

BENNETTS GREEN – SPOTLIGHT
PROPERTY 2 PTY LTD

TRAFFIC REPORT FOR SECTION
96 APPLICATION AND TWO
DEVELOPMENT APPLICATIONS
FOR APPROVED HOME
IMPROVEMENT CENTRE AND
BULKY GOODS DEVELOPMENT,
BENNETTS GREEN

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I. INTRODUCTION

- I.1 Colston Budd Rogers and Kafes Pty Ltd has been commissioned by BennettsGreen - Spotlight Property 2 Pty Ltd to prepare a report examining the traffic implications of proposed modifications to the approved home improvement centre and bulky goods development on the Pacific Highway at Bennetts Green. The site location is shown in Figure 1.
- I.2 The site is located on the western side of the Pacific Highway, south of Lake Street, at Bennetts Green. The site also has frontage to South Street. It is currently undeveloped.
- I.3 The site has development consent for a home improvement centre of some 13,538m², plus separate bulky goods tenancies of 16,148m² and a fast food outlet. Vehicular access is approved from Pacific Highway, including via a fourth signalised access opposite Groves Street, and a new signalised intersection south of Groves Road. Access is also approved from Lake Street and South Street. We prepared a report¹ in support of the approved development.
- I.4 The following applications are being submitted for the site:
- section 96 application to reconfigure lot boundaries, change the size of the home improvement centre and amend the layout of the bulky goods tenancies. Minor modifications to access are proposed. A service station/fast food outlet is proposed on the northern part of the site; and

¹ "Traffic Report for Proposed Masters Home Improvement Centre and Bulky Goods Development, Bennetts Green."
Prepared for Hydrox Nominees Pty Ltd, February 2013.

- two separate development applications for the northern lot (lot 3) for the petrol and fast food (one application) and bulky goods (one application) components.

I.5 The three applications would result in the following development on the site:

- 16,806m² Bunnings;
- 14,674m² bulky goods;
- petrol station; and
- two fast food outlets.

I.6 This report assesses the implications of the proposed development, including the section 96 and two development applications, through the following chapters:

- Chapter 2 - describing the existing context; and
- Chapter 3 - assessing the traffic implications of the proposed modified development.

2. EXISTING CONTEXT

Site Location and Road Network

- 2.1 The site is located on the western side of the Pacific Highway, south of Lake Street, at Bennetts Green. The site also has frontage to South Street. There are industrial and bulky goods uses on the opposite side of the highway and playing fields west of the site. The site location is shown in Figure 1.
- 2.2 The road network in the vicinity of the site includes Pacific Highway, Lake Street, South Street, the Newcastle Bypass and Groves Road. In the vicinity of the site, the Pacific Highway provides two traffic lanes in each direction with a central concrete median and 70 kilometre per hour speed limit. The highway has signalised intersections with Lake Street/Newcastle Inner City Bypass, Groves Road and South Street. There are turns lanes on the highway at these intersections and all turns are permitted. There are bus stops on both sides of the highway adjacent to the site, including a shelter on the western side of the road.
- 2.3 Lake Street provides for one traffic lane and one parking lane in each direction, clear of intersections. It provides access to residential development, community uses, a club and a school.
- 2.4 South Street intersects Lake Street west of the site at a signalised intersection. South Street provides access to the playing fields and residential development. South of the site it bends east to connect back to the Pacific Highway. South Street provides for one traffic lane and one parking lane in each direction, clear of intersections. It has a 60 kilometre per hour speed limit and a five tonne load limit. There are pedestrian refuges and bus stops on both sides of the road.
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- 2.5 Groves Road intersects the Pacific Highway at a signalised intersection opposite the site. It provides access to and from industrial and bulky goods uses on the eastern side of Pacific Highway.

Approved Development

- 2.6 The approved development includes:

- ❑ home improvement centre of 13,538m²;
- ❑ bulky goods of 16,148m²;
- ❑ fast food outlet with drive-through.

