

1 June 2015

Our Ref: 15GCT0065
Your Ref: DA 43-3-2005

Attention: Aaron Lenden

**Heran Building Group PTY LTD
Level 3, Suite 301 'Pivotal Point'
50 Marine Parade
Southport, QLD 4215**

Dear Peter,

RE: Bay Grand Apartments - 2-6 Bay Street Tweed Heads

TTM have been engaged by Heran Building Group to review the proposed changes to the 'Bay Grand Apartments' development located at 2-6 Bay Street Tweed Heads.

TTM have previously prepared a Transport and Traffic Assessment report for the development dated January 2005 (ref: 30800), and subsequent letters dated April 2008, July 2008 and November 2008 (ref: 32713).

This letter report reviews the compliance of the proposed changes in accordance with the previous May 2010 development plans, understood to have been approved in January 2011 by NSW Planning. The assessment has been undertaken in accordance with the current Tweed Shire Council (TSC) Development Control Plan (DCP) and Australian Standards.

Car Parking

Parking requirements for the 2011 approval were calculated under the the 1999 Tweed Shire Council Site Access and Parking Code. The parking requirement for the 2011 proposal under the 1999 Site Access and Parking Code is calculated in Table 1 .

Table 1: DCP 1999 Parking Requirement for 2011 Approved Plan

Use	Rate	Units/GFA	Parking Requirement
Multiple Unit Dwelling	1.5 spaces per dwelling	206 Units	303.0 spaces
Office/Commercial	1 space per 40m ² GFA	289m ² GFA	7.2 spaces
Retail	4 space per 100m ² GFA	348m ² GFA	13.9 spaces
Restaurant	1 space per 7m ² dining area	144m ² GFA (72m ² dining)	10.3 spaces
Total			335 spaces

The new development proposal consists of 203 units with 444m² GFA of commercial area, with no retail or restaurant area.

Assessed under the same 1999 Site Access and Parking Code, the parking requirement for the new proposal is calculated in Table 2.

Table 2: DCP 1999 Parking Requirement for New Proposed Plan

Use	Rate	Units/GFA	Parking Requirement
Multiple Unit Dwelling	1.5 spaces per dwelling	198 units	297.0 spaces
Office/Commercial	1 space per 40m ² GFA	444m ² GFA	11.1 spaces
Retail	4 space per 100m ² GFA	0m ² GFA	0 spaces
Restaurant	1 space per 7m ² dining area	0m ² GFA	0 spaces
Total			309 spaces

Under the 1999 Site Access and Parking Code, the new proposal requires approximately 26 less parking spaces over the previously approved 2011 development scheme, a decrease of approximately 7.7%.

The Tweed City Centre Plan, adopted by TSC as part of the 2012 Local Environment Plan (LEP), contains specific parking rates for developments located within defined commercial core areas. The development is largely contained within the Commercial Core Parking Area - North, as illustrated in Figure 1.

