

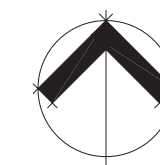


# LEGEND

- visitor car parking
- mini-bus parking
- disabled spaces
- access to bus stop on Pacific Highway

Scale

metres 0 5 10 15 20 25



*sapphire*

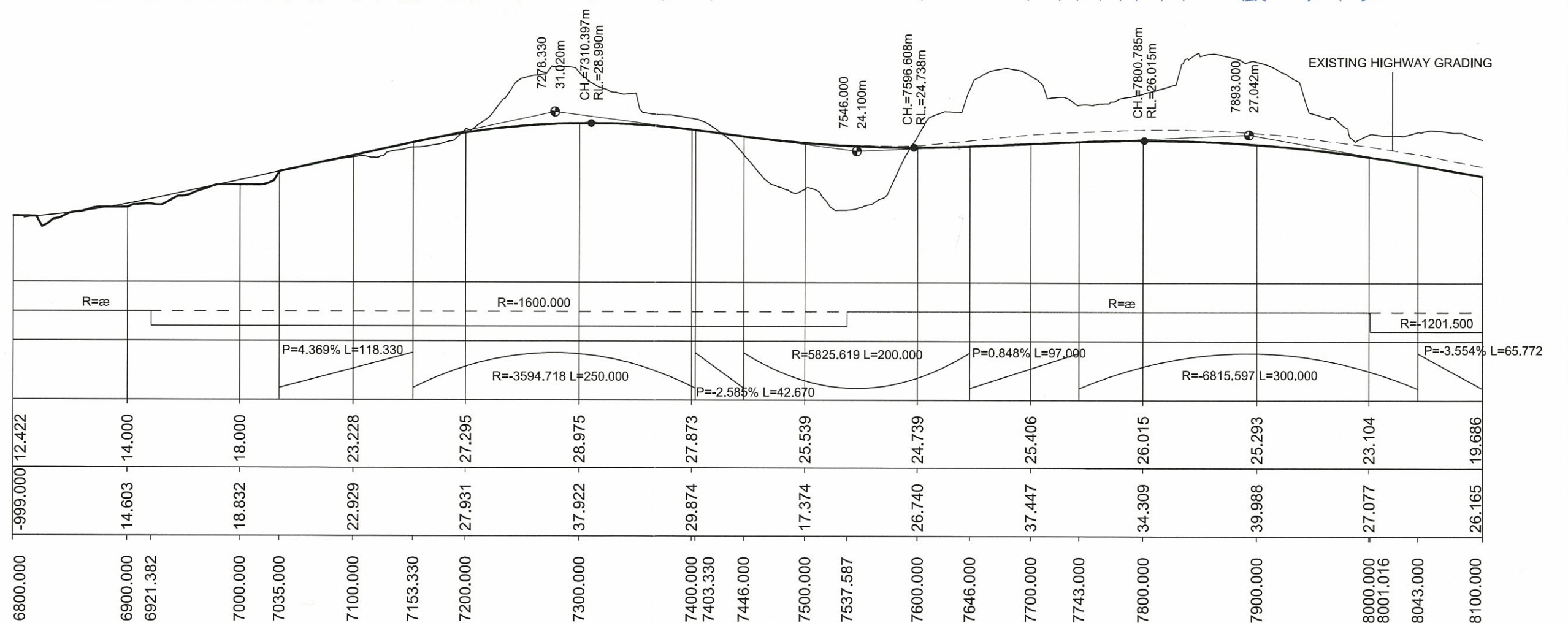
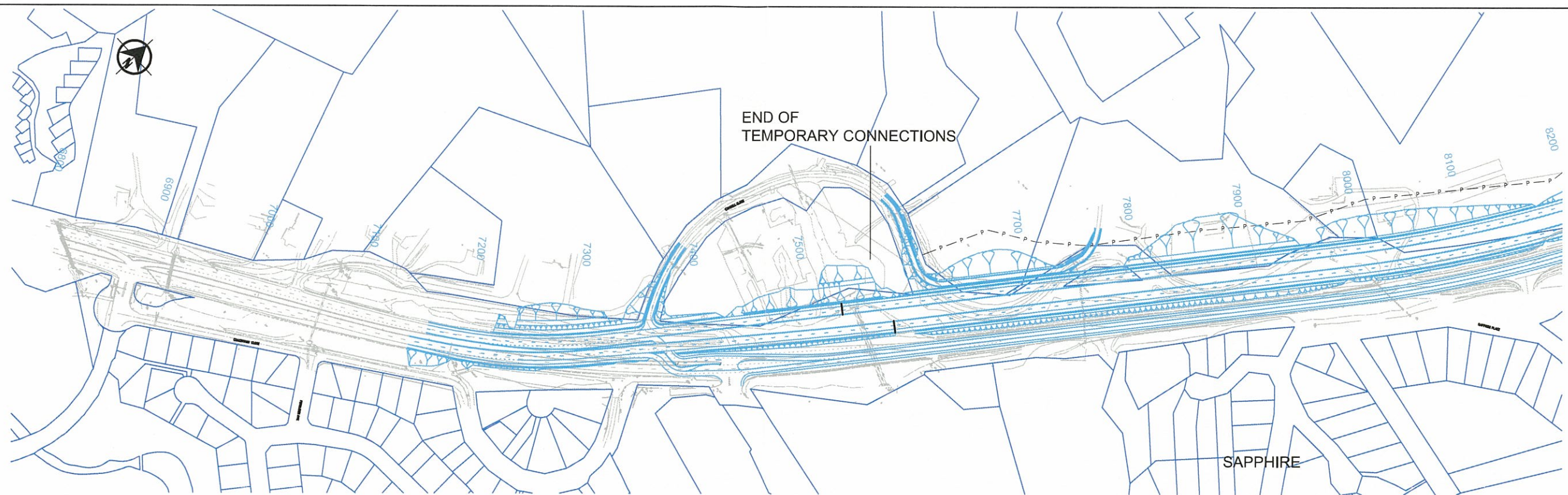
**SK.03** Visitor Car Parking & Bus Access/Stops



Appendix B

# Sapphire to Woolgoolga Upgrade Project

Preliminary Concept Design



LONGITUDINAL SECTION ALONG DESIGN CONTROL LINE MCNB

|             |  |                                                                         |  |          |  |      |  |
|-------------|--|-------------------------------------------------------------------------|--|----------|--|------|--|
| No.         |  | Amendment Description                                                   |  | Initials |  | Date |  |
| A3 original |  | This sheet may be prepared using colour and may be incomplete if copied |  |          |  |      |  |

|                  |               |
|------------------|---------------|
| SCALES           |               |
| 0 50 100 150 200 | SCALE 1:4000m |
| 0 10 20 30 40    | SCALE 1:800m  |

|                                 |  |                      |  |
|---------------------------------|--|----------------------|--|
| Co-ordinate System: MGA Zone 56 |  | Height Datum: A.H.D. |  |
|---------------------------------|--|----------------------|--|

|               |  |               |  |
|---------------|--|---------------|--|
| DESIGNED..... |  | REVIEWED..... |  |
|---------------|--|---------------|--|

|                                                                                                                                                                                                                                        |  |                                                                                                                                                                    |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|
| Cornell Wagner Pty Ltd<br>ABN 54 005 139 873<br>PO Box 19 The University of Newcastle Union<br>Callaghan New South Wales 2308 Australia<br>Telephone: +61 2 4941 5415<br>Facsimile: +61 2 4941 5489<br>Email: cwm@cornellwagner.com.au |  | ROADS AND TRAFFIC AUTHORITY OF NSW<br>PACIFIC HIGHWAY UPGRADE SAPPHIRE TO WOOLGOOLGA<br>PRELIMINARY CONCEPT DESIGN<br>PLAN AND LONGITUDINAL SECTION<br>6800 - 8100 |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|--|

|                                         |                      |                          |                 |
|-----------------------------------------|----------------------|--------------------------|-----------------|
| FILE No.                                | DRAWING<br>1093_R001 | PRINTED DATE<br>07-03-06 | SHEET No.<br>R1 |
| REGISTRATION NUMBER<br>0010.110.RC.1695 |                      |                          |                 |



Appendix C

## Sapphire Beach Development – Staging Plan

# Sapphire



## Staging

Subject to approval and following demolition of existing buildings and associated facilities, the site would be partly filled and regraded to the levels required for the main access road and the first stage of development.

The site would be configured into four stages to allow for staged construction.

It is envisaged the first stage of development would be on the lower level of the site. The sensitive vegetation and dune areas would also be rehabilitated early in the development process.

Up to one stage a year may be built, commencing after approval of the development.

A construction management plan would be prepared to manage noise and construction works to ensure impacts on neighbouring properties are minimised.



