PRELIMINARY TRAFFIC ASSESSMENT

SERVICE STATION, CONVENIENCE STORE, TRUCK STOP AND TAKE-AWAY FOOD SHOPS

LOT 200 IN DP 1177619
600 MACLEAY VALLEY WAY, SOUTH KEMPSEY

PREPARED FOR: SPECTRUM RETAIL GROUP

OCTOBER 2017

REF: - 17/130

PRELIMINARY TRAFFIC ASSESSMENT
SERVICE STATION / CONVENIENCE STORE, TRUCK STOP AND TAKE-AWAY FOOD SHOPS
SPECTRUM RETAIL GROUP PTY LTD

LOT 200 IN DP 1177619
600 MACLEAY VALLEY WAY, SOUTH KEMPSEY

Intersect Traffic Pty Ltd (ABN: 43 112 606 952)

Address:
Shop 7, Metford Shopping Village
Cnr Chelmsford Drive & Tennyson Street,
Metford NSW 2323
PO Box 268
East Maitland NSW 2323

Contact:
(Ph) 02 4936 6200
(Mob) 0423 324 188
Email: jeff@intersecttraffic.com.au

QUALITY ASSURANCE

This document has been prepared, checked and released in accordance with the Quality Control Standards established by Intersect Traffic Pty Ltd.

Issue	Date	Description	By
A	04/10/17	Draft	JG
B	05/10/17	Edit	JG
C	25/10/17	Final Proof/Final Plans	JG
D	25/10/17	Approved	JG

This document has been authorised by

Date 25th October 2017

Disclaimer

This report has been prepared based on the information supplied by the client and investigation undertaken by Intersect Traffic Pty Ltd & other consultants. Recommendations are based on Intersect Traffic's professional judgement only and whilst every effort has been taken to provide accurate advice, Council and any other regulatory authorities may not concur with the recommendations expressed within this report. This document and the information are solely for the use of the authorised recipient and this document may not be used, copied or reproduced in whole or part for any purpose other than that for which it was supplied by Intersect Traffic Pty Ltd. Intersect Traffic makes no representation, undertakes no duty and accepts no responsibility to any third party who may use or rely upon this document or the information.

Confidentiality Statement

All information, concepts, ideas, strategies, commercial data and all other information whatsoever contained within this document as well as any and all ideas and concepts described during the presentation are provided on a commercial in confidence basis and remain the intellectual property and Copyright of Intersect Traffic Pty Ltd and affiliated entities.

CONTENTS

APPENDICES

FIGURES

PHOTOGRAPHS

1. INTRODUCTION

Intersect Traffic Pty Ltd (Intersect Traffic) was engaged by KDC Pty Ltd on behalf of Spectrum Retail Group to prepare a preliminary traffic assessment report for a proposed service station, convenience store, truck stop and take-away food shops on Lot 200 in DP 1177619, 600 MacLeay Valley Way, South Kempsey. The development includes the construction of new separate entry and exit driveways off MacLeay Valley Way which will be primarily for light vehicle traffic and a separate heavy vehicle entry and exit driveways of West End Road at the rear of the site. The proposed concept development plan is provided within ***Appendix 1***.

This report is required to support a planning proposal to Kempsey Shire Council seeking to rezone the site to allow the development to be permissible on the site. The report allows Council and NSW RMS officers to assess at this preliminary stage the traffic impacts of the proposal and identify matters to be further addressed within a development application should the project proceed to this stage. The aim of this report is to determine the likely impact of the proposal on the adjacent local and state road network due to the traffic generated by the development.

This report presents the findings of the traffic impact assessment and includes the following:

1. An outline of the existing road network near the proposed development.
2. An assessment of the likely peak traffic generation from the development.
3. An assessment of the likely traffic impacts of the proposal on the adjacent road network particularly in terms of the capacity of the existing road network linking to the sub-arterial road network.
4. An assessment of the proposed development access and on-site parking.
5. Presentation of conclusions and any recommendations.

This assessment has been carried out referencing the RMS' *RTA's Guide to Traffic Generating Developments*, Austroads *Guide to Road Design Guidelines* (2009) and Kempsey Shire Council's relevant DCP as well as utilising information provided by the client.

