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**THOMPSON  
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9 December 2015

The General Manager  
Ryde City Council  
PO Box 23  
RYDE  
NSW 2112

Dear Sir,

ASSESSMENT OF PARKING IMPACTS ASSOCIATED WITH  
SECTION 96 APPLICATION  
MIXED USE DEVELOPMENT  
SHEPHERDS BAY – STAGES 2 & 3

This Practice has been engaged by Shepherds Bay Urban Development Pty. Ltd. to undertake an assessment of the parking impacts associated with a Section 96 Application for alterations to an approved mixed use development known as Stages 2 & 3 Shepherds Bay, Meadowbank.

**APPROVED DEVELOPMENT**

Development consent was granted by Ryde City Council on 20 October 2015 (LDA2015/0018) for a mixed use development comprising the following:

- 453 residential apartments comprising:
  - 242 one bedroom dwellings;
  - 194 two bedroom dwellings; and
  - 17 three bedroom dwellings.
- A non-residential floor space of 1,000m<sup>2</sup> comprising a retail / commercial tenancy providing a floor area of approximately 200m<sup>2</sup> and a community centre providing a floor area in the order of 800m<sup>2</sup>.

The development was approved to be serviced by three levels of basement car parking containing a total of 607 spaces, as follows:

- 501 resident parking spaces.
- 91 residential visitor spaces.

- 7 car share spaces.
- 8 retail / commercial car parking spaces.

Further to the above passenger vehicle parking spaces, the basement parking level was also approved to provide a formalised waste collection bay.

In addition, the development was approved to provide a total of 61 bicycle parking spaces.

Vehicular access was approved to be facilitated by a single access driveway connecting with Rothesay Avenue in the south-eastern corner of the site, providing a 6m wide ingress laneway, separated from a 6m wide egress lane by a 1m wide median.

## PROPOSED ALTERATION & SCOPE OF ASSESSMENT

It is proposed that the approved development be amended as follows:

- The approved community centre be removed from the development;
- Alterations and additions to the approved development to facilitate the provision of 45 additional residential apartments as follows:
  - 1 studio dwelling
  - 26 one bedroom dwellings; and
  - 18 two bedroom dwellings.
- Alterations and additions to the approved basement parking area to facilitate the provision of 33 additional vehicular parking spaces as follows:
  - 24 resident spaces; and
  - 9 residential visitor spaces.
- Alterations and additions to the approved bicycle parking provision to provide an additional three spaces.

No alterations to the approved site access arrangements are proposed.

No alterations to the approved site servicing arrangements are proposed.

The purpose of this correspondence is to assess and document likely internal traffic and parking impacts resulting from the proposed Section 96 Application, with reference to the relevant Australian Standards and Ryde City Council's Development Control Plan 2014 (DCP 2014).

This report makes reference to and should be read in conjunction with amended architectural plans prepared by Turner. In this regard, the parking and circulation arrangements have been designed in consultation with this Practice so as to mitigate any impacts and ensure compliance with the relevant Australian Standards and Council's relevant planning policies.

## ACCESS ARRANGEMENTS

The approved site access arrangements are not proposed to be altered, whereby a 6m wide ingress driveway is to be separated from a 6m wide egress driveway by a 1m wide median.

In order to undertake an assessment of the suitability of the approved access arrangements with respect to the proposed altered development yield, reference is made to AS2890.1-2004. This Standard provides driveway design requirements based on a number of site characteristics such as the land-use proposed, the number of spaces the driveway is to serve and the functional order of the access road. The following provides a summary of the pertinent characteristics of the subject proposal:

- The amended development involves a primarily residential land-use;
- The driveway is proposed to service 640 parking spaces; and
- Rothesay Avenue performs a minor (non-arterial) function within the local road hierarchy.

Based on the above characteristics, Tables 3.1 and 3.2 of AS2890.1-2004 specify that, at minimum, a Category 3 type driveway is required, providing a 6m wide ingress laneway, separated from a 6m wide egress lane by a 1m wide median. The originally approved driveway design continues to suitably accord with this Standard requirement and is therefore considered to be satisfactory.

## PARKING PROVISION

### Car Parking

The amended development provides a total of 640 off-street vehicle parking spaces as follows:

- 525 resident spaces;
- 100 visitor spaces;
- 7 car share spaces; and
- 8 café spaces.

