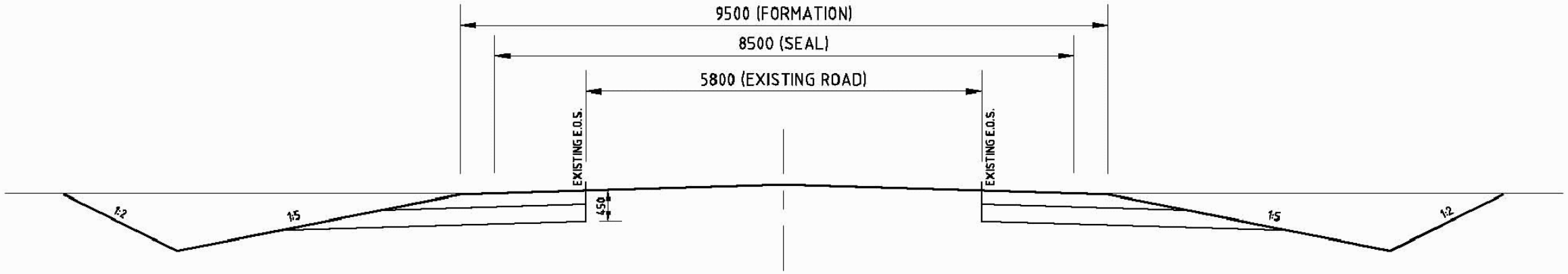

SECTION 9

RURAL 2 LANE ROAD
(UPGRADE OF EXISTING ROAD)

No.	Date	Revision Details	By
A	12-06-07	FINAL REPORT	JRD

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CHRISTCHURCH ROLLESTON AND ENVIRONS TRANSPORTATION STUDY

Drawing Title:

TRANSPORT STRATEGY
TYPICAL SECTION 9
FINAL REPORT

Drawn	JRD	Date	12-06-07
Designed	JRD	Scale	NTS
Verified	MDF		
Approved	MDF		
CW Project No.	21654	Figure No.	FR-SEC9
		Rev.	A

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Friday, 17 April 2009

REVISION	DATE	DESCRIPTION
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SPBL Rural Residential Plan Change

Proposed Dunns Crossing Road Carriageway Section

DRAWN: DKN
DATE: 05.11.2008
SCALE: 1:75 @ A3
DWG NO:9819-2-C6A

Traffic Design Group

6

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The traffic volumes shown above indicate the dominance of SH1 in the vicinity of the site and highlight its arterial function. Rolleston itself clearly contributes significantly to the traffic volumes on SH1 to the east of Rolleston, with a substantial change in traffic volume between the two SH1 count sites. Both Dunns Crossing Road and Burnham School Road have traffic volumes consistent with Local Roads providing an access function.

4.2 Road Safety

A search of the NZTA Crash Analysis System (CAS) has been undertaken to determine the road safety history of the road network in the vicinity of the site. The crash analysis was undertaken to include Dunns Crossing Road between SH1 and Selwyn Road, including intersections, for the five year period from 2004 and 2008 inclusive. The crash search identified nine crashes during the review period.

A minor injury crash and two non-injury crashes occurred at the SH1/Dunns Crossing Road /Walkers Road intersection. The injury crash and one non-injury crash occurred as a result of vehicles on Dunns Crossing Road failing to give way to SH1 traffic. The other non-injury crash occurred due to driver loss of control.

An injury crash and two non-injury crashes occurred at the Dunns Crossing Road/Brookside Road intersection. All the crashes at the intersection were due to drivers failing to give way to oncoming traffic.

Two loss of control crashes occurred on Dunns Crossing Road at a position 800m and 1500m north of Selwyn Road respectively. Neither crash resulted in injury.

The remaining crash resulted in minor injuries and occurred at the Dunns Crossing Road/ Selwyn Road intersection. The crash was a result of a vehicle southbound on Dunns Crossing Road failing to give way to oncoming traffic.

