

Reference: #N147040

13 March 2018

Dunnet Properties
Unit 5B, 277 Lane Cove Road
MACQUARIE PARK NSW 2113

Attention: Mr. Craig Sinclair (Development Manager)

Dear Craig

RE: 44-48 OXFORD STREET, EPPING (DA/485/2016)
TRANSPORT IMPACT ASSESSMENT PEER REVIEW

GTA Consultants (GTA) was commissioned by Dunnett Properties (on behalf of Pirasta Pty Ltd) to conduct an independent traffic review of Development Application (DA) No. DA/485/2016 lodged with City of Parramatta for a proposed mixed-use development comprising of ground floor retail, first floor commercial space and 178 apartments. The proposed development is located at 44-48 Oxford Street, Epping. GTA has reviewed the following:

- Traffic and Parking Assessment Report, prepared by Varga Traffic Planning Pty Ltd, Reference 15230, dated 8 June 2016
- City of Parramatta, Report to Central City Planning Panel, SCCPP Reference 2016SYW0114, dated 17 June 2016
- Traffic and Parking Assessment Report, prepared by Varga Traffic Planning Pty Ltd, Reference 17328, dated 15 November 2017
- Roads & Maritime Services, Advisory Comments Letter, RMS reference SYD16/00841/02, dated 20 December 2017
- Sydney Central City Planning Panel, Record of Deferral, dated 7 February 2018
- EMM Interim Traffic Modelling Report for Epping Town Centre, dated 23 June 2017
- Various previous Transport Impact Assessment reports prepared by GTA Consultants for projects within the immediate vicinity of the subject site.

Upon review of the above documents, it is concluded that:

- The existing Chester Street/ Oxford Street/ Essex Street intersection and Cambridge Street roundabout are currently operating satisfactorily and unlikely to be impacted by the proposed development.
- The Epping Road/ Langston Place/ Beecroft Road/ Blaxland Road intersection is already operating at capacity during the weekday PM peak period and near capacity during the weekday AM and Sunday noon peak period.
- Much of the congestion at the intersection of Langston Place/ Pembroke Street/ Oxford Street is influenced by the major signalised intersection of Epping Road/ Langston Place/ Beecroft Road/ Blaxland Road.
- The cumulative peak period traffic generated by the proposed development and surrounding new developments of an additional 121 trips per hour is below the short-term scenario allowances made for the site as part of the Epping Town Centre Traffic Study (Halcrow et al, 2011)
- Travel demand management initiatives can feasibly be implemented via a Green Travel Plan to encourage mode shift.

VIC | **NSW** | QLD
ACT | SA | WA

Level 6, 15 Help Street
CHATSWOOD NSW 2067

PO Box 5254
WEST CHATSWOOD NSW 1515

t// +612 8448 1800

www.gta.com.au

- As such, the proposed development would not result in further road and intersection upgrades than those already proposed in the Epping Town Centre traffic study long-term scenario.

I trust the enclosed is consistent with your expectations. Should you have any questions or require any further information, please do not hesitate to contact me on (02) 8448 1800.

Yours sincerely

GTA CONSULTANTS



Brett Maynard
Director

Background of Application

Development Application DA/485/2016 was submitted to the City of Parramatta on 17 June 2016 for the:

"Demolition of all existing structures including the heritage listed dwelling on site, tree removal, construction of a mixed use development in the form of 2 towers (15 and 18 storeys tall) over a podium and basement car parking."

The application proposal comprises the following elements:

- 178 apartments located within 2 towers.
- 3 retail premises with gross floor area (GFA) of 591.3m² - two out of the three tenancies with direct frontage to Oxford Street,
- 1 commercial office space with GFA of 991.1m² located on the first floor of Tower A.
- 223 parking spaces within 4 levels of basement.

The original application included a supermarket within the development. This was subsequently amended, with the supermarket no longer forming part of the overall development.

An initial Traffic and Parking Assessment report was prepared by Varga Traffic Planning dated 8 June 2016 which provided an assessment based on the original scheme involving a supermarket.

A revised Traffic and Parking Assessment report was prepared by Varga Traffic Planning dated 15 November 2017.

Based on our review of the Traffic and Parking Assessment reports submitted, it is noted that parking supply, parking access and design were considered by Council's Traffic Engineer to be satisfactory when assessed against the provisions under the DCP. Roads & Maritime Services Advisory Comments Letter dated 20 December 2017 also raised no concerns over the cumulative traffic impact.

