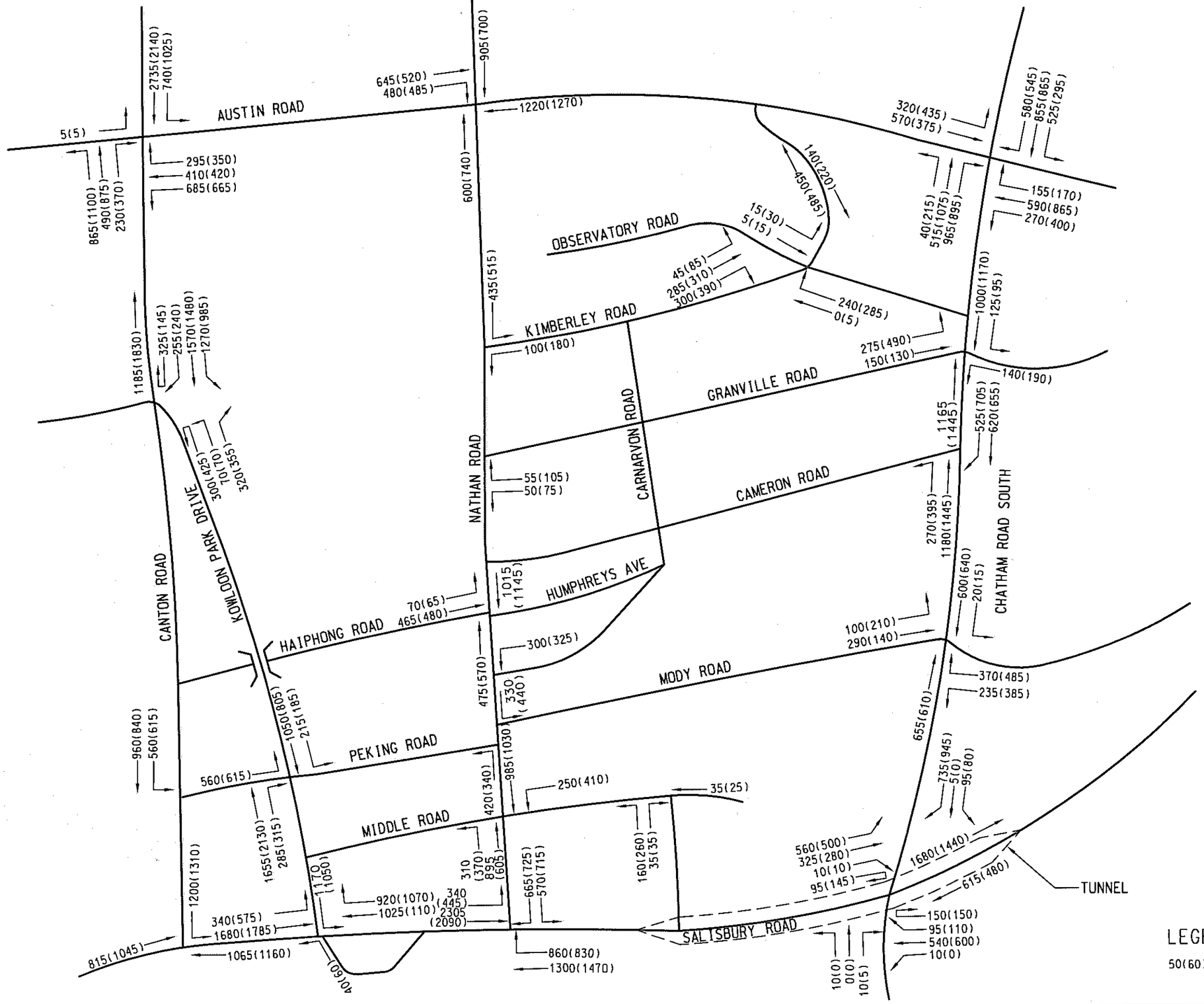

AECOM

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	–

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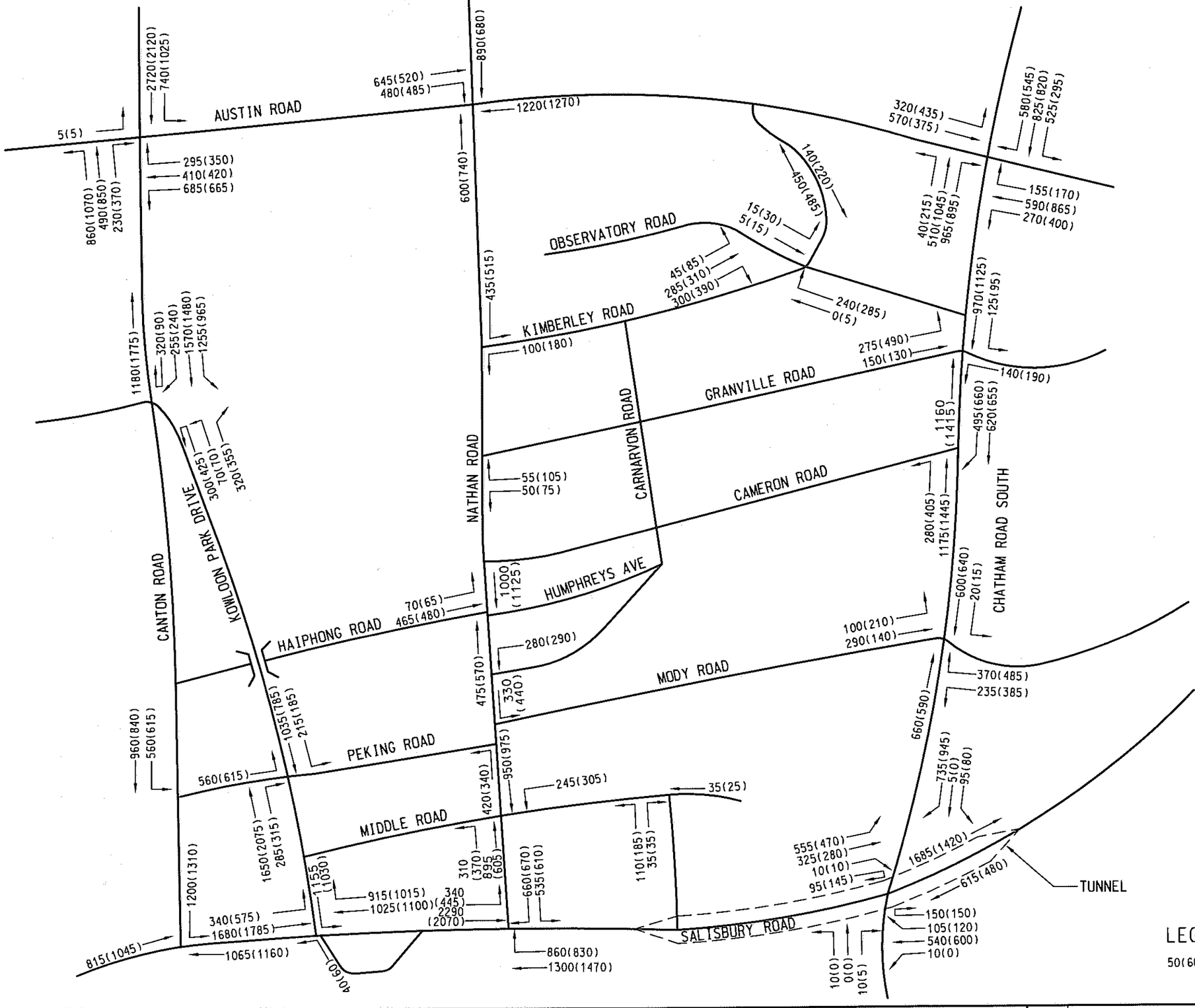

LEGEND:

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	–

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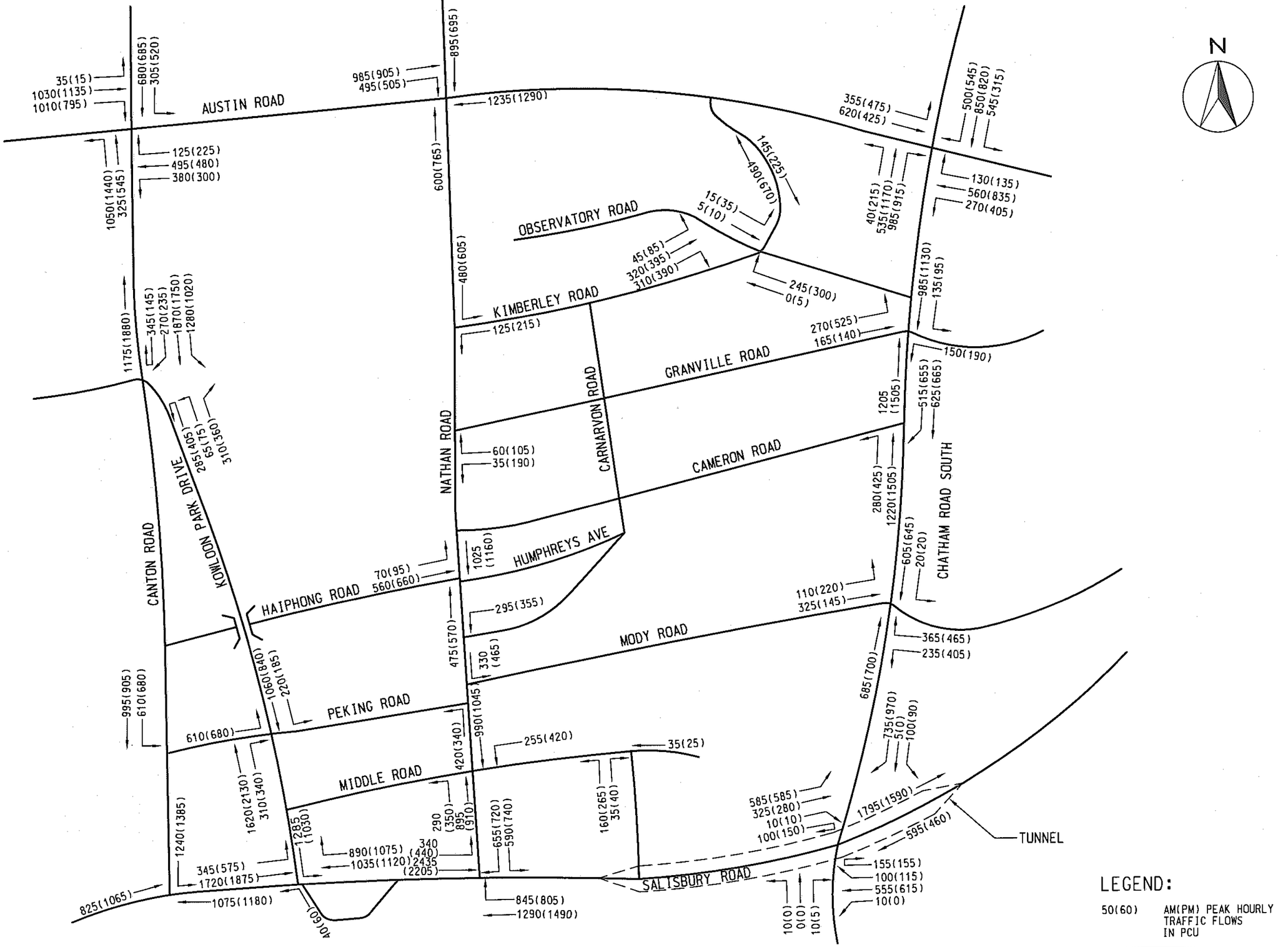