2. SITE LOCATION

The subject site is located on the western side of the recently constructed dual carriageway Pacific Highway, South Kempsey approximately 3.5 km's south of Crescent Head Road and approximately 5.5 km's south of the Kempsey CBD. ***Figure 1*** below shows the location of the site while ***Photograph 1*** shows existing conditions at the site. The site is immediately west of the existing South Kempsey Service Centre located east of the southbound carriageway on the Pacific Highway. The proposed service centre is designed to complement the existing service centre by better catering for the northbound motorists. The proposal is consistent with NSW RMS' strategic plans for service centres along the Pacific Highway.

The site currently has several buildings and sheds associated with a light industrial land-use business and has a sealed formal access crossing approximately 12.5 metres wide off MacLeay Valley Way as shown below in ***Photograph 2***. The proposed development site is titled Lot 200 in DP 1177619, 600 MacLeay Valley Way, South Kempsey and has a total area of approximately 3.92 ha. Pursuant to the Kempsey LEP (2013) the site it is zoned RU 2 Rural Landscape.

Figure 1 – Site Location Plan

Photograph 1 – Existing site conditions

Photograph 2 – Existing site access

3. EXISTING ROAD NETWORK

3.1 Pacific Highway

The Pacific Highway is a major arterial road and transport route that connects Sydney to Brisbane along the eastern seaboard of NSW. As such it is a classified road (HW10) and under the care and control of the NSW Roads and Maritime Services (RMS). Near the site the road is a high standard rural dual carriageway concrete road with two lanes of traffic in each direction wide sealed shoulders, vegetated median, some drainage and table drains. It is a designated B-Double route and carries high traffic volumes and a high percentage of freight vehicles (heavy vehicles).

Travel lane widths are approximately 3.5 metres and a 110 km/h speed limit applies to most of the section of road near the site. At the time of inspection, the Highway was observed to be in excellent condition having only been recently constructed.

3.2 MacLeay Valley Way

MacLeay Valley Way is a major transportation route providing access into the Kempsey CBD and surrounds area from the Pacific Highway. The road is a classified road under the care and control of NSW RMS. Near the site it is a two-lane two-way high standard rural road with sealed shoulders of varying width between 1 metre and 2 metres wide. Travel lane widths are 3.5 metres and speed limits along the road vary from 60 km/h near the Pacific Highway interchange immediately south of the site to 80 km/h midway along the site frontage. At the time of inspection MacLeay Valley Way was found to be in good condition as shown below in ***Photograph 3.***

Photograph 3 – MacLeay Valley Way adjacent to the site

3.3 West End Road

West End Road has recently been constructed along part of the frontage of the site as part of the interchange construction works associated with the Pacific Highway upgrade being another leg of the roundabout at the end of the highway off-ramp. It is a local road providing vehicular access to properties along its length and as a result has low traffic volumes. It is therefore under the care and control of Kempsey Shire Council and is a two-lane two-way rural standard road approximately 11 metres wide with two x 3.5-metre wide travel lanes and 2-metre wide sealed shoulders. A 60 km/h speed zone exists along the site frontage and at the time of inspection was found to be in good condition (see ***Photograph 4***).

Photograph 4 – West End Road adjacent to the site

4. ROAD NETWORK IMPROVEMENTS

With the recent upgrading of the Pacific Highway additional capacity is available within the state road network with through traffic being removed from the local traffic on the MacLeay Valley Way and passing traffic being provided a dedicated high speed dual carriageway. There are no other known road network improvements in the area that would further increase the capacity of the road network. Future maintenance and rehabilitation works may be carried as part of the NSW RMS future work programs.

5. TRAFFIC VOLUMES

Traffic counts for the state road network were sourced from the RMS Traffic Volume Viewer program which identified the nearest count stations being located north of the site on MacLeay Valley Way (northbound only classifier) and north of the site on the Pacific Highway west of Whistler's Lane (northbound) and west of Inches Road (southbound). The relevant 2017 data sourced from these stations are shown below;

- Pacific Highway – Northbound peaks AM – 249 vtph, PM – 331 vtph.
- Pacific Highway – Southbound peaks AM – 298 vtph; PM – 256 vtph.
- MacLeay Valley Way – Northbound peaks AM – 268 vtph; PM – 276 vtph.