The Panel in its decision encouraged a further report to *"address the justification for determination of this application prior to the outcomes of the traffic study of Epping being available which will take into account cumulative impact."*

Relevant Reference Material

GTA has previously prepared several Transport Impact Assessments for mixed use developments within the Epping Town Centre, and are aware of the following relevant assessments:

- 20 – 28 Oxford Street, Epping (GTA Consultants, 2015)
- 30 – 42 Oxford Street, Epping (GTA Consultants, 2015)
- 35 Oxford Street, Epping (Parking and Traffic Consultants, 2015)
- 12 – 22 Langston Place, Epping (GTA Consultants, 2017)

In addition, GTA has previously completed a supplementary *Epping Town Centre Detailed Traffic Assessment* to consider the cumulative traffic impact arising from planned and/or approved future development of the Epping Town Centre in 2015.

Change of Council Area

Prior to the lodgement of the current Development Application on 17 June 2016, Epping Town Centre extended across two local government areas (LGA), being the Parramatta Council and the Hornsby Shire Council LGAs. The site was located within the Hornsby LGA.

Following the Council mergers in 12 May 2016, the whole of Epping Town Centre was moved to within the jurisdiction of the City of Parramatta Council LGA.

Site Location

The subject site is located at 44 – 48 Oxford Street, Epping. The site has a land use classification as Local Centre (B2). Vehicle access is provided from Cambridge Street to the west and Oxford Street to the east.

The surrounding properties predominantly include a mixture of low to high density residential uses, as well as some local retail businesses.

The site is conveniently located close to the existing and future commercial and retail centre of Epping Town Centre as well as existing rail and bus services, and future high frequency metro rail services. Overall, the planning controls within DCP 2013 have been informed by the Epping Town Centre Study 2011 and the Epping Town Centre Precinct Structure Plan and Public Domain Plan 2013 prepared for the Precinct by the former Department of Planning and Infrastructure.

Road Network

Oxford Street

Oxford Street is classified as a Local Road is aligned in a north-south direction on the eastern side of the site. Near the site, Oxford Street is a two-way road configured with one lane in each direction, over a 12-metre wide carriageway. Oxford Street has a general speed limit of 50 km/h, while also incorporating a 40 km/h school zone of 120 metres length near the school.

Kerbside parking is permitted along the road with various restrictions including one-hour (1P) and two-hour (2P) largely between 8:30am and 6pm on weekdays and 8:30am and 12:30pm on Saturdays. Parking also varies between angled and parallel parking.

Langston Place

Langston Place and Oxford Street are classified as local roads under the management and control of Parramatta City Council. Near the site, Langston Place is aligned in a north-south direction and generally provides one traffic lane and one parking lane in each direction. On approach to Epping Road, there are two southbound traffic lanes. The posted speed limit is 50 km/h.

Time restricted kerbside parking is generally permitted on both sides with a taxi zone located on the western side of Langston Place, close to Epping Railway Station.

Cambridge Street

Cambridge Street is classified as a Local Road and is aligned in a north-south direction on the site's western boundary. It is a two-way road with one lane in each direction, set within an approximately

10-metre wide carriageway. Cambridge Street has an approximately 160-metre school zone, with a 50 km/h speed limit outside school set-down/ pick-up periods.

Parallel kerbside parking is permitted on the eastern side of the road under a 2P time restriction between 8:30am and 6pm on weekdays and 8:30am and 12:30pm on Saturdays. Angled parking is also provided on the western side of the road which functions as the commuter car park for Epping Railway Station.

Chester Street

Chester Street is classified as a Local Road and is aligned in an east-west direction on the site's northern boundary. It is a two-way road with one lane in each direction, set within an approximately 11-metre wide carriageway. Chester Street has a posted speed limit of 50 km/h.

Parallel kerbside parking is permitted on both sides of the road, with unrestricted parking on the northern side of the road and two-hour (2P) time restricted parking between 8:30am and 6pm on weekdays and 8:30am and 12:30pm on Saturdays on the southern side of the road. There is currently an approximately 110-metre Works Zone located on the southern side of Chester Street for the neighbouring development.

