



61 York Street
Subiaco WA 6008
P.O.BOX 42 Subiaco WA 6904
Phone: +61 (08) 9382 4199
Fax: +61 (08) 9382 4177
Email: admin@transcore.net.au



transport planning • traffic engineering • project management

TRANSCORE PTY LTD AS TRUSTEE FOR THE TRANSCORE TRUST
ACN 094 951 318 ABN 85 707 500 280

Technical Note: No 1

Date: 28/05/2020

Project No: t20.128

Project: Brighton Employment Composite Precinct – Rezoning Proposal

Subject: Traffic Assessment

Introduction

An amendment to the Agreed Butler-Ridgewood Local Structure Plan (LSP) has been prepared (Amendment No.25) to rezone the Amendment Area from “Service Industrial” to “Special Use”. Appendix A shows the existing Butler-Ridgewood Agreed Local Structure Plan and the Proposed Amendment No.25.

The purpose of this Special Use Zone (Brighton Employment Composite Precinct) is to facilitate permanent residential accommodation within the Service Industry Zone by:

- Carrying over the majority of the land uses (non-residential) from the current Service industry zone, with some exceptions at the request of the City (including Consulting Room, Office, Private Recreation and Public Exhibition Centre); and,
- Providing for business owners to live at their place of business – which could include a detached house, strata type situation or an apartment example.

It is expected that the proposed amendment would change the traffic pattern including trip generation and distribution, trip distances, and peak traffic periods and volumes of the LSP area and therefore the City of Wanneroo has requested that the traffic implications of the proposed amendment should be investigated to ensure satisfactorily traffic operations as a result of the proposed amendment.

The purpose of this technical note is to quantify the traffic implications of the proposed amendment.

Existing Situation

The Amendment Area (approx.3.8ha) is generally bound by Landbeach Boulevard to the west, Trinity Residential Estate to the north, Mitchell Freeway reservation to the east, and the eastern-most stretch of the Brighton District Centre to the south. A mechanic business is currently operating from Lot 3119. Paisley Link provides internal connectivity to the existing Lots and connects to Landbeach Boulevard via two priority-controlled T-intersections (refer **Figure 1**).



Figure 1: Subject site

Trip Generation

According to the “Employment Assessment” undertaken by Macro Plan Dimasi (August 2019) the development of the site as Employment Composite Zone would allow the site to still achieve the same employment potential as it would under the current planning controls due to more intensive employment uses on site. Accordingly, with the proposed amendment, the Employment Composite Zone could yield an estimated 96 jobs, compared with estimated 97 jobs by 2031 under the existing zoning and at full buildout. Therefore, there is no material loss of employment as a result of the proposal.

The proposed amendment would conservatively provide the opportunity for approximately 50 residents (within the existing 19 Lots) within the amended area. It

should be noted that the above assumptions (about 100 employees and 50 residents by 2031) are very conservative and depend on the type of businesses and residential dwellings which would be planned and developed for the amendment area.

In order to establish the trip generation of the amendment area during different hours of the day reference was made to table 3.4 of the RTA Trip Generation Guidelines for industrial estates. This table is based on 1000 employees for areas of wide range of industry types. The trip rates in Table 3.4 are presented only as a general indication of traffic generation. Commercial vehicle trip generation depends on industry type. However, the figures in Table 3.4 can be used for the purpose of establishing the net traffic change due to the proposed amendment. The trip rates in this table were adjusted for 100 employees to reflect more or less the number of employees in 2031 for both scenarios (agreed and amended LSPs).

Table 1 summarises the trip rates (based on Table 3.4 of RTA Guidelines) and trip generation of the subject site as per the agreed LSP with full build out in 2031. It was assumed that the LSP area would include about 100 employees.

Table 1: Trip generation of the subject site as per the agreed LSP

Period	Cars/hr/100 staff	CVs/hr/100 staff	Total Vehicles
7 - 8 am	10	0	10
8 - 9 am	31	1	32
9 - 10 am	21	3	23
10 - 11 am	11	3	14
11 - 12 pm	8	3	12
12 - 1 pm	13	3	16
1 - 2 pm	16	3	20
2 - 3 pm	11	3	14
3 - 4 pm	16	3	19
4 - 5 pm	27	2	29
5 - 6 pm	35	2	37
6 - 7 pm	4	0	4
Total	203	27	230

Table 2 summarises the trip generation of the proposed amendment area including the industrial and residential land uses. The following assumptions were made for estimation of the trip generation:

- The residents would generate approximately 3 vehicle trips per day (equivalent of about 8 vehicles per dwellings per day);
- The home to work/ work to home trips would be about 18% of the total vehicle trips (based on PARTS survey December 2006);
- The residents who work from their place of residence would not generate any home to work or work to home trips;
- The majority of the residents would work from their place of residence;

- The staff trips would form about 35% of the industrial trips which would be removed from the total trips of the industrial areas.

