

APPENDIX : 1 DEMOGRAPHIC PROFILING

GENERAL	CATCHMENT	WAIMAKARIRI
Population	1349	50,858
Households	464	19,582
Person Per Dwelling Ratio	2.91	2.60

AGE PROFILE

0-4 Years	6%	6%
5-9 Years	10%	7%
10-14 Years	8%	7%
15-19 Years	6%	7%
20-24 Years	3%	4%
25-29 Years	2%	4%
30-34 Years	3%	4%
35-39 Years	7%	6%
40-44 Years	10%	8%
45-49 Years	11%	8%
50-54 Years	8%	8%
55-59 Years	8%	7%
60-64 Years	8%	7%
65 years and Over	10%	17%

HOUSEHOLD INCOME PROFILE

\$20,000 or Less	2%	7%
\$20,001-\$30,000	5%	11%
\$30,001-\$50,000	8%	18%
\$50,001-\$70,000	10%	15%
\$70,001-\$100,000	23%	20%
\$100,001 or More	52%	28%

PERSONAL INCOME PROFILE

\$5,000 or Less	13%	12%
\$5,001-\$10,000	5%	4%
\$10,001-\$20,000	12%	19%
\$20,001-\$30,000	9%	14%
\$30,001-\$50,000	20%	22%
\$50,001 or More	42%	28%

ETHNICITY

European Ethnic Groups	91%	88%
Māori Ethnic Group	5%	7%
Pacific Peoples' Ethnic Groups	0%	1%
Asian Ethnic Groups	2%	2%
MELAA Ethnic Groups	0%	0%
Other Ethnic Groups	1%	2%

HOUSEHOLD STRUCTURE

Single	7%	19%
Couple	41%	37%
Single Parent With Children	6%	8%
Two Parent Family	45%	33%
Other Multi-person	1%	2%

QUALIFICATION ATTAINMENT	CATCHMENT	WAIMAKARIRI
No Qualification	16%	24%
Level 1 Certificate	16%	16%
Level 2 Certificate	12%	12%
Level 3 Certificate	7%	8%
Level 4 Certificate	11%	13%
Level 5 or Level 6 Diploma	15%	10%
Bachelor Degree and Level 7 Qualifications	12%	8%
Postgraduate and Honours Degrees	3%	2%
Masters Degree	3%	1%
Doctorate Degree	1%	0%
Overseas Secondary School Qualification	4%	4%

EMPLOYMENT		
Employed - Full Time	57%	50%
Employed - Part Time	16%	16%
Unemployed	2%	3%
Not in Labour Force	25%	31%

EMPLOYMENT CLASSIFICATION		
Managers	22%	19%
Professionals	22%	16%
Technicians and Trades Workers	11%	16%
Community and Personal Service Workers	7%	8%
Clerical and Administrative Workers	15%	12%
Sales Workers	7%	9%
Machinery Operators and Drivers	5%	7%
Labourers	10%	13%

STUDENT PROPORTIONS		
Full Time	8%	7%
Part Time	3%	3%
Full-time and Part-time Study	0%	0%
Not Studying	89%	90%

SOURCES OF HOUSEHOLD INCOME		
Wages, Salary, Commissions, Bonuses etc	80%	69%
Self-employment or Business	39%	27%
Interest, Dividends, Rent, Other Invest.	47%	30%
Payments from a Work Accident Insurer	2%	2%
NZ Superannuation or Veterans Pension	20%	26%
Other Super., Pensions, Annuities	8%	4%
Unemployment Benefit	1%	2%
Sickness Benefit	2%	2%
Domestic Purposes Benefit	1%	3%
Invalids Benefit	3%	2%
Student Allowance	1%	1%
Other Govt Benefits, Payments or Pension	5%	6%
Other Sources of Income	2%	2%
No Source of Income During That Time	1%	0%

INDUSTRY OF EMPLOYMENT	CATCHMENT	WAIMAKARIRI
Agriculture, Forestry and Fishing	6%	10%
Mining	0%	0%
Manufacturing	11%	12%
Electricity, Gas, Water and Waste Services	1%	1%
Construction	13%	14%
Wholesale Trade	8%	5%
Retail Trade	7%	10%
Accommodation and Food Services	3%	4%
Transport, Postal and Warehousing	5%	5%
Information Media and Telecommunications	2%	1%
Financial and Insurance Services	3%	2%
Rental, Hiring and Real Estate Services	4%	2%
Professional, Scientific and Technical Services	8%	6%
Administrative and Support Services	3%	3%
Public Administration and Safety	3%	4%
Education and Training	9%	6%
Health Care and Social Assistance	8%	9%
Arts and Recreation Services	2%	2%
Other Services	5%	5%