Surrounding Intersections

The following key intersections currently exist near the site:

- Cambridge Street (roundabout)
- Epping Road/ Langston Place/ Beecroft Road/ Blaxland Road (signalised)
- Oxford Street/ Pembroke Street/ Langston Place (signalised)
- Chester Street/ Oxford Street/ Essex Street (roundabout).

Based on previous analysis, the intersection of Epping Road/ Langston Place/ Beecroft Road/ Blaxland Road is already operating at capacity during the weekday PM peak period and near capacity during the weekday AM and Sunday noon peak period.

Much of the congestion at the intersection of Langston Place/ Pembroke Street/ Oxford Street is influenced by the major signalised intersection of Epping Road/ Langston Place/ Beecroft Road/ Blaxland Road.

The other intersections are operating satisfactorily, with minimal queues and delays on all approaches. There are adequate capacities at the intersections of Cambridge Street Roundabout, Langston Place/ Pembroke Street/ Oxford Street and Chester Street/ Oxford Street/ Essex Street, to cater for the traffic generated by the proposed development with future development traffic entering via Oxford Street towards the north and the south.

Public Transport

Existing Services

The site is well located with respect to public transport facilities with Epping Railway Station located approximately 200 metres south-west of the site and within a five-minute walk. Epping Railway Station is serviced by the T1 North Shore Line and Central Coast and Newcastle Line.

Bus stops are also located at the Station along Cambridge Street immediately north of the Oxford Street/ Pembroke Street/ Langston Place intersection. Epping Road to the south, Pembroke Street to the north and Beecroft Road to the west also provide conveniently located bus stops to ensure a good level of accessibility to a range of bus services.

Sydney Buses operate services from Macquarie Centre, Sydney CBD and Manly Wharf that travel along Cambridge Street. Several bus stops are located within a five-minute walk of the site.

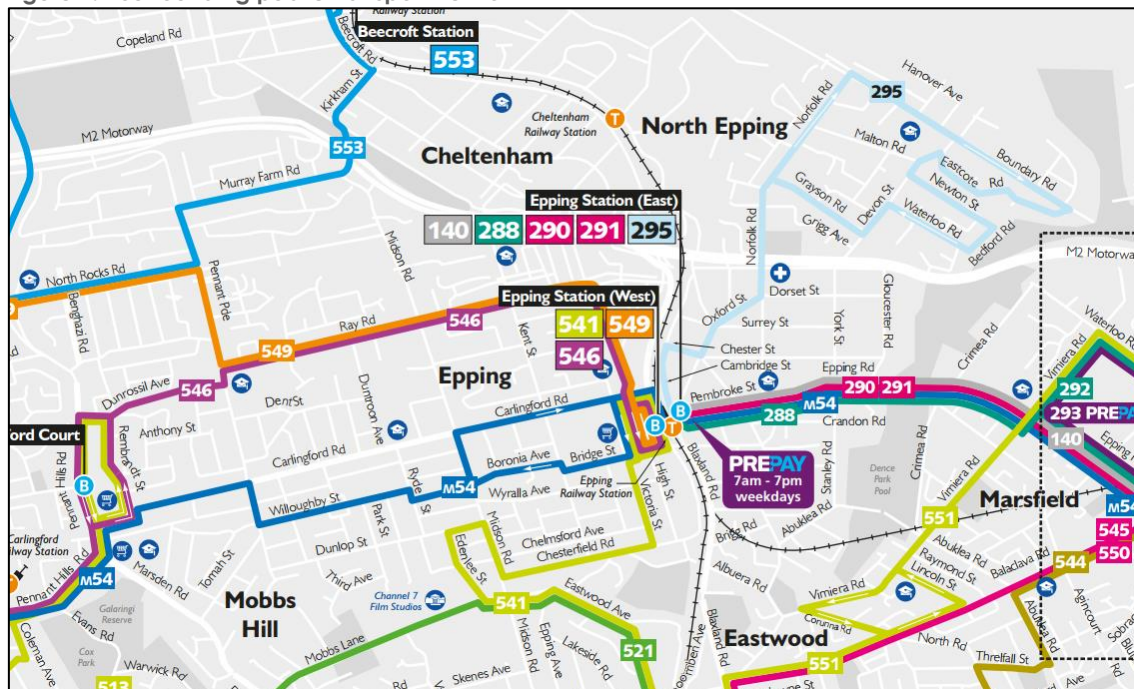
A review of the public transport availability near the site is summarised in Table 1

