



NZ Research and Travel Profiles

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Overview



1. NZTA Research Report 374
2. NZTA Research Report 353 Part A
3. NZTA Research Report TAR 09/12

Introduction 374



“Can we apply UK data to improve trip and parking prediction information in NZ?”

1. Background to the research
2. Aims of the study
3. The approach to the study and scale of analysis
4. Results of the analysis
5. Study Findings and applications

1. Background



- Previous collaborative working
- Size of NZ Data base
- Multi-modal travel.
- Is there a potential for the NZ and UK data bases to merge.

2. Aims of the Study



- Determine any linkages between the UK TRICS and the NZ TDB.
- Determine strongest predictor variables.
- How can we make the databases more compatible.
- Identify the land use activities that are poorly represented.

3. Approach



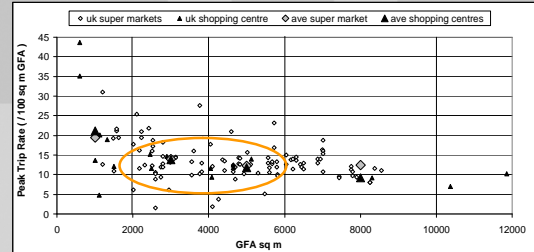
- 8 Land use categories.
- Peak hour trips and parking generation rates.
- Assess linkages between the UK and NZ trips and parking rates using different variables.
- The analysis looked at a comparison of mean values derived from each database.
- Ensured that comparisons between like-for-like activities were occurring.

Land Use Definitions

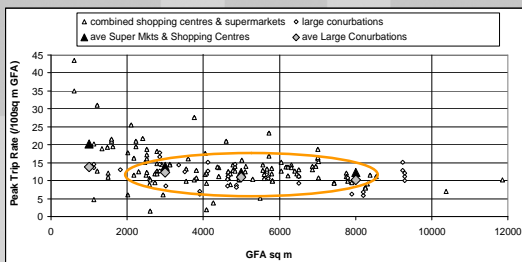


NZ LAND USE	NZ SUB LAND USE	UK SUB LAND USE	UK LAND USE
Assembly	Cinema	A - Multiplex Cinemas	07 - Leisure
Commercial	Office (100k)	B - Business Park	02 - Employment
Industry	Manufacture Warehouse	C - Industrial Unit F - Warehousing Commercial	02 - Employment
Recreation	Sports Fields Golf Courses	L - Football (5-a-side) Golf Courses	07 - Leisure 06 - Golf Courses
Residential	Dwelling Hotel Superstore Shopping Centre - Retail Shops	A - Houses Privately Owned B - Houses for Rent A - Hotel A - Food Superstore L - Shopping Centre	03 - Residential 06 - Hotel, Food & Drink 01 - Retail
Retail	Service station Restaurant-Bar Fast Food	A - Petrol Filling Stations B - Restaurants D - Fast Food - Drive Through	13 - Petrol Filling Stations 06 - Hotel, Food & Drink 06 - Hotel, Food & Drink

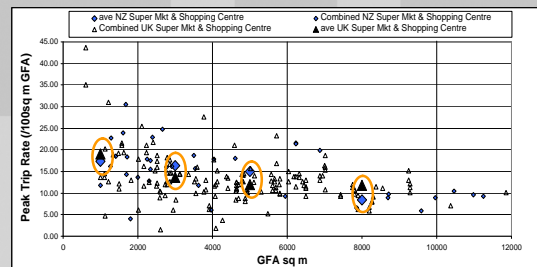
4. UK Supermarkets and Shopping Centers



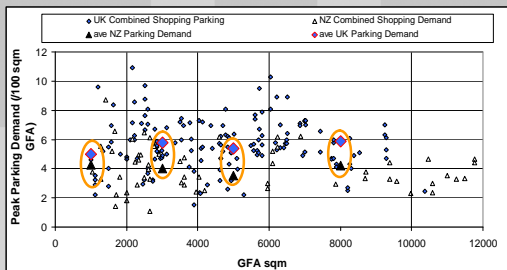
4. Relationship between UK sites and large conurbation sites