HOME OWNERSHIP		
Dwelling Owned or Partly Owned	67%	65%
Dwelling Not Owned and Not Held in a Family Trust	9%	20%
Dwelling Held in a Family Trust	24%	15%

YEARS AT RESIDENCE		
0 Years	22%	22%
1-4 Years	28%	30%
5-9 Years	23%	23%
10-14 Years	18%	11%
15-29 Years	7%	11%
30 Years or More	1%	3%

NUMBER OF BEDROOMS		
One Bedroom	2%	4%
Two Bedrooms	6%	14%
Three Bedrooms	21%	41%
Four Bedrooms	52%	33%
Five Bedrooms	17%	6%
Six Bedrooms	2%	1%
Seven Bedrooms	0%	0%
Eight or More Bedrooms	0%	0%

NUMBER OF RESIDENTS		
1 Residents	6%	19%
2 Residents	40%	40%
3 Residents	17%	15%
4 Residents	22%	17%
5 Residents	10%	7%
6 Residents	3%	2%
7 Residents	1%	0%
8 Plus Residents	0%	0%

APPENDIX : 2 RETAIL EXPENDITURE MODEL

This overview outlines the methodology that has been used to estimate retail spend generated at Meshblock (MB) level for the identified catchments out to 2031.

Statistics New Zealand Boundaries

Analysis has been based on Meshblock and Census Area Unit (CAU) 2006 / 2013 boundaries, depending on the format of the most recently available datasets.

Permanent Private Households (PPH) 2013

These are the total Occupied Households as determined by the Census 2013. PPHs are the primary basis of retail spend generation and account for approximately 66% of all retail sales. PPHs have regard for (exclude) the proportion of dwellings that are vacant at any one time in a locality, which can vary significantly, and in this respect account for the movement of some domestic tourists.

Permanent Private Household Forecasts 2013-2031

These are based on Statistics NZ Census Area Unit (CAU) Medium Series Population Growth Projections and have been adjusted to account for residential building consent activity occurring between 2006 and 2013, with this extrapolated to the year of concern. This accounts for recent building activity, particularly important for the 5-10 year forecasts, and effectively updates Statistics NZ projections to reflect recent trends. Geo-spatial differences in growth between 2006 and 2013 CAUs and MBs have been accounted for with a pro rata distribution.

International Tourist Spend

The total international tourism retail spend has been derived from the Ministry of Economic Development Tourism Strategy Group (MEDTSG) estimates nationally. This has been distributed regionally on a 'spend per employee' basis, using regional spend estimates prepared by the MEDTSG. Domestic and business based tourism spend is incorporated in the employee and PPH estimates. Employees are the preferred basis for distributing regional spend geo-spatially as tourists tend to gravitate toward areas of commercial activity, however they are very mobile.

Total Tourist Spend Forecast

Growth is conservatively forecast in the model at 2% per annum for the 2014-2031 period.

2013-2031 PPH Average Household Retail Spend

This has been determined by analysing the national relationship between PPH average household income (by income bracket) as determined by the 2006 Census, and the average PPH expenditure of retail goods (by income bracket) as determined by the Household Economic Survey (HES) prepared by Statistics NZ.

While there are variables other than household income that will affect retail spending levels, such as wealth, access to retail, population age, household types and cultural preferences, the effects of these are not able to be assessed given data limitations, and have been excluded from these estimates.

Real Retail Spend Growth (excl. trade based retailing)

Real retail spend growth has been factored in at 1% per annum. This accounts for the increasing wealth of the population and the subsequent increase in retail spend. The following explanation has been provided.

Retail Spend is an important factor in determining the level of retail activity and hence the 'sustainable amount' of retail floorspace for a given catchment. For the purposes of this outline 'retail' is defined by the following categories:

- Food Retailing
- Footwear
- Clothing and Softgoods
- Furniture and Floor coverings
- Appliance Retailing
- Chemist
- Department Stores
- Recreational Goods
- Cafes, Restaurants and Takeaways
- Personal and Household Services
- Other Stores.

These are the retail categories as currently defined by the ANZSIC codes (Australia New Zealand Standard Industry Classification).

Assessing the level and growth of retail spend is fundamental in planning for retail networking and land use within a regional network.

Internet Retail Spend Growth

Internet retailing within New Zealand has seen significant growth over the last few decades. This growth has led to an increasing variety of business structures and retailing methods including; internet auctions, just-in-time retailing, online ordering, virtual stores, and etc.

As some of internet spend is being made to on-the-ground stores, a proportion of internet expenditure is being represented in the Statistics NZ Retail Trade Survey (RTS) while a large majority remain unrecorded. At the same time this expenditure is being recorded under the Household Economic Survey (HES) as part of household retail spend, making the two datasets incompatible. For this reason Property Economics has assumed a flat 5% adjustment percentage on HES retail expenditure, representing internet retailing that was never recorded within the RTS.

