Gracetown Residential Development

REVIEW OF TRAFFIC MANAGEMENT PLAN AND POSSIBLE ADDITIONAL MODIFICATIONS

Prepared for
GRACETOWN PROGRESS ASSOCIATION

Prepared by
Uloth and Associates
16 November 2010
# TABLE OF CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. INTRODUCTION</td>
<td>1</td>
</tr>
<tr>
<td>1.1 Study Objectives</td>
<td>1</td>
</tr>
<tr>
<td>2. OVERVIEW OF TRANSCORE REPORT</td>
<td>2</td>
</tr>
<tr>
<td>3. PRELIMINARY TRAFFIC ASSESSMENT BY ULOTH AND ASSOCIATES</td>
<td>3</td>
</tr>
<tr>
<td>4. RESIDENTS MEETING IN GRACETOWN</td>
<td>5</td>
</tr>
<tr>
<td>4.1 Existing Issues and Concerns</td>
<td>5</td>
</tr>
<tr>
<td>4.2 Recommended (Draft) Traffic Management Plan</td>
<td>7</td>
</tr>
<tr>
<td>5. WHERE TO FROM HERE</td>
<td>8</td>
</tr>
</tbody>
</table>

## LIST OF FIGURES

<table>
<thead>
<tr>
<th>Figure</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Locality Plan – Gracetown and Proposed GRD</td>
<td>1</td>
</tr>
<tr>
<td>2. Existing Peak Day Traffic – Gracetown 2010</td>
<td>4</td>
</tr>
<tr>
<td>3. Future Peak Day Traffic – With Gracetown Residential Development</td>
<td>4</td>
</tr>
<tr>
<td>5. Issues Raised by Gracetown Residents Group</td>
<td>6</td>
</tr>
<tr>
<td>Existing Traffic and Pedestrian Safety Concerns</td>
<td></td>
</tr>
<tr>
<td>6. Recommended (Draft) Traffic Management Plan – Gracetown Residential Development</td>
<td>8</td>
</tr>
</tbody>
</table>
1. INTRODUCTION

The Gracetown Residential Development (GRD) is a proposal by LandCorp to develop an area of 14.42 hectares on the southern side of the existing townsite to accommodate 146 additional dwellings.

Transcore has prepared a traffic study titled *Gracetown Residential Development - Traffic Management Plan* to assess the impact of the development and to identify necessary upgrades due to the additional traffic flows. A draft report was prepared in February 2010. However, after comments received by the community, the report was expanded (and a second report was also prepared in relation to a proposed second access road for Gracetown), and the final report was published in June 2010.

Uloth and Associates has been commissioned by the Gracetown Progress Association to review the Transcore reports and the proposed development, in order to advise the Association as to the appropriateness of the Transcore report findings and recommendations.

A locality plan showing the proposed GRD and the existing Gracetown townsite is shown in Figure 1.

1.1 STUDY OBJECTIVES

The objectives of this preliminary study are to review and critique the Transcore traffic study, and to provide preliminary advice regarding the impact of the development and necessary upgrades.

The agreed scope of works is as follows:

- Undertake a site visit to identify the existing situation.
- Review the Transcore report study findings and recommendations, together with the various comments and responses from residents.
- Convene a meeting with an appointed residents’ group to discuss the existing situation, the impacts of the proposed development, and the preferred outcomes to be conditioned as part of any approvals for the development.
Locality Plan
GRACETOWN AND PROPOSED GRD
2. **OVERVIEW OF TRANSCORE REPORT**

Figure 6 in Transcore report documents existing traffic flows throughout the Gracetown townsite based on traffic counts carried out in March/April 2010. The data provides daily traffic flows for a typical weekday, a typical weekend and for a peak day during the Easter period.

It is interesting to note that on a peak day in 2010 the traffic flow on Cowaramup Bay Road was 2,180 vehicles per day, while traffic on Bayview Drive varies from 2,060 vehicles per day at the northern end to 1,560 vehicles per day at the southern end near Salter Street. Traffic on Salter Street varied from 742 vehicles per day north of Bayview Drive (accessing the South Point beach car park) to 1,141 vehicles per day south of Bayview Drive and 821 vehicles per day north of Langley Crescent.