LEGEND:

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	–

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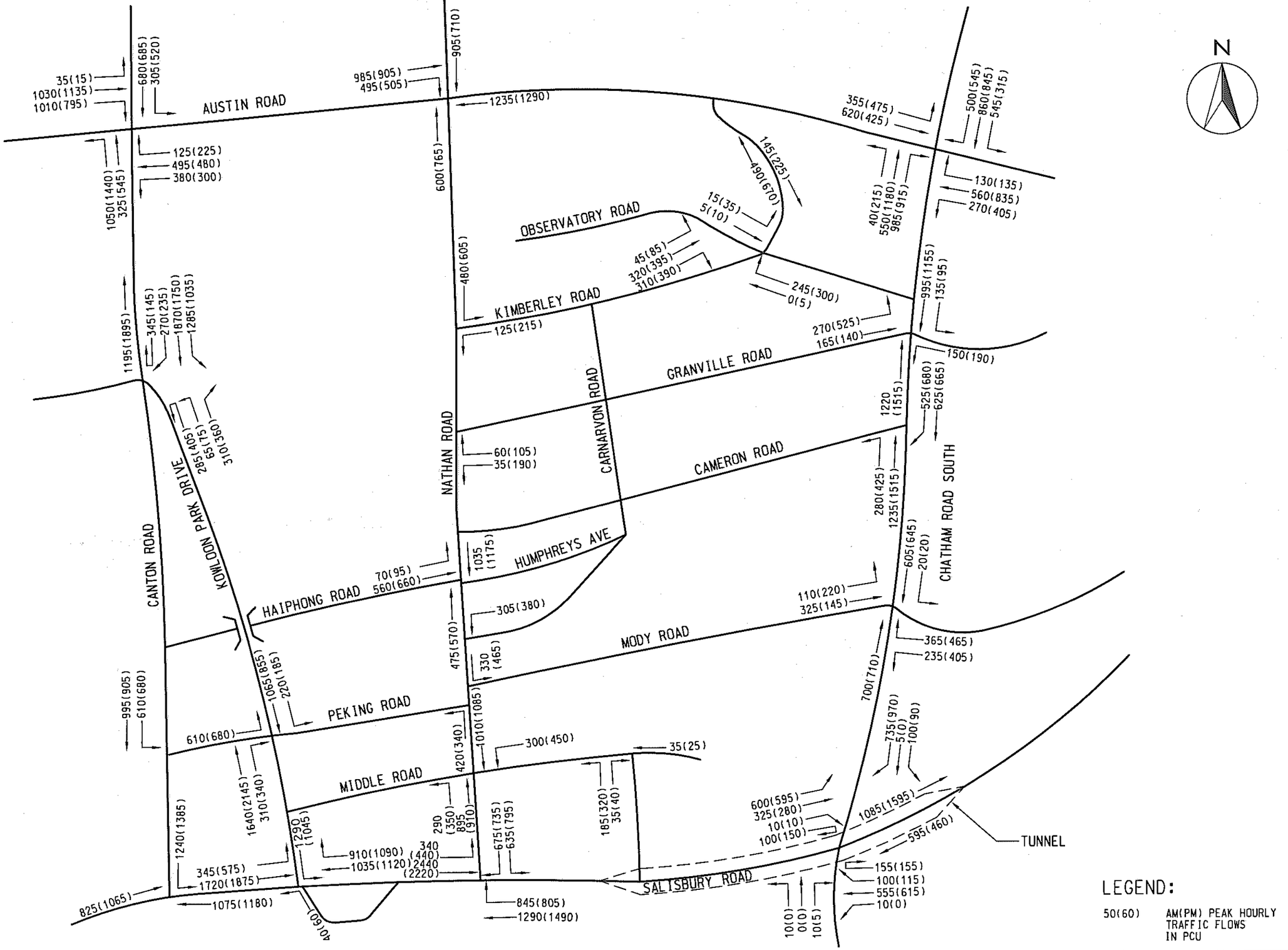

LEGEND:

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	–

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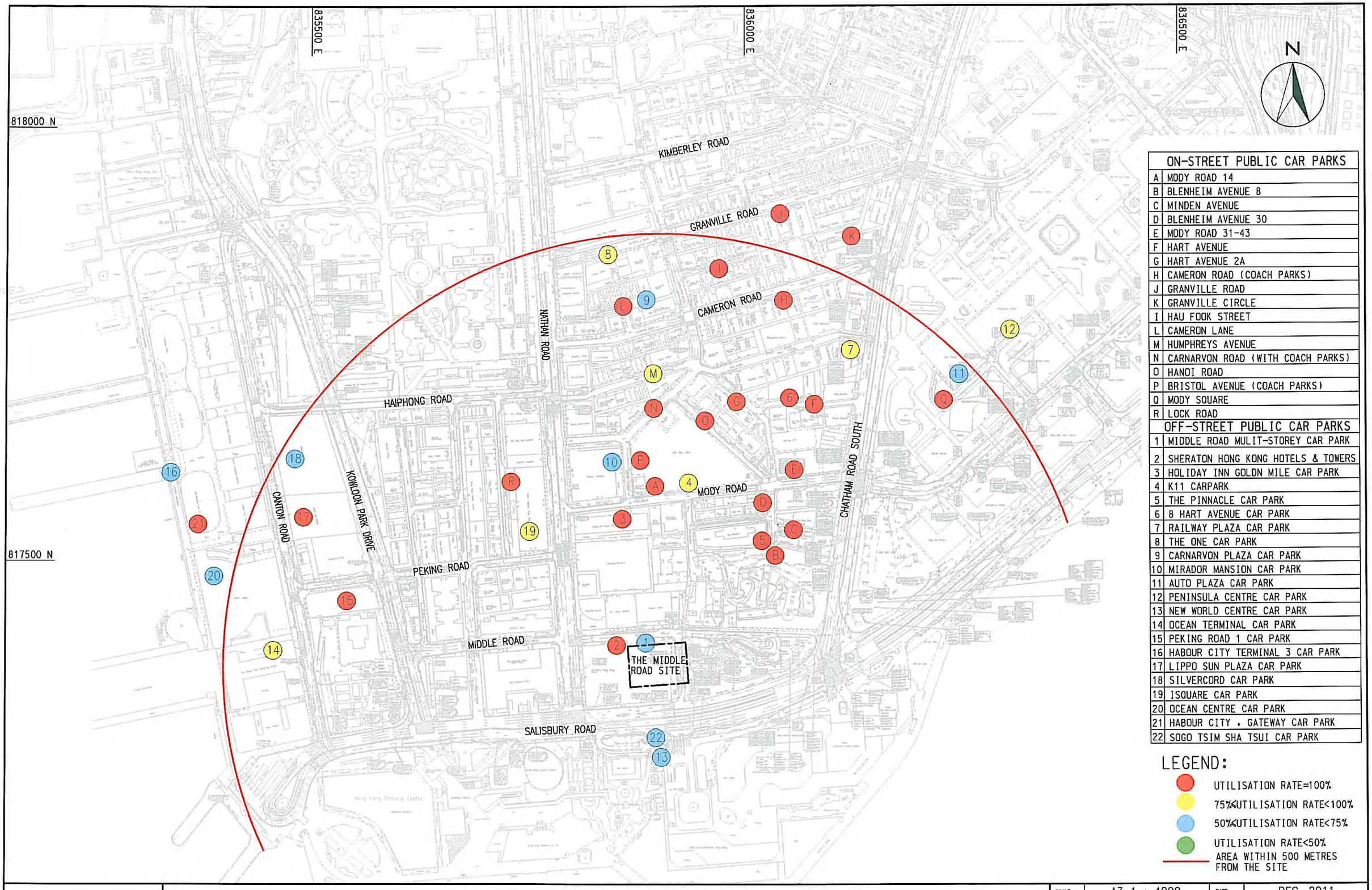

ON-STREET PUBLIC CAR PARKS	
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
J	GRANVILLE ROAD
K	GRANVILLE CIRCLE
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
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	–