Based on this data it is reasonable to conclude that the existing peak hour traffic volumes on the Pacific Highway near the site would be;

- AM – 547 vtph; and
- PM – 587 vtph

Peak traffic volumes on the MacLeay Way are almost the same as for the Pacific Highway.

Therefore, the PM peak is considered the critical peak for assessment. Whilst these values have been adopted for this assessment, confirmation of the peak hour traffic volumes on the state road network near the site would need to be provided within any Traffic Impact Assessment prepared for a development application through the undertaking of classifier counts adjacent to the site should the project reach that stage.

6. ROAD CAPACITIES

The capacity of rural roads is generally determined by the capacity of intersections. However, Table 4.5 of the RMS's *Guide to Traffic Generating Developments* provides some guidance on mid-block capacities for rural roads and likely levels of service. The table is reproduced below.

The criteria for the Pacific Highway and MacLeay Valley Way, adopted in this assessment are for level terrain, 15% heavy vehicles and 100 km/h speed zoning. A desirable level of service on a rural Highway is generally considered to be a level of service (LoS) C or better. Noting a LoS D on a two-lane rural road occurs when mid-block traffic volumes exceed 1,410 vtph, the two-way two-lane mid-block traffic volume threshold for a LoS C is 1,410 vtph. Therefore, the two-way mid-block capacity of MacLeay Valley Way is approximately 1,410 vtph. With the additional travel lanes provided on the Pacific Highway i.e. two in each direction, the capacity of the Pacific Highway would at least be double this figure i.e. approximately at least 2,800 vtph.

This capacity assessment has been adopted in this report.

Table 4.5
peak hour flow on two-lane rural roads (veh/hr)
(Design speed of 100km/hr)

Terrain	Level of Service	Percent of Heavy Vehicles			
		0	5	10	15
Level	B	630	590	560	530
	C	1030	970	920	870
	D	1630	1550	1480	1410
	E	2630	2500	2390	2290
Rolling	B	500	420	360	310
	C	920	760	650	570
	D	1370	1140	970	700
	E	2420	2000	1720	1510
Mountainous	B	340	230	180	150
	C	600	410	320	260
	D	1050	680	500	400
	E	2160	1400	1040	820

The data for Table 4.5 assumes the following criteria:

- *terrain level* with 20% no overtaking.
- *rolling* with 40% no overtaking.
- *mountainous* with 60% no overtaking.
- 3.7 m traffic lane width with side clearances of at least 2m.
- 60/40 directional split of traffic.

Source: - RTA's Guide to Traffic Generating Developments

7. ALTERNATIVE TRANSPORT MODES

Public transport past the site is not readily available. While some interstate and inter-town service may make use of the proposed development facilities it is considered reasonable to conclude that the site is not serviced by public transport.

Similarly, being in a rural area and with the public road past the site being a Highway there is nothing in the way of designated pedestrian and cycle paths near the site. Pedestrians and cyclists would need to use the sealed shoulders of both the Pacific Highway and MacLeay Valley Way. This would be highly hazardous however currently there is little if any in the way of pedestrian traffic and other alternate transport mode trip making past the site.

8. PROPOSED DEVELOPMENT

The proposal involves the development of a service station / convenience store, Truck Stop and take-away food shops as a Highway Service Centre for northbound traffic to complement the existing service centre which best services southbound traffic. The proposal includes the separation of heavy and light vehicles through provision of separate filling areas and internal roads.

The development will include the following new construction works;

- A light vehicle fuel station with 8 bowsers (16 fill points) and a canopy;
- A heavy vehicle fuel station with 3 bowsers (6 fill points);
- Underground tanks;
- A convenience store and two take-away food shops with drive through service lanes within a building approximately 1,100 m^2 GFA;
- Separate amenities for truck drivers;
- On-site marked car parking spaces;
- On-site marked heavy vehicle parking spaces;
- On-site car and caravan / trailer parking;
- Parking spaces at the bowsers;
- Separate light vehicle entry off MacLeay Valley Way;
- Separate light and heavy vehicle exit to MacLeay Valley Way;
- Separate heavy vehicle entry and exit driveways off West End Road;
- Separation of heavy and light vehicle manoeuvring areas;
- Property drainage to Kempsey Shire Council's requirements; and
- Landscaping.