The report then identifies different scenarios of possible trip generation for the Gracetown Residential Development, with estimated traffic flows of between 219 and 307 vehicle trips per day on a typical weekday, 548 to 767 vehicle trips per day on a typical weekend, and between 730 and 1,022 vehicle trips per day on a peak day.

Taking into account that some traffic will remain within the townsite, including trips to and from the various beaches, Transcore has estimated that the proposed development will increase traffic on Cowaramup Bay Road by up to 795 vehicles per day. Transcore then also allows for an increase of tourist traffic into the townsite equivalent to 5 percent of the future traffic on Caves Road, resulting in a maximum total traffic on Cowaramup Bay Road at the completion of the Gracetown Residential Development of 3,025 vehicles per day.

Transcore then carried out an intersection operational analysis for the intersection of Cowaramup Bay Road and Caves Road, to show that the intersection can continue to operate at an acceptable Level of Service.

Section 4.6 of the Transcore report then documents a series of recommended traffic management measures that should be carried out as part of the proposed development, while Section 4.7 provides a separate list of additional recommendations that should be carried out within the town site but not as any direct result of the proposed development.

The traffic management measures recommended in the Transcore report for implementation as part of the proposed Gracetown Residential Development are as follows:

- Intersection improvements at Salter Street - Langley Crescent.
- New roundabout at Bayview Drive - Salter Street.
- Improved standard of Salter Street from Bayview Drive to Lefthanders car park.
- Modifications at Langley Crescent - Galliers Street intersection, restricting access to right-turns-out of Galliers Street only.
- Extension of 60km/hr speed zone from immediately north of town to the bend in Cowaramup Bay Road.
- Introduction of a 40km/hr speed limit in the vicinity of the commercial land uses, with default 50km/hr speed limit throughout the remainder of the townsite.

The Transcore report also recommended additional improvements to pedestrian facilities within the existing townsite as part of the proposed development, as follows:

- Extension of existing footpaths along Bayview Drive and Salter Street to link with the proposed development.
- New crossing facilities at proposed roundabout at Bayview Drive - Salter Street.
- New footpath from roundabout to South Point car park.
- Upgrade and lighting of path along Galliers Street and extending through to Bayview Drive.
Additional traffic management measures suggested by Transcore include:

- Entry statement feature to townsite near the commercial land uses, together with turnaround facilities for buses and vehicles towing boats, etc, as well as additional parking.
- Parallel parking in Bayview Drive opposite commercial land uses.
- Improved legibility for pedestrian crossing in Bayview Drive, at this location.
- Improvements at Cowaramup Bay Road and the Boat Ramp access.
- Formalisation and increased capacity at the various beach car parks.
- Possible prohibition of parking along Bayview Drive verges north of town.
- Relocation of pedestrian crossing north of the shops, with extension of footpath and removal of vegetation on eastern side of Bayview Drive.

The Transcore report also provides a brief assessment of 2 “Loop Road” options proposed by ‘the community’ drawing the conclusion that both “loop road” options offer some benefits, however “transfer of impacts elsewhere in the town, construction costs and limited extent of practical benefits undermines the project justification”.

The report also refers to a separate assessment of a proposed second access road to Gracetown, providing an additional link from Caves Road to the southern end of town, but draws the conclusion that due to the “significant costs,...the negative environmental impact of the road and the future maintenance costs, the construction of the Second Access Road is questionable...” and that “the existing road network has the required capacity to cater for estimated traffic increase as a result of the proposed GRD”.

3. PRELIMINARY TRAFFIC ASSESSMENT BY ULOTHER AND ASSOCIATES

On the basis of the information in the Transcore report, Uloth and Associates has developed a basic traffic model to reflect the existing travel patterns within the Gracetown townsite during a peak day.