This crash search shows that there are no locations in the immediate vicinity where there have been multiple injury accidents. However, the presence of the multiple crashes (including non-injury) at the low volume crossroad intersection of Brookside Road / Dunns Crossing indicates the issue referenced earlier relating to the high run up speeds to the intersection that has a ‘see through’ effect i.e. drivers could perceive a continuous road.

5. The Proposal

It is proposed to rezone the 73ha site from the existing Outer Plains zone to a new zone, Living 3, which permits rural residential development. The proposed average lot size for development of the site is slightly greater than 5,000m^2 and the site will provide for 125 lots. It is envisaged that development of the site would occur from approximately 2011, with full development expected prior to 2026.

Figure 7 shows the Concept Plan for the site. It is proposed to provide an internal road network in a grid layout. The site will be accessed from a two new road connections to Dunns Crossing Road. There will be a number of lots fronting Dunns Cross Road that will be accessed directly from the road. The internal road hierarchy and road standards are discussed in detail within the following section of this report.

Scale 1:5,000 @ A3

PLANTING TYPES:

Feature Planting

Street Tree Planting

Shelter Belt Planting

Buffer Planting

YIELD:

Total Lots: 125

Gross Area: 72.7ha

Net Area: 63.1ha (86.7%)

Average Lot Size: 5048m²

Project No. 1021.127337.01
Drawing No. 127337-PSC2-v22
Scale: 1:5000 at A3

7

Selwyn Plantation Board Limited
Land at Dunns Crossing Road
Rolleston
March 2009

SKELLERUP BLOCK
Subdivision and Landscape Concept

HARRISON GRIERSON
CONSULTING ENGINEERS SURVEYORS PLANNERS
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Assessment of potential speeds within the site based on the length of road sections indicates that operating speeds within the site are expected to be limited to approximately 60km/hr. The future speed limit of Dunns Crossing Road will depend on how development of the area to the northeast of Dunns Crossing Road is developed. However, the style of the existing residential development on the northern side of Dunns Crossing Road may suggest that a future speed limit of 50km/h will be appropriate.

6. Internal Road Standards

6.1 Road Hierarchy

An assessment of traffic volumes on the internal road network of the site has been undertaken based on the location of lots and the relevant connections to the existing road network. This assessment has then been used to create a proposed road hierarchy diagram for the site.

Figure 8 shows the proposed internal road hierarchy. Only two road standards are proposed, a secondary road and a neighbourhood road, given the variation in traffic volumes anticipated on roads within the site.

The Selwyn District Plan Road Hierarchy consists of Strategic, Arterial, Collector and Local Road classifications. Based on the predicted traffic volumes it is considered that all internal roads within the site will be classified as Local Roads under the District Plan.

6.2 Cross Sections

The following standards are proposed for the internal road network based on the assessed volumes and speed limits:

Road	Typical Daily Traffic Volume (vpd)	Traffic Lanes	Sealed Shoulder	Sealed Width
Neighbourhood	100vpd	5.0m (2x2.5m)	0.5m	6.0m
Secondary	400vpd	6.0m (2x3.0m)	0.5m	7.0m

Table 2: Proposed Road Carriageway Standards

Road standards for rural roads are provided within Table 3.2 – Road design standards - Rural of NZS4404:2004, *Land Development and Subdivision Engineering*. The following table summarises the specifications:

Element	Design AADT (vpd)			
	1-300	300-700	700-1,000	1,000-3,000
Traffic Lanes	5.0m (2x2.5m)	6.0m (2x3.0m)	7.0m (2x3.5m)	7.0m (2x3.5m)
Each Shoulder (sealed)	0.5m (0.5m)	1.0m (0.5m)	1.0m (0.5m)	1.0m (0.5m)
Total Sealed Width	6.0m	7.0m	8.0m	8.0m

Table 3: Rural Road Carriageway Standards (NZS4404:2004)