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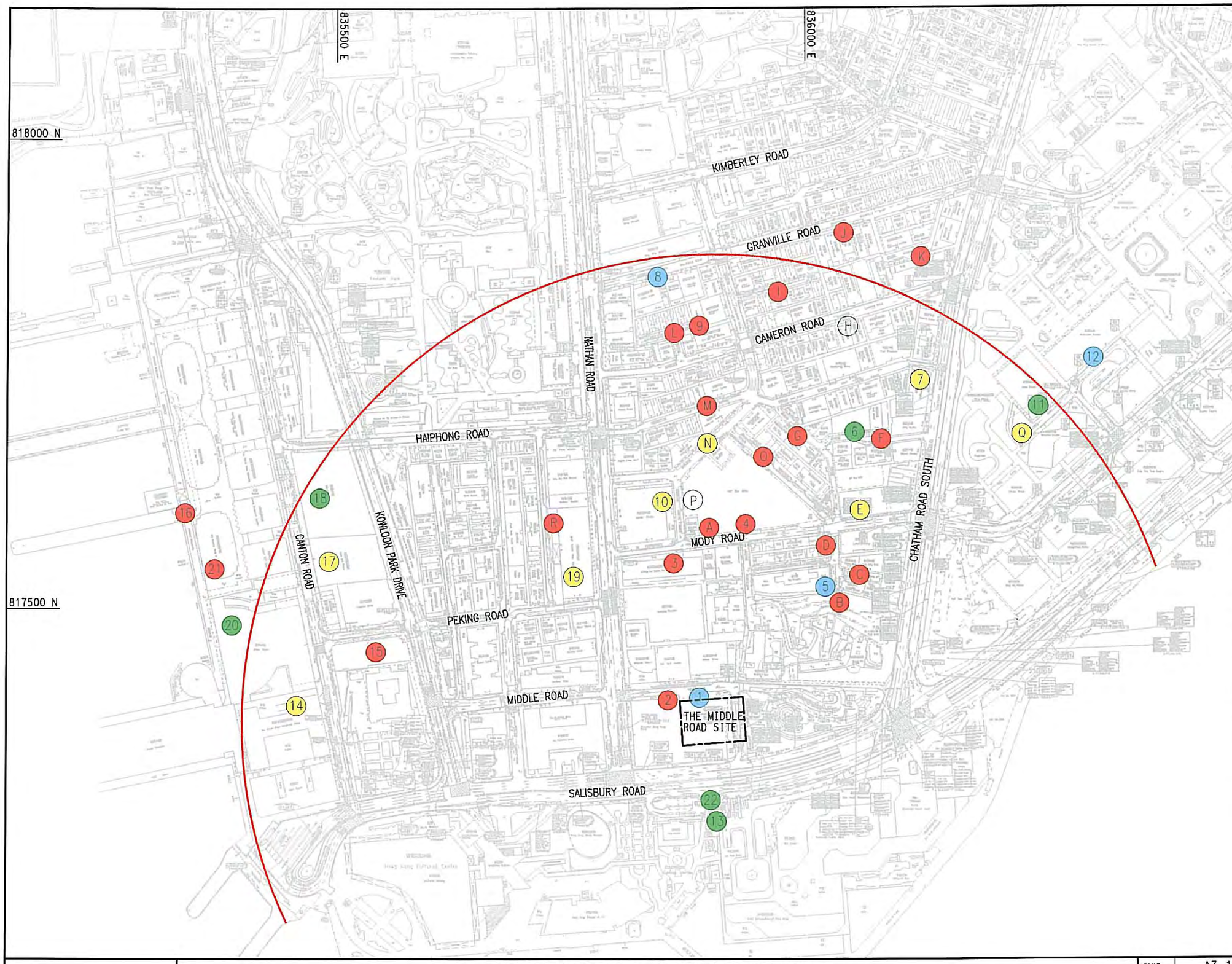

ON-STREET PUBLIC CAR PARKS	
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
J	GRANVILLE ROAD
K	GRANVILLE CIRCLE
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
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	–

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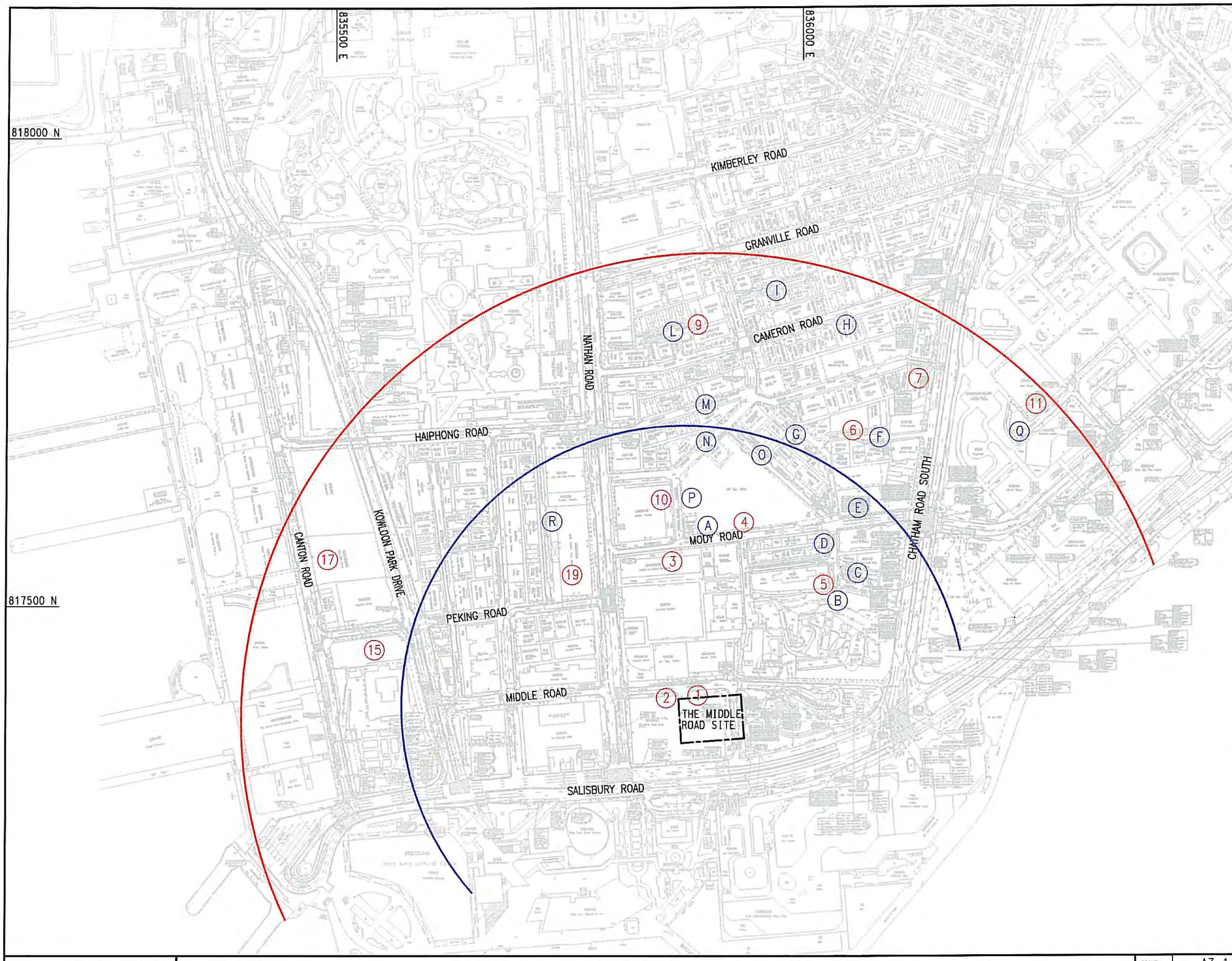

	ON-STREET PUBLIC CAR PARKS
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD (COACH PARKS)
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD (WITH COACH PARKS)
O	HANOI ROAD
P	BRISTOL AVENUE (COACH 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	–