Table 1: Public transport provision within vicinity of subject site

Service	Route number	Route description	Location of stop	Distance to nearest stop	Frequency on/off-peak
Bus	140	Manly Wharf to Epping via Macquarie University	Cambridge Street	200 m	Limited services per day
	288	Epping to City Erskine St			15 mins/ 30 mins
	290	Epping to City Erskine Street via Macquarie University and North Sydney			Limited services per day
	291	Epping Station to McMahons Point			15 mins/ hourly
	295	North Epping to Epping (Loop Service)			15 mins/ hourly
	541	Epping to Eastwood	Beecroft Road	280 m	45 mins/ hourly
	546	Epping to Parramatta via North Rocks and Oatlands			30 mins/ hourly
	549	Parramatta to Epping via North Rocks			15 mins/ hourly
	630	Macquarie Park to Blacktown via Carlingford			30 mins/ hourly
	M54	Parramatta to Macquarie Park via Epping			10 mins/ 15 mins
	N80	Hornsby to City Town Hall via Strathfield			Hourly (night bus)
Train	T1 North Shore and Northern Line		Epping Station	200 m	4-10 mins/ 15-30 mins
	Central Coast and Newcastle Line				15 mins/ 30 mins

The surrounding public transport network is also shown indicatively in Figure 1.

Figure 1: Surrounding public transport network



Source: Transport for NSW, accessed 18 September 2017.

Future Rail Services

The Sydney Metro Northwest project is one of Australia's largest public transport infrastructure projects and is anticipated to deliver faster, safer and more reliable service to the northwest region of Sydney.

The Sydney Metro Northwest will provide a rail connection from the existing Chatswood Interchange through to Cudgegong Railway Station. As part of this connection, the train line will pass through Epping Station which is anticipated to provide an additional train every four minutes during the weekday AM and PM peak periods.

In short, the Epping Town Centre is expected to benefit greatly from the Sydney Metro Northwest project given the increased incentives to travel by train on the regular fast service with the town centre planning, largely reflecting this inherent change.

Pedestrian and Cycle Infrastructure

Pedestrian footpaths are located on both sides of most of the streets within the Epping Town Centre with Oxford Street, Langston Place and the eastern side of Cambridge Street providing two to three-metre wide footpaths.

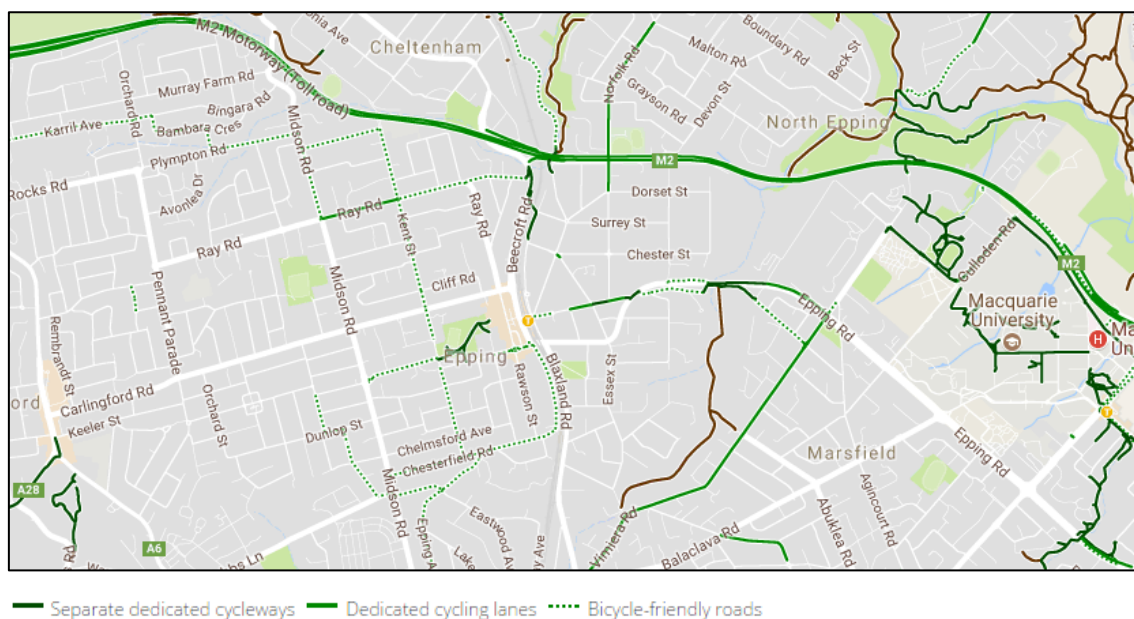
These paths provide good connectivity between the subject site and Epping Railway Station, with signalised pedestrian crossings on all legs at the intersection of Pembroke Street/ Oxford Street allowing for safer crossing.