The subject site is subject to Ryde City Council's locally specific DCP 2014 which stipulates the following off-street parking requirements relevant to the subject proposal:

High Density Residential Flat Buildings  
0.6 – 1.0 spaces per one bedroom dwelling  
0.9 – 1.2 spaces per two bedroom dwelling  
1.4 – 1.6 spaces per three bedroom dwelling  
1 visitor space per 5 dwellings

Retail Premises  
1 space per 25m<sup>2</sup>

Whilst no specific requirements are provided for car share spaces within DCP 2014, it is understood that Council has recently been applying a rate of 1 car share bay per 90 vehicular parking spaces to development within the precinct.

Table 1 summarises the off-street parking required based on the above rates.

<b>TABLE 1 SUMMARY OF CAR PARKING REQUIREMENTS</b>					
	<b>Proposed Development</b>	<b>Minimum</b>		<b>Maximum</b>	
		<b>Car Parking Rate</b>	<b>Car Parking Required</b>	<b>Car Parking Rate</b>	<b>Car Parking Required</b>
Resident	269 x 1 bedroom units	0.6 spaces / unit	162	1 space / unit	269
	212 x 2 bedroom units	0.9 space / unit	191	1.2 spaces / unit	255
	17 x 3 bedroom units	1.4 spaces / unit	24	1.6 spaces / unit	28
Residential Visitor	498 units	0.2 spaces / unit	100	0.2 spaces / unit	100
Retail	200m <sup>2</sup>	1 space / 25m <sup>2</sup>	8	1 space / 25m <sup>2</sup>	8
Car Share	640 spaces	1 bay / 90 spaces	7	1 bay / 90 spaces	7
		<b>TOTAL</b>	<b>492</b>	<b>TOTAL</b>	<b>667</b>

The amended development is therefore required to provide between 492 and 667 spaces as follows:

- Between 377 and 552 resident spaces;
- 100 visitor spaces;
- 8 retail spaces; and
- 7 car share bays.

The amended development provision of 640 off-street vehicle parking spaces comprising 525 resident spaces, 100 visitor spaces, 7 car share spaces and 8 café spaces is therefore suitably compliant with Council's relevant DCP 2014 requirements.

### Bicycle Parking

The proposed development provides a total of 64 parking spaces for bicycles. Clause 2.7, Section 9.3 of DCP 2014 and Condition 13 of Consent MP09\_0216 specifies the following bicycle parking requirements:

1 bicycle space per 10 car spaces

Based on a total amended car parking provision of 640 spaces, a total of 64 bicycle parking spaces are required. Compliance with the relevant bicycle parking requirements is therefore achieved.

## PASSENGER VEHICLE CIRCULATION

The additional parking yield is primarily proposed to be accommodated through the creation of two small additional parking levels, located at lower ground and ground floor levels. The layout of these additional small parking levels essentially forms a partial duplication of the approved parking levels with respect to the proposed internal circulation arrangements.

Further, whilst minor alterations are proposed to the approved three basement level parking areas to provide appropriate physical separation between the publically accessible residential visitor, café and car share parking spaces and the secure resident parking spaces, the approved parking layout has not been materially changed from that approved.

In order to assess the suitability of the proposed overall internal circulation design servicing Stages 2 & 3, an audit of the architectural plans has been undertaken with respect to the design criterion of AS2890.1-2004. A schedule of compliance with the relevant sections AS2890.1-2004 is contained within Table 1 provided overleaf.