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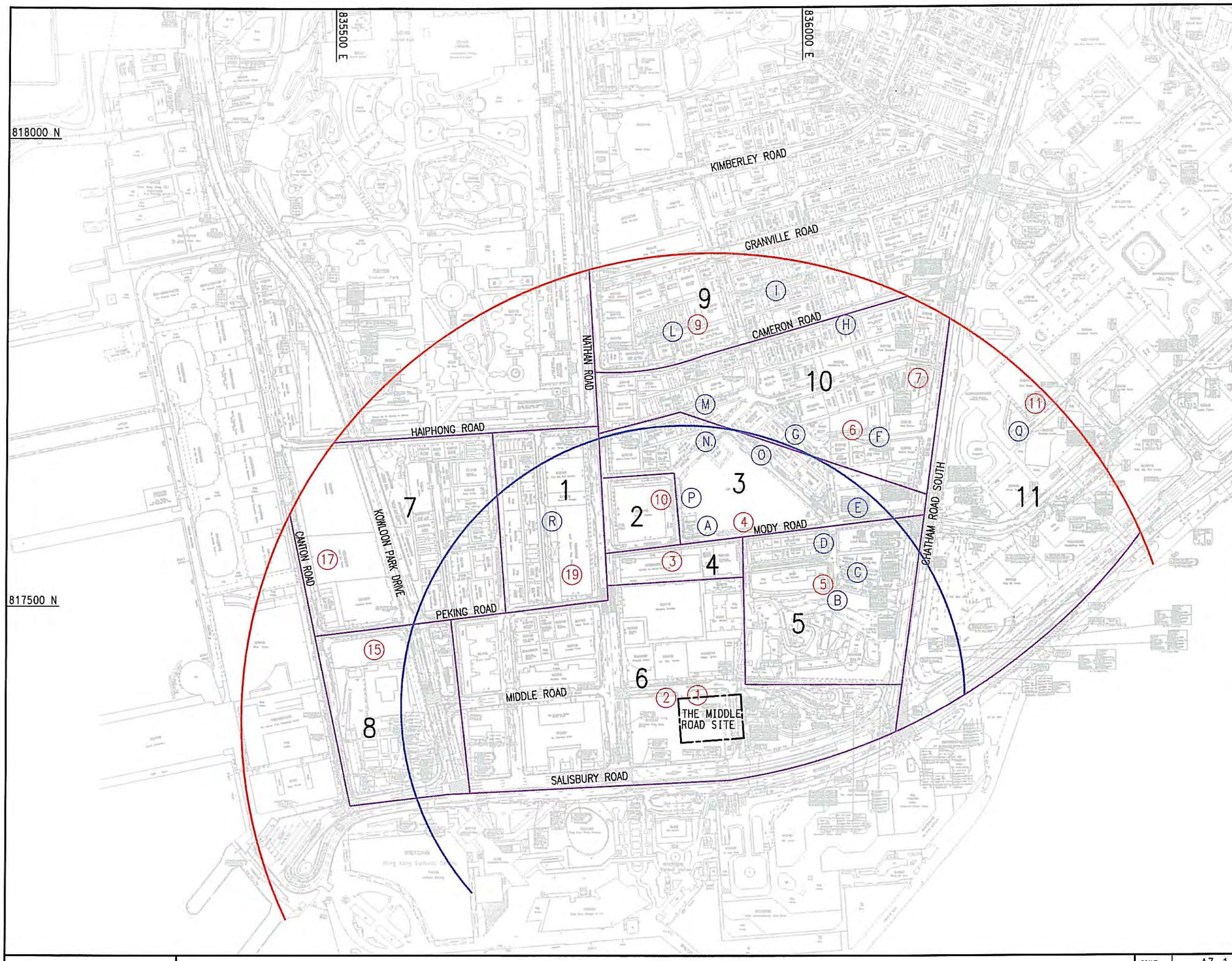

	ON-STREET PUBLIC CAR PARKS
A	MODY ROAD 14
B	BLENHEIM AVENUE 8
C	MINDEN AVENUE
D	BLENHEIM AVENUE 30
E	MODY ROAD 31-43
F	HART AVENUE
G	HART AVENUE 2A
H	CAMERON ROAD
I	HAU FOOK STREET
L	CAMERON LANE
M	HUMPHREYS AVENUE
N	CARNARVON ROAD
O	HANOI ROAD
P	BRISTOL AVENUE
Q	MODY SQUARE
R	LOCK ROAD
	OFF-STREET PUBLIC 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	–

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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	–

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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	–

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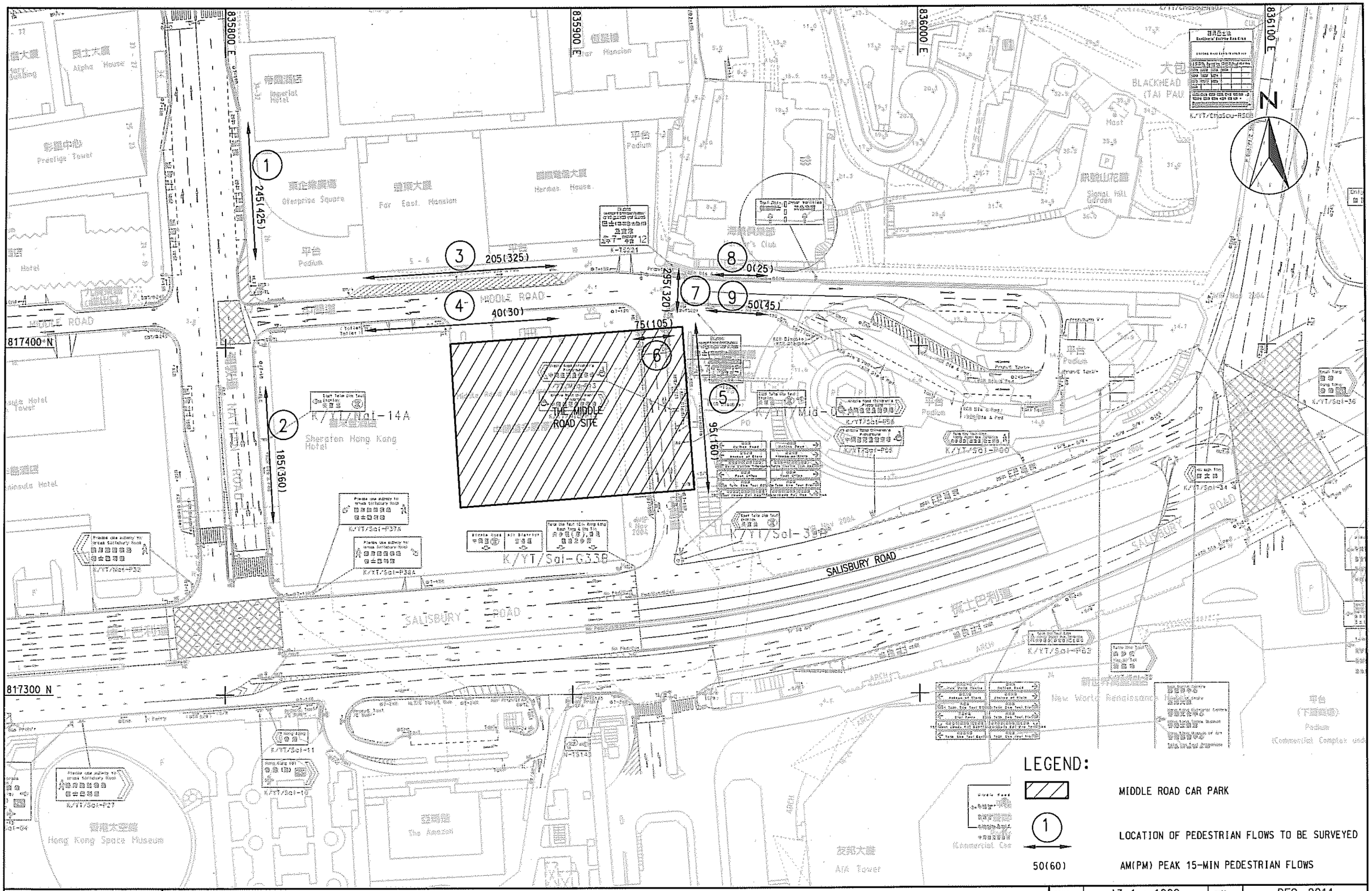

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AGREEMENT NO. TD 11/2011 – TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

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	–

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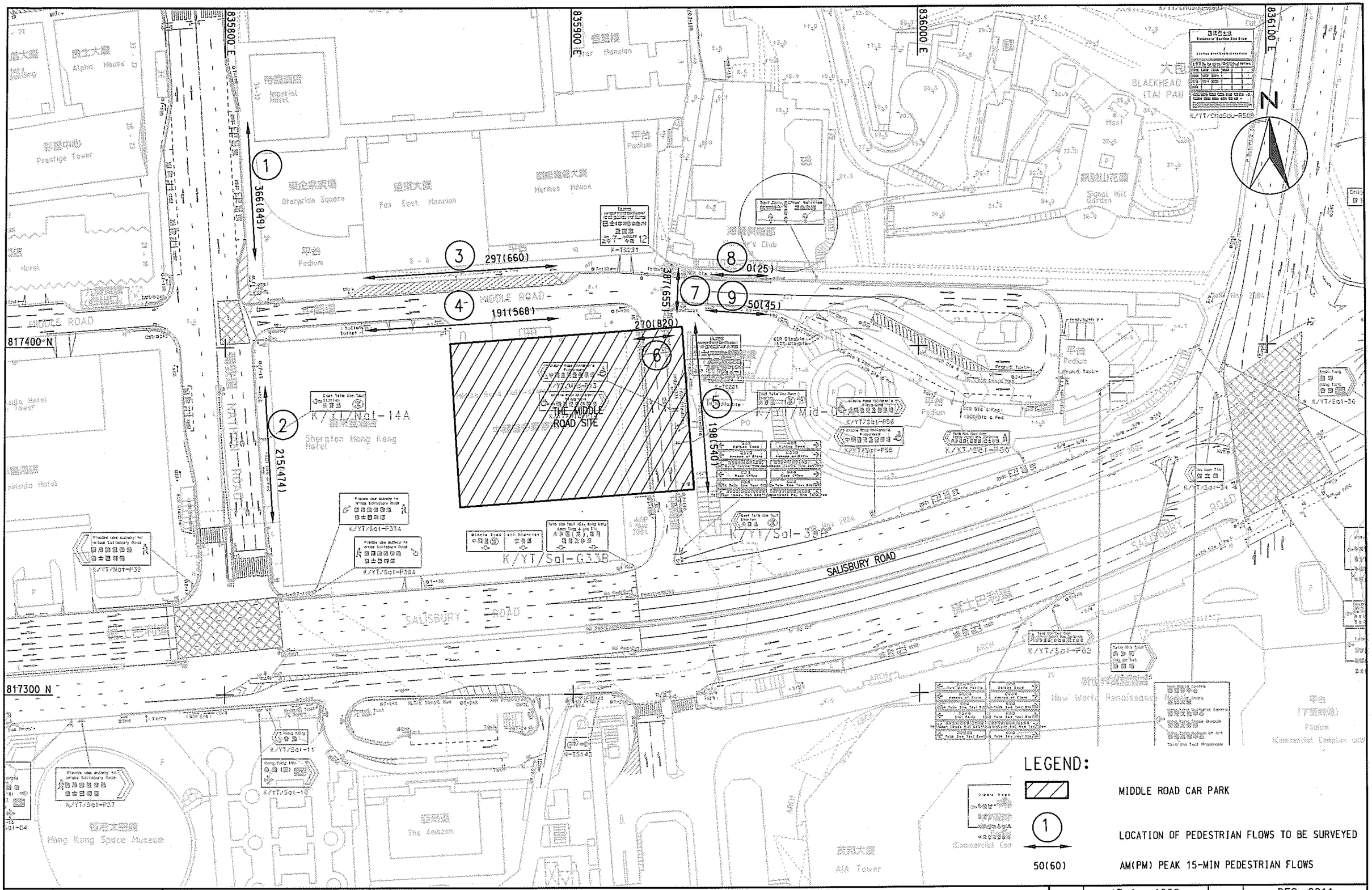

