TRAFFIC MANAGEMENT & SAFETY CONSULTANTS

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TRAFFIC ASSESSMENT

PROPOSED expansion of WASTE MANAGEMENT FACILITY

John Renshaw Drive, BLACK HILL

July 2008

Don Fox Planning
(For the Applicant)

Cessnock City Council Local Government Area

Prepared by
Terry Keating
Director
TPK & Associates Pty Ltd

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TRAFFIC ASSESSMENT

SECTION 1 - INTRODUCTION

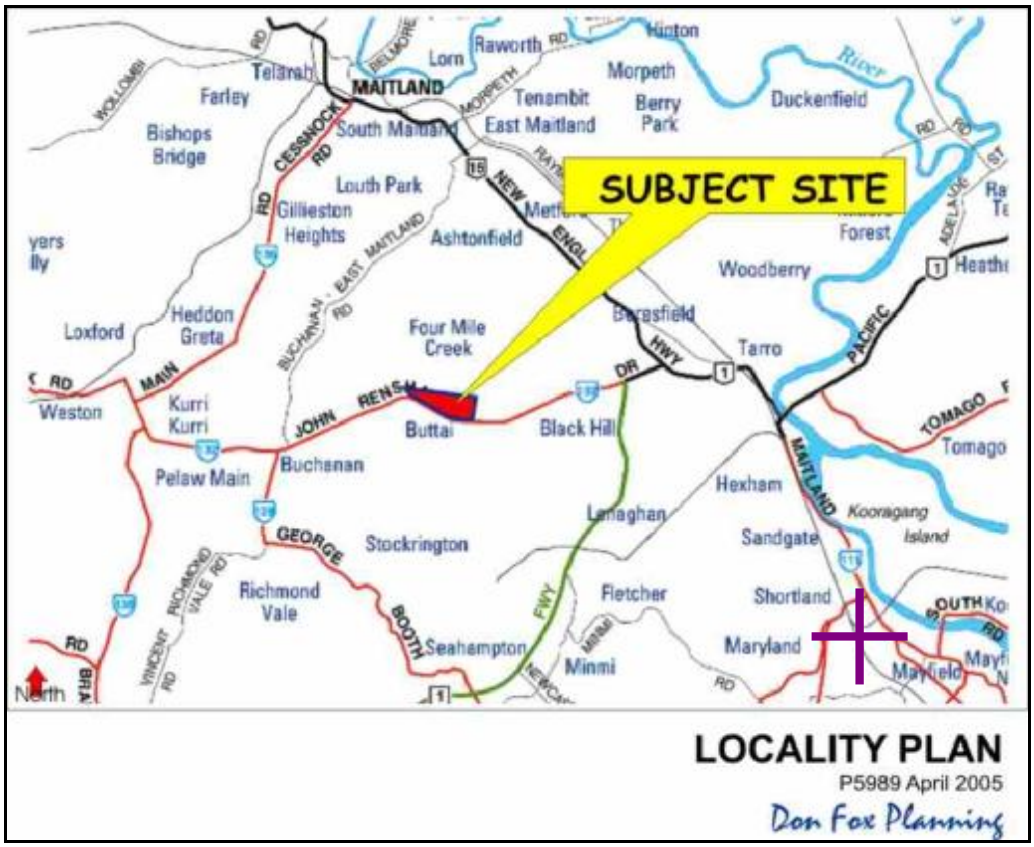
1.1. – The Project

TPK & Associates Pty Ltd (TPK) was invited by Don Fox Planning on behalf of the applicant to join their project team with the view to undertaking a traffic assessment for a proposed expansion to an existing Waste Management Facility at:

Lot 931 DP 816814

John Renshaw Drive, Black Hill

A locality map is provided below.



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1.2. – Task Description

This assessment and report focuses on the content of a letter to Don Fox Planning from RTA dated 16th October 2007 (RTA reference 85.564:2) and embraces: -

- Review of traffic management and road safety requirements.
- Establish potential traffic volume increases.
- Assess potential impacts related to road safety and traffic management.

1.3. – Project Representative

Mr. Terry Keating, Director, TPK undertook the evaluation and preparation of the report. He has over 40 years experience in the road safety and traffic management profession, including the assessment of traffic generating developments.

1.4. - References

The assessment and report have been provided as an outcome of reference to:

- RTA Guide to Traffic Generating Developments.
- Austroads Part 2 Roadway Capacity.
- Austroads Part 5 Intersections at Grade.
- Project Plans as provided by Don Fox Planning.

SECTION 2 – BACKGROUND

The existing facility is licensed by the Environmental Protection Authority to treat grease trap and other liquid waste up to a capacity of 15,000 tonnes per annum, although the existing consent from Cessnock City Council only allows treatment of 5,000 tonnes per annum.

The current proposal is to increase the allowable capacity to 20,000 tonnes per annum.

P1 & P2 photographs (below) show John Renshaw Drive (JRD) at the site access road intersection.

P1. VIEW ON JRD TO THE WEST

P2. VIEW ON JRD TO THE EAST

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SECTION 3 – ASSESSMENT

The business plan to increase allowable capacity will include the purchase of a 27 tonne semi-trailer for transportation of treated waste minimising the extent of increase in heavy vehicle trips.

The business plan provides a reasonable prediction of potential daily traffic generations; it is based on current traffic demands of the site and adjustments for the new operating platform. The potential daily traffic demands are shown in Figure 1.