Additionally, growth of internet retailing for virtual stores, auctions and overseas stores is leading to a decrease in on-the-ground spend and floorspace demand. In order to account for this, a non-linear percentage decrease of 6.3% in 2016 growing to 10% by 2031 has been applied to retail expenditure encompassing all retail categories in our retail model. These losses represent the retail diversion from on-the-ground stores to internet based retailing that will no longer contribute to retail floorspace demand.

Retail Spend Determinants

Retail Spend for a given area is determined by: the population, number of households, size and composition of households, income levels, available retail offer and real retail growth. Changes in any of these factors can have a significant impact on the available amount of retail spend generated by the area. The coefficient that determines the level of 'retail spend' that eventuates from these factors is the MPC (Marginal Propensity to Consume). This is how much people will spend of their income on retail items. The MPC is influenced by the amount of disposable and discretionary income people are able to access.

Retail Spend Economic Variables

Income levels and household MPC are directly influenced by several macroeconomic variables that will alter the amount of spend. Real retail growth does not rely on the base determinants

changing but a change in the financial and economic environment under which these determinants operate. These variables include:

Interest Rates: Changing interest rates has a direct impact upon households' discretionary income as a greater proportion of income is needed to finance debt and typically lowers general domestic business activity. Higher interest rates typically lower real retail growth.

Government Policy (Spending): Both Monetary and Fiscal Policy play a part in domestic retail spending. Fiscal policy, regarding government spending, has played a big part recently with government policy being blamed for inflationary spending. Higher government spending (targeting on consumer goods, direct and indirectly) typically increases the amount of nominal retail spend. Much of this spend does not, however, translate into floorspace since it is inflationary and only serves to drive up prices.

Wealth/Equity/Debt: This in the early-mid 2000s had a dramatic impact on the level of retail spending nationally. The increase in property prices has increased home owners unrealised equity in their properties. This has led to a significant increase in debt funded spending, with residents borrowing against this equity to fund consumable spending. This debt spending is a growth facet of New Zealand retail. In 1960 households saved 14.6% of their income, while households currently spend 14% more than their household income.

Inflation: As discussed above, this factor may increase the amount spent by consumers but typically does not dramatically influence the level of sustainable retail floorspace. This is the reason that productivity levels are not adjusted but similarly inflation is factored out of retail spend assessments.

Exchange Rate: Apart from having a general influence over the national balance of payments accounts, the exchange rate directly influences retail spending. A change in the \$NZ influences the price of imports and therefore their quantity and the level of spend.

General consumer confidence: This indicator is important as consumers consider the future and the level of security/finances they will require over the coming year.

Economic/Income growth: Income growth has a similar impact to confidence. Although a large proportion of this growth may not impact upon households MPC (rather just increasing the

income determinant) it does impact upon households discretionary spending and therefore likely retail spend.

Mandatory Expenses: The cost of goods and services that are necessary has an impact on the level of discretionary income that is available from a households disposal income. Important factors include housing costs and oil prices. As these increase the level of household discretionary income drops reducing the likely real retail growth rate.

Current and Future Conditions

Retail spending experienced a significant real increase in the early-mid 2000s. This was due in large part to the increasing housing market. Although retail growth is tempered or crowded out in some part by the increased cost of housing it showed massive gains as home owners, prematurely, access their potential equity gains. This resulted in strong growth in debt / equity spending as residents borrow against capital gains to fund retail spending on consumption goods. A seemingly strong economy also influenced these recent spending trends, with decreased employment and greater job security producing an environment where households were more willing to accept debt.

Over the years 2008 – 2012 this trend reversed with the worldwide GFC recession taken grip. As such, the economic environment underwent rapid transformation. The national market is currently experiencing low interest rates (although expected to increase over this coming year) and a highly inflated \$NZ (increasing importing however disproportionately). Now emerging is a rebound in the property market and in general business confidence as the economy starts to recover from the post-GFC hangover. These factors will continue to influence retail spending throughout the next 5 or so years. Given the previous years (pre-2008) substantial growth and high levels of debt repayment likely to be experienced by New Zealand households, it is expected that real retail growth rates will continue to be subdued for the short term.

Impacts of Changing Retail Spend

At this point in time a 1% real retail growth rate is being applied by Property Economics over the longer term 20 year period. This rate is highly volatile however and is likely to be in the order of 0.5% to 1% over the next 5 – 10 years rising to 1% - 2% over the more medium term as the economy stabilises and experiences cyclical growth. This would mean that it would be prudent in the shorter term to be conservative with regard to the level of sustainable retail floorspace within given centres.

