

Our Ref: JB10630

21 October 2010

Mode Design
78 Annerley Road
WOOLLOONGABBA QLD 4102

Attention: Claudi-Mari Preller

Dear Claudi

RE: 10 THEODORE STREET, EAGLE FARM

It is understood that a Development Application is to be lodged for a proposed electronic goods showroom and office development on land located at 10 Theodore Street, Eagle Farm. It is noted that the subject site falls under the Urban Land Development Authority's (ULDA) Northshore Hamilton region. As a result of this, the proposed development will be subject to ULDA development requirements. GTA Consultants has been requested to review the proposed development with regards to servicing, access and the car park configuration against Brisbane City Council's '*Transport, Access, Parking and Servicing Policy*' (TAPS Policy), with reference made to the ULDA's development scheme where required.

This letter has been prepared based on development plans provided by Mode Design, Drawing Numbers DD100_A, DD101_A and DD102_B, dated June 2010, a copy of which is can be found at Attachment A.

Subject Site

The subject site is located at 10 Theodore Street, Eagle Farm. The site has a frontage of some 30m to Theodore Street and is currently occupied by a fast food store and an existing car park. The surrounding properties predominantly include industrial uses.

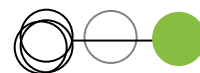
Theodore Street is classified by Brisbane City Council as a local street and, in the vicinity of the site, it is generally aligned in a north to south direction. It is a two-way road configured with a 9.0m wide carriageway set within a 20.0m road reserve (approx).

Cullen Avenue West is classified by Brisbane City Council as a local street and, in the vicinity of the site, it is generally aligned in an east to west direction. It is a two-way road configured with an 8.0m wide carriageway set within a 40.0m road reserve (approx).

Development Proposal

It is understood that a Development Application is to be lodged with Brisbane City Council for the development of a three storey electronic goods showroom and office development. The proposed development will incorporate showroom uses on the ground and mezzanine levels, with commercial premises proposed at level one.

**PLANS AND DOCUMENTS
referred to in the ULDA
APPROVAL dated 11 / 4 / 11**



The development plans indicate that ingress to the site is proposed via an existing crossover on Theodore Street with egress proposed via an existing crossover on Cullen Avenue West. Pedestrian access is proposed at the north-west corner of the site, adjacent to an existing community park.

A total of 62 car parking spaces are proposed on-site including five parking spaces for persons with a disability. A mixed use loading zone is also located at the eastern side of the site.

Car Park Layout

The car park layout has been reviewed against the requirements of the TAPS Policy. Details of this review are provided below.

Bay and Aisle Width

The parking spaces are consistent with the TAPS Policy classification of a Type 3 space, being public car parking areas with low turnover rates where goods can be expected to be loaded.

The TAPS Policy requires these parking bays to be a minimum 5.4m long by 2.6m wide with minimum parking aisle widths of 6.2m. The development plans indicate that car parks 34, 40, 50 and 56 are only 2.5m wide, less than the minimum specified by TAPS for Type 3.

It is recommended that these spaces be modified to allow a minimum width of 2.6m, in accordance with the TAPS Policy. This could be achieved by relocating the adjacent columns and kerb, shown graphically at Attachment B. Alternatively, these spaces could be reserved for staff parking and therefore have a reduced minimum width of 2.4m.

The TAPS Policy requires that car parking spaces for persons with a disability are to be provided at a rate of one space / 4,500sq.m GFA for business development, with a minimum requirement of one space. This equates to a requirement of one car parking space for persons with a disability. Development plans indicate that the proposed development makes a provision for five parking spaces for persons with a disability, which exceeds the requirements of the TAPS Policy.

Adjacent Structures

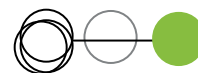
The TAPS Policy requires that a car parking envelope, as shown at Attachment C, is required to be clear of intrusions such as columns or walls. Development plans indicate that lift cores on basement level 1 are adjacent the car parking spaces for persons with a disability 13 and 15. These spaces are required to provide an additional 300mm clearance to allow for door opening.

It is recommended that these spaces be modified to allow an additional 300mm clearance or alternatively be line marked as general car parking spaces with a width of 2.9m. It is noted that after removing these two car parking spaces the proposed development will still exceed the required number of parking spaces for persons with a disability.

Gradients

The proposed development incorporates a number of ramps to and from the basement levels. The ramps shown on the plans are indicated to have a gradient of 1:6 (16.7%) with transitions of 2.0m in length and a gradient of 1:8 (12.5%). It is noted that this does not comply with the requirements of the TAPS Policy, which requires a maximum change of grade of 1:12.5 (8%).

In order to meet the requirements of the TAPS Policy, the transitions ramps could be up to a maximum grade of 1:12.5 (8%). If this is the case, the gradient of the ramp itself could be up to a maximum of 1:6.25 (16%),



before further transition ramps would be required. It is noted that to achieve these gradients and maintain the current height, the ramps would extend an additional 2.5m into the site, severely reducing the distance between ramps. Given that this outcome would result in insufficient room for vehicles to manoeuvre at the end of ramps, it is not recommended that the TAPS Policy requirements be adopted.

It is noted that the proposed ramp gradients and transitions meet the requirements of the AS / NZS 2890.1:2004. On this basis, the proposed ramps are considered to be adequate.