The concept development plan is shown in ***Appendix 1***. This will be further developed and amended through the development approval process should the development reach this stage.

9. TRAFFIC GENERATION

General guidelines on traffic generation are provided within the RMS' *RTA's Guide to Traffic Generating Development.*

The applicable rate for this development taken from *Section 3.6.2 Service stations and convenience stores* of the Guide are:

Evening peak hour vehicle trips = 0.04 A (S) + 0.3 A (F)

A (S) = area of site (m^2).
A (F) = gross floor area of convenience store (m^2).

For the take-away food shops the closest applicable rate within the *RTA Guide* would be *'restaurant'* taken from *Section 3.6.1* of the Guide and is:

Evening peak hour vehicle trips = 5 per 100 m^2 GLFA

GLFA = gross leasable floor area of shopping store (m^2).

Based on previous work undertaken by Intersect Traffic on similar developments it is estimated that the total peak hour traffic generation from the site would be in the order of **300 vtph**. This would need to be confirmed once a detailed concept plan is developed for the site.

However, a significant proportion of traffic using this facility would be passing traffic i.e. traffic already travelling on the road and using the site as a service centre. The service station and take away food outlet may generate some additional traffic from the Kempsey and surrounds for staff and customer trips however this is unlikely to be any more than 10 % of traffic generated by the site. As a worst-case scenario for this assessment a passing traffic percentage of 90 % has been adopted for this assessment.

Therefore, the additional traffic on the road network resulting from this development would only be in the order of a maximum of **30 vtph** during the peak periods for the take away food outlets and all this traffic would be on MacLeay Valley Way. This has been adopted in this assessment.

10. TRIP DISTRIBUTION

This development traffic needs to be distributed through the road network and the likely development trip distribution that has been adopted for this assessment has been calculated as follows noting the constraints on entry and exit from the site;

- 70% of inbound traffic will be from northbound traffic on the Pacific Highway and 30 % will be southbound traffic on MacLeay Valley Way;
- 100% of outbound traffic will be northbound with traffic wishing to access the Pacific Highway using the northbound on-ramp approximately 600 metres north of the site (see ***Photograph 5***);
- 50% of traffic will enter the site and 50% of traffic will exit the site in the peak hour;
- 70% of traffic entering and exiting the site will be existing traffic travelling northbound along the Pacific Highway;

The resulting trip distribution onto Macleay Valley Way will be a maximum of an additional 300 vtph on the section of MacLeay Valley Way between the site and the Pacific Highway northbound on-ramp 600 metres north of the site.

Photograph 5 – Pacific Highway northbound on-ramp South Kempsey

11. TRAFFIC IMPACT ASSESSMENT

11.1 Road Network Capacity

This assessment has determined (***Section 6***) that MacLeay Valley Way and the Pacific Highway are currently operating below its technical mid-block two-way capacity and has spare capacity to cater for additional traffic from the proposed development. ***Section 10*** of this report determined that the development is likely to generate up to an additional 300 vehicle trips per hour on MacLeay Valley Way. Little if any additional traffic will result on the Pacific Highway Assuming the same traffic generation for the AM and PM peak periods, 2017 traffic flows on the MacLeay Valley Way could increase to approximately 900 vtph peak during the AM and PM peak traffic periods. With an adopted background traffic growth of 1.5 % per annum 2027 traffic volumes on MacLeay Valley Way would increase to 1,000 vtph in the AM and PM peak periods resulting from this development.

These traffic volumes are still below the two-way mid-block capacity of MacLeay Valley Way previously determined as approximately 1,410 vtph. It is reasonable to conclude therefore that as the likely existing and future traffic volumes on the state road network would continue to be well below the technical two-way mid-block capacity of the network post development the existing road network has sufficient spare two-way mid-block capacity to cater for the development without the need for any road upgrading.

