

APPENDIX 2

Preferred Project Traffic Report

Barangaroo - Concept Plan Modification
(Headland Park and Northern Cove)
Preferred Project Traffic Report

FINAL



1 September 2009

Prepared for
Barangaroo Delivery Authority

Barangaroo - Concept Plan Modification (Headland Park and Northern Cove) Preferred Project Traffic Report

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This report has been issued and amended as follows:

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1 Introduction

This report was prepared for the Barangaroo Development Authority (formerly part of the Sydney Harbour Foreshore Authority) by Halcrow MWT to provide responses to submissions and queries raised in respect of traffic aspects related to the Barangaroo Part 3A Modification – Headland Park and Northern Cove [Preferred Project].

The current modification involves adjustment to the proposed land form and landscape treatment of the northern part of the Barangaroo site to recreate a natural headland. The modified design necessitates the following changes to the Approved Concept Plan:

- the re-routing of Globe Street and the removal of Block 8 and part of Block 7 to accommodate the enlarged Northern Cove;
- the demolition of three items which are listed on Sydney Ports and Sydney Water Section 170 Heritage Registers to allow for the building up of the headland and enlargement of the cove.

Subsequently, Barangaroo Development Authority has sought a modification to the approved Concept Plan under Section 75W of the *Environmental Planning and Assessment Act, 1979*. Public exhibition was held from 4 February to 6 March 2009.

The rest of the report is set out as follows:

- Chapter 2 summarises responses to the submissions;
- Chapter 3 provides justification of the car park proposal;
- Chapter 4 describes the alternative car park access;
- Chapter 5 examines the implication of the alternative car park access; and
- Chapter 6 discusses expected use and management of the car park.

This report should be read in conjunction with the Modification Report dated January 2009.

2 Response to Submissions

Following the exhibition of the 75W Modification, submissions were received from government agencies, authorities, community and interest groups.

Submissions were received from the following government authorities or agencies regarding the traffic and transport issues:

- City of Sydney;
- Ministry of Transport;
- Roads and Traffic Authority; and
- State Transit (Sydney Buses).

The summary of submissions and our responses to each of the government authorities are set out below. A more detail response to each of issues raised is included in **Appendix A**.

City of Sydney

The proposal for a car park within the Headland Park is not supported by City of Sydney on the basis that it would promote use of private cars and undermine future provision of public transport.

The proposed car park is intended to serve the visitors of the park areas and residential/commercial visitors. Residents and employees would be discouraged from using this car park by appropriate charging rates.

Justification of the car park is discussed in more detail in **Chapter 3**.

Ministry of Transport

The Ministry of Transport is concerned that the loss of approximately 40 short stay on-street parking spaces may increase pressure for parking on Hickson Road and increase traffic accessing the Headland car park.

It is proposed to convert ninety degree long stay parking spaces along Hickson Road to short stay parallel spaces. The resulting reduction in parking numbers along Hickson Road would to some extent be off set by higher turnover per space.

In addition the reduction of parking spaces on Hickson Road together with the provision of public parking at the Headland Park will reduce the tendency for vehicles to circulate or travel slowly along Hickson Road whilst looking for a vacant space. This will be of benefit to road network efficiency.

The analysis contained within the Barangaroo Concept Plan traffic report accounted for both the removal of the on-street spaces and the traffic associated with the operation of the proposed 300 space public car park. It found that satisfactory road network performance would result with the inclusion of the changed traffic flow patterns resulting from the proposed development.

Notwithstanding this, it is noted that any relocation of car parking from Hickson Road into the proposed car park would be beneficial to public transport using Hickson Road as it would reduce the potentially disruptive effects of parking manoeuvres on Hickson Road.

Road and Traffic Authority, Sydney Regional Development Advisory Committee

RTA has questioned the mode split targets adopted for the proposed development unless identified public transport initiatives are put in place at an early stage of the development. RTA is also concerned whether the existing railway network and bus services along York Street would be able to cope with the additional commuters.

A draft Transport Management and Accessibility Plan has been prepared which examines the transport arrangements needed to service the Barangaroo Development. This outlines the measures to ensure that there will be adequate public transport in the area.

In addition, a highly restrictive parking policy is proposed which will physically limit the ability of persons to drive to and from the site.