Turnaround Facilities

The proposed development incorporates two terminating aisles on basement level 2 and one terminating aisle on the ground floor. Development plans indicate that a 1.0m aisle extension is proposed, which is consistent with the requirements of the Australian / New Zealand Standard, Parking Facilities, Part 1: Off-street Car Parking (AS / NZS 2890.1:2004). It is noted that the TAPS Policy requires a 2.0m aisle extension be provided at terminating aisles. If possible, it is recommended that the aisle extension be extended by an additional metre to meet the requirements of the TAPS Policy.

Circulation Roads and Ramps

The TAPS Policy requires that a minimum width for one and two way circulation roads and ramps of 3.0m and 6.2m respectively. The development plans indicate that all one-way circulation ramps are a minimum 3.2m wide and all two-way circulation roads are a minimum of 6.2m wide. The proposed development therefore meets the requirements of the TAPS Policy.

The proposed one-way service aisle, providing access to the loading area, is 4.6m wide. This exceeds the TAPS Policy's requirement of 4.5m for a Refuse Collection Vehicle (RCV) or Large Rigid Vehicle (LRV).

Height Clearance

The TAPS Policy requires a minimum vertical clearance of 2.3m to permit access for all vehicles expected to use the car park and a minimum vertical clearance of 4.5m for an RCV or LRV. It is noted that for an RCV to operate, the following vertical clearances are required:

- front load – 6.1m
- side load – 6.7m
- rear load (roll-off) – 7.1m.

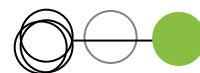
It is recommended that the appropriate vertical clearance be maintained for the proposed development should refuse collection be undertaken in the designated loading bay.

Provision for Queuing

Given that vehicle access to the site is proposed as one-way only, it is considered appropriate to consider external queuing only, as internal queuing is anticipated to be accommodated on-site.

The TAPS Policy requires that car parking areas providing access to between 51 – 75 vehicles provide a minimum provision for three vehicles to queue. Assuming a vehicle length of 6.0m, the proposed development is required to provide a queuing distance of 18.0m.

The development plans indicate that the proposed development provides a queuing distance of some 3.0m to the first internal conflict point. It is noted that an existing internal intersection is located some 7.0m from the site boundary, therefore limiting the achievable queue length to 7.0m.



It is recommended that the ground floor car park be modified, as is shown graphically at Attachment B, such that the first proposed internal intersection is approximately the same distance into the site as the existing internal intersection, thereby maintaining the current queuing distance.

Suitability of Site Access

The proposed development will incorporate an existing crossover on Theodore Street for ingress into the site and an existing crossover on Cullen Avenue West for egress from the site. Given that both crossovers have previously been approved for use by a much larger development, this is considered to be sufficient for the proposed development.

Loading Facilities

The business component of the proposed development is required to provide occasional access for a Refuse Collection Vehicle (RCV) and regular access for a Medium Rigid Vehicle (MRV) under the TAPS Policy. The showroom component of the proposed development does not have a requirement for servicing under the TAPS Policy, however display and sales activities require regular access by an Articulated Vehicle (AV). It has been advised that the proposed showroom development will be for electrical goods only, not car sales, and therefore access for an AV is perceived to be unnecessary. Nevertheless, provision has been made for a Large Rigid Vehicle (LRV).

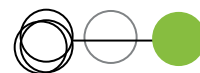
A swept path assessment, conducted using the computer program *AutoTURN*, has been undertaken to test the accessibility of the proposed development for an RCV and LRV. The results of this analysis, shown graphically at Attachment D, indicate that both design vehicles can enter and exit the site in a forward gear, and that all manoeuvring can be contained on site.

It is noted that the proposed development provides a loading bay for servicing and refuse collection. Council's TAPS Policy requires that service bays catering for an LRV must be a minimum 11.0m long and 3.5m wide. The proposed development provides a 9.5m long x 6.5m wide service bay, less than that required by the TAPS Policy. Whilst the proposed service bay does not meet the length requirements specified by the TAPS Policy, a swept path assessment, shown at Attachment D, indicates that a Brisbane City Council Large Car can pass either a LRV or RCV parked in the loading bay. Given this, the proposed servicing bay is considered to be adequate.

Summary

Following a review of the proposed development, the following has been identified:

- Car parking spaces 34, 40, 50 and 56 do not meet the minimum width requirements outlined in the TAPS Policy. It is recommended that these spaces be modified to meet these requirements as is shown at Attachment B.
- Car parking spaces for persons with a disability, numbered 13 and 15, do not provide an additional 300mm clearance between walls to allow for door opening. It is recommended that these spaces be modified or removed given that the number of car parking spaces for persons with a disability required by the TAPS Policy is exceeded.
- Whilst grades of transition ramps for the proposed development exceed the maximum allowable change in grade specified in the TAPS Policy they comply with the requirements of AS / NZS 2890.1:2004. Given that the TAPS Policy requirements would result in an unacceptable



outcome with regards to vehicle manoeuvring between ramps, the proposed arrangement is considered to be adequate.

- Insufficient provision is made for vehicles entering the site to queue. It is recommended that the ground level car park be modified such that the first internal conflict point is consistent with the existing operation as shown at Attachment B.
- The proposed loading bay does not meet the requirements of the TAPS Policy with regards to length. Nevertheless, it is considered adequate given that a Large Car can still pass expected service vehicles using the loading bay.

Naturally, should you have any questions or require any further information, please do not hesitate to contact Richard Ward or me in our Brisbane office on (07) 3113 5000.

Yours sincerely

GTA CONSULTANTS

Richard V Jones
Associate Director

encl.