11.2 Intersection capacity

Traffic volumes on the adjoining roundabout and the northbound on-ramp intersection are still likely to be below the thresholds identified in the table below sourced from Austroads *Guide to Traffic Management – Part 6 – Intersections, Interchanges & Crossings (2009)* for which the guide states a detailed analysis to demonstrate adequate capacity is available is unlikely to be necessary as uninterrupted flow conditions would prevail.

Major road type[1]	Major road flow (vph)[2]	Minor road flow (vph)[3]
Two-lane	400	250
	500	200
	650	100
Four-lane	1000	100
	1500	50
	2000	25

Notes:

1. Major road is through road (i.e. has priority).
2. Major road flow includes all major road traffic with priority over minor road traffic.
3. Minor road design volumes include through and turning volumes.

Source: - Austroads Guide to Traffic Management – Part 6 – intersections, Interchanges & Crossings (2009)

It is therefore concluded that the intersections adjoining the site would operate with uninterrupted flow conditions and no further analysis is required.

11.3 On-Site Car Parking

The quantity of on-site car parking provision needs to be in accordance with Kempsey Shire Council's Development Control Plan (DCP 2013) Chapter B2 – Parking, Access and Traffic Management while the design of the on-site car parking needs to be in accordance with Australian Standard *AS2890.1 – 2004 Parking facilities – Part 1 Off-street car parking*.

The DCP rates are as follows;

- *Service Station with convenience store – 1 space per 30 m^2 GFA.*
- *Take Away Food & Drink Premises – 12 spaces per 100 m^2 GLFA + 1 per 5 seats + 6 queue spaces in drive through.*

Whilst currently the concept plan for the development is not detailed enough to determine the on-site car parking requirements of Kempsey Shire Council, if the following assumptions are made;

- Convenience Store – 200 m^2 GFA
- Take Away Food Outlets – 400 m^2 GFA plus 100 seats

An on-site car parking supply based on the DCP rates can be calculated as;

Car Parking Spaces = 200/30 + 400/100 x 12 + 100 / 5 = 75 spaces.

The current concept plan can provide up to 130 on-site car parks indicating the site is large enough to provide sufficient on-site car parking. The two drive-through lanes provide up to 12 queuing spaces from the service area and 6 spaces between the ordering and service points plus provides a waiting bay to reduce queuing times. It is therefore considered this development could meet the requirements of both Kempsey Shire Council and NSW RMS.

Truck parking rates are not specified in Kempsey Shire Council's DCP or in the RMS's *RTA Guide to Traffic Generating Developments* however NSW RMS require on-site car parking for 25 B-Double vehicles for Highway Service Centres and the concept plan shows that this is possible on the site.

Australian Standard *AS 2890.1 – 2004 Parking facilities – Part 1: Off-street car parking* is the standard utilised for determining compliance of developments to parking design requirements. Relevant *sections* and *figures* from the Standard are referenced below for various facets of parking design.

The layout of the parking within a development would need to comply with *Figure 2.2 - Layouts for Angled Parking Spaces*. Class 3A has been determined as the User Class applicable for the off-street car parking facility of this development. For the 90° angled parking proposed with no obstructions either side, the minimum carpark bay width would therefore be 2.6 metres, the minimum bay length 5.4 metres and the minimum aisle width 6.6 metres. Again, the size of the site would allow the required car parking to be compliant with Australian Standard *AS 2890.1 – 2004 Parking facilities – Part 1: Off-street car parking.* This would need to be further reviewed and assessed once a detailed site plan is available prior to lodgement of any development application.

Servicing of the site does need to be considered and would include servicing for mainly B-Double fuel tankers and HRV deliveries for the take away food shop, convenience store and waste collection. Swept turn paths would need to be provided on the detailed site plans and once available could be further reviewed and assessed prior to lodgement of any development application. It is noted however that a separate service bay is provided within the current concept plan and suitable servicing of the site could be achieved.