The existing peak day traffic model is shown in the attached Figure 2. It can be seen that the existing residential developments within the townsite are estimated to generate 1,050 vehicle trips per day on a peak day, and of these trips an estimated 850 trips travel in and out of the town site via Cowaramup Bay Road. This suggests that there is an additional 1,330 vehicles per day utilising Cowaramup Bay Road as visitors to the townsite beaches, with an estimated 700 vehicles per day accessing the South Point car park and main beach, and 490 vehicles per day travelling through to Lefthanders Road.

Figure 3 then identifies a similar traffic model including the proposed Gracetown Residential Development and also identifies additional traffic growth of visitors to the Gracetown beaches as a result of increasing population within the surrounding catchment area (including significant development at Cowaramup). It can be seen in Figure 3 that the Gracetown Residential Development is expected to generate 1,020 vehicle trips per day on a peak day, with 930 of these vehicles trips travelling in and out of the townsite via Cowaramup Bay Road.

The existing visitor traffic will remain, and is expected to increase by an additional 530 vehicles per day. This is based on an assumed 40 percent increase in the surrounding residential catchment, noting that the November 2005 publication ‘Western Australia Tomorrow’ predicts population growth for the Shire of Augusta-Margaret River from 13,400 in 2011 to 16,600 in 2021 (an increase of 24 percent). In
In this regard it should also be noted that the additional 16 percent growth assumed for this exercise is equivalent to an additional population growth of approximately 2,100 persons in the region by 2021.

It can therefore be seen in Figure 3 that traffic flows on Cowaramup Bay Road are expected to increase to 3,630 vehicle trips per day in the long term. Traffic on Bayview Drive will therefore increase to 3,440 vehicles per day, while traffic on Salter Street (north of Bayview Drive) and Lefthanders Road will increase to 1,060 vehicles per day and 890 vehicles per day respectively.

Figure 4 shows the anticipated future traffic flows including the construction of a second access road to the south linking back to Caves Road as has been previously identified as ‘Alternative Road Access Option 9’. It can be seen in Figure 4 that with an estimated 40 percent of all external trips travelling to and from the north and 60 percent travelling to and from the south, the construction of a second access road will reduce the future traffic flows on Cowaramup Bay Road to 1,510 vehicles per day, which is 670 vehicles per day less than the existing peak day traffic flows on Cowaramup Bay Road. It can also be seen that the Second Access Road is expected to carry 2,120 vehicles per day. Traffic on Bayview Drive with the Second Access Road would reduce to 1,320 vehicles per day, while Salter Street south of Bayview Drive would carry 980 vehicles per day.

It can therefore be seen that the construction of the Second Access Road results in more balanced traffic flows throughout the townsite with traffic flows at the northern end of town being significantly less than the existing situation. The only area of town to experience an increase in traffic flows under this scenario will be immediately adjacent to the yet to be constructed Residential Development.

It is also important to note that the Second Access Road could also attract additional traffic through Gracetown, simply as a result of the introduction of a ‘through route’. As pointed out within the Transcore report, it is agreed that the level of ‘induced’ traffic is very difficult to quantify. However, an assumed increase equivalent to 5 percent of the total traffic flows on Caves Road at Cowaramup Bay Road is considered reasonable (resulting in a minor additional increase of just 100 vehicles per day).

With the additional benefits relating to fire safety and emergency access, the improved distribution of traffic within the townsite makes the Second Access Road a highly favourable option to cater for the proposed significant increase in housing and the ongoing growth in visitor numbers to the town and its beaches from the surrounding communities and beyond. The Second Access Road could also be used exclusively for construction traffic during the development phase of the proposed GRD, in order to reduce the traffic impact of the construction on the existing townsite.
Existing Peak Day Traffic
GRACETOWN - 2010
Future Peak Day Traffic
WITH GRACETOWN RESIDENTIAL DEVELOPMENT

LEGEND
- Existing Townsite Traffic
- Existing Visitor Traffic
- Future GRD Traffic
- Additional Visitor Traffic
- Future Total Traffic

SOURCE: ULOTH & ASSOCIATES
Future Traffic - With 2nd Access Rd
WITH GRACETOWN RESIDENTIAL DEVELOPMENT

FIG. 4

LEGEND

Existing Townsite Traffic
Existing Visitor Traffic
Future GRD Traffic
Future Total Traffic

Note: All traffic flows are 'Peak Day' traffic.