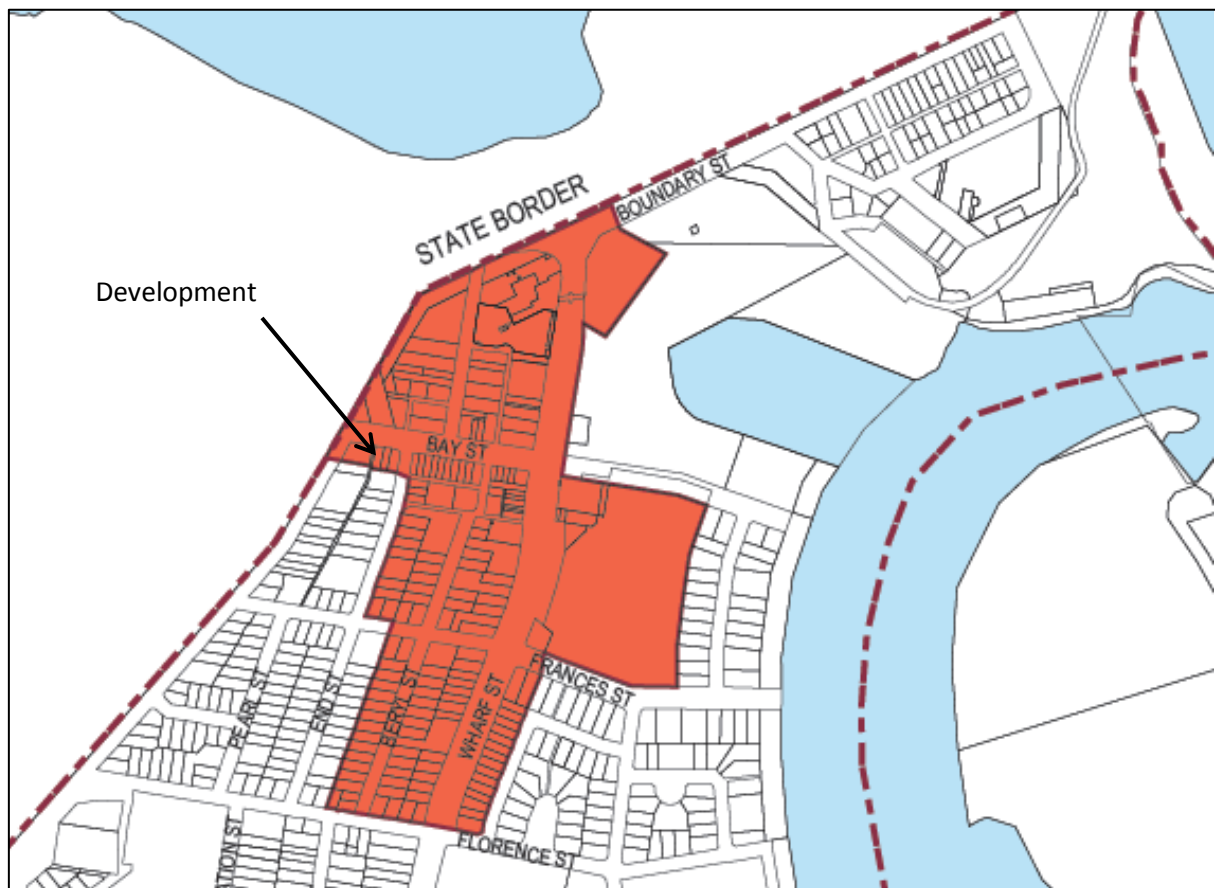


Figure 1: Commercial Core Parking Area North

Under the Tweed City Centre Plan, the parking for the proposed development is calculated as shown in Table 3.

Table 3: Tweed City Centre Plan Car Parking Requirement for Proposed Plan

Use	Rate	Units/GFA	Parking Requirement
Attached Dwellings	1.0 spaces per 1 and 2 bedroom dwelling	172 1-2 bed units	172.0 spaces
	1.5 spaces per 3 bedroom dwelling	26 3 bed units	39.0 spaces
	1 visitor space per 10 dwellings	198 total units	19.8 spaces
General Office	1 space per 70m ² GFA (in Commercial Core)	444m ² GFA	6.3 spaces
Total			238 spaces

In addition to the car parking requirement outlined in Table 3, the Tweed City Centre Plan requires motorcycle parking be provided at a rate of 1 space per 25 employees (assumed to be equal to 1 staff per 40m² commercial), and 1 space per 25 residential spaces. Under the Tweed City Centre Plan rates, 9 motorcycle spaces would be required for the new development proposal.

Further, Tweed City Centre Plan specifies that 2% of the required parking spaces be designated as spaces for a person with a disability (PWD). Under the Tweed City Centre Plan rates, 5 PWD spaces would be required for the new development proposal.

It is understood that previous DA Administrative Conditions require for a total of 10 separate car wash spaces to be provided for the 198 unit proposed development.

The proposed development parking provision is compared with the Tweed City Centre Plan requirements in Table 4.

Table 4: Difference Between Tweed City Centre Plan requirements and Proposed Parking Provision

Parking Type	Tweed City Centre Plan Requirement	Proposed Development Provision	Difference
Residential Parking	211 spaces	244 spaces (including 26 tandem spaces)	+33
Visitor Parking	20 spaces	28 spaces	+8
Commercial Parking	7 spaces	11 spaces	+4
Motorcycle Parking	9 spaces	14 spaces	+5
PWD Parking	5 spaces	6 spaces	+1
Car Wash Bays	10 wash bays	10 wash bays	0
Total	262 spaces	313 spaces	+49 spaces

The proposed development provision far exceeds the minimum requirements specified under the Tweed City Centre Plan.

Trip Generation

As part of TTM's July 2008 supplementary letter for the previous development scheme, the expected trip generation of the development was calculated. TTM calculated the likely peak hour trip generation of the development based on trip generation rates contained within the RTA (now RMS) Guide to Traffic Generating Developments 2002.

TTM utilised a trip generation rate of 0.4 trips per dwelling, 6 trips per 100m² GFA of Shops/Café/Restaurant, and 1 trip per 100m² of GFA of Office. The estimated peak hour trip generation for the previously approved scheme is shown in Table 5.

Table 5: Estimated Trip Generation for 2011 Approved Plan

Use	Rate	Units/GFA	Trip Generation
Residential Flat	0.4 trips per dwelling	202 units	80.8 trips
Office	1 trip per 100m ²	289m ² GFA	2.9 trips
Shops/Café/Restaurant	6 trips per 100m ²	492m ² GFA	29.5 trips
Total			114 trips

Utilising the same trip generation rates, the trip generation for the proposed development is outlined in Table 6.

Table 6: Estimated Trip Generation for Proposed Plan

Use	Rate	Units/GFA	Trip Generation
Residential Flat	0.4 trips per dwelling	198 units	79.2 trips
Office	1 trip per 100m ²	444m ² GFA	4.4 trips
Shops/Café/Restaurant	6 trips per 100m ²	0m ² GFA	0 trips
Total			84 trips

The new proposal is estimated to generate 30 less trips than the 2011 approved proposal.