- 2.7 Access is approved from Pacific Highway, via a fourth signalised leg at the existing traffic signals at Groves Road, including left and right turn bays into the site from Pacific Highway. A second signalised access point is approved south of Groves Road, with left and right turn entry to the site and left turn exit. No right turn exit is permitted from this southern signalised access. Unsignalised access is approved from South Street (with all turns permitted), from Pacific Highway at the southern end of the site (left turn entry for service vehicles) and from Lake Street (left in/left out).

- 2.8 The approved road works in association with the development are detailed in condition 13 of the consent, and shown in plans prepared by Northrop. Condition 13 and the approved road works are provided as Appendix A to this report.
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3. IMPLICATIONS OF PROPOSED MODIFICATIONS

3.1 The following applications are being submitted for the site:

- section 96 application to reconfigure lot boundaries, change the size of the home improvement centre and amend the layout of the bulky goods tenancies. Minor modifications to access are proposed. A service station/fast food outlet is proposed on the northern part of the site; and
- two separate development applications for the northern lot (lot 3) for the petrol and fast food (one application) and bulky goods (one application) components.

3.2 The three applications would result in the following development on the site:

- 16,806m² Bunnings;
- 14,674m² bulky goods;
- petrol station; and
- two fast food outlets.

3.3 This chapter assesses the traffic implications of the proposed development through the following sections:

- parking provision;
 - access, servicing and internal layout;
 - traffic generation and effects; and
 - summary.
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Parking Provision

- 3.4 Section 5 (Access and Parking) of Part 4 (Development in Business Zones) of the Lake Macquarie City Council Development Control Plan 2014 includes a parking requirement of two spaces per lot plus one space per 50m² for hardware and building supplies. On this basis, the proposed Bunnings on lot 1 would require 336 parking spaces. 345 spaces are proposed for this lot, which satisfies the DCP.
- 3.5 For bulky goods uses, the DCP requirement is two spaces per tenancy plus one space per 40m². The DCP does not include specific parking requirements for drive-in take-away food outlets with drive-through facilities.
- 3.6 By comparison, RMS has undertaken surveys of the parking demands of fast food outlets with drive-through facilities. The RMS “Guide to Traffic Generating Developments” indicates that drive-in take-away restaurants with on-site seating and drive-through facilities should provide the greater of one space per two seats (internal) or one space per three seats (internal plus external).
- 3.7 Lot 2 includes 5,905m² bulky goods and a fast food outlet with drive-through. Based on five bulky goods tenancies and 120 internal seats in the fast food outlet, the parking requirement for lot 2 would be 218 spaces. The proposed provision for lot 2 is 263 spaces which satisfies this requirement.
- 3.8 For petrol stations with convenience stores, the DCP parking requirement is one space per 60m² of convenience store area.
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- 3.9 Lot 3 includes 8,769m² bulky goods, a petrol station with 200m² convenience store and fast food outlet with drive-through. Based on six bulky goods tenancies and 50 internal seats in the fast food outlet, the parking requirement for lot 3 would be 260 spaces. The proposed provision for lot 3 is 280 spaces which satisfies this requirement.
- 3.10 The proposed provision includes appropriate disabled parking (eight spaces for Bunnings and six spaces for each of lots 2 and 3), which represents some two per cent of spaces. Spaces for cars with trailers are also proposed for Bunnings.