Table 2: Trip generation of the proposed amendment area

Period	Cars/hr/100 staff	CVs/hr/100 staff	Cars/hr/50 residents	Total Vehicles	Net traffic change
7 - 8 am	7	0	5	12	2
8 - 9 am	20	1	3	24	-8
9 - 10 am	13	2	13	29	5
10 - 11 am	7	2	14	24	10
11 - 12 pm	5	2	15	23	11
12 - 1 pm	9	2	16	27	11
1 - 2 pm	11	2	17	30	11
2 - 3 pm	7	2	12	21	8
3 - 4 pm	11	2	10	23	4
4 - 5 pm	17	2	5	24	-5
5 - 6 pm	23	1	7	31	-6
6 - 7 pm	3	0	3	6	2
Total	142	19	123	274	44

As evident from Table 2 and Figure 2 the net traffic change due to the proposed amendment would be minimal (increase of about 44 vehicle trips per day and increase of up to 11 vehicles during off peak hours) and would have insignificant impact on the traffic operation of the surrounding road and intersections. In fact, the proposed amendment would result in less traffic during the road network peak hours as there would be reduction of commuter trips (home to work or work to home) during these periods.

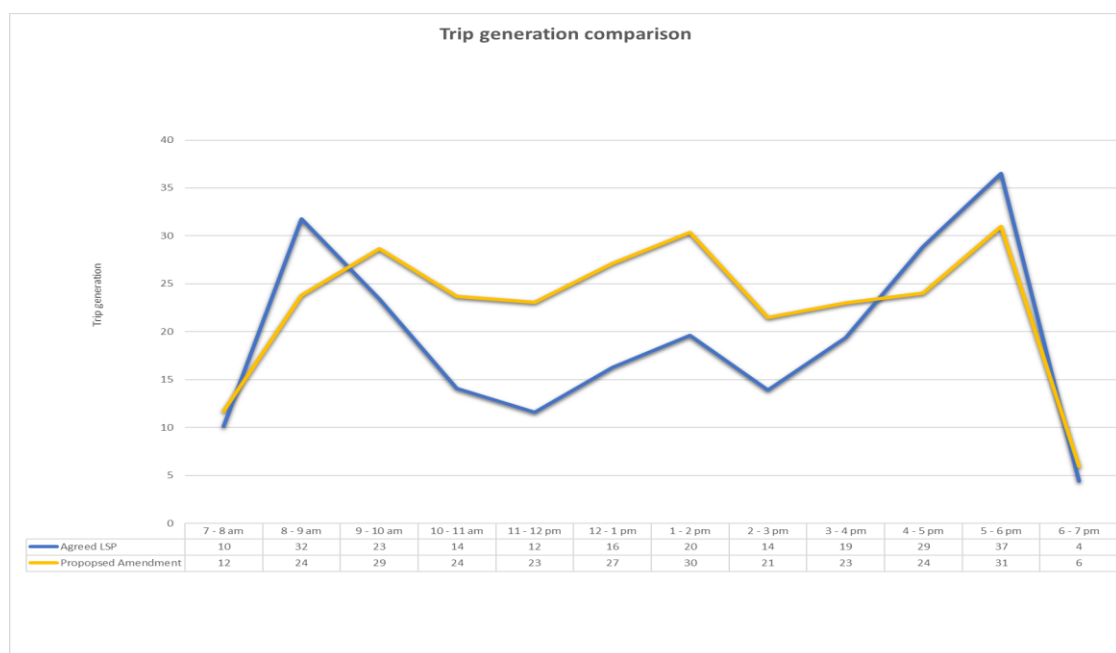


Figure 2: Trip generation of the LSP for agreed and amendment scenarios

It should also be noted that the proposed amendment would result in reduced overall trip distances and travel times which in turn results in less pressure on the wider transport network as a result of more jobs in the local area.

Conclusions

An amendment to the Agreed Butler-Ridgewood Local Structure Plan (LSP) has been prepared (Amendment No.25) to rezone the Amendment Area from “Service Industrial” to “Special Use”.

The purpose of the Special Use Zone is to facilitate permanent residential accommodation within the Service Industry Zone, where the occupants of the dwellings are business owners or operators of a service industry business undertaken from the site.

According to the “Employment Assessment” undertaken by Macro Plan Dimasi (August 2019) the development of the subject site as Employment Composite Zone would allow the site to still achieve the same employment potential as it would under the current planning controls.