This policy includes provision of essential parking including that at the Headland Park.

It is however noted that the RTA comment relates mainly to travel by residents and employees who will work and live on the site. The proposed Headland Park and car park within it will not generate commuter travel and therefore are not strictly the subject of the RTA's concern.

State Transit Authority (Sydney Buses)

STA is concerned about traffic management and impact on bus services during the construction phase. STA is also concerned about adequacy of the Sussex Street and Napoleon Street intersection.

Construction Traffic Management Plans will be prepared as part of the planning process which will identify traffic management measures to ensure safe continued operation of the road network adjoining the development site during all the phases of construction activities.

Traffic analysis undertaken as part of the original approved Concept Plan for development identified the need to signalise the intersection of Sussex Street/ Napoleon Street. The design of the layout will cater for all bus movements through the intersection. The concern of the STA is noted and this aspect will need to be dealt with in more detail when a design for the intersection is prepared.

3 Justification of the Car Park

With any development, there is a need for a minimum level of parking provision to be provided to support the development uses. In the case of Barangaroo, it is proposed to provide only resident and tenant operational parking within individual developments. The parking so provided is deliberately being kept low and will be well below the average provision for such in the Sydney CBD which for historical reasons is somewhat higher than that which the current Sydney City Council LEP allows. It is proposed to provide/allow visitor parking in the vicinity of buildings only on adjacent streets.

The southern end of the Barangaroo development will be the most intense part. No additional visitor parking is proposed for this as it will have the benefit of the presence of already established public car park within reasonable walking distance.

However the Northern Parkland part of the site is most distant from Wynyard Station and from the established car parks near the southern end of the site and hence there is a need for some additional public off-street car parking to serve this part of the site (and associated kiosks / pavilions).

Having public parking at the northern end of the site will tend to encourage its use during periods when public transport service frequencies in the area are reduced. As such it will help to extend usage of the Headland Park and related facilities. Increased traffic in off peak periods will also assist with passive surveillance and help to activate streets in the area.

This location would also enable the car park to be used by visitors to Walsh Bay during evenings should such be required. This would be a potential added benefit and is not a principal reason for the car park.

In summary car parking is proposed in the Headland Park for the following reasons:

- to provide for visitors to Barangaroo residents/commercial uses/retailing;
- to provide for visitors to the park areas; and
- to promote off peak passive surveillance and street activation.

4 Alternative Car Park Access

A number of public submissions received in relation to the Barangaroo Part 3A Modification – Headland Park and Northern Cove comment in relation to the impact of traffic associated with the Headland car park on Towns Place/Dalgety Road and its surrounding streets.

The original traffic assessment for the Barangaroo Concept Plan envisaged that the Headland car park access would be provided from Hickson Road. At that time it was proposed that such access would occur through a more consolidated Barangaroo site. The introduction of the Northern Cove means that the car park access could not be provided in this way.

The present concept provides for vehicular access to be provided at the point of connection of Towns Place to Dalgety Road. If provided at this location, it would be logical for safety and traffic efficiency reasons to provide a roundabout at the junction point. An advantage of this access location is that it would afford convenient access from Hickson Road in each direction as well as from the upper levels at Millers Point.

The expected peak hourly traffic generation of the car park is only about 120 vehicle movements per hour and this volume of traffic would easily be handled by the roads feeding to and from the access point.

It would be possible to provide access to the proposed car park directly off Hickson Road via the existing driveway at Gate D4. This is illustrated on **Figure 1** of this report. This access would require a driveway of about 150m in length compared to one of about 125m in length to Towns Place. The advantage of this alternative location is that it would reduce resident concerns about additional traffic in Towns Place/Dalgety Road and would afford an access address that better connected the car park to the wider Barangaroo Project.

5 Implication of Alternative Car Park Access

This chapter considers traffic implications of the two car park access options.

The traffic generation of the car park is expected to be 12 and 120 vehicle trips per hour for the morning and afternoon weekday peak hours respectively, as per the original Concept Plan traffic report.

The current two-way traffic flows on Hickson Road, west of Towns Place and Towns Place, north of Hickson Road are as follows:

- Hickson Road – 570 veh/hr (AM) and 510 veh/hr (PM);
- Towns Place – 330 veh/hr (AM) and 290 veh/hr (PM).