SOURCE: ULOTH & ASSOCIATES

2nd Access Road
(to Caves Road)
4. **RESIDENTS MEETING IN GRACETOWN**

Following the review of the Transcore report, a residents’ meeting was convened at the Gracetown Hall on Friday 17 September 2010. The list of attendees at the meeting was as follows:

<table>
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<tr>
<th>NAME</th>
<th>GRACETOWN ADDRESS</th>
<th>PERMANENT RESIDENT?</th>
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<tbody>
<tr>
<td>Jon Elliot</td>
<td>Bayview Drive</td>
<td>Yes</td>
</tr>
<tr>
<td>Mick Manolas</td>
<td>Earl Place</td>
<td>No</td>
</tr>
<tr>
<td>Ann McFarlane</td>
<td>Earl Place</td>
<td>No</td>
</tr>
<tr>
<td>Jay Laurie</td>
<td>Bayview Drive</td>
<td>No</td>
</tr>
<tr>
<td>Shane Carvill</td>
<td>Osborne Street</td>
<td>Yes</td>
</tr>
<tr>
<td>Mark Stowell</td>
<td>Osborne Street</td>
<td>No</td>
</tr>
<tr>
<td>Esme Bowen</td>
<td>Langley Crescent</td>
<td>No</td>
</tr>
<tr>
<td>Ben Devenish</td>
<td>Percy Street</td>
<td>No</td>
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<tr>
<td>Ian Englert</td>
<td>Georgette Road</td>
<td>Yes</td>
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The preliminary traffic assessment described above in Chapter 3 was presented to the meeting, followed by a discussion of issues, concerns and possible solutions relating to the proposed Gracetown Residential Development.

4.1 **EXISTING ISSUES AND CONCERNS**

Figure 5 shows a summary of the existing traffic and safety issues within the Gracetown townsite that will be worsened by the Gracetown Residential Development and should be addressed through conditions of approval, as follows:

- Speed and pedestrian safety issues at Bayview Drive - Salter Street.
- Poor intersection alignment/definition at Salter Street - Georgette Road, and Salter Street - Langley Crescent, also impacted by speed along Salter Street.
- Insufficient sightlines for vehicles exiting Percy Street at Bayview Drive, possibly due to excessive speed on Bayview Drive.
- Parking/Traffic/Pedestrian conflicts in Bayview Drive at shops.
- Pedestrian/Vehicle conflicts at pedestrian crossing north of shops.
- Poor definition of access points to car parks along Bayview Drive and Cowaramup Bay Road, including the Main Beach car park, and the North Point Upper car park, and the access to Melaleuca Beach.
- Safety concerns due to verge parking along Bayview Drive at peak times.
- Insufficient parking capacity at South Point car park.

It was agreed that these are all existing concerns, and that the proposed Residential Development would add to these concerns by increasing traffic flows on the road network and by increasing the local demand for parking spaces at the various beach car parks, at the existing shops, and at the boat ramp car park. It was also acknowledged that increasing growth and residential development within the surrounding communities will put significant additional pressure onto these areas.

It was also agreed at the meeting that the single most important issue was the need for the construction of the second access road to the south of the townsite, noting that this was most important due for fire safety and emergency access, as well as for traffic and pedestrian amenity and safety reasons within the townsite.
Considerable time was spent at the meeting explaining the various traffic volumes in relation to what is considered acceptable on residential streets as per *Liveable Neighbourhoods* document. It was also discussed that while these traffic volumes are considered acceptable in typical metropolitan Perth, it is not necessarily applicable to a country town such as Gracetown. This was acknowledged, however it was pointed out that any of these discussions are based on acceptable amenity within a residential environment rather than a traffic capacity. In this regard it was pointed out that two-lane road can carry significantly more than even 5,000 or 7,000 vehicles per day. But from a residential amenity and pedestrian safety perspective volumes of below 3,000 were deemed acceptable for a metropolitan residential street. It was also acknowledged that the perception of what is acceptable for residential amenity within Gracetown is significantly different, and that reduced traffic should be sought.