Business Spend

This is the total retail spend generated by businesses. This has been determined by subtracting PPH retail spend and Tourist retail spend from the Total Retail Sales as determined by the Retail Trade Survey (RTS) which is prepared by Statistics NZ. All categories are included with the exception of accommodation and automotive related spend. In total, Business Spend accounts for 18% of all retail sales in NZ. Business spend is distributed based on the location of employees in each Census Area Unit and the national average retail spend per employee.

Business Spend Forecast 2014-2031

Business spend has been forecasted at the same rate of growth estimated to be achieved by PPH retail sales in the absence reliable information on business retail spend trends. It is noted that while working age population may be decreasing as a proportion of total population, employees are likely to become more productive over time and therefore offset the relative decrease in the size of the total workforce.

APPENDIX : 3 CONVENIENCE STORE TYPES

Note this is not intended to represent an exhaustive list.

EXAMPLES OF CONVENIENCE RETAIL STORE TYPES

- Superette / Dairy / Mini-mart
- Fish shop
- Butcher
- Bakery
- Post Shop / Stationery
- Fruit & Vege Shop
- Delicatessen
- Cake Shop
- Ice Cream Parlour
- Liquor / Wine Shop
- Takeaways (Fish & Chips, Pizza, Chinese, Thai, Turkish, Indian, etc.)
- Cafés & Restaurants
- Video store
- Newsagent
- Pub / Bar
- Florist
- Gift Shops
- Pharmacy

EXAMPLES OF CONVENIENCE COMMERCIAL / PROFESSIONAL SERVICE ACTIVITIES

- Camera / Photography Shop
- Optometrist
- Locksmith
- Hairdresser
- Drycleaners
- Doctors
- Accountants
- Physiotherapists
- Medical practitioners
- Dentists
- Child care facilities
- Gym
- Lawyers

Appendix V:
GAP Analysis

Objective	Provision Description	Proposal description
Chapter 2: Maori Objective 2.1.1	Objective 2.1.1 addresses tangata whenua as a treaty partner, the principles of the Treaty of Waitangi (Te Tiriti O Waitangi), the parties identified as tangata whenua and that these parties will be provided for to participate in management of the District's resources.	The objectives of Chapter 2 are broad considerations that apply across a range of planning processes including the review of planning documents. In the context of the issues dealt with under PC33, it is considered that these issues are able to be appropriately addressed.
Chapter 8: Natural Hazards Objective 8.2.1 Policy 8.2.1.1		Natural hazards from flooding require assessment and appropriate protection in regard to floodwaters entering buildings. In the context of the issues dealt with under PC33, it is considered that these issues are appropriately addressed.
Chapter 11: Utilities and Traffic Management Objective 11.1.1 Policy 11.1.1.2 Policy 11.1.1.3 Policy 11.1.1.4 Policy 11.1.1.5	Objective 11.1.1 focus on utility provision enhancing and maintaining community wellbeing.	<p>Objective 11.1.1, through Policy 11.1.1.2 requires every new site with a design catchment of an existing or proposed utility to connect to the utility wherever possible. Mandeville is serviced by both a reticulated water and sewer network. Policy 11.1.1.3 supports Policy 11.1.1.2 by indicating that development should not proceed in areas where there is not an appropriate utility or an appropriate alternative. By protecting the safe and efficient functioning of the district's road network, and ensuring that vehicle access is to an appropriate level of road in the roading hierarchy the existing policies and objectives of the Plan appropriately address the issue of traffic and vehicle access identified above. The onsite effects of traffic management are also considered under policies 11.1.1.6 and 11.1.1.7, which require that vehicle entranceways and onsite car parking are appropriately managed to protect the safe and efficient functioning of the road network.</p> <p>Policies 11.1.1.4 and 11.1.1.5 require that a road hierarchy is maintained, with new developments or activities locating access to an appropriate level of road within the roading hierarchy. Tram Road is classified as an "arterial Road", which is classified as a road of major importance in the district. In the context of this PC33, the objective s and policies require consideration to be given to protecting the safe and efficient functioning of this Road.</p>