Staging Plan



## Appendix D

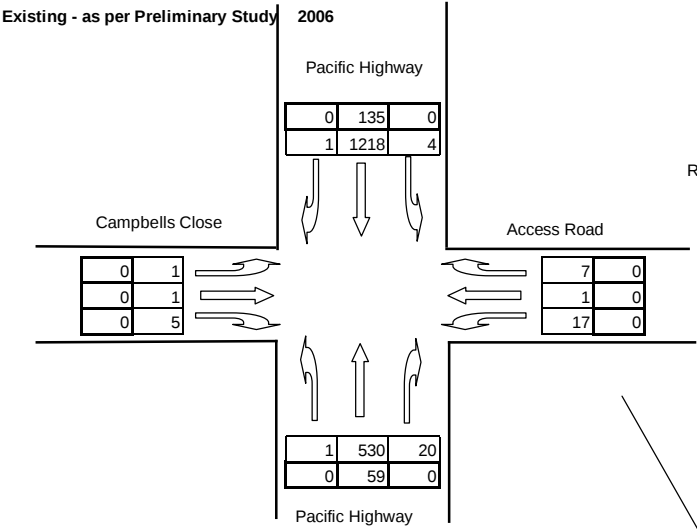
# Traffic Volumes

AM and PM volumes for each stage of the development

Client: Sapphire Beach Development Pty Limited  
Title: Intersection traffic flows  
Job No: 22/13148/00  
(original job: 22/12787)

AM Peak

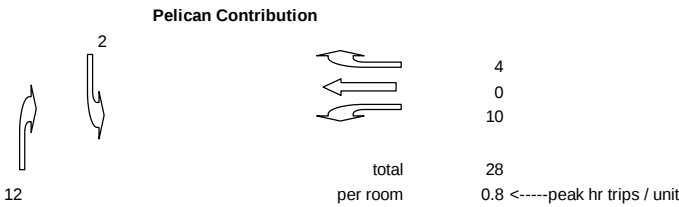
Existing - as per Preliminary Study



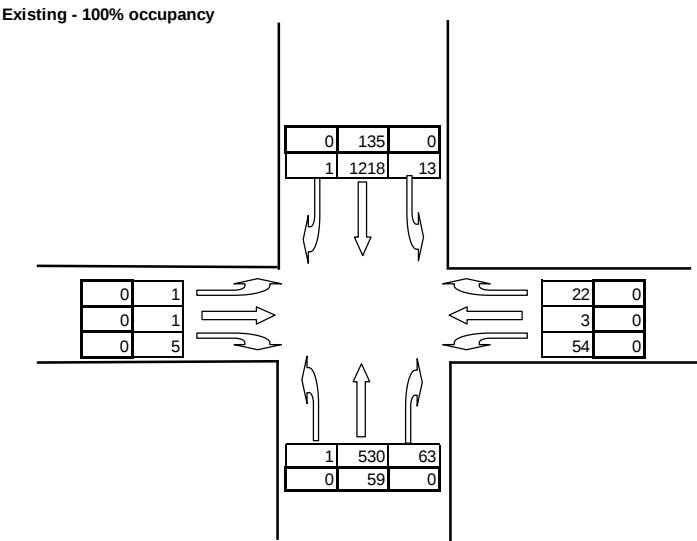
Survey date: 1-Jun-06

| Development            | Occupancy | No. of rooms - occupied | No. of rooms | Development Share |
|------------------------|-----------|-------------------------|--------------|-------------------|
| Nautilus               | 20%       | 13                      | 65           | 34.39%            |
| Pelican                | 31%       | 35                      | 112          | 59.26%            |
| Residential apartments |           | 12                      | 12           | 6.35%             |
|                        |           | 60                      | 189          |                   |

Overall Development Occupancy: 31.75%  
For 100% occupancy, need to multiply traffic flows in/out by: 3.2

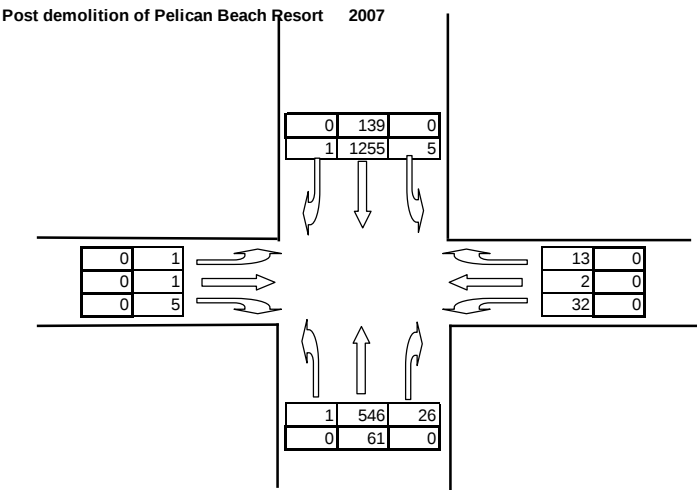


Existing - 100% occupancy



| Existing in/out split | Note: Also used for future tourist component |
|-----------------------|----------------------------------------------|
| IN 24 49.0%           | OUT 25 51.0%                                 |

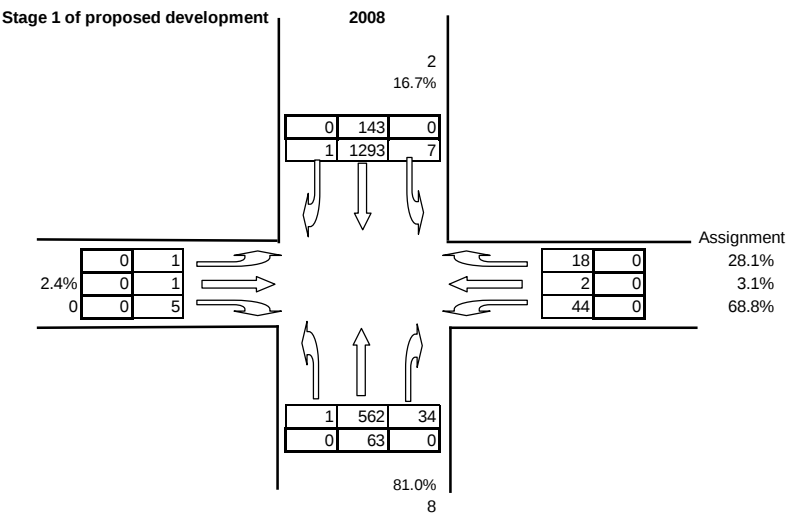
Post demolition of Pelican Beach Resort



Annual Increase of hwy traffic: 3%

Remove contribution in/out made by Pelican Beach Resort

Stage 1 of proposed development

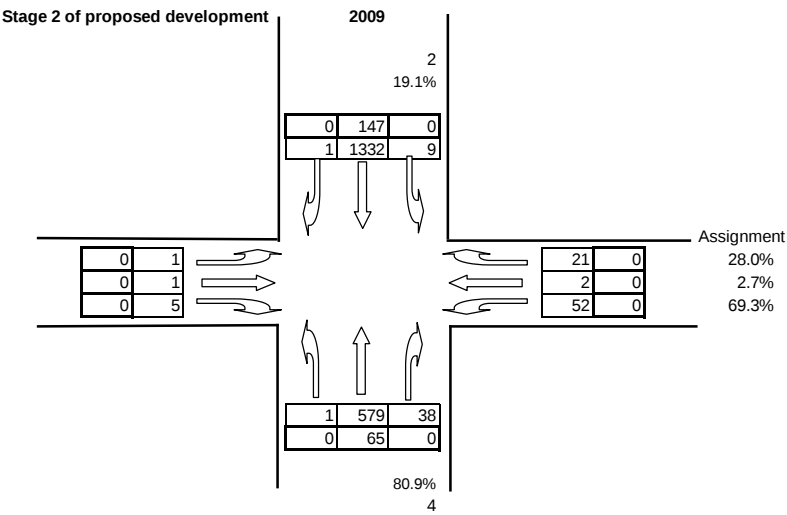


Extra to be added

|    |
|----|
| 5  |
| 0  |
| 12 |

| Stage 1 Development                        |        |                           |                     |    |     |  |  |
|--------------------------------------------|--------|---------------------------|---------------------|----|-----|--|--|
| Description                                | Number | Trips per peak hour/house | Total peak hr trips | In | Out |  |  |
| Residential Three bedroom beachfront homes | 9      | 0.85                      | 7.65                | 2  | 6   |  |  |
| Residential Two bedroom apartments         | 10     | 0.5                       | 5                   | 1  | 4   |  |  |
| Tourist Two bedroom apartments             | 18     | 0.8                       | 14.4                | 7  | 7   |  |  |
| Total                                      |        |                           |                     | 10 | 17  |  |  |

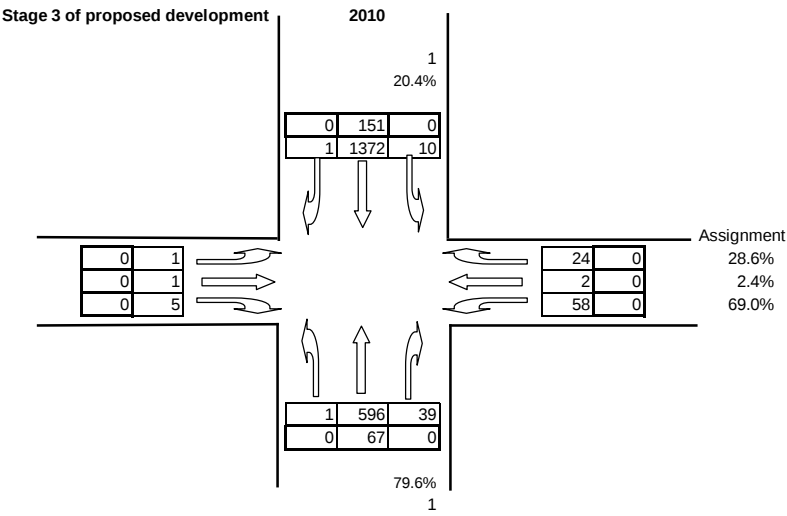
Stage 2 of proposed development



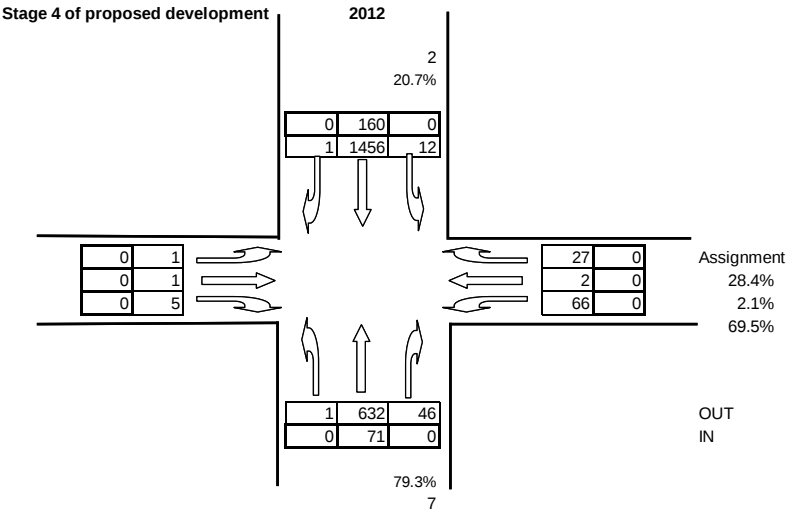
| Stage 2 Development                |        |                           |                     |    |     |  |  |
|------------------------------------|--------|---------------------------|---------------------|----|-----|--|--|
| Description                        | Number | Trips per peak hour/house | Total peak hr trips | In | Out |  |  |
| Residential Two bedroom apartments | 17     | 0.5                       | 8.5                 | 2  | 7   |  |  |
| Tourist Two bedroom apartments     | 11     | 0.8                       | 8.8                 | 4  | 4   |  |  |
| Total                              |        |                           |                     | 6  | 11  |  |  |