Access, Servicing and Internal Layout

- 3.11 Minor changes are proposed to the approved access arrangements to the site, as follows:
- relocation of the southern signalised access some 20 metres south on Pacific Highway; and
 - changing the service vehicle entry driveway from Pacific Highway to an exit driveway, so that service vehicles to the home improvement centre enter from South Street and exit to Pacific Highway.
- 3.12 The other approved access arrangements, including from Pacific Highway at Groves Road, South Street customer access and access from Lake Street, are not proposed to change.
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- 3.13 The approved development requires service vehicles for the home improvement centre to enter from Pacific Highway and exit to South Street. The proposed amendments would reverse these movements, to better cater for access to loading docks in the amended building layout. The entry slip lane on Pacific Highway would be removed. The proposed amendments separate home improvement centre service vehicles from customer traffic.
- 3.14 Service vehicles to the other uses (bulky goods, fuel, and food) will continue to enter the site from either Pacific Highway or Lake Street (close to the highway), with exit to Pacific Highway.
- 3.15 The driveways, circulation areas and loading bays will accommodate 19 metre semi-trailers and 12.5 metre rigid trucks, the largest vehicles which will service the development. Fuel deliveries would also be made by 19 metre b-doubles. Service vehicles will be able to enter and exit the site in a forward direction.
- 3.16 Amended internal parking areas and circulation are proposed to accommodate the amended internal layout. Parking spaces will be a minimum of 2.6 metres wide by 5.4 metres long, with 6.6 metre wide circulation aisles. Spaces with adjacent obstructions will be 0.3 metres wider to provide for doors to open. Disabled spaces will be a minimum of 2.4 metres wide, with a 2.4 metre wide adjacent area for wheelchairs. These dimensions are considered appropriate, being in accordance with the Australian Standard for Parking Facilities (Part 1: Off-street car parking and Part 6: Off-street parking for people with disabilities), AS 2890.1:2004 and AS 2890.6:2009.
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Traffic Generation and Effects