11.4 Access

The proposed development includes new separate entry and exit driveways off MacLeay Valley Way for light vehicles and light and heavy vehicles respectively as well as new separate entry and exit driveways for heavy vehicles off West End Road which can also be utilised by light vehicles. This concept will require reconstruction of West End Road to cater for the additional heavy vehicle traffic. These accesses will need to be constructed to RMS standards including compliance to Austroads *Guide to Road Design – Part 4A – Unsignalised and signalised intersections (2010)* Approach Sight distance and Safe Intersection Sight distance requirements. This would need to be checked at detailed design stage however by observation on site Safe Intersection Sight

distance would be achievable (125 metres for a 60 km/h speed limit). The sight distance at the proposed exit driveway on MacLeay Valley Way is assessed as satisfactory. To ensure suitable safety on MacLeay Valley Way the light vehicle entry access will require a new separate left turn deceleration lane into the site and the light and heavy vehicle exit driveway will require a suitable acceleration lane for northbound vehicles exiting the site. The length of these lanes will need to be determined and dimensioned within a development plan for the site when a development application is lodged.

In reviewing the heavy vehicle accesses, as West End Road is a low speed environment sight distance is not as important. The heavy vehicle exit is considered satisfactory subject to West End Road being upgraded to the exit driveway. Further design development will be undertaken in preparing the development plans for the site should the project proceed to development application stage.

As the site provides mainly short term high turnover visitor parking (Class 3A) for between 100 - 300 vehicles fronting an arterial road a category 3 access facility is required under Australian Standard *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking.* A category 3 access requires separate entry and exit driveways at least 4 to 6 metres wide. The proposed access arrangements to the development are therefore considered compliant with Australian Standard *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking*.

When considering the suitability of the development proposed on the site, it should be noted that the facility seeks to provide refuelling, refreshment and additional rest facilities for drivers on the Pacific Highway. It therefore provides essential services to combat fatigue of drivers which is one of the main reasons for motor accidents on the road network. Therefore, it is concluded that development is appropriate for the site.

Therefore, the proposed vehicular accesses at the site would be suitable and could comply with Australian Standard *AS2890.1 – 2004 Parking facilities – Part 1 Off street car parking*. Access arrangements would however need to be further reviewed and assessed once a detailed site plan is available prior to lodgement of a development application for the development.

11.5 Alternate Transport Modes

There is little in the way of public transport services, pedestrian infrastructure and bicycle infrastructure in the area. Due to the location of the site and the type of development there would also be little if any additional demand for public transport services and no additional services or infrastructure could be reasonably required. It is however recommended that coach / bus parking spaces be provided within the development so that these high occupancy vehicles can be catered for in the development.

Similarly, with only a small number of dwellings within walking or cycling distance of the site the new take away food shops are not going to generate any significant increase in pedestrian or bicycle traffic external to the site or close to the site. Therefore, no nexus would exist for additional external pedestrian or bicycle infrastructure near or within the site. However internal facilities will need to be provided to Kempsey Shire Council requirements.

Internal pedestrian linkages and bus parking facilities will need to be further reviewed and assessed once a detailed site plan is available prior to lodgement of a development application for the development.

11.6 NSW RMS – Preliminary Advice

NSW RMS has provided informal preliminary advice as shown in ***Appendix 2***. Having review this advice the following commentary is made;

- The provision of left turn deceleration and acceleration lanes at the MacLeay Valley Way entry and exit driveways respectively would ensure suitable safety on MacLeay Valley Way.
- The proposed layout provides up to 10 light vehicle queue spaces and 3 heavy vehicle queue spaces behind the proposed bowsers. This would meet Australian Standard requirements however the RMS advice suggests additional queue space is required. This has been achieved in the current concept by moving the bowser locations further away from the entry points and increasing the footprint of the Service Centre. There appears to be sufficient room on site to achieve this and continued consultation with NSW RMS is recommended.
- The development has now been amended to provide a minimum 25 on-site heavy vehicle (B-Double) car spaces further increasing the development footprint.
- NSW RMS would prefer all access to the site be via a single entry and exit point to the roundabout via West End Road. My comment would be that this would also be a suitable access arrangement however I also believe the proposed access arrangements which separate the heavy and light vehicle traffic also has merit and subject to the construction of suitable entry and exit deceleration and acceleration lanes, respectively on MacLeay Valley Way, would provide a suitable level of road safety on MacLeay Valley Way.
- NSW RMS has advised that the eastern boundary of the site is a declared controlled access road which has significant ramifications for the development. This means NSW RMS are within their powers to prohibit any access to MacLeay Valley Way from the site despite the fact the site already has accesses to MacLeay Valley Way. This means NSW RMS has the bargaining position and they will need to be fully satisfied that any access off MacLeay Valley Way is suitably safe. Whilst I maintain that suitably safe accesses off MacLeay Valley Way could be provided it is the NSW RMS that will make the final judgement.