AECOM

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	–

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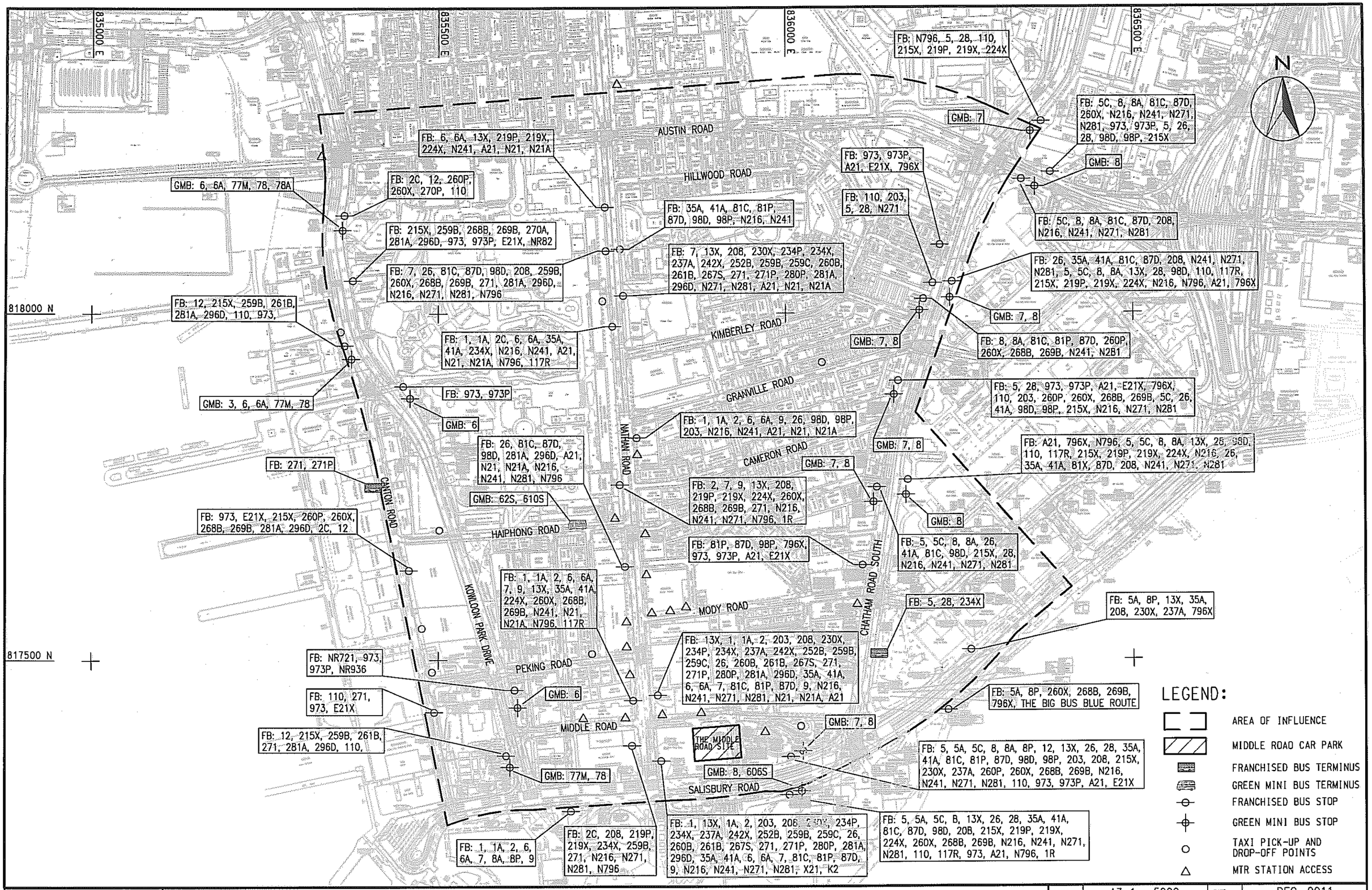

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FOR THE PROPOSED DEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

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	–

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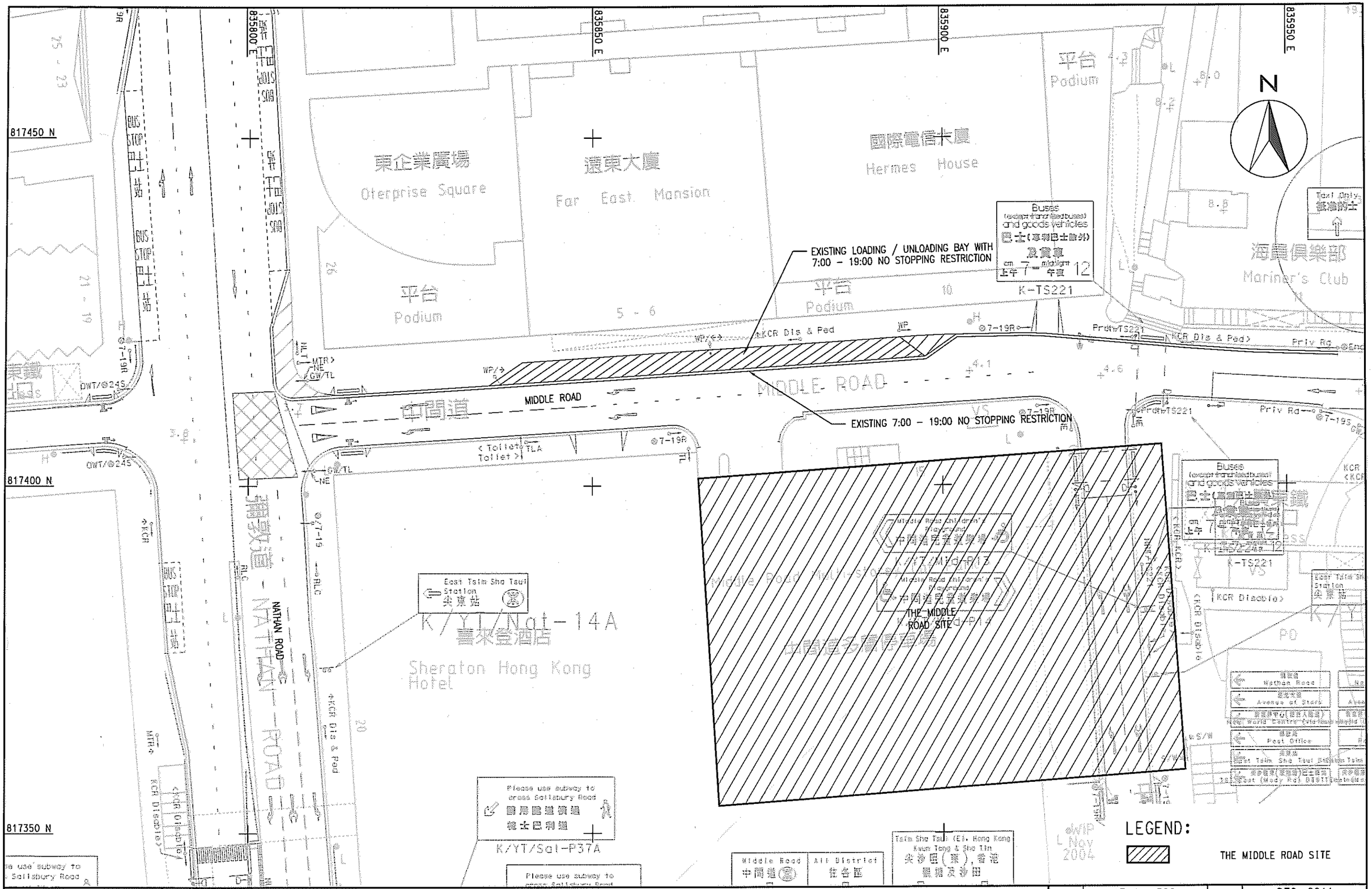

AGREEMENT NO. TD 11/2011 - TRAFFIC IMPACT ASSESSMENT
FOR THE PROPOSED OEVELOPMENT AT MIDDLE ROAD PUBLIC CAR PARK SITE

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	-

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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 –

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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 –