The traffic modelling for Barangaroo project under two alternative access options indicates that some of the Barangaroo generated traffic would use Towns Place. The location of the Headland car park access would affect this. Changed traffic flows are indicated in **Appendix B**. Table 5-1 compares outcomes for different car park access options.

Table 5-1: Future Traffic Flows (2-way) under Alternative Access Options

	Towns Place Access		Hickson Road Access	
	Option		Option	
	AM	PM	AM	PM
Hickson Road, west of Towns Place	580	650	570	590
Hickson Road, south of Gate D4	580	650	580	650
Towns Place, north of Hickson Road	350	410	340	330

NOTE: The future traffic flows shown above is for the total Barangaroo development not just the traffic generated by the car park.

In terms of impacts on Towns Place, it operates as a collector road. For such roads, the RTA specifies 300 vehicles per hour or less as an environmental goal and 500 vehicles per hour as an environmental limit.

Frequently in busy CBD area, it is not possible to keep traffic volumes below these levels. However in this case, traffic volumes on Towns Place would be kept below 500 vehicles per hour. Therefore local amenity would remain satisfactory in terms of traffic levels.

On weekends, there may be slightly higher traffic generation from the car park. However on weekends, there would be minimal office traffic generation and this would offset any higher Headland car park generation.

This analysis indicates that provision of vehicular access to the proposed car park off Towns Place would increase traffic volumes on Towns Place only moderately and not to the extent that such would cause environmental traffic targets to be exceeded.

6 Expected Use and Management of the Car Park

The proposed car park is intended to serve the visitors to the park areas and residential/commercial visitors. Residents and employees would be discouraged from using this car park by appropriate charging rates (high charges for all day parking).

The most likely users would be visitors to the area to either recreate in the park, cycle or walk along the foreshore or play sport on the proposed field. Some residential and office visitors would also use the car park as no other off-street car parking is proposed for them in the individual development buildings.

As this will be the only public off-street car parking on the whole Barangaroo site, it represents a very modest provision even in the context of the already highly parking constrained Sydney CBD.

It is proposed that the car park be closed at night with actual operating hours to be varied from time to time to suit the range of activities taking place in Barangaroo and on the Headland Park at the time. Boom gates will control entry and exit and the usual security measures such as CCTV cameras will be incorporated.

At this stage, there are no plans for alternative management when there are special events in the area. Any such plans would be prepared as part of a special event area wide traffic access management plan in the event that such was needed.

POTENTIAL ALTERNATIVE HEADLAND CAR PARK ACCESS

BARANGAROO



Scale: 1:2,500@A4

Image Source: Google Earth

Appendix A Response to Submissions

Following the exhibition of the 75W Modification, submissions were received from government agencies, authorities, community and interest groups.

The response to the traffic and transport related submissions are set out below.

Roads and Traffic Authority, Sydney Regional Development Advisory Committee

Issue

Mode split targets questionable unless identified public transport initiatives are put in place at an early stage. Concern that existing railway network, Wynyard Station and bus stops at York St may not be able to cope with additional commuters.

Response

A draft Transport Management and Accessibility Plan has been prepared which examines the transport arrangements needed to service the Barangaroo Development. This outlines the measures to ensure that there will be adequate public transport in the area.

Issue

Demolition and Construction Traffic Management Plan will be needed prior to issue of construction certificate.

Response

Noted.

Issue

All road works, car parking, cycleways etc to comply with relevant standards.

Response

Noted.

State Transit Authority (Sydney Buses)

Issue

Concerned that there will be sufficient public transport provision to cope with additional overall patronage. No principles/guidelines in document for managing public transport travel to/from site.

Response

Public transport initiatives are outlined in the Draft Transport Management and Accessibility Plan which has been prepared in response to a consent condition in the Barangaroo Concept Plan approved.

Issue

STA requests to be involved in planning, design and implementation of TMAP and design of Globe St. Also concerned about traffic management and impact on bus services during construction phase. Consideration should be given to ensuring conflicts are minimised between short stay car parking and bus movements.