Extra to be added

|   |
|---|
| 3 |
| 0 |
| 8 |



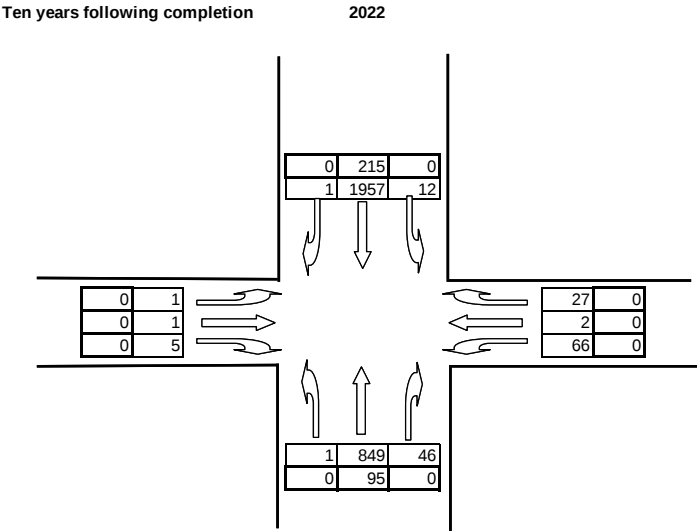
| Stage 3 Development                        |        |                           |                     |    |     |   |
|--------------------------------------------|--------|---------------------------|---------------------|----|-----|---|
| Description                                | Number | Trips per peak hour/house | Total peak hr trips | In | Out |   |
| Residential Three bedroom beachfront homes | 7      | 0.85                      | 5.95                | 1  | 1   | 5 |
| Residential Three bedroom townhouses       | 8      | 0.65                      | 5.2                 | 1  | 1   | 4 |
| Extra to be added                          | 3      |                           |                     |    |     |   |
|                                            | 0      |                           |                     |    |     |   |
|                                            | 6      |                           |                     |    |     |   |
| Total                                      |        |                           |                     |    | 2   | 9 |



| Stage 4 Development                |        |                           |                     |    |     |    |
|------------------------------------|--------|---------------------------|---------------------|----|-----|----|
| Description                        | Number | Trips per peak hour/house | Total peak hr trips | In | Out |    |
| Residential Two bedroom apartments | 8      | 0.5                       | 4                   | 1  | 1   | 3  |
| Tourist Two bedroom apartments     | 20     | 0.8                       | 16                  | 8  | 8   | 8  |
| Residential Two bedroom apartments | 16     | 0.5                       | 8                   | 2  | 2   | 6  |
| Extra to be added                  | 3      |                           |                     |    |     |    |
|                                    | 0      |                           |                     |    |     |    |
|                                    | 8      |                           |                     |    |     |    |
| Total                              |        |                           |                     |    | 9   | 11 |

OUT 20.3% Difference from existing - 100% occupancy

IN -23.7%

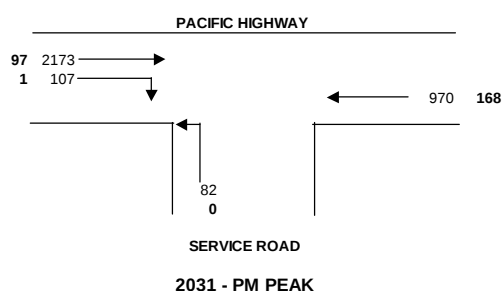
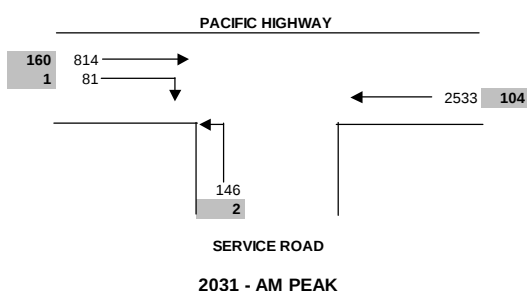
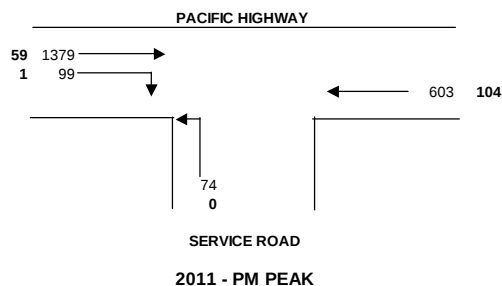
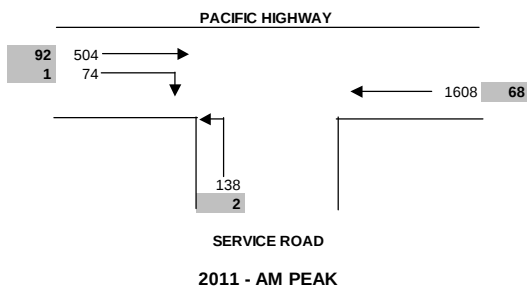


Total dwellings for project 124

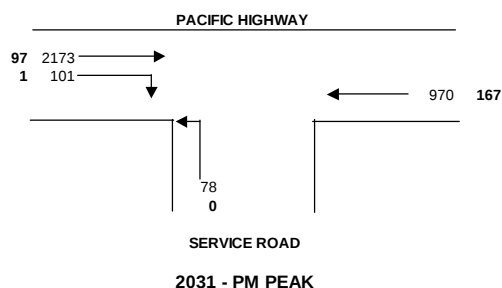
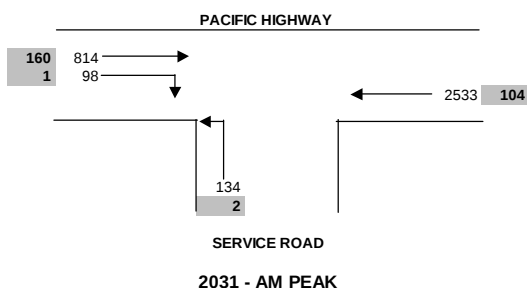
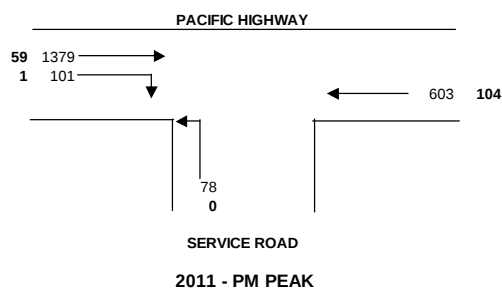
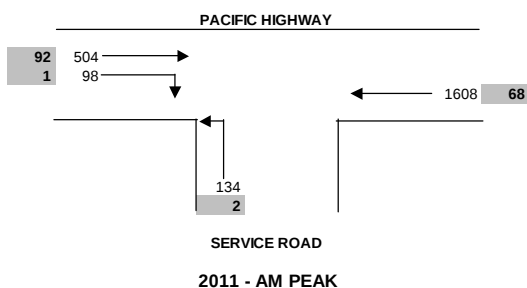
**Client:** Sapphire Beach Development Pty Limited  
**Title:** Intersection traffic flows  
**Job No:** 22/13148/00  
 (original job: 22/12787)

**Post highway upgrade**

RTA supplied data modified to incorporate updated information.



**TRAFFIC VOLUMES AT THE PROPOSED INTERSECTION AT SAPPHIRE  
 (WITH PROPOSED SAPPHIRE BEACH DEVELOPMENT)**

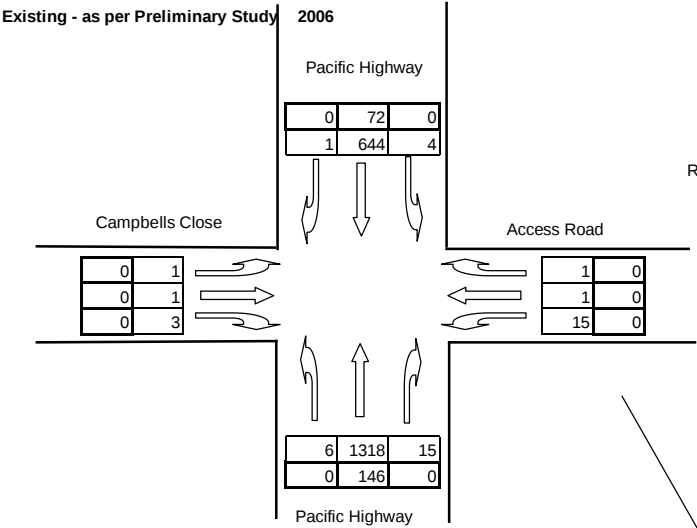


**TRAFFIC VOLUMES AT THE PROPOSED INTERSECTION AT SAPPHIRE  
 (WITHOUT PROPOSED SAPPHIRE BEACH DEVELOPMENT)**

Client: Sapphire Beach Development Pty Limited  
Title: Intersection traffic flows  
Job No: 22/13148/00  
(original job: 22/12787)