12. CONCLUSIONS

This preliminary parking assessment for the proposed service station, convenience store, truck stop and take-away food shops on Lot 200 in DP 1177619, 600 MacLeay Valley Way, South Kempsey has determined the following;

- As existing traffic volumes on the state road network are less than the technical mid-block two-way capacity of the state road network there is spare capacity to cater for the additional traffic generated by this development.
- The proposed development is predicted to generate approximately 300 vtph to the development in the AM and PM peak periods however the majority of this is passing traffic and only a maximum of 30 vtph of additional traffic will be generated onto the state road network.
- The additional traffic generated by the development will not cause the Pacific Highway and MacLeay Valley Way to reach their technical mid-block two-way capacities therefore subject to satisfactory intersection operation the state and local road network has sufficient spare capacity to cater for the development.
- The proposed development could provide sufficient and suitable on-site parking to meet the requirements of Kempsey Shire Council and Australian Standards AS2890 including heavy vehicle parking for up to 25 B-Doubles as required by NSW RMS.
- Servicing of the site will need to be catered for in the development for B-Double petrol tankers and at least up to HRV delivery and waste collection vehicles. There is sufficient room on site for this to occur.
- Suitable Safe Intersection Sight distance (125 metres for a 60 km/h speed limit) is achievable at the proposed accesses to the site off MacLeay Valley Way. This would need to be checked prior to lodgement of a development application.
- Suitable safe intersection sight distance could be provided to the heavy vehicle entry and exit accesses off West End Road. West End Road would need to be reconstructed to cater for the additional heavy vehicle traffic generated by the development.
- To ensure suitable road safety on MacLeay Valley Way left turn deceleration and acceleration lanes at the MacLeay Valley Way entry and exit accesses respectively would need to be constructed as part of the development.
- Overall it is concluded the proposed access arrangements to the site would be suitable and could be constructed to comply with Australian Standard requirements whilst providing an acceptably safe road environment.
- Due to the location of the site and the type of development there would be little if any additional demand for public transport services and no additional services or infrastructure could be reasonably required. Bus parking should however be catered for on the site.
- With only a small number of dwellings within walking or cycling distance of the site the development is not going to generate any significant increase in pedestrian or bicycle traffic external to the site and close to the site. Therefore, no nexus would exist for additional external pedestrian or bicycle infrastructure near the site. Internal provisions for cyclists and pedestrians would be provided to Kempsey Shire Council requirements and be reviewed and assessed when a detailed site plan is available prior to lodgement of a development application.
- The proposed access arrangements are currently not the preferred access arrangements of the NSW RMS however it is considered the access arrangements proposed have merit in terms of separating heavy and light vehicle traffic movements and with suitable deceleration and acceleration lanes constructed on MacLeay Valley Way would provide a suitable level of road safety for motorists on MacLeay Valley Way. However, as the eastern boundary of the site is a declared Controlled Access Road NSW RMS are within their rights to deny access to the site from MacLeay Valley Way. Therefore, continuing consultation with the NSW RMS is required in developing the site plan for the service centre.

13. RECOMMENDATION

Having undertaken this preliminary traffic assessment of the proposed service station, convenience store, truck stop and take-away food shops on Lot 200 in DP 1177619, 600 MacLeay Valley Way, South Kempsey it is recommended that the site is suitable for the proposed development and subject to suitable on-site parking and access arrangements being provided on-site in consultation with NSW RMS could be supported as it will not have an adverse impact on the state road network and could comply with all the requirements of Kempsey Shire Council, Austroads, Australian Standards and NSW RMS.