Response

STA have been closely involved in the preparation of the Transport and Accessibility Management Plan for the Barangaroo scheme. Construction Traffic Management Plans will be prepared as part of the planning process which will identify traffic management measures to ensure safe continued operation of the road network adjoining the development site during all the phases of construction activities.

Issue

Concerned about adequacy of intersection of Sussex and Napoleon Streets - need traffic control signals to manage this.

Response

Traffic analysis undertaken as part of the original approved Concept Plan for development identified the need to signalise the intersection of Sussex Street/ Napoleon Street. The design of the layout will cater for all bus movements through the intersection. The concern of the STA is noted and this aspect will need to be dealt with in more detail when a design for the intersection is prepared.

Ministry of Transport

Issue

Loss of approximately 40 short stay on street car spaces may increase pressure for parking on Hickson Road and increase traffic accessing headland carpark.

Response

The existing short stay spaces along Hickson Road are in part used by the current (or historic) uses on the site area. These site uses will be removed with the proposed redevelopment and accordingly it is expected that demand for these short stay space will accordingly diminish.

A number of on-street spaces are proposed to be converted from rear to kerb parking to parallel parking. This conversion will result in less parking friction between through traffic movements and parking vehicle providing greater efficiency in travel along Hickson Road.

The removal of these spaces will also reduce the tendency for vehicles to circulate whilst looking for a vacant space. This will be of benefit to road network efficiency.

Additional public parking spaces are proposed as part of the development proposal.

The analysis contained within the Barangaroo Concept Plan traffic report accounted for both the removal of the on-street spaces and the traffic associated with the operation of the proposed 300 space public car park. It found that satisfactory road network performance would result with the inclusion of the changed traffic flow patterns resulting from the proposed development.

Notwithstanding this, it is noted that any relocation of car parking from Hickson Road into the proposed car park would be beneficial to public transport using Hickson Road as it would reduce the potentially disruptive effects of parking manoeuvres on Hickson Road.

Issue

Supports proposed signalisation of proposed junction of “New” and Hickson Roads.

Response

Noted.

Issue

Proposed new ferry hub likely to increase pedestrian traffic along the foreshore. High quality shared pedestrian/cycle path will be required.

Response

Ferry hub – the foreshore walk shared cycle/walkway is proposed.

City of Sydney

Issue

Proposal for a car park within headland is not supported. This will promote use of private cars and undermine future provision of public transport. Also creates security and surveillance issues.

Response

Car parking is proposed for the following reasons:

- Provide for visitors to residences/commercial uses/retailing.
- Provide for visitors to the park areas.
- Activate streets.

The public car parking will be managed to discourage commuter/long stay use and promote use by visitors. Very little other public car parking is proposed in the Barangaroo development and there is an essential need for some visitor parking.

In urban terms a 300 space car park near CBD is modest but of sufficient size to be readily recognised as being the principal public parking resource in the area.

Not all visitors to the area will be able to use public transport and it is considered that on equity grounds, at least limited allowance should be made to afford access for such persons or groups.

In addition, the availability of such parking in the Domain near Mrs Macquarie’s Chair already demonstrates how the availability of parking helps to enliven such public spaces.

It is noted that the southern end of Barangaroo will rely on already established public car parking in that part of the CBD.

The northern part of Barangaroo is some 1.2km away and is not served by any comparable existing car park.

There is thus considered to be a strong need to provide a limited amount of car parking at or near the northern end of the site.