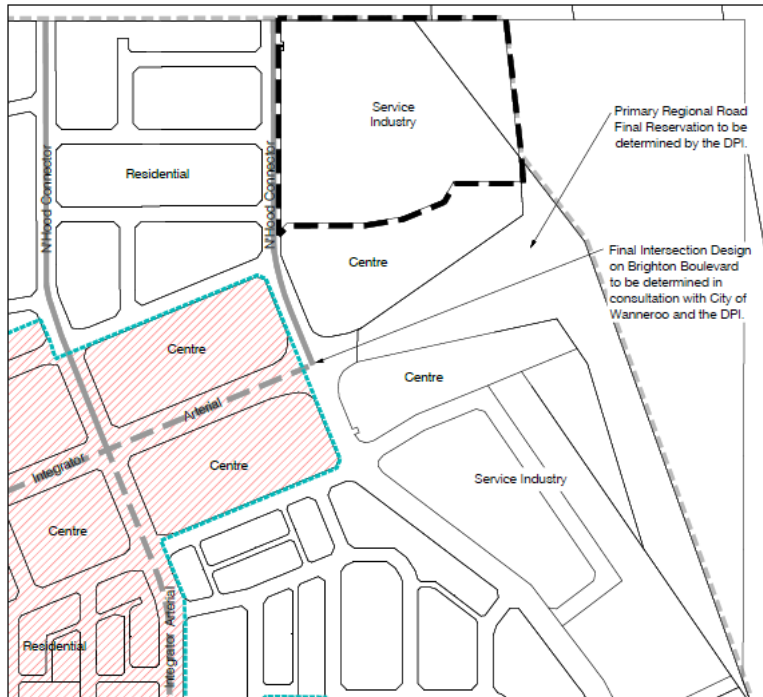
The proposed amendment would conservatively provide the opportunity for approximately 50 residents (within the existing 19 Lots) within the amended area.

Trip generation analysis undertaken indicates that the net traffic change due to the proposed amendment would be minimal and would have insignificant impact on the traffic operation of the surrounding road and intersections. In fact, the proposed amendment would result in reduced traffic volumes during the road network peak hours as there would be a reduction of commuter trips (home to work or work to home) during these periods.

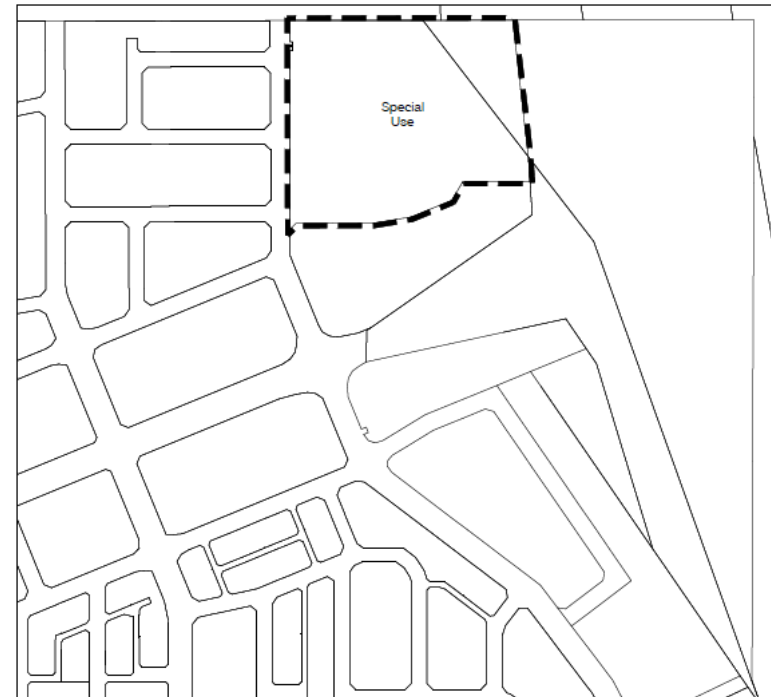
It should also be noted that the proposed amendment would result in reduced overall trip distances and travel times which in turn results in less pressure on the wider transport network as a result of more jobs in the local area.

Appendix A

Existing Butler-Ridgewood Agreed Local Structure Plan and Proposed Amendment No.25



EXISTING BUTLER RIDGEWOOD AGREED LOCAL STRUCTURE PLAN



PROPOSED AMENDMENT

LEGEND	
	Boundary of Amendment
	Subject Land - Structure Plan Boundary
	Special Design Precinct



Butler Ridgewood Agreed Local Structure Plan

Proposed Amendment 25

Plan No. 1: Agreed Local Structure Plan