- 3.17 Traffic generated by the proposed development will have its greatest effects during weekday afternoon and Saturday peak periods when it combines with commuter and other traffic.
- 3.18 The RMS surveys of home improvement centres found the following two-way (sum of both directions) peak hour traffic generation rates for the Bunnings at Minchinbury (11,915m²) and Bankstown (14,111m²):
- 2.84 and 2.05 vehicles per hour per 100m² respectively during the afternoon peak hour; and
 - 6.33 and 5.98 vehicles per hour per 100m² respectively during the weekend peak hour.
- 3.19 These surveys indicate that as Bunnings stores become larger, their unit traffic generation rate reduces. This is to be expected, as larger stores carry a greater range of products and customers spend longer during a visit. It is also consistent with other retail development, which the RMS guidelines indicate have reducing traffic generation rates as the size of development increases.
- 3.20 The proposed Bunnings, having a larger area than the two stores above, would therefore be expected to have a lower unit traffic generation. Our assessment is based on a reduction in the traffic generation rates of ten per cent to 1.95 and 5.68 vehicles per hour per 100m² for the Thursday and Saturday respectively.
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- 3.21 The proposed Bunnings would therefore have the following two-way peak hour traffic generations:
- weekday afternoon peak hour: some 330 vehicles; and
 - weekend peak hour: some 950 vehicles.
- 3.22 RMS traffic generation rates for bulky goods developments are 1.01 and 2.24 vehicles per hour per 100m² during weekday afternoon and Saturday peak hours respectively. The proposed bulky goods would therefore generate some 150 and 330 vehicles per hour two-way during weekday afternoon and Saturday peak hours respectively.
- 3.23 The RMS guidelines indicate that fast food restaurants generate some 100 (KFC) to 180 (McDonald's) vehicles per hour two-way at peak times. We have assessed 100 vehicles per hour for each restaurant. As the proposed fast food restaurant would be a small component of the overall development, a significant proportion of its trade is likely to be customers already visiting the development (linked trips).
- 3.24 The petrol station would have a traffic generation of some 130 vehicles per hour, based on the RMS rate of $0.66A(F)$, where $A(F)$ is the floor area of the convenience store. Similar to the food outlets, the petrol station is likely to have a significant proportion of its trade as customers already visiting the development.
- 3.25 The RMS guidelines indicate that some 15 per cent of retail traffic would be passing trade, i.e. traffic which would have driven past the site regardless of its visit to the site. Fast food passing trade is typically some 50 per cent. As noted above, a significant proportion of customers to the petrol station and food outlets are likely to be customers already visiting the development. Our assessment is based on 20 per cent.
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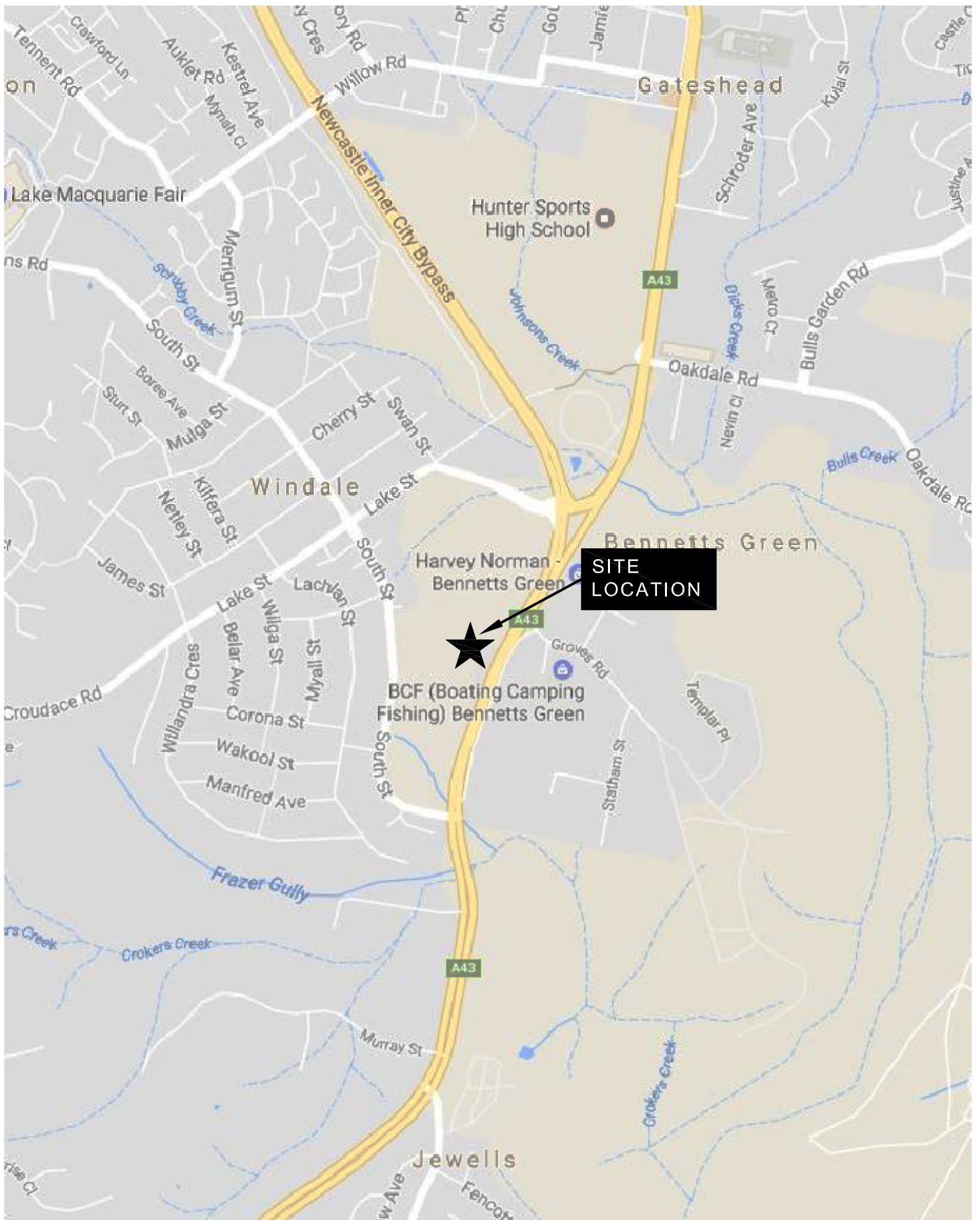
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- 3.26 The proposed development would therefore have the following additional two-way traffic generations on the surrounding road network:
- weekday afternoon peak hour: some 485 vehicles; and
 - weekend peak hour: some 1,165 vehicles.
- 3.27 Our previous report assessed additional traffic generations of 465 and 1,070 vehicles per hour two-way during Thursday afternoon and Saturday peak hours respectively. Therefore, traffic generation of the proposed development would be similar to the approved development.
- 3.28 The traffic increases of 20 and 95 vehicles per hour two-way on Thursday and Saturday would be spread between the various access points on Pacific Highway, Lake Street and South Street. Traffic increases on any movement would generally be some 10 vehicles per hour or less.
- 3.29 As noted in Chapter 2, a series of road works has been approved to cater for the traffic from the development. These works include:
- fourth signalised approach to the Pacific Highway/Groves Road intersection and associated re-phasing of the intersection;
 - left and right turn bays on Pacific Highway for traffic turning into the site;
 - signalised intersection on Pacific Highway, south of Groves Road;
 - right turn bay in Pacific Highway at this intersection; and
 - amendments to bus stop on Pacific Highway.
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- 3.30 As the additional traffic generation of the proposed development would be similar to the approved development, the above works would also cater for the generation of the proposed development.