PM Peak

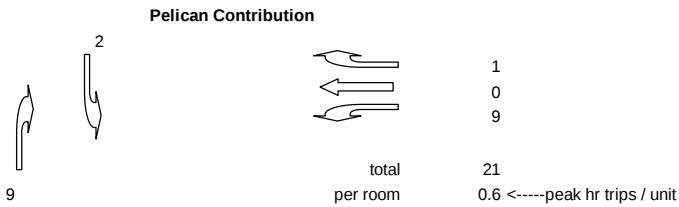
Existing - as per Preliminary Study



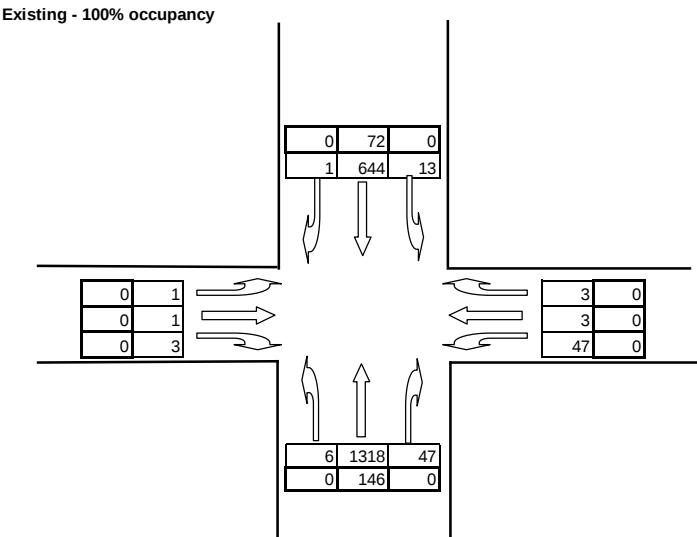
Survey date: 1-Jun-06

|                        | Development | Occupancy | No. of rooms - occupied | No. of rooms | Development Share |        |
|------------------------|-------------|-----------|-------------------------|--------------|-------------------|--------|
|                        | Nautilus    | 20%       |                         | 13           | 65                | 34.39% |
|                        | Pelican     | 31%       |                         | 35           | 112               | 59.26% |
| Residential apartments |             |           |                         | 12           | 12                | 6.35%  |
|                        |             |           |                         | 60           | 189               |        |

Overall Development Occupancy: 31.75%  
For 100% occupancy, need to multiply traffic flows in/out by: 3.2

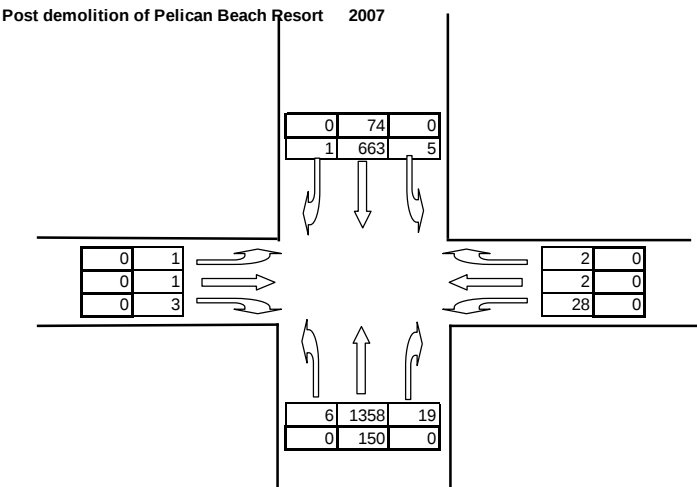


Existing - 100% occupancy



| Existing in/out split | Note: Also used for future tourist component |
|-----------------------|----------------------------------------------|
| IN 19 52.8%           | OUT 17 47.2%                                 |

Post demolition of Pelican Beach Resort

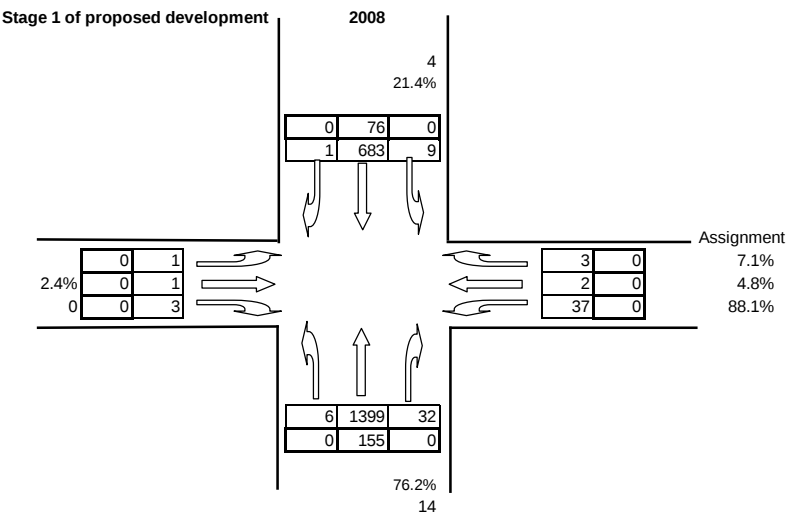


Annual Increase of hwy traffic: 3%

Remove contribution in/out made by Pelican Beach Resort

| In/out split for residential |
|------------------------------|
| AM                           |
| IN 80%                       |
| OUT 20%                      |

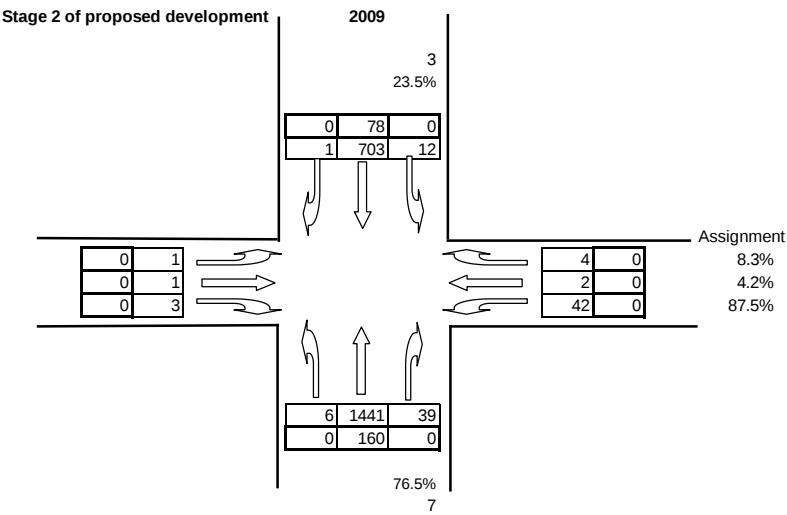
Stage 1 of proposed development



| Stage 1 Development | Description                    | Number | Trips per peak hour/house | Total peak hr trips | In | Out |
|---------------------|--------------------------------|--------|---------------------------|---------------------|----|-----|
| Residential         | Three bedroom beachfront homes | 9      | 0.85                      | 7.65                | 6  | 2   |
| Residential         | Two bedroom apartments         | 10     | 0.5                       | 5                   | 4  | 1   |
| Tourist             | Two bedroom apartments         | 18     | 0.8                       | 14.4                | 8  | 7   |
| Total               |                                |        |                           |                     | 18 | 10  |

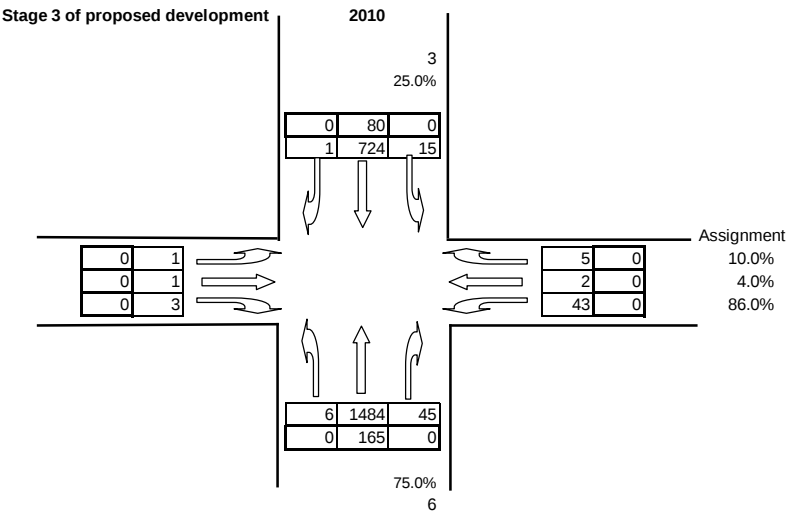
| Extra to be added |
|-------------------|
| 1                 |
| 0                 |
| 9                 |