Issue

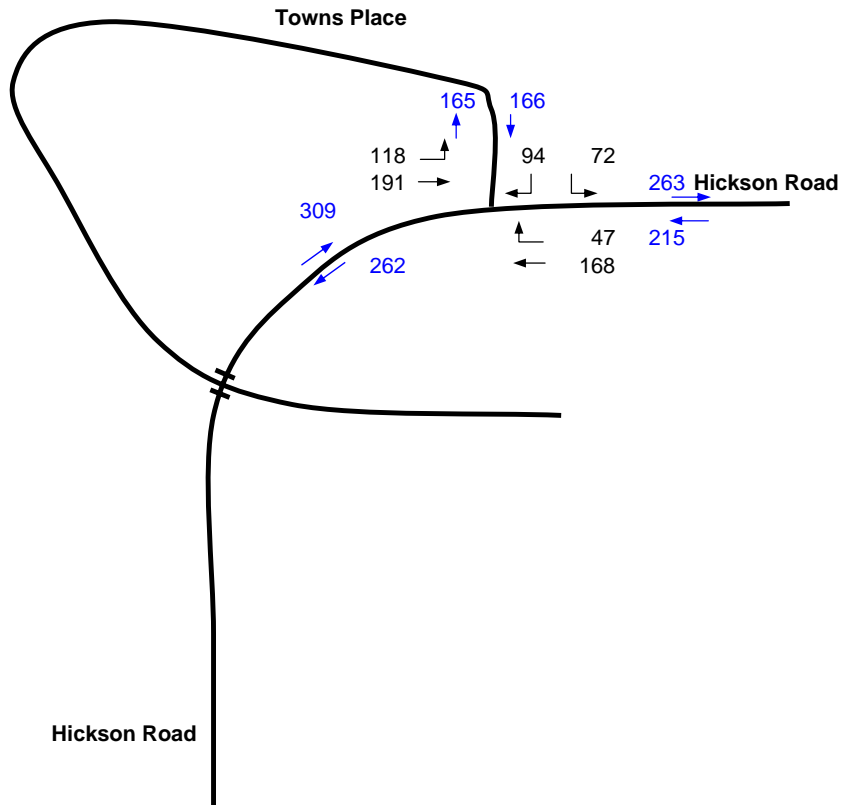
Need to consider widening Merriman St to improve quality and capacity of this street. Also need to consider opportunities to link Merriman St with Dalgety Road.

Response

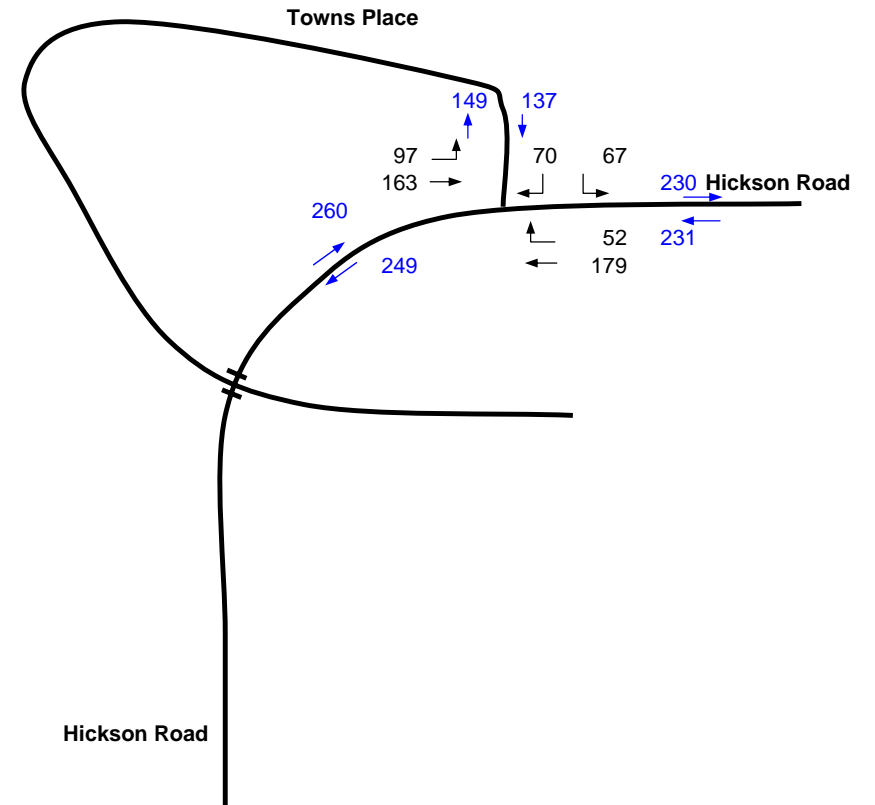
It is not proposed to connect the car park with Merriman Street. Therefore no upgrade is considered necessary.