Summary

- 3.31 In summary, the main points relating to the traffic implications of the proposed development are as follows:

- i) the proposed development would reconfigure lot boundaries and change the size and layout of the various tenancies. Minor modifications to access are proposed. A service station/fast food outlet is proposed on the northern part of the site;
 - ii) parking provision is appropriate;
 - iii) access, servicing arrangements and internal layout will be provided in accordance with AS 2890.1:2004 and AS 2890.2 – 2002;
 - iv) a series of road works has been approved for the development, including signalised access points on Pacific Highway;
 - v) the proposed development would have a similar traffic generation to the approved development; and
 - vi) with the approved road works, the road network will be able to cater for the traffic generation of the proposed development.
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Location Plan

APPENDIX A

APPROVED ROAD WORKS

13. Roads & Maritime Service

The following requirements of the Roads & Maritime Services are to be complied with:

Pacific Highway/Groves Road intersection

- The developer shall upgrade the Pacific Highway / Groves Road intersection by providing a fourth leg for vehicular access into and out of the subject site. The upgrade shall be designed and constructed in accordance with Austroads *Guide to Road Design 2010* (with Roads and Maritime supplements) and Roads and Maritime *Traffic Signal Design* to the satisfaction of Roads and Maritime including, but not limited to, the following works:
 - A right turn storage lane shall be provided on the southbound Pacific Highway approach to Groves Road. The lane shall be minimum of 70 metres in length, not including tapers.
 - A left turn deceleration lane, in accordance with Drawing No. MMD-302816-C-SK-00_XX-2005 (**Attachment A**) in terms of lane layout, shall be provided on the northbound Pacific Highway approach to Groves Road.
 - The through and right turn movements on the proposed fourth leg and traffic signal phasing shall be designed to ensure that the operational performance, network efficiency and road safety of the Pacific Highway is maintained. Restrictions to right turn out and/or through movements shall be implemented, if required for efficient and safe operation.

Proposed new signalised intersection south of Groves Road

- The developer shall design and construct a new three leg Traffic Signal Controlled intersection south of Groves Road providing right in, left in and left out access to the site. The intersection shall be designed and constructed in accordance with Austroads *Guide to Road Design 2010* (with Roads and Maritime supplements) and Roads and Maritime *Traffic Signal Design* to the satisfaction of Roads and Maritime including, but not limited to, the following works:
 - A right turn storage lane shall be provided on the southbound Pacific Highway at the new intersection south of Groves Road. The lane shall be a minimum of 65 metres in length, not including tapers.
 - A left turn deceleration lane shall be provided on the northbound Pacific Highway at the new intersection south of Groves Road. The lane shall be a minimum of 65 metres in length, not including tapers.

Proposed left in only access at the southern end of the site

- The developer shall design and construct a new left in only vehicular access from the Pacific Highway at the southern end of the site. The access shall be designed and constructed in accordance with Austroads *Guide to Road Design 2010* (with Roads and Maritime supplements) and Roads and Maritime *Traffic Signal Design* to the satisfaction of Roads and Maritime including, but not limited to, the following works:

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- A left turn deceleration lane shall be provided on the northbound Pacific Highway approach to the proposed access.
 - The access shall be restricted to service vehicles only and a physical barrier shall be provided to prevent vehicular access to the general car park area.