Stage 2 of proposed development

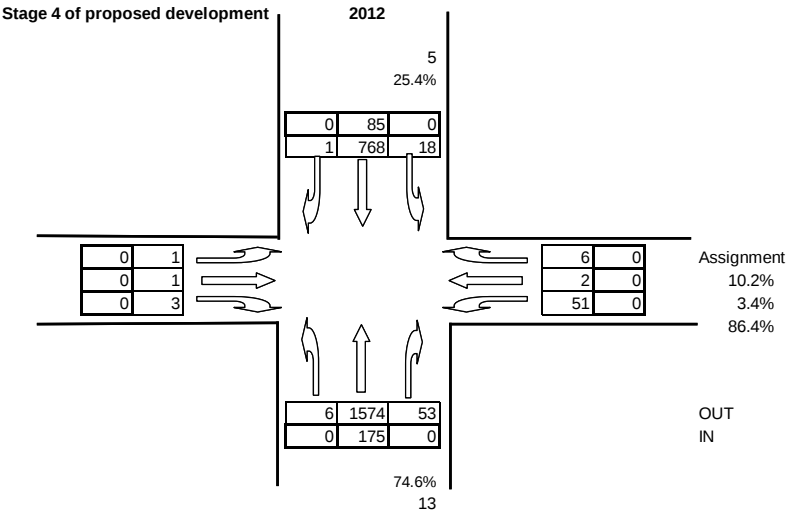


| Stage 2 Development | Description            | Number | Trips per peak hour/house | Total peak hr trips | In | Out |
|---------------------|------------------------|--------|---------------------------|---------------------|----|-----|
| Residential         | Two bedroom apartments | 17     | 0.5                       | 8.5                 | 7  | 2   |
| Tourist             | Two bedroom apartments | 11     | 0.6                       | 6.6                 | 3  | 3   |
| Total               |                        |        |                           |                     | 10 | 5   |

| Extra to be added |
|-------------------|
| 1                 |
| 0                 |
| 5                 |



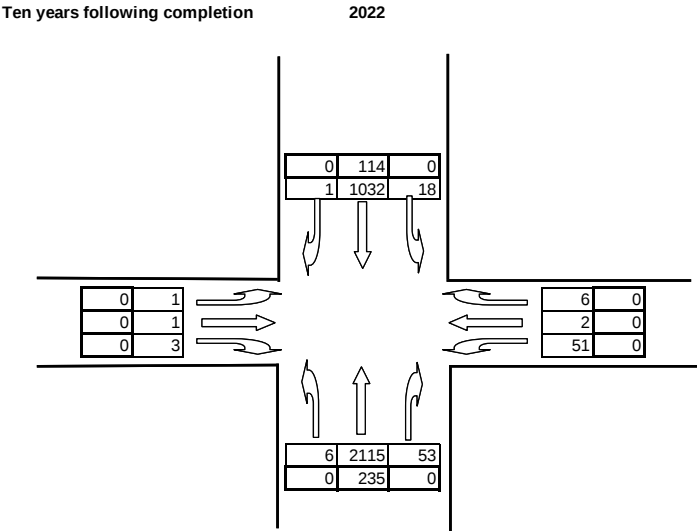
| Stage 3 Development                        |        |                           |                     |    |     |   |
|--------------------------------------------|--------|---------------------------|---------------------|----|-----|---|
| Description                                | Number | Trips per peak hour/house | Total peak hr trips | In | Out |   |
| Residential Three bedroom beachfront homes | 7      | 0.85                      | 5.95                | 5  | 5   | 1 |
| Residential Three bedroom townhouses       | 8      | 0.65                      | 5.2                 | 4  | 4   | 1 |
| Extra to be added                          | 1      |                           |                     |    |     |   |
|                                            | 0      |                           |                     |    |     |   |
|                                            | 1      |                           |                     |    |     |   |
| Total                                      |        |                           |                     | 9  | 2   |   |



| Stage 4 Development                |        |                           |                     |    |     |   |
|------------------------------------|--------|---------------------------|---------------------|----|-----|---|
| Description                        | Number | Trips per peak hour/house | Total peak hr trips | In | Out |   |
| Residential Two bedroom apartments | 10     | 0.5                       | 5                   | 4  | 4   | 1 |
| Tourist Two bedroom apartments     | 18     | 0.8                       | 14.4                | 8  | 8   | 6 |
| Residential Two bedroom apartments | 16     | 0.5                       | 8                   | 6  | 6   | 2 |
| Extra to be added                  | 1      |                           |                     |    |     |   |
|                                    | 0      |                           |                     |    |     |   |
|                                    | 8      |                           |                     |    |     |   |
| Total                              |        |                           |                     | 18 | 9   |   |

OUT 11.3% Difference from existing - 100% occupancy  
IN 18.3%

Total dwellings for project 124





Appendix E

# SIDRA Modelling Results

Lane Performance

Intersection of Pacific Highway / Campbells Cl / Access Road, Sapphire NSW  
Existing AM Peak - original  
Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue 95% Back ----- (vehs) (m) |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|---------------------------------|------|-----------------|
| South: Pacific Highway       |                   |              |             |                   |                |                                 |      |                 |
| 1 L                          | 1                 | 1950         | 0.001       | 15.3              | 0.79           | 0.0                             | 0.0  | 150.0T          |
| 2 T                          | 310               | 1950         | 0.159       | 0.0               | 0.00           | 0.0                             | 0.0  | 500.0           |
| 3 T                          | 310               | 1950         | 0.159       | 0.0               | 0.00           | 0.0                             | 0.0  | 500.0           |
| 4 R                          | 25                | 246          | 0.102       | 31.9              | 0.97           | 0.4                             | 3.0  | 150.0           |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                                 |      |                 |
| 1 L                          | 18                | 172          | 0.105       | 23.6              | 0.93           | 0.4                             | 2.8  | 30.0            |
| 2 TR                         | 8                 | 9            | 0.907       | 767.2             | 1.12           | 3.3*                            | 23.0 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                                 |      |                 |
| 1 L                          | 4                 | 1950         | 0.002       | 20.5              | 0.83           | 0.0                             | 0.0  | 50.0T           |
| 2 T                          | 791               | 1950         | 0.406       | 0.0               | 0.00           | 0.0                             | 0.0  | 500.0           |
| 3 T                          | 633               | 1950         | 0.325       | 0.0               | 0.00           | 0.0                             | 0.0  | 500.0           |
| 4 R                          | 2                 | 744          | 0.003       | 17.0              | 0.70           | 0.0                             | 0.1  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                                 |      |                 |
| 1 LTR                        | 7                 | 10           | 0.695       | 594.3             | 1.06           | 2.3                             | 16.4 | 500.0           |

Existing AM Peak - 100% Occupancy  
Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.               | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue 95% Back |      | Lane Length (m) |
|------------------------|-------------------|--------------|-------------|-------------------|----------------|----------------|------|-----------------|
|                        |                   |              |             |                   |                | (vehs)         | (m)  |                 |
| South: Pacific Highway |                   |              |             |                   |                |                |      |                 |
| 1 L                    | 1                 | 1950         | 0.001       | 15.3              | 0.79           | 0.0            | 0.0  | 150.0T          |
| 2 T                    | 310               | 1950         | 0.159       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 3 T                    | 310               | 1950         | 0.159       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 4 R                    | 71                | 243          | 0.293       | 36.6              | 1.00           | 1.3            | 9.4  | 150.0T          |
| East: Access Road      |                   |              |             |                   |                |                |      |                 |
| 1 L                    | 57                | 171          | 0.334       | 28.4              | 1.02           | 1.4            | 10.1 | 30.0            |
| 2 TR                   | 26                | 26           | 1.000       | 521.8r            | 1.10           | 4.4*           | 30.9 | 10.0T           |
| North: Pacific Highway |                   |              |             |                   |                |                |      |                 |
| 1 L                    | 14                | 1950         | 0.007       | 20.5              | 0.83           | 0.0            | 0.0  | 50.0T           |
| 2 T                    | 791               | 1950         | 0.406       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 3 T                    | 633               | 1950         | 0.325       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 4 R                    | 2                 | 744          | 0.003       | 17.0              | 0.70           | 0.0            | 0.1  | 90.0T           |
| West: Campbells Close  |                   |              |             |                   |                |                |      |                 |
| 1 LTR                  | 7                 | 8            | 0.891       | 856.9             | 1.09           | 3.1            | 22.0 | 500.0           |

AM Peak - demolition (07)  
Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|--------------------|------|-----------------|
|                              |                   |              |             |                   |                | ----- (vehs)       | (m)  |                 |
| South: Pacific Highway       |                   |              |             |                   |                |                    |      |                 |
| 1 L                          | 1                 | 1950         | 0.001       | 15.3              | 0.79           | 0.0                | 0.0  | 150.0T          |
| 2 T                          | 320               | 1950         | 0.164       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 320               | 1950         | 0.164       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 32                | 230          | 0.139       | 33.7              | 0.97           | 0.6                | 4.0  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                    |      |                 |
| 1 L                          | 34                | 160          | 0.213       | 27.2              | 0.97           | 0.9                | 6.0  | 30.0            |
| 2 TR                         | 16                | 16           | 1.000       | 673.7r            | 1.15           | 4.4*               | 30.9 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                    |      |                 |
| 1 L                          | 5                 | 1950         | 0.003       | 20.5              | 0.83           | 0.0                | 0.0  | 50.0T           |
| 2 T                          | 815               | 1950         | 0.418       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 652               | 1950         | 0.334       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 2                 | 727          | 0.003       | 17.1              | 0.71           | 0.0                | 0.1  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                    |      |                 |
| 1 LTR                        | 7                 | 8            | 0.909       | 881.6             | 1.10           | 3.2                | 22.6 | 500.0           |

AM Peak - Stage 1 (2008)  
Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue 95% Back |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|----------------|------|-----------------|
|                              |                   |              |             |                   |                | (vehs)         | (m)  |                 |
| South: Pacific Highway       |                   |              |             |                   |                |                |      |                 |
| 1 L                          | 1                 | 1950         | 0.001       | 15.3              | 0.79           | 0.0            | 0.0  | 150.0T          |
| 2 T                          | 329               | 1950         | 0.169       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 3 T                          | 329               | 1950         | 0.169       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 4 R                          | 40                | 213          | 0.188       | 36.2              | 0.98           | 0.8            | 5.5  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                |      |                 |
| 1 L                          | 46                | 147          | 0.313       | 31.9              | 1.01           | 1.3            | 9.1  | 30.0            |
| 2 TR                         | 21                | 21           | 1.000       | 727.7r            | 1.14           | 4.4*           | 30.9 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                |      |                 |
| 1 L                          | 7                 | 1950         | 0.004       | 20.5              | 0.83           | 0.0            | 0.0  | 50.0T           |
| 2 T                          | 840               | 1950         | 0.431       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 3 T                          | 672               | 1950         | 0.345       | 0.0               | 0.00           | 0.0            | 0.0  | 500.0           |
| 4 R                          | 2                 | 711          | 0.003       | 17.3              | 0.71           | 0.0            | 0.1  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                |      |                 |
| 1 LTR                        | 7                 | 7            | 1.000       | 1139.0            | 1.12           | 4.1            | 28.4 | 500.0           |