Appendix B Intersection Flows

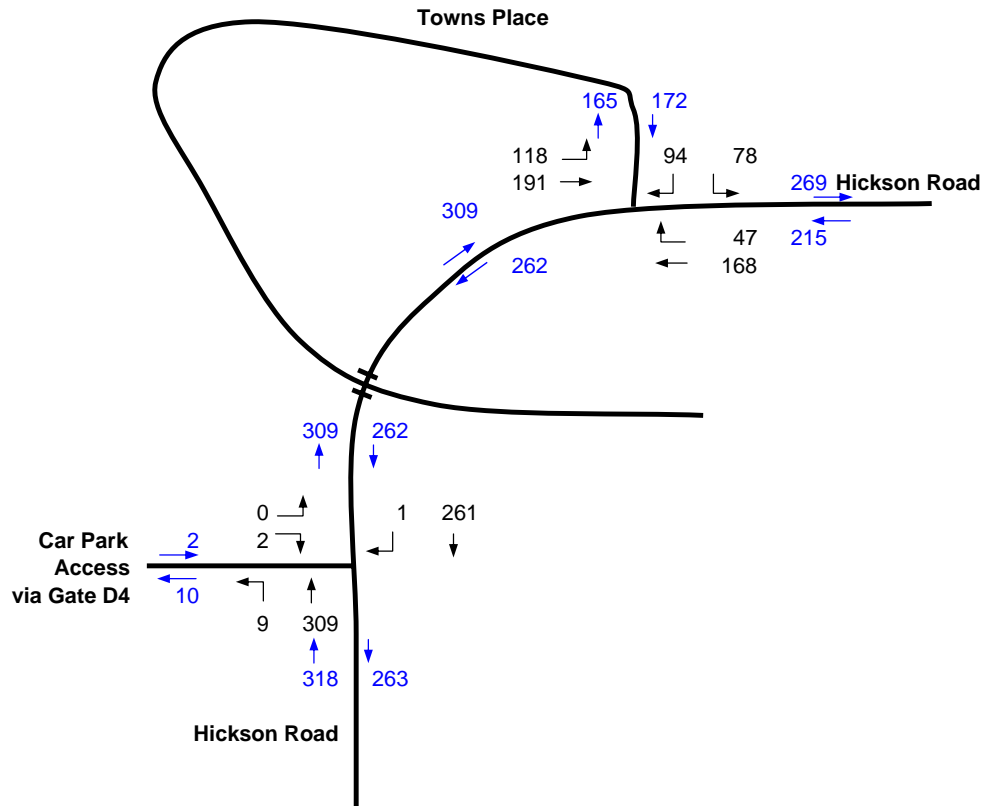
Existing Surveyed Flows
AM Peak Hour (8:00 - 9:00AM)



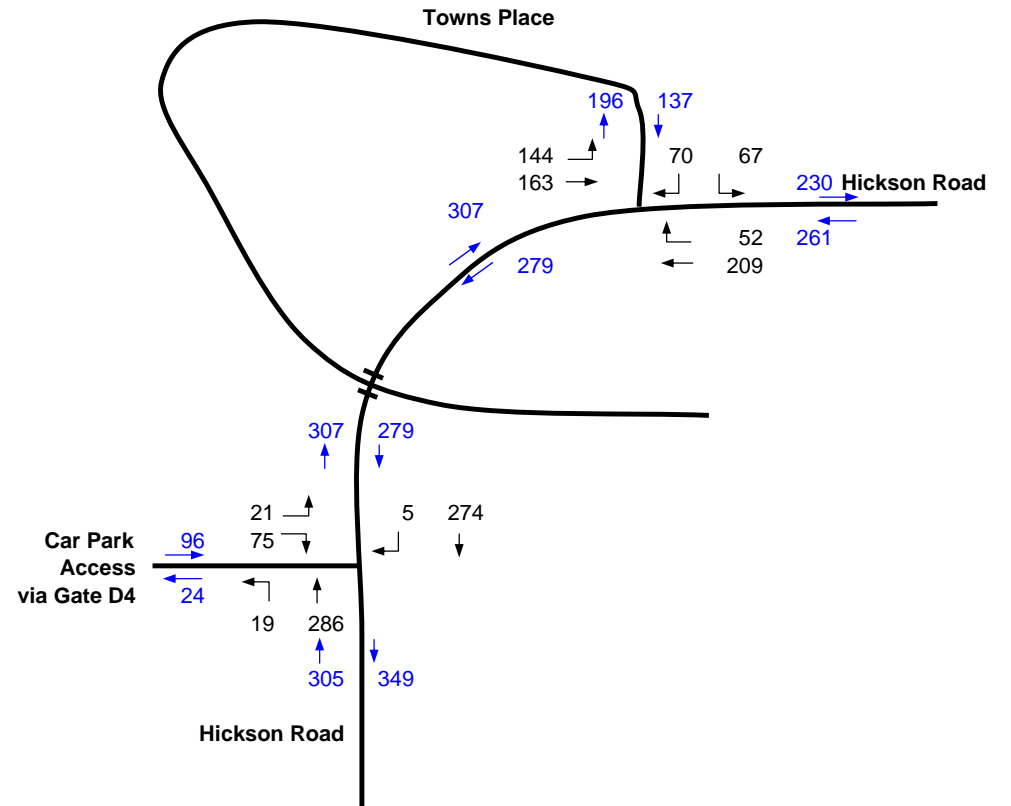
Existing Surveyed Flows
PM Peak Hour (5:00 - 6:00PM)