Hornsby Shire Council and City of Parramatta Council have developed and maintained an effective cycling network within and surrounding the Epping town centre. Oxford Street,

Cambridge Street, Chester Street and Essex Street are cyclist friendly streets and combine to connect with designated shared paths, including the Surrey Street tunnel under the rail line.

The local on-street and off-street cycling network is shown in Figure 2

Figure 2: Epping bicycle network



Source: Sydney Cycleways, accessed 18 September 2017.

Epping Town Centre Traffic Study (2011)

The Epping Town Centre was rezoned in March 2014 to allow high density residential development as part of the State Government's Epping Town Centre Urban Activation Precinct (UAP) initiative. The subject site is located within the Epping Town Centre. The approved rezoning permits the subject site to be developed to provide for senior housing, shop top housing, educational establishments and community facilities.

As part of the rezoning process, the Department of Planning and Environment, in conjunction with Hornsby Shire Council and Parramatta City Council, commissioned a traffic study to assess the traffic implications of the intensification of the Epping Town Centre being considered in the UAP. The intensification of development includes the subject site which the Epping Town Centre traffic study envisaged would have a floor space ratio (FSR) of 4.5:1.

It is noted that the proposed 44 – 48 Oxford Street development has an FSR of 4.35:1, which is lower than the above control.

The Epping Town Centre traffic study recommended a number of road infrastructure improvements to accommodate the additional traffic arising from the intensification of the town centre. The recommended road works include:

- Removal of the right turn movement from Langston Place into Epping Road
- Widening of Epping Road between Langston Place and Essex Street
- New dedicated right turn lane from Essex Street into Epping Road

- Changes to Carlingford Road intersection with Beecroft Road
- Widening of Epping rail bridge
- Beecroft Road widening.

While funding has been secured for the first four items above through the Housing Acceleration Fund, and are now being progressed into a detailed design phase by Roads and Maritime, funding is still being sourced for the two remaining items.

While the proposed development could not be directly be responsible for such broader arterial road network upgrades, the proposed development would be part of the overall Section 94 contributions relating to the proposed upgrades of traffic facilities based on the Hornsby Shire Council's 2012-2021 Section 94 Development Contributions Plan. The plan outlines the required levies payable by new developments within Council's local area to maintain a level of services and/ or to ensure new facilities and services.

The Epping Town Centre traffic study relates to two development scenarios considered for the UAP; short and long-term scenarios. The Epping Town Centre traffic study estimates that for the town centre as a whole in the short-term scenario, there would be an additional 315 trips per hour, while the long-term scenario would generate an additional 617 trips per hour.

Traffic Generation and Distribution

As outlined in the submitted Traffic and Parking Assessment Report prepared by Varga Traffic Planning, the projected future traffic generation for the development are summarised in Table 2.

Table 2: Projected Future Traffic Generation for Subject Development

Use	Peak hour traffic generation (vehicles)	
	Weekday AM Peak	Weekday PM Peak
Residential	33.8 vph	26.7 vph
Retail	9.5 vph	7.1 vph
Commercial	16.2 vph	12.2 vph
Total Traffic Generation	59.5 vph	46.0 vph

Source: Varga Traffic Planning Pty Ltd, Traffic and Parking Assessment Report 15 November 2017.

Cumulative Traffic Impact

There is a total of four residential developments within the vicinity of the site that are each in various stages of planning and construction:

- 20-28 Cambridge Street – 501 apartments plus 709 square metres of retail uses and 307 square metres of commercial uses
- 30-42 Oxford Street – 279 apartments plus 600 square metres of retail uses
- 35 Oxford Street – 58 apartments plus 145 square metres of commercial uses
- 12-22 Langston Place – 463 apartments plus 1,454 square metres of retail uses, and 10 Pembroke Street – 175 apartments plus a Council library (1,500 square metres) and Community Centre (2,000 square metres).