<b>TABLE 1</b> <b>ASSESSMENT OF COMPLIANCE OF ON-SITE PARKING AREA WITH</b> <b>AUSTRALIAN STANDARD (AS 2890.1-2004)</b>			
<b>Section</b>	<b>Requirement</b>	<b>Provided</b>	<b>Compliance</b>
2.3.3	Max 100m parking module length	Maximum 70m	Yes
2.4.1	Standard 90 degree space width servicing employees = 2.4m	Minimum space width = 2.4m	Yes
2.4.1	Standard 90 degree space length = 5.4m	Minimum space length = 5.4m	Yes
2.4.1 (b) (i)	Small car 90 degree space length = 5.0m	Minimums small car space length = 5.0m	Yes
2.4.1 (b) (ii)	300mm additional width against obstruction	Minimum additional width = 300mm	Yes
2.4.2 (a)	Parking aisle adjacent to 90 degree open spaces 5.8m	Minimum parking aisle = 5.8m	Yes
2.4.2 (c)	Blind aisles to be extended a minimum of 1m beyond last space	Blind aisles extended at least 1m in all cases	Yes
2.4.6	Maximum gradients, 1:20 parallel to angle of parking and 1:16 @ 90 degrees to angle of parking	Parking modules are close to level	Yes
2.5.2 (a) (i)	One-way straight roadway / ramp, at least 3.0m wide	Minimum 4.0m wide	Yes
2.5.2 (a) (ii)	Two-way straight roadway / ramp, at least 5.5m wide	Minimum 5.5m	Yes
2.5.2 (c)	Provision to be made at intersections to accommodate B85 and B99 vehicle in combination	B85 and B99 vehicles accommodated in combination	Yes
2.5.3 (a)	Maximum grade of ramp = 1 in 4	Maximum grade = 1 in 4	Yes
2.5.3 (d)	Maximum change in grade = 1 in 8	Maximum change in grade = 1 in 8	Yes
3.2.4	Sight distance at driveway minimum 45m	>45m	Yes
3.2.4	Sight distance triangle 2.5m x 2m at corner of driveway must be clear of obstructions	Sight distance triangle provided at Rothesay Avenue	Yes
3.3 (a)	Maximum grade within 6m of property boundary = 1 in 20	1 in 20 upgrade	Yes
5.2	Columns to be located within 750-1750mm back from opening of space or last 1750mm of the space	Columns located outside of nominated design envelope	Yes
5.3	Minimum headroom = 2.2m	Minimum headroom = 2.2m	Yes

It is therefore considered that the proposed amended car park layouts servicing Stages 2 & 3 suitably conform to the intentions of the requirements of AS2890.1-2004.

Further to the above, a number of disabled parking spaces have been provided throughout the parking area, primarily providing the following design criterion in accordance with AS2890.6-2009:

- Disabled space width = 2.4m (plus adjoining 2.4m wide shared area);
- Disabled parking space length = 5.4m; and
- Clearance above disabled spaces = 2.5m.

Notwithstanding this, it is acknowledged that a small number of resident adaptable parking spaces have been provided with dimensions of 3.8m x 5.4m. Certification of these adaptable parking spaces is understood to be provided by an accessibility consultant under separate cover with respect to AS4299.

In consideration of this and the above discussion, the proposed internal passenger vehicle circulation arrangements servicing Stages 2 & 3 are satisfactory.

## SITE SERVICING

The approved site servicing arrangements are not proposed to be altered. Assessment of the compliance of the servicing arrangements with the relevant Australian Standard and DCP 2014 considerations is therefore not required.

## CONCLUSION

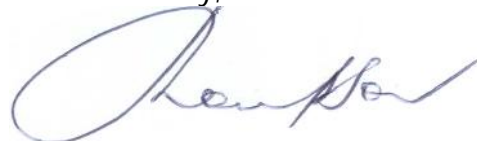
This correspondence provides an assessment of the parking impacts associated with a Section 96 Application for alterations to an approved mixed use development within Stages 2 & 3 of the Shepherds Bay redevelopment at Meadowbank. Having regard to the assessment contained within this correspondence, the following conclusion is provided:

- The proposal involves the provision of 45 additional residential apartments, the provision of 33 additional passenger vehicle parking spaces, three additional bicycle parking spaces and the deletion of a community centre;
- The approved site access arrangements are suitably capable of accommodating the additional development yield in accordance with the relevant requirements of AS2890.1-2004;
- The proposed amended parking provision complies with Council's DCP requirements and are therefore considered to be satisfactory; and
- The altered internal circulation and parking arrangements generally comply with the relevant requirements of AS2890.1-2004 and AS2890.6-2009 and accordingly, are considered to be satisfactory.

In consideration of the above, the proposed alterations to the approved development are envisaged to be satisfactory.

It would be appreciated if the information contained within this correspondence could be incorporated in Council's assessment of the subject application.

Yours faithfully,



David Thompson  
**Principal**  
**Transport Planner**