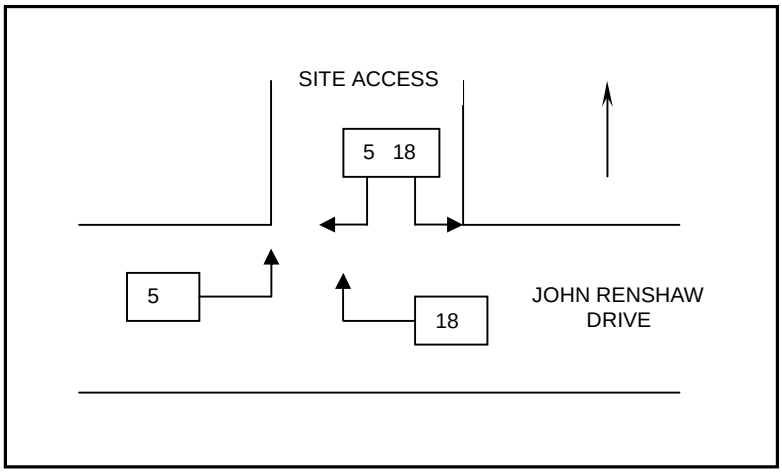

FIGURE 1 – POTENTIAL DAILY TRAFFIC GENERATIONS

Key traffic factors of the project are:

- The hours of operation are scheduled for 0700 to 1700 Mon-Fri, 0700-1200 Sat
- The staff and other light vehicles represent 20 of the total daily 46 trips; the staff will arrive during the shoulder peak period of the typical business peak on John Renshaw Drive when acceptable gaps and pavement tapers are presented to complete their movements into the site. The staff departure traffic will be in between the trades and business peaks for this section of the network and acceptable gaps are again anticipated.
- The 26 heavy vehicle trips will be spread over the typical day; random arrival/departure of such low demands determines that there is a minimal to nil likelihood of more that one right turn, entry heavy vehicle arrival at any time.
- The right turn into the access road will not exceed 9 trips in any one hour
- RTA Traffic Volume Data records indicate an AADT of 10 to 12,000vpd on John Renshaw Drive (MR 588); TPK has concluded that the maximum opposing hourly flow for the right turn into the subject access road would be 700vph in any one hour.
- Photographs P1& P2 confirm adequate safe intersection sight distance (SISD) is available for the existing 100kph road environment.
- The access road approach is Stop sign controlled encouraging side road traffic to make informed decisions prior to entering John Renshaw Drive.
- The access road is a sealed approach minimising the risk of transfer of loose materials onto the public road network.

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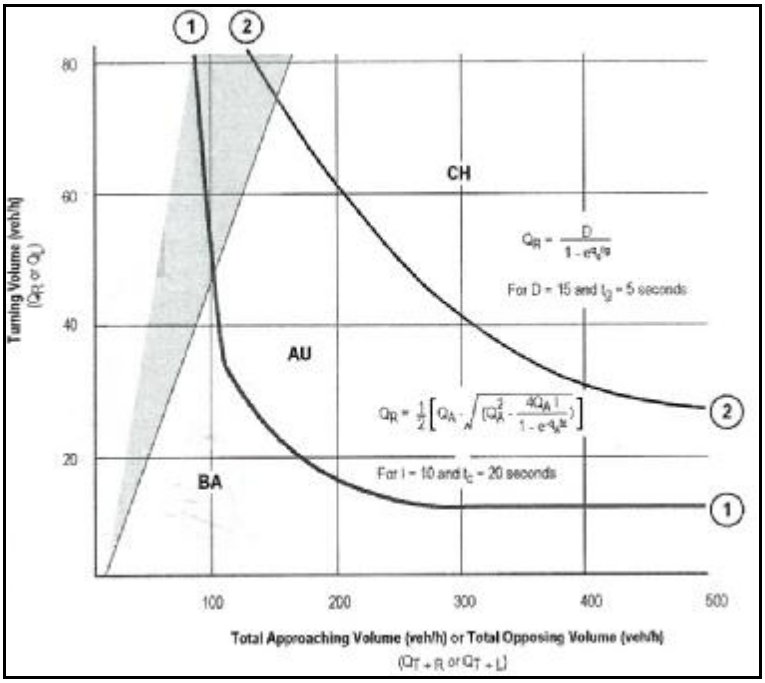
- TPK did not consider it was necessary to undertake intersection modelling to confirm capacity given the small volumes to/from the access road.
- The access road provides acceptable approach sight lines to John Renshaw Drive intersection; see photograph P3 below.

P3. ACCESS ROAD

Austroads, Part 5, Intersections at Grade, Figure 6.41 provides a chart suitable for identification of the appropriate geometric layout for intersections on rural roads; the chart is provided below.



AUSTROADS PART 5, FIGURE 6.41

TPK has assessed that the right turn movement into the subject site from John Renshaw Drive will not exceed 9vph at any time. Referencing the Austroads chart the suggested geometric layout for the subject intersection is in the BA area.

The existing channelisation plan for the access road intersection is provided in Appendix A of this report. TPK submits that the current layout exceeds the RTA Road Design Guide requirements for BAR and BAL combined layouts and that the potential traffic generated to operate under the increased tonnes per year (as per Figure 1) does not require further road improvements at this location.

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SECTION 4 – SUMMATION

The assessment by TPK & Associates has concluded that:

- ü The proposed increase in capacity of the land use business operation will not generate an increase in traffic that would have an adverse impact on road network or intersection capacity.

- ü The current channelisation at the intersection of the site access with John Renshaw Drive will continue to manage the road safety in terms of road environment requirements including safe intersection sight distance.

Prepared by

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APPENDIX A

EXISTING CHANNELISATION

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