		<p>Policies 11.1.1.1 and 13.1.1.3 of the Plan give effect to Objective 13.1.1 and Objective 11.1.1 by encouraging promotion of alternative transport modes. These policies are also key methods in which the Plan gives effect to the specific Act requirement to have regard to the effects of climate change.</p>
<p>Chapter 12: Health, Safety and Wellbeing</p> <p>Objective 12.1.1</p> <p>Policy 12.1.1.1</p> <p>Policy 12.1.1.2</p> <p>Policy 12.1.1.4</p> <p>Policy 12.1.1.5</p> <p>Policy 12.1.1.6</p> <p>Policy 12.1.1.8</p> <p>Policy 12.1.4.1</p>	<p>Objectives 12.1.3 and 12.1.4 and Policies 12.1.1.1 to 12.1.1.8 address a range of matters including the effects and contribution of structures and natural features on urban amenity and management of the effects from signs, noise and glare on the surrounding area.</p>	<p>Objective 12.1.1, when read with the anticipated characteristics of the Rural Zone and Residential Zones provide a framework for assessing the degree to which development and/or growth maintains or enhances the characteristics of the respective zones. This framework is considered to appropriately provide for an assessment of how the proposed plan change maintains the existing characteristics of the Mandeville settlement.</p> <p>Objective 12.1.1 seeks to:</p> <p><i>“Maintain the amenity values and a quality of environment appropriate for different parts of the District which protects the health, safety and wellbeing of present and future generations, and ensure that any potential adverse environmental effects from buildings and structures, signs, glare, noise and hazardous substances are avoided or mitigated.”</i></p> <p>Objective 12.1.1 is supported by policies that require consideration of a number of environmental effects including the effect of structure bulk and location (Policy 12.1.1.1), amenity values associated with business zones (Policy 12.1.1.2), signage (Policy 12.1.1.4), Glare (policies 12.1.1.5 and 12.1.1.6) and Noise (Policy 12.1.1.7 and 12.1.1.8).</p> <p>These matters are considered to be addressed by the proposal.</p>
<p>Chapter 13: Resource Management Framework</p> <p>Objective 13.1.1</p> <p>Policy 13.1.1.1</p> <p>Policy 13.1.1.2</p>	<p>Objective 13.1.1 and Policies 13.1.1.1 and 13.1.1.4 set high level objectives for resource management and the way in which the Plan will deliver key Resource Management Act considerations. Policy 13.1.1.4 relates to transportation and use energy sources.</p>	<p>With regards to the issue of transportation and development patterns, the Plan seeks to promote the utilisation of alternative transport modes and to encourage settlement patterns that do not conflict with the district’s strategic transport network. Objective 13.1.1 and Objective 11.1.1 identify the effects that further subdivision and development can have on the safe and efficient functioning of the district’s road network and seeks to ensure that these are managed in an integrated and sustainable way.</p> <p>Policy 13.1.1.2 seeks to avoid, remedy or</p>

Policy 13.1.1.4		mitigate the adverse effects of development by limiting the establishment of new zones to locations where the subdivision/ development will not adversely affect significant natural/physical resources/ exacerbate damage from natural hazards or create conflict with neighbouring land uses. These matters are considered to be appropriately provided for in the district plan and the proposed PC33 amendments.
Chapter 14: Rural	Objective 14.1.1 and Policy 14.1.1.1 are concerned with maintenance of rural production and character and the effect of development.	<p>The area assessed as part of this plan change is currently zoned Rural and is located within the preferred growth area of the <i>2010 Rural Residential Development Plan</i> and is within the identified Mandeville settlement of Policy 18.1.2.1.</p> <p>Objective 14.1.1, in particular seeks to <i>maintain and enhance both rural production and rural character</i>. These characteristics, including “the dominant effects of paddocks, trees, natural features and agricultural, pastoral or horticultural activities”, and controls on dwellinghouses are considered to be not currently achieved given the current lot size and arrangements (approximately 2 hectares per lot), the surrounding Residential 4A and 4B zones, and the location of Tram Road to the immediate north of the site, which is a significant barrier to stock or vehicle movements associated with an intensive farming activity.</p>
Chapter 15:Urban Activities Objective 15.1.1 Policy 15.1.1.1 Policy 15.1.1.2 Policy 15.1.1.3		<p>Chapter 15 sets out the overarching framework for the towns and settlements within the district. It seeks to ensure that development and activities are integrated into the urban environment in a way that maintains and enhances the form and function and amenity values of the urban areas. Methods to implement the objective and policies of Chapter 15 include zones, rules and guidelines, including urban design. The Chapter has an Anticipated Environmental Result that seeks to maintain character, amenity and form and function.</p> <p>Through the policies and objectives of Chapters 12 and 15 the Plan controls the actual or potential adverse effects that business zoning could bring to the amenity and character of the Mandeville settlement, and are therefore considered appropriate to deal with the issues relating to a potential business and Residential 4A zone in Mandeville.</p>
Chapter 16 Business	Chapter 16 provides the objectives and	Objective 16.1.1 seeks to:

<p>Zones</p> <p>Objective 16.1.1</p> <p>Policy 16.1.1.1</p> <p>Policy 16.1.1.6</p> <p>Policy 16.1.1.7</p>	<p>policies for business zones, based on the framework of zones established by Chapter 13 (Resource Management Framework) and the growth and development provisions of Chapter 15 (Urban Environment).</p>	<p><i>“maintain different zone qualities which provide opportunities for a range of business development appropriate to the needs of the business community, residents and visitors while sustaining the form and function of the urban environments”</i></p> <p>The current business zone framework provides for a range of business zones, including the Business 1 and 2 Zones, which are considered to be the location of the key employment and industrial/ commercial zones.</p> <p>The Business 4 zoning framework establishes a zone for local centres that are appropriate to the centres in which they are located. Each of the local centre zones has a specific policy that reflects the characteristics that the local centres should achieve.</p> <p>The Business 4 zones are all located within the urban areas of the district. In order to recognise the different characteristics of the Mandeville settlement, including that the area is not considered as a full urban environment, a further Objective detailing the appropriate size and scale of the proposed business area is considered to better achieve the purpose of the RMA.</p>
<p>Chapter 17: Residential</p> <p>Objective 17.1.1</p> <p>Policies 17.1.1.1</p> <p>17.1.1.2</p>	<p>Chapter 17 provides for a series of Residential Zones, including the Residential 1 Zone which provides for higher density housing options in Rangiora and Kaiapoi.</p> <p>The objective and policies focus on character and amenity within residential areas. The character for each zone is set out in accompanying Table 17.1. Parking provision and its effect on the character and amenity will relate to these characteristics</p>	<p>Chapter 17 provides for a series of Residential Zones, including the Residential 4A and Residential 4B Zone with the following characteristics of the zones anticipated:</p> <ul style="list-style-type: none"> • <i>Predominant activity is living;</i> • <i>detached dwellings and associated buildings;</i> • <i>some limited farming and horticulture;</i> • <i>dwelling density is lowest for Residential Zones;</i> • <i>dwellings in generous settings;</i> • <i>average lot size of 0.25 -1.0 hectare;</i> • <i>limited number of lots located in a rural environment;</i> • <i>rural style roads or accessways;</i> • <i>opportunity for a rural outlook from within the zone;</i> • <i>few vehicle movements within the zone;</i> • <i>access to zones not from arterial roads;</i> • <i>community water and/or sewerage schemes; and</i> • <i>limited kerb, channelling and street lighting</i>

		<p>Within the Mandeville settlement, The environmental results expected introduced by Plan Change 32 seek that <i>"lot sizes within the boundary of Mandeville remain consistent with the minimum and average lot sizes of the Residential 4A and 4B Zones."</i></p> <p>These expected environmental results are not considered to be appropriately met by the existing zoning.</p>
<p>Chapter 18: Constraints of Development and Subdivision</p> <p>Objective 18.1.1</p> <p>Policy 18.1.1.1</p> <p>Objective 18.1.2</p> <p>Policy 18.1.2.1</p>		<p>Objective 18.1.1 seeks:</p> <p><i>"Sustainable management of natural and physical resources that recognises and provides for:</i></p> <ul style="list-style-type: none"> <i>a. changes in the environment of an area as a result of land use development and subdivision;</i> <i>b. changes in the resource management expectations the community holds for the area; and</i> <i>c. the actual and potential effects of subdivision, use and development."</i> <p>To provide for Objective 18.1.1, Policy 18.1.1.1 provides a checklist of matters to be considered and the time of consideration of growth and/or development. In regards to the potential development of a business area at Mandeville points (t) and (u) respectively provide for efficiency in terms of energy use and the enabling of communities to be more self-sustaining. These matters are appropriately for by some form of business provisioning in Mandeville.</p> <p>Points (e), (f) and (g) collectively require the maintenance or enhancement of the characteristics of the Mandeville settlement. These matters are considered appropriately addressed by the proposed plan amendments.</p>

Appendix VI:

Plan Change option 2 background reports

MANDEVILLE PLAN CHANGE 33

Integrated Transportation Assessment



abley
transportation consultants

MANDEVILLE PLAN CHANGE 33

Integrated Transportation Assessment

Job No.	Prepared by	Verified by	Approved by	Status	Issue No.	Date
4344	AD	JW		Draft	1	11/11/2014
4344	AD	JW		Final	1	18/11/2014
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APPENDIX A:

CAS Data

APPENDIX B:

SIDRA Outputs

1 INTRODUCTION

Background

- 1.1 Abley Transportation Consultants (Abley) were commissioned by Waimakariri District Council (Council) to prepare an Integrated Transport Assessment (ITA) for the Business 4 component of proposed Plan Change 33 (PC33) at Mandeville. Council is proposing the creation of a business and residential zone at Mandeville by means of a Plan Change that involves rezoning an area of land from Rural to Business 4 and Residential 4A.
- 1.2 The purpose of the Plan Change is to accommodate a small commercial centre at Mandeville to meet and provide for the convenience shopping needs of the surrounding area. In advance of the Plan Change, Council has carried out a number of detailed investigations to assist in determining the most appropriate site for the Plan Change including consideration of the potential access options.
- 1.3 This report provides the assessment of the transportation effects of the proposal. It has been prepared using the guidance specified in the Integrated Transport Assessment Guidelines published by the New Zealand Transport Agency¹ (NZTA). The guidelines identify four levels of scope for an ITA; 'Simple', 'Moderate', 'Broad' and 'Extensive', which represent the anticipated geographic and policy effects of the proposal.
- 1.4 A 'Moderate' ITA has been prepared for this proposal, as its effects are expected to be confined to a small geographic area and it is expected to align with local policies. A 'Moderate' ITA is concerned with land use characteristics and zoning provisions for the area in the District Plan and does not extend to include a strategic assessment of the location or evaluation of surrounding land uses.

Report Structure

- 1.5 This report is divided into the following sections to aid understanding of the assessment methodology;
- Existing Site Data
 - A description of the site and locality
 - Existing Transport Data
 - A description of the surrounding transport network, facilities for all road user groups, traffic flows and crash statistics
 - Proposed Plan Change
 - A description of the proposal giving specific attention to the transport related components.
 - Appraisal of Transport Effects
 - An assessment of the anticipated trip generation, proportion of trip types and trip assignment
 - An assessment of the effects of vehicle trips on the receiving environment
 - An assessment of the parking demand for the activity
 - Site and Network Layout Considerations
 - District Plan Assessment
 - Conclusions

¹ Abley, S. Durdin, P. Douglass M. (2010) Integrated Transport Assessment Guidelines, NZ Transport Agency Research Report 422

2 SITE LOCATION AND CONTEXT

Locality

- 2.1 The plan change area comprises approximately 7ha and is located in Mandeville which lies to the north east of Swannanoa and south west of Ohoka. The plan change area is situated 9km to the west of Kaiapoi and 10km to the south-west of Rangiora.
- 2.2 State Highway 1 (SH1) and State Highway 71 (SH71) form the strategic road network in the vicinity of Mandeville, with SH1 being classified as a National Strategic corridor and SH71 as a Regional Connector.
- 2.3 SH1 provides the major north-south roading connection through the South Island and is located around 9km east of the plan change area. SH71 provides the primary connection between Kaiapoi and Rangiora, and passes 9km to the northeast of the plan change area.
- 2.4 The location of the site in the context of the wider area is shown in **Figure 2.1** and in more detail in **Figure 2.2**.

Figure 2.1 Development Locality Plan



Figure 2.2 Development Locality Plan (aerial view)



Surrounds

- 2.5 Surrounding the site primarily is low density residential dwellings, lifestyle properties and farming land. Approximately 400m southwest of the plan change site on Mandeville Road is the Mandeville Sports Ground. Adjoining the western boundary of the site is a reserve area.