In the interests of presenting a robust traffic assessment, traffic generation associated with the surrounding developments has been considered as part of this assessment. A summary of the future traffic generation estimates for the surrounding developments is detailed as follows:

- GTA completed a transport report for the development located at 20-28 Cambridge Street concluding that the site would generate a net **reduction of 76 vehicle trips** per hour in any peak hour.
- GTA completed a transport report for the development located at 30-42 Oxford Street concluding that the site would generate a total of **63 and 52 vehicle trips** per hour during the AM and PM peak hours, respectively.
- Parking and Traffic Consultants completed a transport report for the development located at 35 Oxford Street concluding that the site would generate a total of **14 and 12 vehicle trips** per hour during the AM and PM peak hours, respectively.
- GTA completed a transport report for the development located at 12-22 Langston Place and 10 Pembroke Street concluding that the combined sites would generate a net increase of **60 vehicle trips** per hour in any peak hour.

In combination, these developments will generate a total of 121 and 94 vehicle trips during AM and PM peak hours, respectively, as summarised in Table 3. This is equivalent to an increase of up to two vehicle trips every minute during the peak hour.

Table 3: Cumulative traffic generation estimates

Site location	AM peak hour	PM peak hour
	Total	Total
44-48 Oxford Street	60	46
30-42 Oxford Street	63	52
20-28 Cambridge Street	-76	-76
35 Oxford Street	14	12
12-22 Langston Place and 10 Pembroke Street	60	60
Total	121	94
% Development Traffic	49	

The proposed development traffic would contribute up to 49 per cent of the cumulative traffic impact.

The additional traffic volume threshold for the short- and long-term scenarios (considered as part of the Epping UAP), allows for an additional 315 trips per hour and an additional 617 trips per hour respectively. The cumulative traffic generated by the proposed development and surrounding new developments of an additional 121 trips per hour is below the short-term scenarios' allowances made for the site as part of the Epping Town Centre Traffic Study (Halcrow, 2011); the recommended road network improvements of which are currently being addressed as previously discussed).

Under these levels of additional traffic, the Epping Town Centre traffic study indicates that the road improvement works previously identified would accommodate the additional traffic arising from the short-term scenario and some traffic from the long-term scenario. As such, the development would not result in further road and intersection upgrades as already proposed in the long-term scenario.

Following the full development of the long-term scenarios (including the proposed development), the key intersections near the Epping Town Centre would operate with similar performance to existing conditions.

Travel Demand Management

Green Travel Plans have proven to be a successful way of changing travel behaviour for mixed-use developments throughout Australia and overseas. A GTP is a way in which a development manages the transport needs of residents, staff and visitors. The aim of the plan is to reduce the environmental impact of travel to and from a given site and in association with its operation. In essence, plans encourage more efficient use of motor vehicles as well as alternatives to single occupant car usage.

There is anticipated to be a significant shift in the future travel patterns to/ from and within the site's local and regional area, due to the Sydney Metro project. The frequency, capacity and nature of metro services will transform areas along the proposed Sydney Metro route, with high density residential developments either in planning or currently under construction. Large commercial entities are also continuing to be drawn to these areas.

A Transport Access Guide (TAG) should accompany a Green Travel Plan to provide travel information for people travelling to and from the site using the sustainable forms of transport available, including walking, cycling and public transport. The TAG provides a visual snapshot of the location, making it easier to understand the relationship between a site and the surrounding train stations, bus stops, car share pods and walking and cycling routes.

Such TAGs encourage the use of non-vehicle mode transport and can reduce associated greenhouse gas emissions and traffic congestion while improving health through promoting active transport choices.

They can be presented in different forms, such as a map printed on the back of business cards or envelopes with complimentary slips detailing more comprehensive information. Best practice suggests that the information should be as concise, simple and site centred and where possible, be provided on a single side sheet. If instructions are too complex, residents and staff are likely to ignore them.

The information presented in the TAG could also be incorporated onto public transport noticeboards that would make residents and visitors more aware of the alternative transport options available.

In general, there is an opportunity to provide GTP for the proposed development, not only for the future residents of the development, but also the staff and visitors associated with the proposed commercial and retail land uses to encourage changes in mode of travel that is afforded a high level of accessibility to public transport services.