**AM Peak - Stage 2 (2009)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh/h) | Cap (veh/h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back |      | Lane Length (m) |
|------------------------------|------------------|-------------|-------------|-------------------|----------------|--------------------|------|-----------------|
|                              |                  |             |             |                   |                | (vehs)             | (m)  |                 |
| South: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 1                | 1950        | 0.001       | 15.3              | 0.79           | 0.0                | 0.0  | 150.0T          |
| 2 T                          | 339              | 1950        | 0.174       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 339              | 1950        | 0.174       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 44               | 197         | 0.223       | 38.6              | 0.99           | 0.9                | 6.6  | 150.0T          |
| East: Pelican Beach Entrance |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 55               | 135         | 0.407       | 37.3              | 1.05           | 1.7                | 12.1 | 30.0            |
| 2 TR                         | 24               | 24          | 1.000       | 847.0r            | 1.11           | 4.4*               | 30.9 | 10.0T           |
| North: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 9                | 1950        | 0.005       | 20.5              | 0.83           | 0.0                | 0.0  | 50.0T           |
| 2 T                          | 865              | 1950        | 0.444       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 692              | 1950        | 0.355       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 2                | 694         | 0.003       | 17.4              | 0.71           | 0.0                | 0.1  | 90.0T           |
| West: Campbells Close        |                  |             |             |                   |                |                    |      |                 |
| 1 LTR                        | 7                | 7           | 1.000       | 1359.2            | 1.13           | 4.2                | 29.3 | 500.0           |

**AM Peak - Stage 3 (2010)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh/h) | Cap (veh/h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back |      | Lane Length (m) |
|------------------------------|------------------|-------------|-------------|-------------------|----------------|--------------------|------|-----------------|
|                              |                  |             |             |                   |                | (vehs)             | (m)  |                 |
| South: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 1                | 1950        | 0.001       | 15.3              | 0.79           | 0.0                | 0.0  | 150.0T          |
| 2 T                          | 349              | 1950        | 0.179       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 349              | 1950        | 0.179       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 45               | 182         | 0.247       | 40.9              | 1.00           | 1.0                | 7.3  | 150.0T          |
| East: Pelican Beach Entrance |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 61               | 124         | 0.492       | 43.7              | 1.09           | 2.1                | 15.0 | 30.0            |
| 2 TR                         | 27               | 27          | 1.000       | 1020.4r           | 1.08           | 4.4*               | 30.9 | 10.0T           |
| North: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 11               | 1950        | 0.006       | 20.5              | 0.83           | 0.0                | 0.0  | 50.0T           |
| 2 T                          | 891              | 1950        | 0.457       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 712              | 1950        | 0.365       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 2                | 676         | 0.003       | 17.6              | 0.72           | 0.0                | 0.1  | 90.0T           |
| West: Campbells Close        |                  |             |             |                   |                |                    |      |                 |
| 1 LTR                        | 7                | 7           | 1.000       | 1633.1            | 1.14           | 4.3                | 30.4 | 500.0           |

**AM Peak - Stage 4 (2012)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh/h) | Cap (veh/h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back |      | Lane Length (m) |
|------------------------------|------------------|-------------|-------------|-------------------|----------------|--------------------|------|-----------------|
|                              |                  |             |             |                   |                | (vehs)             | (m)  |                 |
| South: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 1                | 1950        | 0.001       | 15.3              | 0.79           | 0.0                | 0.0  | 150.0T          |
| 2 T                          | 370              | 1950        | 0.190       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 370              | 1950        | 0.190       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 53               | 154         | 0.345       | 48.0              | 1.01           | 1.5                | 10.4 | 150.0T          |
| East: Pelican Beach Entrance |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 69               | 103         | 0.671       | 64.5              | 1.19           | 3.1                | 21.8 | 30.0            |
| 2 TR                         | 30               | 30          | 1.000       | 1621.1r           | 1.00           | 4.4*               | 31.0 | 10.0T           |
| North: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 13               | 1950        | 0.007       | 20.5              | 0.83           | 0.0                | 0.0  | 50.0T           |
| 2 T                          | 945              | 1950        | 0.485       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 756              | 1950        | 0.388       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 2                | 642         | 0.003       | 17.9              | 0.73           | 0.0                | 0.1  | 90.0T           |
| West: Campbells Close        |                  |             |             |                   |                |                    |      |                 |
| 1 LTR                        | 7                | 7           | 1.000       | 2483.7            | 1.17           | 4.9                | 34.0 | 500.0           |

**AM Peak - Future (2022)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh/h) | Cap (veh/h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back |      | Lane Length (m) |
|------------------------------|------------------|-------------|-------------|-------------------|----------------|--------------------|------|-----------------|
|                              |                  |             |             |                   |                | (vehs)             | (m)  |                 |
| South: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 1                | 1950        | 0.001       | 15.3              | 0.79           | 0.0                | 0.0  | 150.0T          |
| 2 T                          | 497              | 1950        | 0.255       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 497              | 1950        | 0.255       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 53               | 53          | 1.000       | 260.5             | 1.23           | 6.6                | 46.0 | 150.0T          |
| East: Pelican Beach Entrance |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 69               | 69          | 1.000       | 312.8             | 2.10           | 8.4                | 58.9 | 30.0            |
| 2 TR                         | 30               | 30          | 1.000       | 63062.9r          | 1.00           | 4.9*               | 34.1 | 10.0T           |
| North: Pacific Highway       |                  |             |             |                   |                |                    |      |                 |
| 1 L                          | 13               | 1950        | 0.007       | 20.5              | 0.83           | 0.0                | 0.0  | 50.0T           |
| 2 T                          | 1270             | 1950        | 0.651       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 3 T                          | 1016             | 1950        | 0.521       | 0.0               | 0.00           | 0.0                | 0.0  | 500.0           |
| 4 R                          | 2                | 463         | 0.004       | 20.4              | 0.78           | 0.0                | 0.1  | 90.0T           |
| West: Campbells Close        |                  |             |             |                   |                |                    |      |                 |
| 1 LTR                        | 7                | 7           | 1.000       | 68832.8           | 1.69           | 11.8               | 82.4 | 500.0           |

**Existing PM Peak - original**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e       |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|-----------------|------|-----------------|
|                              |                   |              |             |                   |                | 95% Back (vehs) | (m)  |                 |
| South: Pacific Highway       |                   |              |             |                   |                |                 |      |                 |
| 1 L                          | 6                 | 1950         | 0.003       | 15.3              | 0.79           | 0.0             | 0.0  | 150.0T          |
| 2 T                          | 771               | 1950         | 0.395       | 0.0               | 0.00           | 0.0             | 0.0  | 500.0           |
| 3 T                          | 771               | 1950         | 0.395       | 0.0               | 0.00           | 0.0             | 0.0  | 500.0           |
| 4 R                          | 20                | 629          | 0.032       | 21.1              | 0.84           | 0.1             | 1.0  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                 |      |                 |
| 1 L                          | 16                | 487          | 0.033       | 9.1               | 0.74           | 0.1             | 1.0  | 30.0            |
| 2 TR                         | 2                 | 5            | 0.440       | 971.1             | 1.02           | 1.3             | 9.3  | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                 |      |                 |
| 1 L                          | 4                 | 1950         | 0.002       | 20.5              | 0.83           | 0.0             | 0.0  | 50.0T           |
| 2 T                          | 419               | 1950         | 0.215       | 0.0               | 0.00           | 0.0             | 0.0  | 500.0           |
| 3 T                          | 335               | 1950         | 0.172       | 0.0               | 0.00           | 0.0             | 0.0  | 500.0           |
| 4 R                          | 2                 | 203          | 0.010       | 30.7              | 0.94           | 0.0             | 0.3  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                 |      |                 |
| 1 LTR                        | 5                 | 5            | 1.000       | 1321.0            | 1.08           | 3.5             | 24.8 | 500.0           |

**Existing PM Peak - 100% Occupancy**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back ----- (vehs) (m) |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|-------------------------------------|------|-----------------|
| South: Pacific Highway       |                   |              |             |                   |                |                                     |      |                 |
| 1 L                          | 6                 | 1950         | 0.003       | 15.3              | 0.79           | 0.0                                 | 0.0  | 150.0T          |
| 2 T                          | 771               | 1950         | 0.395       | 0.0               | 0.00           | 0.0                                 | 0.0  | 500.0           |
| 3 T                          | 771               | 1950         | 0.395       | 0.0               | 0.00           | 0.0                                 | 0.0  | 500.0           |
| 4 R                          | 53                | 622          | 0.085       | 23.7              | 0.90           | 0.4                                 | 2.8  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                                     |      |                 |
| 1 L                          | 49                | 484          | 0.101       | 9.5               | 0.80           | 0.4                                 | 3.1  | 30.0            |
| 2 TR                         | 6                 | 6            | 1.000       | 912.9r            | 1.02           | 4.4*                                | 30.9 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                                     |      |                 |
| 1 L                          | 14                | 1950         | 0.007       | 20.5              | 0.83           | 0.0                                 | 0.0  | 50.0T           |
| 2 T                          | 419               | 1950         | 0.215       | 0.0               | 0.00           | 0.0                                 | 0.0  | 500.0           |
| 3 T                          | 335               | 1950         | 0.172       | 0.0               | 0.00           | 0.0                                 | 0.0  | 500.0           |
| 4 R                          | 2                 | 203          | 0.010       | 30.7              | 0.94           | 0.0                                 | 0.3  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                                     |      |                 |
| 1 LTR                        | 5                 | 5            | 1.000       | 1522.6            | 1.08           | 4.0                                 | 28.0 | 500.0           |