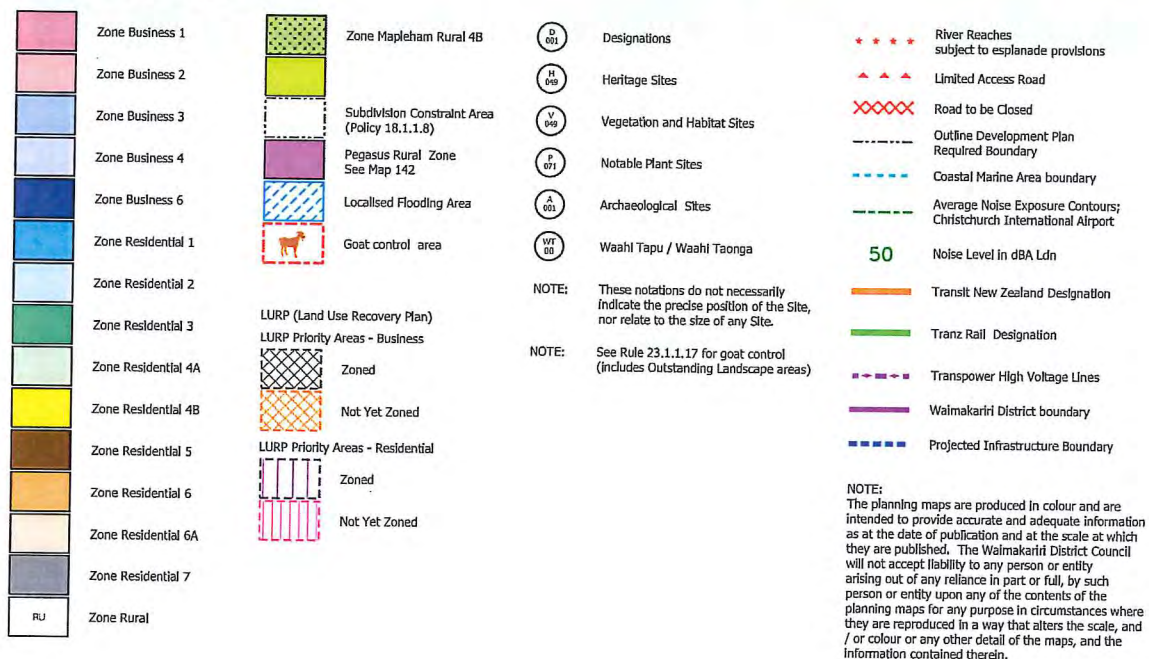
Zoning

- 2.6 The site is currently zoned Rural (RU) as shown in **Figure 2.3**. To the west and south of the site are the yellow highlighted areas showing the existing Residential 4B zone. A recent area of rezoning to the northwest of the plan change area is shown highlighted light green and zoned Residential 4A.

Figure 2.3 Existing zoning



URBAN LEGEND (Sheets 77 to 133)



2.7

The relevant zone definitions from the District Plan are outlined below:

- **Rural zone:** Maintain and enhance both rural character of the Rural Zones which is characterised by:
 - a. The dominant effect of paddocks, trees, natural features, and agricultural, pastoral or horticultural activities;
 - b. separation between dwellinghouses to maintain privacy and a sense of openness;

- c. a dwellinghouse clustered with ancillary buildings and structures on the same site;
 - d. farm buildings and structures close to lot boundaries including roads;
 - e. generally quiet – but with some significant intermittent and/or seasonal noise from farming activities;
 - f. clean air – but with some significant short term and/or seasonal smells associated with farming activities; and
 - g. limited or no roadside advertising.
- **Residential Zones:** that provide for residents' health, safety and wellbeing and that provide a range of living environments with distinctive characteristics. Specifically for Residential 4A/B the characteristics are:
 - a. Predominant activity is living;
 - b. detached dwellings and associated buildings;
 - c. some limited farming and horticulture;
 - d. dwelling density is lowest for Residential Zones;
 - e. dwellings in generous settings;
 - f. average lot size of 0.25-1.0 hectare;
 - g. limited number of lots located in a rural environment;
 - h. rural style roads or accessways;
 - i. opportunity for a rural outlook from within the zone;
 - j. few vehicle movements within the zone;
 - k. access to zones not from arterial roads;
 - l. community water and/or sewerage schemes; and
 - m. limited kerb, channelling and street lighting

3 EXISTING TRANSPORT ENVIRONMENT

Road Frontage

- 3.1 The plan change site has frontage to Tram Road and Mandeville Road.

Tram Road

- 3.2 Tram Road runs along the north-eastern boundary of the plan change area. It is classified as an Arterial Road under the District Plan. An Arterial Road is described as *"a road that is of major importance in the District serving significant populations and functioning as a prime access to other major centres inside and outside the District"*.
- 3.3 Tram Road is subject to a 100km/h speed limit and has a straight, level alignment. Tram Road has two traffic lanes of 3.5m width and a sealed shoulder of approximately 1m on both sides. The road reserve width is in the order of 20m.
- 3.4 Sight distances are excellent in both directions in the vicinity of the plan change area as is shown in **Figure 3.1** and **Figure 3.2**.

Figure 3.1 Tram Road looking north (plan change area on the left of the image)



Figure 3.2 Tram Road looking south (plan change area on the right of the image)



Mandeville Road

- 3.5 Mandeville Road runs along the southern boundary of the plan change area. It is classified as a Local Road under the District Plan. A Local Road is described as “a road whose primary function is property access”. It forms a priority controlled intersection with McHugh Road approximately 150m northwest of the proposed Mandeville Road access.
- 3.6 Mandeville Road is subject to a speed limit of 80km/h. The carriageway has a predominant seal width of 7.2m although it narrows to 6.3m in the vicinity of the proposed access. The road reserve width is in the order of 20m. The configuration of Mandeville Road is shown in **Figure 3.3**.

Figure 3.3 Mandeville Road looking south (plan change area on the left of the image)



McHughs Road

- 3.7 McHughs extends from Tram Road in the north to North Eyre Road in the south and forms a Stop controlled intersection with Tram Road. A fourth leg, Bradleys Road, intersects Tram Road opposite McHughs Road.
- 3.8 McHughs Road is classified as a Local Road in the District Plan. McHughs Road is subject to an 80km/h speed limit. The road reserve width is in the order of 20m. The sealed carriageway is approximately 7.5m wide, as shown in **Figure 3.4**, although it flares out at the McHughs/Tram Road/Bradleys Road intersection.

Figure 3.4 McHughs Road looking west