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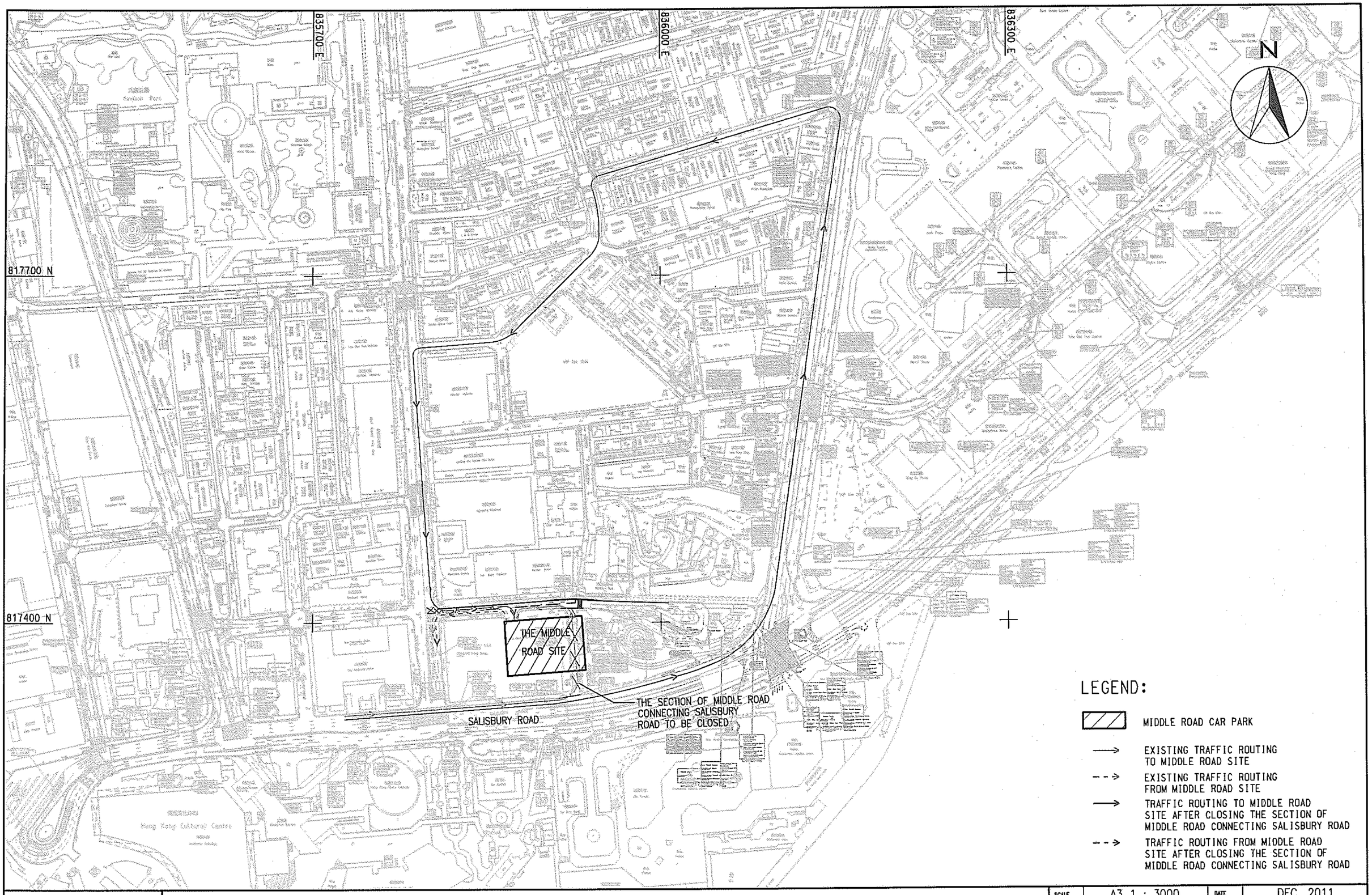

AECOM

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	–

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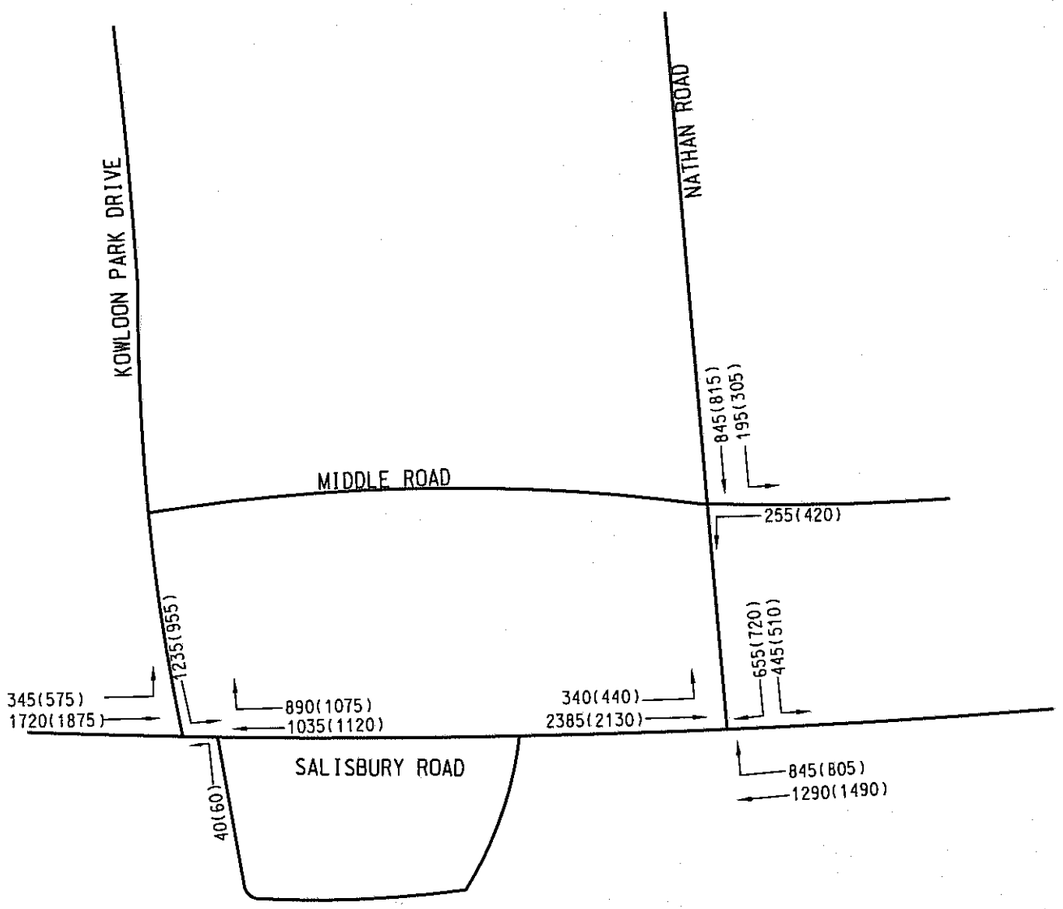
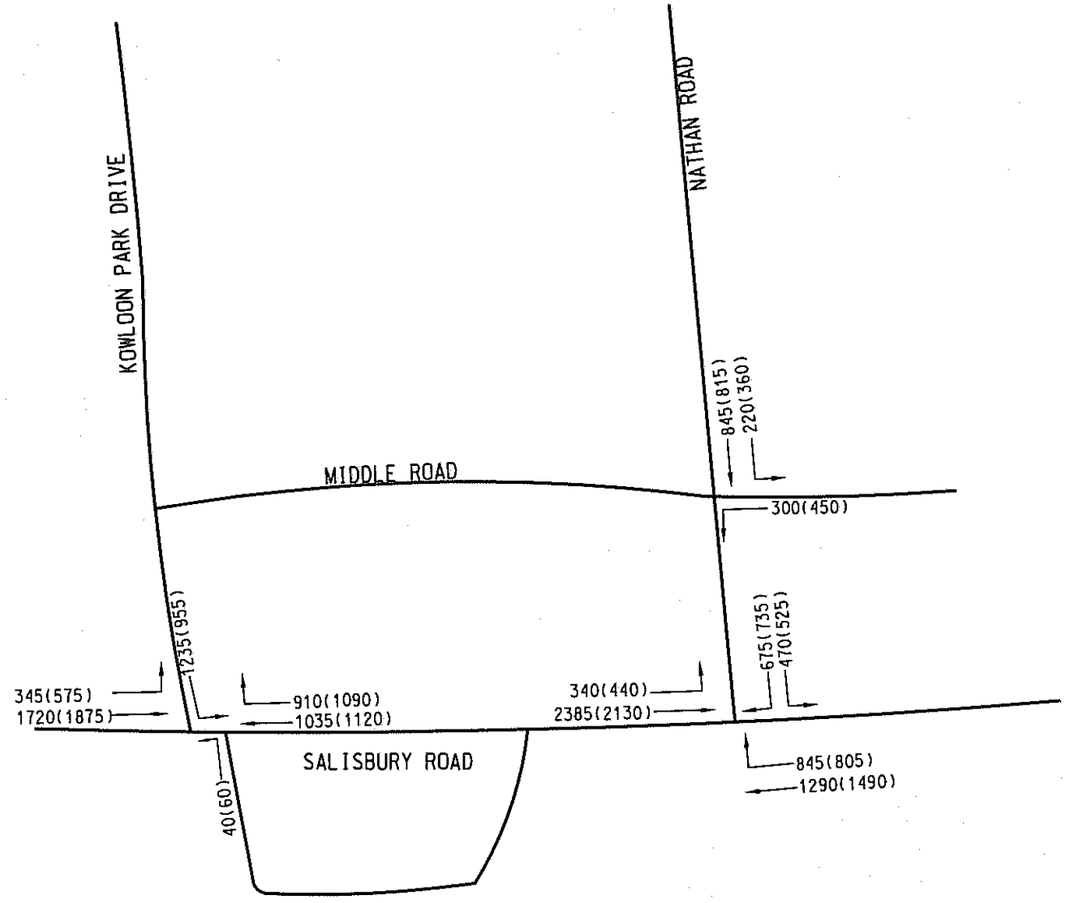


BACKGROUD CASE - WITHOUT PROPOSED DEVELOPMENT AT THE MIDDLE ROAD SITE



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	-

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審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)05

問題編號
SV031

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

就有關增加土地供應措施的討論，請當局說明可否就土地契約修訂申請施加地積比率的條件，並請當局說明香港鐵路有限公司擁有的西鐵沿線土地可否用作公共房屋發展。

提問人： 石禮謙議員

答覆：

在處理土地契約修訂申請(輕微或技術性修訂申請除外)時，地政總署一般都會在經修訂的地契條件中加入最高樓面總面積的條款。

西鐵物業發展項目由西鐵物業發展有限公司負責推展。西鐵物業發展有限公司由政府和九廣鐵路公司共同成立，以發展西鐵物業用地。香港鐵路有限公司(港鐵公司)是落實這些項目及就這些項目進行招標的代理人。