The options that have been presented relating to loop roads within the townsite were also discussed. Three different options were put forward including a duplication of Salter Street (effectively relegating the existing Salter Street to a service road), the provision of a new road looping around the recreation area, and the alternative of a road from the northern of side of town tracking up the hill to the new development. From a traffic engineering perspective none of these roads is considered necessary, particularly if the second access road is constructed. Instead, it is recommended that money to be spent within the townsite itself would be better spent on improving existing intersection layouts and pedestrian and parking facilities rather than constructing an entirely new road.

The following suggested modifications to Salter Street - Bayview Drive, and Percy Street were also discussed, for possible further investigation:

- Reopening of Percy Street at the western end to provide an alternative route to the South Point car park, and closure of Salter Street north of Bayview Drive allowing this section of Salter Street to be used for additional parking.

- Closure of Percy Street at Bayview Drive whilst reopening Percy Street at the western end, allowing Percy Street to be used for additional parking at South Point (that is effectively turning Percy Street into a parking street).

In regards to the Transcore suggestion to restrict traffic movements at the Langley Crescent - Galliers Street intersection in order to prevent traffic from the residential development from cutting through Galliers Street, discussion at the meeting concluded that this is not a significant concern and that restricting movements at an intersection would simply result in increased traffic flows elsewhere. It was agreed that a better solution was to leave all the roads open, based on the view that very little GRD traffic would seek to use this road anyway.
Existing Traffic and Pedestrian Safety Concerns:

1. Speed and pedestrian safety issues at Bayview Drive - Salter Street.

2. Poor intersection alignment/definition at Salter Street - Georgette Road, and Salter Street - Langley Crescent, also impacted by speed along Salter Street.

3. Insufficient sightlines for vehicles exiting Percy Street at Bayview Drive, possibly due to excessive speed on Bayview Drive.

4. Parking/Traffic/Pedestrian conflicts in Bayview Drive at shops.

5. Pedestrian/Vehicle conflicts at pedestrian crossing north of shops.

6. Poor definition of access points to car parks along Bayview Drive and Cowaramup Bay Road, including the Main Beach car park, and the North Point Upper car park, and the access to Melaleuca Beach.

7. Safety concerns due to verge parking along Bayview Drive at peak times.

8. Insufficient parking capacity at South Point car park.
5. **RECOMMENDED (DRAFT) TRAFFIC MANAGEMENT PLAN**

On the basis of the analysis carried out and the discussion at the meeting, taking into account various written comments also received, the preferred outcomes for Gracetown in conjunction with the proposed Gracetown Residential Development are shown in the attached Figure 6. This plan can be considered a draft traffic management plan that if adopted by the Gracetown Progress Association could be put forward as conditions of approval for the Gracetown Residential Development.

The draft traffic management plan includes as the first priority the construction of a Second Access Road for Gracetown to and from the south. The preferred alignment of this road would need to be further investigated.

In addition to the construction of the Second Access Road and a number of recommendations already proposed in the Transcore report, several traffic management measures are also recommended within the existing townsite to cater not only for the additional traffic resulting from the GRD but also the continuing population growth in the surrounding areas. The recommended Traffic Management Plan (as shown in Figure 6) includes the following:

- 1. Construction of Second Access Road linking Salter Street to Caves Road, as an immediate priority, prior to any construction for the GRD.
- 2. Upgrading of Salter Street adjacent to proposed GRD, from Langley Crescent to Lefthanders Road.
- 3. Upgrading of Salter Street - Bayview Drive intersection, with improved pedestrian crossing facilities and a reduced speed environment.
- 4. Improved alignment and definition of intersections at Salter Street - Georgette Road and Salter Street - Langley Crescent.
- 5. Formalisation (including paving and kerbing) of access points to the various beach car parks, as shown.
- 6. Parking prohibition along Bayview Drive at Main Beach, in conjunction with rationalisation/improved capacity of beach car park.
- 7. Extension of 60km/hr speed zone from north of townsite to bend in Cowaramup Bay Road.
- 8. Introduction of various traffic management measures (including possible Townsite Entry Statement as proposed by Transcore) to physically reduce the speed environment on Bayview Drive from just north of the bridge on the approach to town, through to and including the Salter Street intersection.
- 9. New footpath along western side of Bayview Drive from Percy Street to the Melaleuca Beach access (linking with the existing path further north to Main Beach), with defined pedestrian crossing location across Bayview Drive adjacent to the shops.
- 10. Improvement of on-street parking on Bayview Drive adjacent to shops.
- 11. Increased parking capacity at South Point car park.
- 12. New footpath along Salter Street from Bayview Drive to South Point car park.
- 13. New footpaths along Salter Street, Langley Crescent, Nicholson Street and Galliers Street, plus upgrading and possible lighting of the link from Galliers Street to Nicholson Street.
In addition to these recommendations, the following comments are also made:

- The recommended upgrade of the Salter Street - Bayview Drive junction will require further investigation. However, at the very least, the intersection should be upgraded on its current alignment to provide improved pedestrian crossing facilities and an appropriate speed environment. (A roundabout, as recommended by Transcore, is not considered appropriate due to the expected pedestrian crossing movement at this intersection and the reduced levels of safety for pedestrians crossing at a roundabout).

- As noted above, it is recommended to formalise access points to the various car parks along Bayview Drive including the access to Melaleuca Beach, the Main Beach car park, the Boat Ramp car park and the North Point car park. At each of these locations it is suggested that a formal entry statement be constructed for each intersection consisting of kerbing to define a proper access point and paving for perhaps 10 metres into the site before reverting to the existing gravel arrangement. In developing the recommendations for each of these locations it will be necessary to identify the necessary vehicle movements, likely traffic volumes and the vehicle types that will need to be accommodated.

- It has also been suggested that there is a need to provide a pedestrian/cyclist link to the coast from the existing caravan park located at Caves Road, and that this could be incorporated along the northern side of Cowaramup Bay Road.

6. **WHERE TO FROM HERE**

In order to progress the proposed outcomes for Gracetown, it is expected that significant political manoeuvring will need to occur, in order to ensure that Shire councillors and the local Member of Parliament apply sufficient pressure to have these upgrades listed as conditions of approval for the proposed Residential Development. It was therefore suggested that an experienced Town Planner be appointed to provide guidance in regard to the various opportunities for public comment and to provide advice on the best way forward from a political perspective.

Subject to the planner’s proposals, it may also be necessary to carry out further work to better define the various traffic management measures proposed, in order to have a more detailed listing of conditions attached to the development.
Recommended Traffic Management Measures:

1. Construction of Second Access Road linking Salter Street to Caves Road, as an immediate priority, prior to any construction for the GRD.
2. Upgrading of Salter Street adjacent to proposed GRD, from Langley Crescent to Lefthanders Road.
3. Upgrading of Salter Street - Bayview Drive intersection, with improved pedestrian crossing facilities and a reduced speed environment.
4. Improved alignment and definition of intersections at Salter Street - Georgette Road and Salter Street - Langley Crescent.
5. Formalisation (including paving and kerbing) of access points to the various beach car parks, as shown.
6. Parking prohibition along Bayview Drive at Main Beach, in conjunction with rationalisation/improved capacity of beach car park.
7. Extension of 60km/hr speed zone from north of townsite to bend in Cowaramup Bay Road.
8. Introduction of various traffic management measures (including possible Townsite Entry Statement) to physically reduce the speed environment on Bayview Drive from just north of the bridge on the approach to town, through to and including the Salter Street intersection.
9. New footpath along western side of Bayview Drive from Percy Street to the Melaleuca Beach access (linking with the existing path further north to Main Beach), with defined pedestrian crossing location across Bayview Drive adjacent to the shops.
10. Improvement of on-street parking on Bayview Drive adjacent to shops.
11. Increased parking capacity at South Point car park.
12. New footpath along Salter Street from Bayview Drive to South Point car park.
13. New footpaths along Salter Street, Langley Crescent, Nicholson Street and Galliers Street, plus upgrading and possible lighting of the link from Galliers Street to Nicholson Street.