Ref: 15/028

9th August 2016

CKDS Architecture
PO Box 958
NEWCASTLE NSW 2300

Attention: - Mr Stuart Campbell

Dear Stuart,

RE: Traffic Impact Assessment – 5 Storey Commercial Development – Lot 20 DP 1217043 12 Stewart Avenue, Newcastle West.

Reference is made to your engagement of Intersect Traffic to provide traffic advice in regard to the above project. The following traffic assessment is provided to support your development application to Newcastle City Council.

In preparing this advice Intersect Traffic has relied on the following;

- E-mail advice from you dated 5th March 2015.
- Discussions with the Mr. Greg Politis early June 2015.
- E-mail advice from Mr Stuart Campbell (CKDS) 9th August 2016.

Traffic, Parking and Access Advice

Development Proposal

Spartohori Pty Ltd seeks to construct a commercial development (approximately 10,000 m^2 GFA) on the subject lot. The development is serviced by a separate 5 storey car park previously approved by Council as part of the adjoining Gateway development.

Access to the car park is proposed via an existing right of way from Stewart Avenue and through to Woods Street.

Traffic Generation and Impacts

The access will also reduce the traffic impacts of the future development on Lot 102 on Wood Street and associated intersections thereby being a positive impact on this section of the local road network. Traffic generation from the commercial development is expected to be in the order of 160 vtph in the AM peak, 120 vtph in the PM peak or 1,100 vtpd based on rates contained in the RMS Technical Direction TDT 2013/04.

The likely trip distribution within the local road network generated by the development as well as the adjoining approved Gateway development is shown below in ***Figure 1***. These are based on origin / destination assessments carried out within the traffic impact study by Intersect Traffic (November 2013) for the original Gateway development which has already received approval. In summary these are;

- Traffic is likely to access the site via Parry Street and Wood Street for most suburbs west of Newcastle. (40%)
- Traffic is likely to access the site via Stewart Avenue (Wood Street to parry Street to Stewart Avenue when leaving the site) for suburbs south of Newcastle. (30%)
- Traffic from the Lower Hunter i.e. Raymond Terrace, Maitland etc would access the site from Stewart Avenue and Parry Street (Stewart Avenue only when leaving the site) i.e. from Industrial Highway/Hannell Street. (20%)
- Only traffic from Mayfield or Islington would access the site from Hunter Street west and Wood Street. (10%)

The impact of the full development of the site on the Parry Street / Wood Street signalised intersection has been assessed using the Sidra 6 intersection modelling software. The modelling showed the intersection continued to operate satisfactorily post full development of the site with overall LoS A in both the AM and PM peak periods. The movement summary tables extracted from the Sidra program are shown in ***Tables 1 and 2*** below.

It would also be reasonable to conclude that the full development of the site would not adversely impact on other adjacent signalised intersections as the additional traffic volumes within each leg of the intersection are less than 10 % of existing traffic volumes through the intersection.