西鐵物業發展項目是私營房屋土地供應的重要來源，我們正與港鐵公司積極推展西鐵物業發展項目。視乎需要，政府亦不會排除經檢討後在合適的情況下，將原計劃用作私營房屋的土地轉為發展資助房屋。

姓名： 周達明

職銜： 發展局常任秘書長(規劃及地政)

日期： 17.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)06

問題編號
SV030

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

就答覆編號 DEVB(PL)069，請當局提供政府收回代違例招牌擁有人拆除有關招牌的費用的成功率。

提問人： 單仲偕議員

答覆：

如發現危險或棄置招牌，屋宇署會向招牌擁有人發出勸諭信(如無法確定招牌擁有人，則向業主立案法團／管理公司發出勸諭信)，要求對方自願拆除招牌。如危險或棄置招牌在指定時間後仍未拆除或修葺，屋宇署便會採取執法行動，根據《公眾衞生及市政條例》(第 132 章)第 105 條發出「拆除危險構築物通知」(「拆除通知」)，要求有關招牌擁有人在指定時間內拆除或修葺其招牌。如招牌擁有人在「拆除通知」限期屆滿後，仍未遵從「拆除通知」採取行動，屋宇署或會安排顧問公司及承辦商拆除該等危險或棄置招牌，然後向招牌擁有人追討拆除招牌和棄置有關物料所需費用。在緊急情況下，屋宇署亦會委聘承辦商拆除任何危險或棄置招牌。如屋宇署無法得知招牌擁有人的身分，或無法即時找到或確定誰是招牌擁有人，或招牌擁有人不在香港，屋宇署或會出售有關物料，然後從出售物料所得收益中扣除拆除招牌和棄置有關物料所需費用，再把餘額(如有的話)交付庫務署。

大部分被發現的危險或棄置招牌，已由有關招牌擁有人在接獲屋宇署的口頭勸諭或所發出的勸諭信後自行拆除。在過去三年，經拆除或修葺的危險或棄置招牌數目、屋宇署發出的「拆除通知」數目、屋宇署顧問公司及承辦商代失責招牌擁有人執行的「拆除通知」數目，以及已向招牌擁有人追討拆除費用個案的百分比，表列如下：

年度	招牌擁有人在接獲屋宇署的勸諭信或口頭勸諭後自行拆除／修葺的危險／棄置招牌數目	屋宇署發出的「拆除通知」數目	屋宇署承辦商／顧問公司代失責招牌擁有人拆除／修葺的危險／棄置招牌數目 **(A)**[註3]	屋宇署承辦商在緊急情況下拆除／修葺的危險／棄置招牌數目 **(B)**[註3]	因執行「拆除通知」而已向失責招牌擁有人追討費用的個案數目 **(C)**[註4]	在緊急情況下拆除招牌後已向招牌擁有人追討費用的個案數目 **(D)**[註4]	已向招牌擁有人追討費用個案的百分比= **$\frac{(C)+(D)}{(A)+(B)}$ x100%**[註5]
2010-11[註1]	1 982	1 245	695	17	2	3	0.70%
2011-12	952	249	317	9	6	3	2.76%
2012-13[註2]	997	249	128	10	1	5	4.35%
總計	**3 931**	**1 743**	**1 140**	**36**	**9**	**11**	**1.70%**

註：

1. 由於屋宇署在 2009 及 2010 年進行拆除招牌特別行動，因此 2010-11 年度發出的「拆除通知」數目及拆除的危險或棄置招牌數目較多。
2. 截至 2013 年 3 月的數字。
3. 在某一年度內，遵從「拆除通知」拆除／修葺的危險／棄置招牌的數目，以及由屋宇署代失責招牌擁有人執行的「拆除通知」數目，未必與該年度內發出的「拆除通知」數目相符。
4. 請注意，由於屋宇署目前沒有有關資料，有關數字並不包括在無法找到招牌擁有人的情況下由屋宇署委聘承辦商或顧問公司進行拆除工作後出售相關物料以支付全部或部分開支的個案數目。
5. 已向招牌擁有人討回拆除費用的個案只有數宗，原因是大部分由屋宇署代失責擁有人拆除的招牌屬棄置招牌，且無法確定其擁有人。

除上述危險和棄置招牌外，屋宇署亦會在接獲市民舉報後對違例招牌採取執法行動，以及在大規模行動中清拆大型違例招牌。如發現違例招牌，屋宇署會根據《建築物條例》(第 123 章)向招牌擁有人發出清拆令，要求有關招牌擁有人在指定期限內拆除招牌。屋宇署在發出清拆令後，會採取行動促使招牌擁有人主動遵從清拆令。屋宇署亦會考慮委聘承辦商或顧問公司代失責招牌擁有人進行所需工程，然後向其追討工程費用，另加監督費及附加費。在過去三年，屋宇署發出的違例招牌清拆令數目、遵從發出的清拆令清拆的違例招牌數目，以及屋宇署顧問公司和承辦商代失責招牌擁有人清拆的違例招牌數目，表列如下：

年度	針對違例招牌發出的清拆令數目	遵從送達的清拆令清拆的違例招牌數目[註7]	由屋宇署顧問公司及承辦商代失責招牌擁有人清拆的違例招牌數目
2010-11	190	190	0
2011-12	109	125	0
2012-13[註6]	205	150	1[註8]
總計	**504**	**465**	**1**

註：

6. 截至 2013 年 3 月的數字。
7. 遵從清拆令清拆的違例招牌數目未必與該年度內送達的清拆令數目相符。
8. 向有關招牌擁有人追討費用的工作仍在進行。

姓名： 周達明

職銜： 發展局常任秘書長 (規劃及地政)

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)07

問題編號
S066

管制人員的答覆

總目： 138 政府總部：發展局(規劃地政科)　　分目： 000 運作開支

綱領： (2) 屋宇、地政及規劃

管制人員： 發展局常任秘書長(規劃及地政)

局長： 發展局局長

問題：

跟進財委會特別會議上未完的提問，有關短中期增加房屋土地供應：

(1) 65 幅三類土地的總面積；

(2) 65 幅土地的公私營房屋分配的百分比；

(3) 在分配作為公營部分中，出租與出售分配的百分比；

(4) 未屬於上述 65 幅土地的政府空置物業或土地尚有多少數量？

提問人： 王國興議員

答覆：

正如《二零一三年施政報告》所述，政府會繼續以多管齊下的措施，增加短中期的土地供應，以滿足香港的住屋和其他各項需要。在《二零一三年施政報告》提出的十項措施中，我們正積極將 36 幅「政府、機構或社區」及其他政府用地、13 幅沒有植被、荒廢或已平整的「綠化地帶」和 16 幅工業用地改作住宅用途。

(1) 涵蓋上述三類土地的 65 幅用地的總面積約為 114 公頃。

(2) 由於這些用地擬提供的公私營房屋比例須視乎詳細的研究而定，因此我們在現階段沒有有關資料。政府已有既定機制為公私營房屋分配合適的用地，以達致既定的資助房屋建屋目標，並維持每年平均私營房屋土地供應量。

(3) 由於大部分用地仍須待房屋署作進一步研究，我們在現階段沒有租住公屋單位和擬出售公營房屋單位的比例。

(4) 當局現時沒有所有空置政府用地的統計數字。對於有可能提供作發展的政府用地，當局會按政府的既定機制作出檢視，以釐定這些用地的合適用途。如有關政府用地暫未作任何已規劃的永久發展用途，我們會嘗試把有關用地撥作臨時用途，例如以政府撥地形式撥作公共工程的工地或短期租出作多種用途。對於已作指定永久發展用途但未有所需基建設施配套的用地，我們會就所需基建設施作相應的規劃。

政府產業署表示，該署目前管理的政府空置物業中有 3 項或可作房屋發展用途，詳情如下：

	物業	建議用途
(a)	前堅尼地城已婚警察宿舍B座	規劃署正考慮把有關用地作公營房屋發展
(b)	前樂富職員宿合	預留作興建紀律部隊宿舍
(c)	荔枝角道737號屠房	預留作日後發展公營房屋

姓名： 周達明

職銜： 發展局常任秘書長 (規劃及地政)

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)08

問題編號
S185

管制人員的答覆

總目： 82 屋宇署　　分目：

綱領： 樓宇及建築工程

管制人員： 屋宇署署長

局長： 發展局局長

問題：

基於答覆編號 DEVB(PL)095 的答覆以及當局在財務委員會特別會議上的口頭回覆，現時本港約有 19 萬個違規招牌，每年約清拆 1 600 個，但當局現階段並無計劃就這方面的工作增加人手，亦無訂下目標時限，請告之：

(a) 當局有否考慮訂出加快清拆違規招牌的計劃，若有，詳情為何？若否，原因為何？

(b) 鑒於日後不排除繼續有新的違規招牌出現，有可能造成「清拆慢，新增快」的情況，當局有否預先評估，相應作出部署；若有，詳情為何；若否，原因為何？

提問人： 盧偉國議員

答覆：

(a) 如答覆編號 DEVB(PL)095 所述，當局計劃提議修訂法例以實施招牌監管制度，容許符合訂明尺寸規限和其他指明準則的現存違例招牌，經註冊建築專業人士或註冊承建商進行安全檢查、鞏固（如有需要）和核證後，便可繼續使用。屋宇署會對沒有參與該制度的違例招牌採取執法行動。