General

- All signalised intersections shall be designed and constructed to accommodate on-road cyclists unless specified otherwise by Roads and Maritime. If cyclists cannot be accommodated on-road due to site constraints, and subject to agreement by Roads and Maritime, adequate provision shall be made off-road.
- All traffic lanes shall be 3.5 metres in width on the Pacific Highway and at traffic signal controlled intersections, or as determined by Roads and Maritime.
- Co-ordination and linking of all traffic control signals is required at full cost to the developer, to Roads and Maritime requirements.
- Appropriate pedestrian and cyclist facilities, foot/cycle paths and ramps, connecting to traffic signal controlled intersections shall be provided to the satisfaction of Roads and Maritime and Council. Pedestrian fencing on a concrete strip base shall be required in certain areas to prevent any unwarranted pedestrian movements, including across the Pacific Highway. This will be identified as part of the design review process.
- Street lighting shall be provided at all intersections and pedestrian crossings to the relevant Australian Standard, or as determined by Roads and Maritime.
- All works associated with the proposed development shall be at full cost to the developer and at no cost to Roads and Maritime or Council.
- A Construction Traffic Management Plan (CTMP) shall be prepared and include a Vehicle Movement Plan and a Traffic Control Plan. The CTMP shall be prepared with the intention of having minimal impact on the operation of the road network during the construction phase of the development. The CTMP can include consideration of one left in only access including design requirements in accordance with Austroads *Guide to Road Design 2010* (with Roads and Maritime supplements) (including deceleration lane) from the Pacific Highway in a single location agreed to with RMS. The CTMP shall be submitted to Roads and Maritime and Council for review and acceptance prior to any construction activities commencing on site.
- As road works are required on a State road, Roads and Maritime will require the developer to enter into a Works Authorisation Deed (WAD) with Roads and Maritime. Roads and Maritime will exercise its powers under Section 87 of the Roads Act 1993 (the Act) and the functions of the roads authority, to undertake road works in accordance with Sections 64, 71, 72 and 73 of the Act, as applicable, for all works under the WAD. Further advice regarding the WAD is provided as **Attachment B**.
- The WAD shall be executed prior to the issuing the first construction certificate for the proposed development.

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- All road works required under the WAD shall be constructed to practical completion to the satisfaction of RMS prior to an occupation certificate (interim or final) being granted.
 - Signs should be constructed entirely within private property and should not encroach or overhang, into the road reserve.
 - The proposed signs should not have/use:
 - Flashing lights or messages.
 - Electronically changeable messages, unless in accordance with the Department Planning's Transport Corridor Outdoor Advertising and Signage Guidelines (July 2007).
 - Animated display, moving parts or simulated movement.
 - Complex displays that hold a driver's attention beyond "glance appreciation".
 - Displays resembling traffic signs or signals, or giving instruction to traffic by using words such as 'halt' or 'stop'.
 - A method of illumination that distracts or dazzles.

Additionally, Council should ensure that all signs meet the requirements of State Environmental Planning Policy (SEPP) No 64 - Advertising and Signage. Council should also take into account the Department of Planning's Transport Corridor Outdoor Advertising and Signage Guidelines (July 2007).

On receipt and review of the concept design (including turning path templates for all movements into and out of the site and at the Pacific Highway / Groves Road intersection) Roads and Maritime reserves the right to revise its requirements. Operational performance, network efficiency and road safety will all be considered and assessed, in conjunction with the geometric design, to ensure they are maintained to the satisfaction of Roads and Maritime.

Roads and Maritime may need to make modifications to traffic arrangements at intersections in the future to meet the increasing demands of the network and all road users.

14. Water Course Rehabilitation Plan

The Principal Certifying Authority shall not release the first or any Construction Certificate without Council having approved a Water Course Rehabilitation Plan for Crokers Creek.

The applicant is to submit to Lake Macquarie City Council for approval a Water Course Rehabilitation Plan for Crokers Creek, generally in accordance with the Windale Creek Restoration Plan (24 October 2014) by Eco Logical Australia Pty Ltd with the following additional requirements:

- (a) A detailed survey of the creek and conceptual design of erosion control works undertaken by a suitably qualified professional.