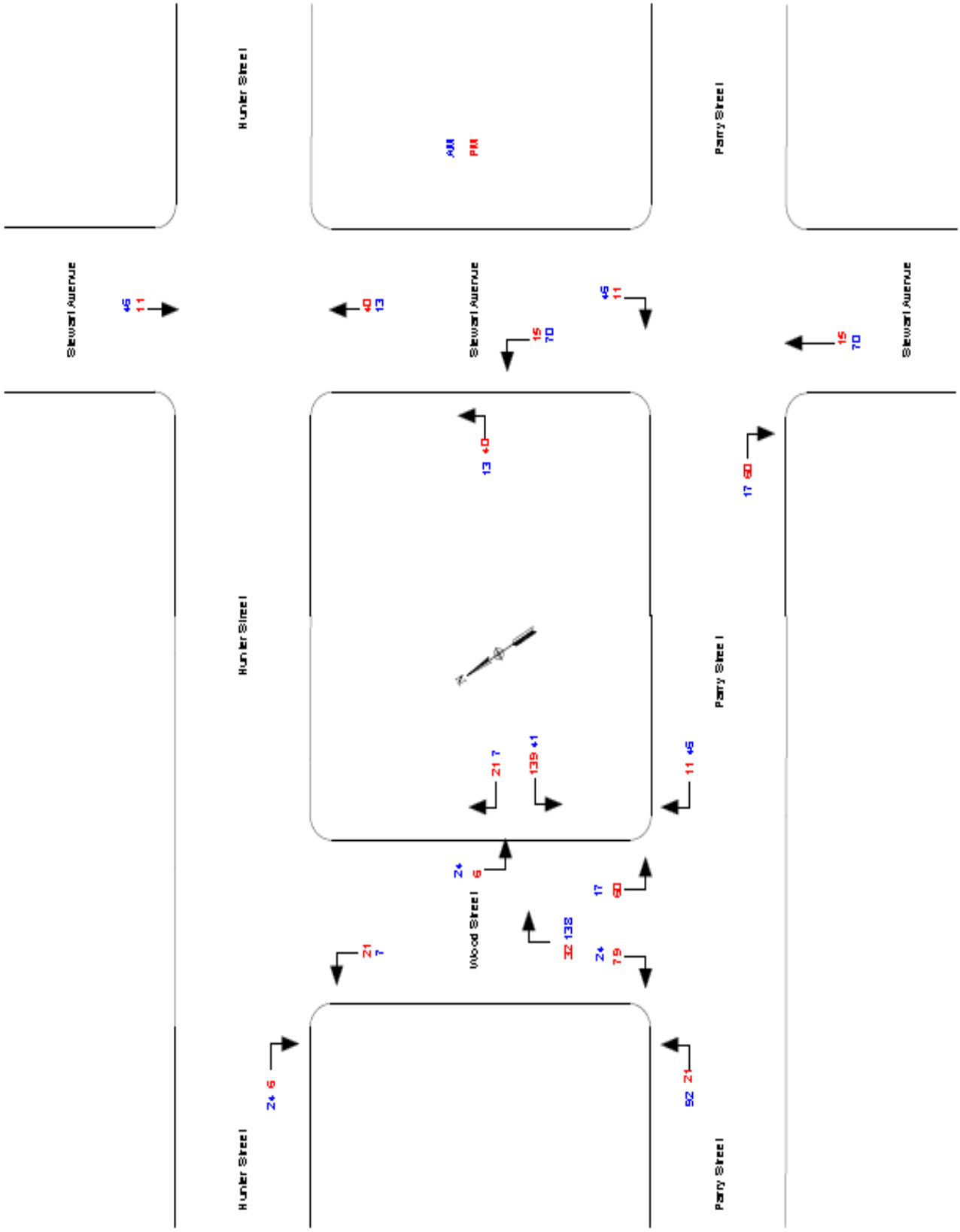

Figure 1 – Likely Trip Distribution – Wood Street and Stewart Avenue accesses – Full Site Development

Table 1 – Sidra Movement Summaries – 2015 AM Peak – full development.

MOVEMENT SUMMARY

Site: 2015 AM Peak - full development

Wood Street Parry Street Intersection
2015 AM Peak
Signals - Fixed Time Cycle Time = 100 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Parry Street											
5	T1	840	10.0	0.353	8.4	LOS A	9.2	69.7	0.49	0.43	51.2
6	R2	70	10.0	0.445	27.6	LOS B	2.5	19.3	0.73	0.77	34.2
Approach		910	10.0	0.445	9.9	LOS A	9.2	69.7	0.51	0.46	49.6
North: Wood Street											
7	L2	21	10.0	0.053	38.0	LOS C	0.8	6.1	0.81	0.70	29.9
9	R2	39	10.0	0.098	38.5	LOS C	1.5	11.5	0.82	0.72	24.5
Approach		60	10.0	0.098	38.3	LOS C	1.5	11.5	0.82	0.71	26.6
West: Parry Street											
10	L2	113	10.0	0.100	12.6	LOS A	2.0	15.4	0.40	0.67	39.1
11	T1	1260	10.0	0.569	10.0	LOS A	18.1	137.6	0.58	0.52	49.8
Approach		1373	10.0	0.569	10.2	LOS A	18.1	137.6	0.56	0.54	49.2
All Vehicles		2343	10.0	0.569	10.8	LOS A	18.1	137.6	0.55	0.51	48.6

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
Intersection and Approach LOS values are based on average delay for all vehicle movements.
SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
HV (%) values are calculated for All Movement Classes of All Heavy Vehicle Model Designation.

Movement Performance - Pedestrians

Mov ID	Description	Demand Flow ped/h	Average Delay sec	Level of Service	Average Back of Queue Pedestrian ped	Distance m	Prop. Queued	Effective Stop Rate per ped
P2	East Full Crossing	35	40.6	LOS E	0.1	0.1	0.90	0.90
P3	North Full Crossing	5	8.8	LOS A	0.0	0.0	0.42	0.42
P4	West Full Crossing	35	44.2	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		75	40.2	LOS E			0.89	0.89

Table 2 – Sidra Movement Summaries – 2015 PM Peak – full development.

MOVEMENT SUMMARY

Site: 2015 PM Peak - full development

Wood Street Parry Street Intersection
2015 PM Peak
Signals - Fixed Time Cycle Time = 100 seconds (User-Given Cycle Time)