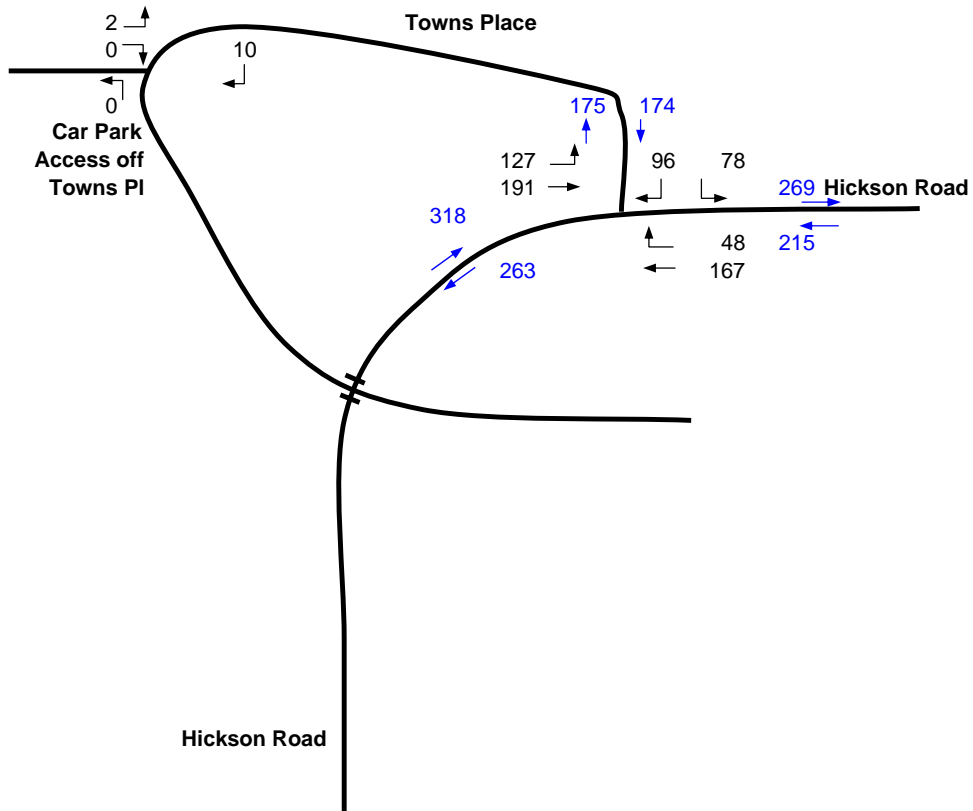
Post Development - Car Park Access off Hickson Road
AM Peak Hour (8:00 - 9:00AM)



Post Development - Car Park Access off Hickson Road
PM Peak Hour (5:00 - 6:00PM)



Post Development - Car Park Access off Towns Place
AM Peak Hour (8:00 - 9:00AM)



Post Development - Car Park Access off Towns Place
PM Peak Hour (5:00 - 6:00PM)