JR Garry BE (Civil), Masters of Traffic
Director
Intersect Traffic Pty Ltd

APPENDIX 1
CONCEPT DEVELOPMENT PLAN


trg
BRISBANE + MELBOURNE
concept + design + interiors + project management
PROPOSED HIGHWAY SERVICE CENTRE
600 MACLEAY VALLEY WAY
SOUTH KEMPSEY NSW 2440
CONCEPT SITE PLAN
SPECTRUM RETAIL GROUP
OCT'17
1:500
HJS
AB
PRELIMINARY
17223
SK03
A
LANDSCAPE ZONE
TRUCK PARKING(26)
SITE AREA 39,185m² 3.92Ha
TRUCK EXIT NORTH
LEFT OUT ONLY
OUT
TRUCK EXIT SOUTH
TRUCK PARKING
TRUCKS GIVE WAY TO THRU CARS
CAR EXIT NORTH
CARAVAN/BUS PARKING
CAR PARKING
HIGHWAY SERVICE CENTRE
TRUCK CANOPY
FUEL CANOPY
LEFT IN LIGHT VEHICLES (CARS) ONLY
IN
TRUCK AND CARAVAN
WEST END ROAD
MACLEAY VALLEY WAY

APPENDIX 2
NSW RMS PRELIMINARY ADVICE

From: ADAMS Matthew G <Matt.ADAMS@rms.nsw.gov.au>
Date: 10 August 2017 at 4:48:33 pm AEST
To: "julian@atmosphereproperty.com.au" <julian@atmosphereproperty.com.au>
Subject: FW: Proposed Highway Service Centre - Southern Interchange Kempsey Bypass

Hi Julian,

As discussed, we have taken an preliminary look at your concept plan for the proposed Highway Service Centre (HSC) at South Kempsey.

In the interest of saving time, I can see some immediate issues that would benefit from an updated concept plan prior to consulting with RMS stakeholders.

- The entry points are proposed immediately downstream of the roundabout departures. The design of the access points will have to demonstrate how vehicles entering the development can do so safely without generating a risk to through traffic movements. The access treatments will need to accommodate the largest design vehicle relevant for each access. Acceptance of ingress and egress points will be subject to review of a Traffic Impact Assessment addressing the impacts of each location on the safety and efficiency of the interchange.
- The proposed layout provides limited separation between the proposed access points and the refuelling plazas, which has the potential to obstruct internal circulation and result in queuing at the site access and onto the interchange. Note this issue can exacerbate the issue identified in point 1. Further consideration will need to be given to providing increased capacity for queuing behind the fuel plazas for relevant design vehicles
- The concept plan does not provide the minimum 25 B-double parking spaces required under Section 1.5 of the attached RMS Policy Update. Note that Roads and Maritime will not support a design having less than the required number of spaces. Furthermore it is strongly recommended that the design provide sufficient space to allow for the future extension of spaces to accommodate longer heavy vehicle combinations should they be introduced to the Pacific Highway in future.
- It is desirable to limit the number of access points to 1 or 2, with a clear internal circulation providing flow for all vehicles from entry to exit. Further consideration should be given to a less constrained site layout with consideration for perimeter circulation. It would be preferable for exiting vehicles to egress via the western boundary and be distributed via the interchange roundabout towards their destination.
- The eastern site boundary with the Macleay Valley Way is a declared Controlled Access Road (CAR) and any access arrangement will need to consider the safety and efficiency of the classified road.

As mentioned you may wish to refer to the two documents relating to the RMS Policy that can be accessed at: http://www.rms.nsw.gov.au/projects/pacific-highway/service-centres.html

The attached DA plans related to recently completed HSC developments that may assist in considering design features. Please note that they are DA plans and may have been subject to change prior to issue of construction certificate. However they provide a general indication of the access locations relative to on-site features. The Kempsey and Nambucca sites are both similar being access from an interchange roundabout and located on the down site of the interchange (aka not accessed off a ramp). The common feature for all three is the use of a roundabout to redistributed exiting traffic.

Please forward an updated plan to inform any further request for advice from Roads and Maritime.

I look forward to further assisting you to progress your proposal.

Best Regards

Matt Adams
A / Manager Land Use Assessment | Network & Safety Management
Northern Region | Regional & Freight
T 02 6640 1362 **E** development.northern@rms.nsw.gov.au
www.rms.nsw.gov.au
Every journey matters

Roads and Maritime Services
Level 1, 76 Victoria Street
Grafton NSW 2460