Movement Performance - Vehicles

Mov ID	OD Mov	Demand Flows Total veh/h	HV %	Deg. Satn v/c	Average Delay sec	Level of Service	95% Back of Queue Vehicles veh	Distance m	Prop. Queued	Effective Stop Rate per veh	Average Speed km/h
East: Parry Street											
5	T1	1260	10.0	0.542	9.9	LOS A	16.8	127.6	0.58	0.52	49.9
6	R2	22	10.0	0.072	17.2	LOS B	0.5	3.9	0.49	0.67	40.2
Approach		1282	10.0	0.542	10.1	LOS A	16.8	127.6	0.58	0.52	49.7
North: Wood Street											
7	L2	83	10.0	0.208	39.6	LOS C	3.3	25.2	0.85	0.75	29.4
9	R2	89	10.0	0.227	39.7	LOS C	3.6	27.1	0.85	0.76	24.1
Approach		172	10.0	0.227	39.6	LOS C	3.6	27.1	0.85	0.76	26.8
West: Parry Street											
10	L2	41	10.0	0.036	12.2	LOS A	0.7	5.3	0.38	0.65	39.4
11	T1	840	10.0	0.364	8.4	LOS A	9.6	72.6	0.49	0.43	51.2
Approach		881	10.0	0.364	8.6	LOS A	9.6	72.6	0.48	0.44	50.7
All Vehicles		2335	10.0	0.542	11.7	LOS A	16.8	127.6	0.56	0.51	47.9

Level of Service (LOS) Method: Delay (RTA NSW).
Vehicle movement LOS values are based on average delay per movement
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SIDRA Standard Delay Model is used. Control Delay includes Geometric Delay.
Gap-Acceptance Capacity: SIDRA Standard (Akçelik M3D).
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P4	West Full Crossing	35	44.2	LOS E	0.1	0.1	0.94	0.94
All Pedestrians		75	40.2	LOS E			0.89	0.89

On-site car parking

The Newcastle DCP (2012) on-site car parking requirement for the proposed new development is 167 car spaces (10,000 m^2 / 60 m^2). Therefore provision of a 263 space car park not only meets the Newcastle DCP (2012) requirements for the proposed development but also provides 96 spaces available for overflow parking for both the approved Gateway development and the proposed development.

Access

The proposed on-site car parking already has approval via the adjoining Gateway development approval and access via Wood Street and Stewart Avenue has been approved. The proposed development does not alter the approved accesses to the site therefore will not adversely impact on the road network.

The right of way is approximately 8.1 metres wide therefore a suitable two way flow access road 6 metres wide has been constructed within the right of way.

Conclusions

This traffic and parking assessment has determined the following;

- The proposed development would not adversely impact on the local and state road network as the existing road network has sufficient capacity to cater for the additional development traffic.
- The already approved separate 5 storey car park servicing the development has sufficient and suitable on-site car parking assigned to the development to comply with the requirements of Newcastle Council's DCP (2012).
- The proposal does not alter the approved vehicular access conditions to the approved 5 storey car park therefore does not adversely impact on the local and state road network through additional vehicular accesses.

Recommendation

The proposed 5 storey commercial development can be supported from a traffic impact perspective as it will not adversely impact on the local road network and complies with all relevant Newcastle City Council, Australian Standards and RMS requirements.

Hoping this assessment is to your satisfaction. Should you require further information please do not hesitate to contact me on 02 4936 6200 or 0423 324 188.

Yours sincerely

Jeff Garry
Director
Intersect Traffic

hunter street
stewart avenue
right of way
commercial
CARPARK
entry foyer
fire stair
fire egress
ramp up
COURIER
existing right of way to be activated from stewart ave
existing light pole to be relocated
existing ausgrid kiosk to be relocated
existing 3m layback to be removed
hatch indicates zone of RMS compulsory land acquisition
green wall to entry to landscape architects details
perforated panels to carpark for natural ventilation
landscaping to be integrated with adjacent properties landscaping
vehicle barrier in accordance with AS2890.1
ramp over shown dotted
entry to office building
O/H garage door

Level 1 - Ground Floor Plan

SCALE 1:200 @ A1

Development Application

issue	revision	description	date	verified
A	-	CONSULTANT REVIEW	09.09.15	MW
B	-	HUNTER WATER ISSUE	23.09.15	MW
C	-	DEVELOPMENT APPLICATION ISSUE	06.10.15	SC
D	-	DEVELOPMENT APPLICATION ISSUE	14.10.15	SC
E	-	CONSULTANT REVIEW	21.01.16	SC
F	-	CONSULTANT REVIEW ISSUE	28.01.16	SC

massing key

north point

consultants

Civil/Structural Engineers

Mechanical Engineer

clients

Spartohori

architects in association

PTW

CKDS ARCHITECTURE

115 King Street Newcastle NSW Australia

project

Politis Hunter Development

Corner of Stewart Ave & Hunter Street
Newcastle 2302
Australia

drawing title

Plans - Stage 1&2

Level 1 - Ground Floor Plan

drawing scale 1:100 @ A1 | drawn MW | verified SC

project # 1502 | drawing # A-101 | issue F

Development Application

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A	-	CONSULTANT REVIEW	09.09.15	MW
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CKDS ARCHITECTURE
115 King Street Newcastle NSW Australia
admin@ckds.com.au
www.ckds.com.au

project
Politis Hunter Development
Corner of Stewart Ave & Hunter Street
Newcastle 2302
Australia

drawing title
Plans - Stage 1&2
Level 2 - Floor Plan

drawing scale	drawn	verified	date
1:100 @ A1	MW	SC	18.05.15
project #	**drawing #**		**issue**
1502	A-102		E