The previously approved 2011 scheme proposed vehicular access onto both Enid Street and Bay Street, whereas the new proposal has vehicle access only from Enid Street, and hence all generated traffic will utilise the single access, concentrating the trips.

Due to the considerable drop in expected trip generation, it is expected that the concentration of all generated trips onto the single access onto a minor road should not have a substantially different impact than the previous scheme with two access points.

Car Parking Layout

Although the currently proposed car parking layout differs considerably from the previously approved scheme, the parking design within the proposed development remains consistent with Australian Standard AS2890 series requirements utilised in the previous layout.

Car parking spaces within the development are provided compliant with AS2890.1 Class 2 spaces, being 2.5m wide (except PWD spaces), with a length of 5.4m. Aisle and circulation road widths throughout the development maintain a minimum width of 5.8m. PWD spaces are provided in compliance with the AS2890.6 standard, being 2.4m wide with a 2.4m adjacent shared area.

‘Dead-end’ aisles are limited to residential use only, with commercial and visitor spaces located close to the ground level access. Reversing areas of a minimum length of 1m are provided for all dead-end spaces to allow for efficient vehicle manoeuvring.

The proposed ramp utilises a maximum gradient of 1 in 5 (20%), acceptable for publically accessible ramps up to 20m in length. The ramp maintains a wall to wall clearance of 6.2m, allowing for two-way flow to occur with sufficient clearances.

The development provides a HRV service bay, consistent with AS2890.2 requirements. TTM have demonstrated the accessibility of the service bay in Figure 2, allowing for the HRV to enter and exit the development in a forward gear.

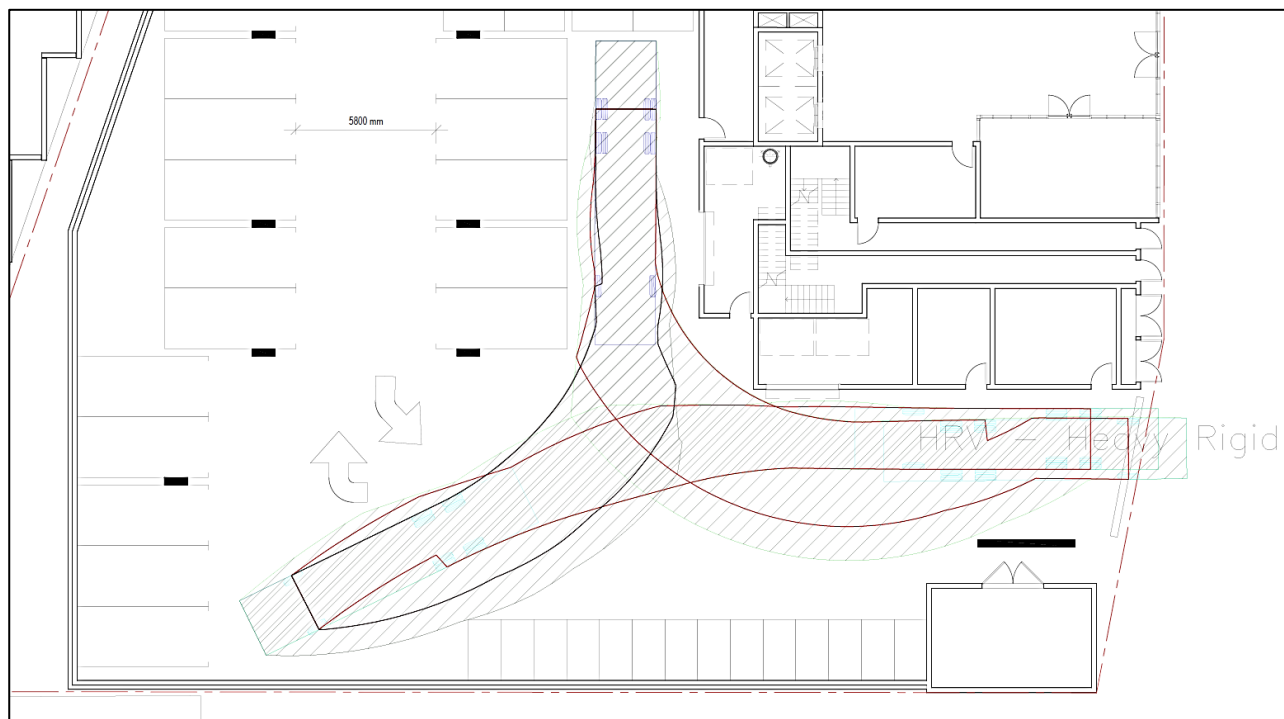


Figure 2: HRV Service Bay Access

Conclusion

The new proposal requires less parking under the previously assessed parking code, and is expected to produce fewer trips during peak hour periods than the previously approved 2011 proposal. Parking design within the car park remains compliant with the AS2890 series.

TTM consider the design and function of the proposed development to be generally in accordance with the 2011 approval (43-3-2005), and hence should be adopted.

If you have any further questions please do not hesitate to contact me.

Yours sincerely,

Christopher Wright
Project Consultant