除了在接獲市民對違例招牌的舉報後採取所需的行動外，屋宇署亦會繼續進行大規模行動，清拆大型違例招牌。在 2013-14 年度，本署計劃對大型違例招牌發出 250 張清拆令，並預計有 125 個大型違例招牌會由招牌擁有人在收到勸諭信後主動拆除、由招牌擁有人為遵從清拆令而拆除，或由本署委聘的顧問公司和承建商代失責的招牌擁有人拆除。本署亦會繼續對危險或棄置的招牌採取所需的執法行動。屋宇署拆除危險或棄置招牌的目標數目，會由 2012-13 年度的 1 200 個增至 2013-14 年度的 1 600 個。

屋宇署現正進行一項清點行動，記錄所有在私人樓宇外部的違例建築物，包括違例招牌。預計該項行動會於 2013 年下半年完成。清點行動所得的結果將有助本署策劃和執行對大型違例招牌採取的執法行動。

屋宇署會不時檢討招牌監管制度的成效、對違例招牌和危險或棄置的招牌所採取的執法行動，以及相關資源是否足夠。

(b) 除了採取上述措施清拆違例及危險或棄置的招牌外，屋宇署亦已委聘外判顧問公司進行定期巡查，並就正在建造的違例招牌的舉報加以調查。本署會根據現行的違例建築物執法政策，就正在建造的或對生命及財產明顯構成威脅或迫切危險而須予以取締的違例招牌，即時採取執法行動。

姓名：	區載佳
職銜：	屋宇署署長
日期：	16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)09

問題編號
SV027

管制人員的答覆

總目： 82 屋宇署　　分目：

綱領： 樓宇及建築工程

管制人員： 屋宇署署長

局長： 發展局局長

問題：

根據答覆編號 DEVB(PL)095，請當局提供在加快清拆大型違例招牌方面所採取的策略，以及所涉及的人手和財政資源的資料。

提問人： 盧偉國議員

答覆：

在 2013-14 年度，屋宇署除了在接獲市民對違例招牌的舉報後採取所需的行動外，亦會繼續進行大規模行動，清拆大型違例招牌。本署計劃發出 250 張清拆令，並預計有 125 個大型違例招牌會由招牌擁有人在收到勸諭信後主動拆除、由招牌擁有人為遵從清拆令而拆除，或由本署委聘的顧問公司和承建商代失責的招牌擁有人拆除。

屋宇署現正進行一項清點行動，記錄所有在私人樓宇外部的違例建築物，包括違例招牌。預計該項行動會於 2013 年下半年完成。清點行動所得的結果將有助本署策劃和執行對大型違例招牌採取的執法行動。

在 2013-14 年度，本署會運用現有資源繼續進行清拆大型違例招牌的大規模行動和違例招牌的執法行動。屋宇署會不時檢討上述大規模行動的成效，以及相關資源是否足夠。

姓名： 區載佳
職銜： 屋宇署署長
日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)10

問題編號
SV032

管制人員的答覆

總目： 82 屋宇署　　分目：

綱領： 樓宇及建築工程

管制人員： 屋宇署署長

局長： 發展局局長

問題：

關於答覆編號 DEVB(PL)102，請當局提供資料，就屋宇署村屋組實施新界豁免管制屋宇僭建物加強執法策略而開設 41 個專業、技術和文書職系職位的理據為何？

提問人： 田北俊議員

答覆：

屋宇署於 2012 年 4 月 1 日實施有關新界豁免管制屋宇違例建築物（僭建物）的加強執法策略前，只會就那些對生命財產明顯構成威脅或迫切危險的僭建物，以及正在建造或新建成的僭建物即時採取執法行動。因此，本署過往並沒有對為數眾多的新界豁免管制屋宇的現有僭建物採取執法行動。

為確保樓宇和公眾安全，以及遵從法例的規定，當局在 2012 年 4 月 1 日根據「分類規管、按序處理」的原則，對新界豁免管制屋宇僭建物實施加強執法策略。根據該加強執法策略，屋宇署已加強對新界豁免管制屋宇僭建物的管制 — 把所有現有的僭建物分類，並按其違例情況的嚴重性和對樓宇及公眾安全所構成的風險度，採取相應的措施，循序漸進地予以取締。該加強執法策略包括：採取大規模行動，清拆違例情況嚴重和對樓宇安全具較高潛在風險的新界豁免管制屋宇的現有僭建物；為違例情況較輕和對樓宇安全具較低潛在風險的新界豁免管制屋宇的現有僭建物，實施一套申報計劃；以及對構成迫切危險、新建成或正在建造的新界豁免管制屋宇的其他僭建物，採取即時執法行動。

考慮到可配合新界豁免管制屋宇僭建物的現況和公眾期望而以適當步伐按序執法，自 2012 年 4 月 1 日起，屋宇署已成立一個由 41 名專業、技術和文職人員組成的專責村屋組，以實施有關新界豁免管制屋宇僭建物的加強執法策略。本署會就所需的人手不時作出檢討，確保能順暢、有效和有效率地實施加強執法策略。

姓名： 區載佳

職銜： 屋宇署署長

日期： 16.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)11

問題編號
SV029

管制人員的答覆

總目： 33 土木工程拓展署　　分目：

綱領： (3) 提供土地及基礎設施

管制人員： 土木工程拓展署署長

局長： 發展局局長

問題：

根據答覆編號 DEVB(PL)129 所載，請當局進一步詳細解釋，雖然開支預算增加，但 2013-14 年度預算平整的土地面積，比對上一年減少的原因。

提問人： 盧偉國議員

答覆：

正如答覆編號 DEVB(PL)129 所述，一些涉及平整土地及基建設施的大型工程，例如中環填海計劃第三期和將軍澳進一步發展等項目，已於 2012 年大致完成。這些工程項目將不會在 2013 年提供平整土地。在 2013 年，將提供平整土地的基建設施工程載列如下：

工程項目名稱	**預計2013年 平整土地面積(公頃)**
灣仔發展計劃第二期	0.5
安達臣道發展計劃	11.8
屯門第54區基建設施工程	4.2
總計	**16.5**

另一方面，平整土地及基建設施建造工程的年度預算開支，視乎建造合約的現金流需求而定，與每年平整土地的面積沒有直接關係。我們在 2013 年計劃開展以下的大型新建造合約，因此引致開支增加，但有關工程項目所平整的土地(如有)，也只會在 2013 年後才可落實推出。

在2013年開展 建造合約的工程項目	**2013年的 預算開支(百萬元)**
蓮塘/香園圍口岸與相關工程 - 工地平整及基礎建設工程	147.2
啟德發展計劃 - 啟德機場北面停機坪第3期甲及第4期基礎設施	141.2
啟德發展計劃 - 啟德明渠重建及改善工程	113.3
石硤尾大窩坪龍坪道旁的房屋用地基礎設施工程	62.3
總計	**464.0**

姓名： 韓志強

職銜： 土木工程拓展署署長

日期： 17.4.2013

審核 2013-14 年度
開支預算

答覆編號
S-DEVB(PL)12

問題編號
S146

管制人員的答覆

總目： 118 規劃署　　分目：

綱領： (2) 地區規劃

管制人員： 規劃署署長

局長： 發展局局長

問題：

規劃署已完成了安達臣道石礦場未來土地用途規劃研究，並於今年 3 月 26 日向立法會交代最終建議發展大綱(大綱)。大綱建議以行人天橋連升降機塔及／或自動電梯將研究地點已規劃的網絡進一步伸延到觀塘市中心，惟運輸署已表示該建議並未包括於興建上坡地區自動扶梯連接系統和升降機系統訂立評審制度。

1. 在初步構思中，大綱建議的自動行人系統是否會獨立於運輸署的上坡系統評審制度，運輸署或相關執行部門會以另立專項形式執行大綱的建議？

2. 預計何時才會就建議的系統諮詢公眾，以及何時落實工程？

3. 在大綱中，除了建議的行人系統外，規劃署有何建議疏導由擬建的安達臣道石礦場新發展產生的人流及車流？

提問人： 胡志偉議員

答覆：

1. 安達臣道石礦場未來土地用途規劃研究建議了數條行人天橋連升降機塔及／或自動扶梯的路線，經安達臣道發展項目把安達臣道石礦場用地和觀塘市中心連接起來。土木工程拓展署現正在安達臣道石礦場擬議發展項目的跟進工程研究中進一步研究所有擬議路線。由於是否闢設這些行人設施須取決於安達臣道石礦場日後的發展項目，故該設施並沒有納入運輸署的上坡地區自動扶梯連接系統和升降機系統的評審制度。土木工程拓展署的工程研究將進行行人連繫評估，以(i)評估各擬議路線在用地需求、成本、相對吸引力，以及對服務範圍內的附近居民是否方便方面的利弊；(ii)在有需要時修改路線；以及(iii)建議落實一條或多條路線。該評估將考慮各路線對社會和經濟的貢獻、在環境上的可持續性，以及能否改善區內的車流和人流。

2. 行人連繫評估預計於 2013 年年底或之前完成，稍後會就該評估的結果和建議徵詢觀塘區議會的意見。首批設施訂於 2016 年年中動工興建，並於 2018-19 年度完成，以便配合安達臣道石礦場預期的入伙情況。

3. 除了上述的擬議行人連繫設施外，安達臣道石礦場規劃研究中的交通評估亦提出以下主要建議，以解決安達臣道石礦場的擬議發展項目日後會對交通造成的影響：

(i) 鼓勵安達臣道石礦場日後的居民使用南面的車輛通道，以紓緩觀塘市中心和彩虹交匯處的交通負荷；

(ii) 除了為安達臣道發展項目所確認的 5 項道路和路口改善工程外，另會為區內 4 條主要道路和路口採取大規模的改善措施；

(iii) 鼓勵區內居民多使用公共交通工具；以及

(iv) 鼓勵安達臣道石礦場日後的居民使用藍田和油塘港鐵站，避免在繁忙時間令本已十分擠擁的觀塘港鐵站增加負荷。

姓名： 凌嘉勤

職銜： 規劃署署長

日期： 16.4.2013