**PM Peak - demolition (2007)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

|                              |                   |              |             |                   |                | Q u e u e             |      |                 |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|-----------------------|------|-----------------|
| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | 95% Back ----- (vehs) | (m)  | Lane Length (m) |
| South: Pacific Highway       |                   |              |             |                   |                |                       |      |                 |
| 1 L                          | 6                 | 1950         | 0.003       | 15.3              | 0.79           | 0.0                   | 0.0  | 150.0T          |
| 2 T                          | 794               | 1950         | 0.407       | 0.0               | 0.00           | 0.0                   | 0.0  | 500.0           |
| 3 T                          | 794               | 1950         | 0.407       | 0.0               | 0.00           | 0.0                   | 0.0  | 500.0           |
| 4 R                          | 23                | 612          | 0.038       | 22.3              | 0.86           | 0.2                   | 1.2  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                       |      |                 |
| 1 L                          | 29                | 473          | 0.061       | 9.5               | 0.79           | 0.3                   | 1.9  | 30.0            |
| 2 TR                         | 4                 | 4            | 1.000       | 1653.3            | 1.08           | 3.7*                  | 25.8 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                       |      |                 |
| 1 L                          | 5                 | 1950         | 0.003       | 20.5              | 0.83           | 0.0                   | 0.0  | 50.0T           |
| 2 T                          | 431               | 1950         | 0.221       | 0.0               | 0.00           | 0.0                   | 0.0  | 500.0           |
| 3 T                          | 345               | 1950         | 0.177       | 0.0               | 0.00           | 0.0                   | 0.0  | 500.0           |
| 4 R                          | 2                 | 188          | 0.011       | 32.1              | 0.95           | 0.0                   | 0.3  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                       |      |                 |
| 1 LTR                        | 5                 | 5            | 1.000       | 1611.0            | 1.08           | 4.1                   | 28.5 | 500.0           |

**PM Peak - Stage 1 (2008)**

Intersection ID: 1

Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back ----- |      | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|--------------------------|------|-----------------|
|                              |                   |              |             |                   |                | (vehs)                   | (m)  |                 |
| South: Pacific Highway       |                   |              |             |                   |                |                          |      |                 |
| 1 L                          | 6                 | 1950         | 0.003       | 15.3              | 0.79           | 0.0                      | 0.0  | 150.0T          |
| 2 T                          | 818               | 1950         | 0.419       | 0.0               | 0.00           | 0.0                      | 0.0  | 500.0           |
| 3 T                          | 818               | 1950         | 0.419       | 0.0               | 0.00           | 0.0                      | 0.0  | 500.0           |
| 4 R                          | 37                | 592          | 0.063       | 23.5              | 0.89           | 0.3                      | 2.1  | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                          |      |                 |
| 1 L                          | 39                | 457          | 0.085       | 9.9               | 0.81           | 0.4                      | 2.6  | 30.0            |
| 2 TR                         | 5                 | 5            | 1.000       | 1276.4r           | 1.01           | 4.4*                     | 30.9 | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                          |      |                 |
| 1 L                          | 9                 | 1950         | 0.005       | 20.5              | 0.83           | 0.0                      | 0.0  | 50.0T           |
| 2 T                          | 444               | 1950         | 0.228       | 0.0               | 0.00           | 0.0                      | 0.0  | 500.0           |
| 3 T                          | 355               | 1950         | 0.182       | 0.0               | 0.00           | 0.0                      | 0.0  | 500.0           |
| 4 R                          | 2                 | 173          | 0.012       | 33.7              | 0.97           | 0.0                      | 0.3  | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                          |      |                 |
| 1 LTR                        | 5                 | 5            | 1.000       | 2056.5            | 1.09           | 4.3                      | 30.2 | 500.0           |

PM Peak - Stage 2 (2009)

Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Dem                          |      |      |       |         | Q u e u e |          |       |        |
|------------------------------|------|------|-------|---------|-----------|----------|-------|--------|
| Lane                         | Flow | Cap  | Deg.  | Aver.   | Eff.      | 95% Back |       | Lane   |
| No.                          | (veh | (veh | Satn  | Delay   | Stop      | -----    | ----- | Length |
|                              | /h)  | /h)  | x     | (sec)   | Rate      | (vehs)   | (m)   | (m)    |
| South: Pacific Highway       |      |      |       |         |           |          |       |        |
| 1 L                          | 6    | 1950 | 0.003 | 15.3    | 0.79      | 0.0      | 0.0   | 150.0T |
| 2 T                          | 843  | 1950 | 0.432 | 0.0     | 0.00      | 0.0      | 0.0   | 500.0  |
| 3 T                          | 843  | 1950 | 0.432 | 0.0     | 0.00      | 0.0      | 0.0   | 500.0  |
| 4 R                          | 44   | 572  | 0.077 | 24.1    | 0.92      | 0.4      | 2.5   | 150.0T |
| East: Pelican Beach Entrance |      |      |       |         |           |          |       |        |
| 1 L                          | 44   | 441  | 0.100 | 10.3    | 0.82      | 0.4      | 3.0   | 30.0   |
| 2 TR                         | 6    | 6    | 1.000 | 1668.4r | 1.00      | 4.8*     | 33.5  | 10.0T  |
| North: Pacific Highway       |      |      |       |         |           |          |       |        |
| 1 L                          | 13   | 1950 | 0.007 | 20.5    | 0.83      | 0.0      | 0.0   | 50.0T  |
| 2 T                          | 457  | 1950 | 0.234 | 0.0     | 0.00      | 0.0      | 0.0   | 500.0  |
| 3 T                          | 365  | 1950 | 0.187 | 0.0     | 0.00      | 0.0      | 0.0   | 500.0  |
| 4 R                          | 2    | 159  | 0.013 | 35.5    | 0.98      | 0.0      | 0.3   | 90.0T  |
| West: Campbells Close        |      |      |       |         |           |          |       |        |
| 1 LTR                        | 5    | 5    | 1.000 | 2595.7  | 1.10      | 4.6      | 32.4  | 500.0  |

PM Peak - Stage 3 (2010)

Intersection ID: 1  
Give-Way Sign Controlled Intersection

|                              | Dem  |      |       |         |      | Q u e u e |       |        |
|------------------------------|------|------|-------|---------|------|-----------|-------|--------|
| Lane                         | Flow | Cap  | Deg.  | Aver.   | Eff. | 95% Back  |       | Lane   |
| No.                          | (veh | (veh | Satn  | Delay   | Stop | -----     | ----- | Length |
|                              | /h)  | /h)  | x     | (sec)   | Rate | (vehs)    | (m)   | (m)    |
| South: Pacific Highway       |      |      |       |         |      |           |       |        |
| 1 L                          | 6    | 1950 | 0.003 | 15.3    | 0.79 | 0.0       | 0.0   | 150.0T |
| 2 T                          | 868  | 1950 | 0.445 | 0.0     | 0.00 | 0.0       | 0.0   | 500.0  |
| 3 T                          | 868  | 1950 | 0.445 | 0.0     | 0.00 | 0.0       | 0.0   | 500.0  |
| 4 R                          | 51   | 553  | 0.092 | 24.5    | 0.94 | 0.4       | 3.0   | 150.0T |
| East: Pelican Beach Entrance |      |      |       |         |      |           |       |        |
| 1 L                          | 45   | 426  | 0.106 | 10.7    | 0.83 | 0.5       | 3.2   | 30.0   |
| 2 TR                         | 7    | 7    | 1.000 | 2404.7r | 1.00 | 5.4*      | 37.8  | 10.0T  |
| North: Pacific Highway       |      |      |       |         |      |           |       |        |
| 1 L                          | 16   | 1950 | 0.008 | 20.5    | 0.83 | 0.0       | 0.0   | 50.0T  |
| 2 T                          | 470  | 1950 | 0.241 | 0.0     | 0.00 | 0.0       | 0.0   | 500.0  |
| 3 T                          | 376  | 1950 | 0.193 | 0.0     | 0.00 | 0.0       | 0.0   | 500.0  |
| 4 R                          | 2    | 146  | 0.014 | 37.5    | 0.98 | 0.1       | 0.4   | 90.0T  |
| West: Campbells Close        |      |      |       |         |      |           |       |        |
| 1 LTR                        | 5    | 5    | 1.000 | 3331.7  | 1.11 | 5.1       | 35.5  | 500.0  |

PM Peak - Stage 4 (2012)

Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow | Cap      | Deg.   | Aver.       | Eff.      | Queue    |      | Lane Length |
|------------------------------|----------|----------|--------|-------------|-----------|----------|------|-------------|
|                              | (veh /h) | (veh /h) | Satn x | Delay (sec) | Stop Rate | 95% Back |      |             |
|                              |          |          |        |             |           | (vehs)   | (m)  | (m)         |
| South: Pacific Highway       |          |          |        |             |           |          |      |             |
| 1 L                          | 6        | 1950     | 0.003  | 15.3        | 0.79      | 0.0      | 0.0  | 150.0T      |
| 2 T                          | 921      | 1950     | 0.472  | 0.0         | 0.00      | 0.0      | 0.0  | 500.0       |
| 3 T                          | 921      | 1950     | 0.472  | 0.0         | 0.00      | 0.0      | 0.0  | 500.0       |
| 4 R                          | 59       | 516      | 0.114  | 25.4        | 0.94      | 0.5      | 3.7  | 150.0T      |
| East: Pelican Beach Entrance |          |          |        |             |           |          |      |             |
| 1 L                          | 54       | 395      | 0.137  | 11.5        | 0.84      | 0.6      | 4.1  | 30.0        |
| 2 TR                         | 8        | 8        | 1.000  | 4560.7r     | 1.00      | 5.3*     | 36.8 | 10.0T       |
| North: Pacific Highway       |          |          |        |             |           |          |      |             |
| 1 L                          | 19       | 1950     | 0.010  | 20.5        | 0.83      | 0.0      | 0.0  | 50.0T       |
| 2 T                          | 498      | 1950     | 0.256  | 0.0         | 0.00      | 0.0      | 0.0  | 500.0       |
| 3 T                          | 399      | 1950     | 0.204  | 0.0         | 0.00      | 0.0      | 0.0  | 500.0       |
| 4 R                          | 2        | 121      | 0.017  | 42.4        | 0.98      | 0.1      | 0.4  | 90.0T       |
| West: Campbells Close        |          |          |        |             |           |          |      |             |
| 1 LTR                        | 5        | 5        | 1.000  | 5857.0      | 1.11      | 6.5      | 45.4 | 500.0       |

PM Peak - Future (2022)

Intersection ID: 1  
Give-Way Sign Controlled Intersection

| Lane No.                     | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Q u e u e 95% Back ----- (vehs) (m) |       | Lane Length (m) |
|------------------------------|-------------------|--------------|-------------|-------------------|----------------|-------------------------------------|-------|-----------------|
| South: Pacific Highway       |                   |              |             |                   |                |                                     |       |                 |
| 1 L                          | 6                 | 1950         | 0.003       | 15.3              | 0.79           | 0.0                                 | 0.0   | 150.0T          |
| 2 T                          | 1237              | 1950         | 0.634       | 0.0               | 0.00           | 0.0                                 | 0.0   | 500.0           |
| 3 T                          | 1237              | 1950         | 0.634       | 0.0               | 0.00           | 0.0                                 | 0.0   | 500.0           |
| 4 R                          | 59                | 336          | 0.176       | 29.9              | 0.97           | 0.8                                 | 5.4   | 150.0T          |
| East: Pelican Beach Entrance |                   |              |             |                   |                |                                     |       |                 |
| 1 L                          | 54                | 246          | 0.220       | 18.6              | 0.94           | 0.9                                 | 6.6   | 30.0            |
| 2 TR                         | 8                 | 8            | 1.000*****r | *****r            | 1.00           | 4.7*                                | 32.7  | 10.0T           |
| North: Pacific Highway       |                   |              |             |                   |                |                                     |       |                 |
| 1 L                          | 19                | 1950         | 0.010       | 20.5              | 0.83           | 0.0                                 | 0.0   | 50.0T           |
| 2 T                          | 670               | 1950         | 0.344       | 0.0               | 0.00           | 0.0                                 | 0.0   | 500.0           |
| 3 T                          | 536               | 1950         | 0.275       | 0.0               | 0.00           | 0.0                                 | 0.0   | 500.0           |
| 4 R                          | 2                 | 33           | 0.061       | 113.9             | 1.00           | 0.2                                 | 1.4   | 90.0T           |
| West: Campbells Close        |                   |              |             |                   |                |                                     |       |                 |
| 1 LTR                        | 5                 | 5            | 1.000*****  | *****             | 2.25           | 17.3                                | 121.3 | 500.0           |

- \* Queue length exceeds short lane length due to specification of a percentile queue in the Tools-Options (Model tab). For calculation of this statistic, you may specify the lane with full length.
  - r Delay, stops and queue length for this lane have been cut down to fit in the queuing space. The amount cut may not be accounted for fully in the adjacent lane performance statistics. You may wish to change the short lane to a full lane to investigate the extent of this effect.
  - T Short lane due to specification of Turn Slot
-

Sapphire Beach Development  
Pre-development AM (2013)  
Intersection ID: 0  
Stop Sign Controlled Intersection

| Lane No.                                       | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue 95% Back |     | Lane Length (m) |
|------------------------------------------------|-------------------|--------------|-------------|-------------------|----------------|----------------|-----|-----------------|
|                                                |                   |              |             |                   |                | (vehs)         | (m) |                 |
| South: Service Road                            |                   |              |             |                   |                |                |     |                 |
| 1 T                                            | 37                | 1950         | 0.019       | 0.0               | 0.00           | 0.0            | 0.0 | 70.0            |
| 2 R                                            | 67                | 1109         | 0.060       | 8.8               | 0.65           | 0.3            | 1.9 | 40.0            |
| East: Access Road                              |                   |              |             |                   |                |                |     |                 |
| 1 LR                                           | 84                | 913          | 0.092       | 8.4               | 0.89           | 0.5            | 3.2 | 30.0            |
| North: Service Road                            |                   |              |             |                   |                |                |     |                 |
| 1 LT                                           | 99                | 1909         | 0.052       | 1.2               | 0.10           | 0.0            | 0.0 | 500.0           |
| T Short lane due to specification of Turn Slot |                   |              |             |                   |                |                |     |                 |

Intersection ID: 0  
Stop Sign Controlled Intersection

| Lane No.                                       | Dem Flow | Cap     | Deg. Satn | Aver. Delay | Eff. Stop Rate | Queue 95% Back |     | Lane Length (m) |
|------------------------------------------------|----------|---------|-----------|-------------|----------------|----------------|-----|-----------------|
|                                                | (veh/h)  | (veh/h) | x         | (sec)       |                | (vehs)         | (m) |                 |
| South: Service Road                            |          |         |           |             |                |                |     |                 |
| 1 T                                            | 37       | 1950    | 0.019     | 0.0         | 0.00           | 0.0            | 0.0 | 70.0            |
| 2 R                                            | 48       | 1108    | 0.043     | 8.8         | 0.65           | 0.2            | 1.3 | 40.0            |
| East: Access Road                              |          |         |           |             |                |                |     |                 |
| 1 LR                                           | 99       | 930     | 0.106     | 8.3         | 0.89           | 0.5            | 3.8 | 30.0            |
| North: Service Road                            |          |         |           |             |                |                |     |                 |
| 1 LT                                           | 96       | 1910    | 0.050     | 1.0         | 0.08           | 0.0            | 0.0 | 500.0           |
| T Short lane due to specification of Turn Slot |          |         |           |             |                |                |     |                 |

Intersection ID: 0  
Stop Sign Controlled Intersection

| Lane No.                                       | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue 95% Back |     | Lane Length (m) |
|------------------------------------------------|-------------------|--------------|-------------|-------------------|----------------|----------------|-----|-----------------|
|                                                |                   |              |             |                   |                | (vehs)         | (m) |                 |
| South: Service Road                            |                   |              |             |                   |                |                |     |                 |
| 1 T                                            | 57                | 1950         | 0.029       | 0.0               | 0.00           | 0.0            | 0.0 | 70.0            |
| 2 R                                            | 50                | 1118         | 0.045       | 8.6               | 0.65           | 0.2            | 1.3 | 40.0            |
| East: Access Road                              |                   |              |             |                   |                |                |     |                 |
| 1 LR                                           | 57                | 1054         | 0.054       | 7.8               | 0.92           | 0.3            | 1.8 | 30.0            |
| North: Service Road                            |                   |              |             |                   |                |                |     |                 |
| 1 LT                                           | 48                | 1866         | 0.026       | 2.5               | 0.21           | 0.0            | 0.0 | 500.0           |
| T Short lane due to specification of Turn Slot |                   |              |             |                   |                |                |     |                 |

Intersection ID: 0  
Stop Sign Controlled Intersection

| Lane No.                                       | Dem Flow (veh /h) | Cap (veh /h) | Deg. Satn x | Aver. Delay (sec) | Eff. Stop Rate | Queue Back |     | Lane Length (m) |
|------------------------------------------------|-------------------|--------------|-------------|-------------------|----------------|------------|-----|-----------------|
|                                                |                   |              |             |                   |                | 95% (vehs) | (m) |                 |
| South: Service Road                            |                   |              |             |                   |                |            |     |                 |
| 1 T                                            | 57                | 1950         | 0.029       | 0.0               | 0.00           | 0.0        | 0.0 | 70.0            |
| 2 R                                            | 53                | 1118         | 0.047       | 8.6               | 0.65           | 0.2        | 1.4 | 40.0            |
| East: Access Road                              |                   |              |             |                   |                |            |     |                 |
| 1 LR                                           | 58                | 1051         | 0.055       | 7.8               | 0.92           | 0.3        | 1.9 | 30.0            |
| North: Service Road                            |                   |              |             |                   |                |            |     |                 |
| 1 LT                                           | 53                | 1867         | 0.028       | 2.8               | 0.24           | 0.0        | 0.0 | 500.0           |
| T Short lane due to specification of Turn Slot |                   |              |             |                   |                |            |     |                 |



**GHD Pty Ltd** ABN 39 008 488 373

352 King St Newcastle NSW 2300

PO Box 5403 Hunter Region Mail Centre NSW 2310

T: (02) 4979 9999 F: (02) 4979 9988 E: [ntlmail@ghd.com.au](mailto:ntlmail@ghd.com.au)

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**Document Status**

| Rev No. | Author      | Reviewer  |                                                                                     | Approved for Issue |                                                                                       |          |
|---------|-------------|-----------|-------------------------------------------------------------------------------------|--------------------|---------------------------------------------------------------------------------------|----------|
|         |             | Name      | Signature                                                                           | Name               | Signature                                                                             | Date     |
| 0       | M Shrimpton | K McNatty |  | P Pigram           |  | 15/12/06 |
|         |             |           |                                                                                     |                    |                                                                                       |          |
|         |             |           |                                                                                     |                    |                                                                                       |          |
|         |             |           |                                                                                     |                    |                                                                                       |          |