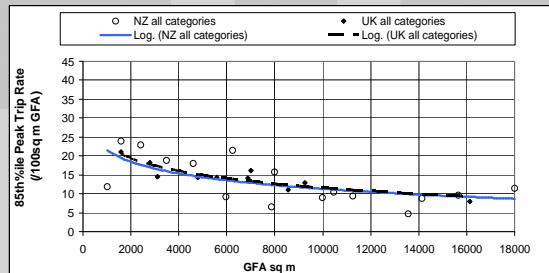
4. UK and NZ Vehicle Trip Generation Rates for Retail



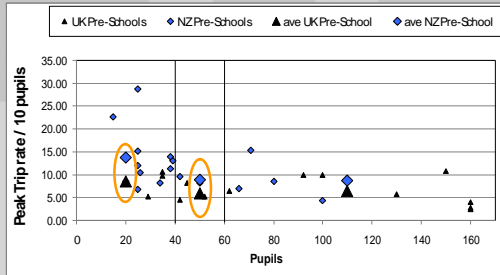
4. UK and NZ Parking Rates



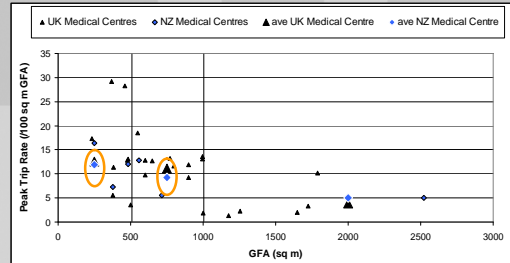
4. 85th%ile Trip Rates for UK and NZ Retailing



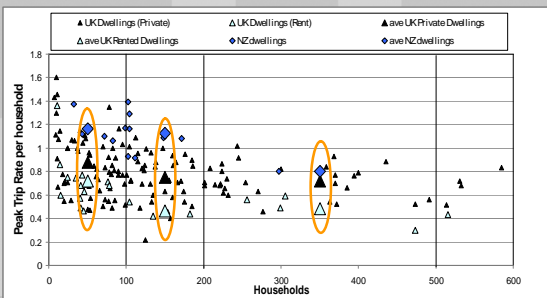
4. Peak Trip Rates for Pre-School Activity



4. Peak Trip Rates for Medical Centre Activity



4. Peak Trip Rates for Urban Residential Activity



5. Conclusions

- 1) Comparison shows that it is possible to use UK trip rate data to inform and support trip rate estimates for NZ circumstances.
- 2) The strongest similarities in trip making patterns were found in land uses such as food retail, restaurants, pre-schools, medical centres and residential activities.
- 3) GFA appears to be a strong parameter for predicting trips and parking for many land use activities.
- 4) TRICS can assist in 'filling in' information gaps.

Questions

Introduction 353 Part A

1. Background
2. Focus of analysis
3. Result
4. Summary

1. Background



• Discrete National Household Travel Surveys

- 1989/90
- 1997/98

• Continuous National Household Travel Surveys

- 2003 (ongoing)

• **Objective:** describe daily travel behaviour by different modes and for different purpose as defined in Household Travel Survey (HTS)

1. Background



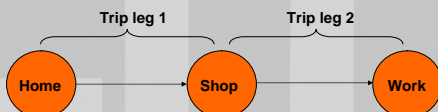
This Project

Data File	Description
Household	Details about the household (e.g. Household type, street number)
Person	Details about the person in the household (e.g. age, sex, occupation)
Trip	Purpose, mode, date, time
Vehicle	Type, model, CCs
Alcohol	Drinking session times and locations
Accident	Accident involvement in the last two years

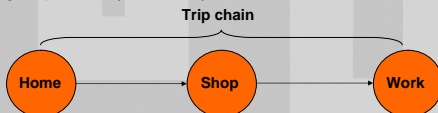
1. Background



• **Trip Leg** – A trip leg is a section of travel by a single mode with no stops. (MoT, 2007)



• **Trip Chains** – For some purposes it is desirable to link travel into longer trip chains. (MoT, 2007)



1. Background



- Major Urban Areas (MUAs)
- Secondary Urban Areas (SUAs)
- Rural Areas (RAs)

2. Focus of Analysis

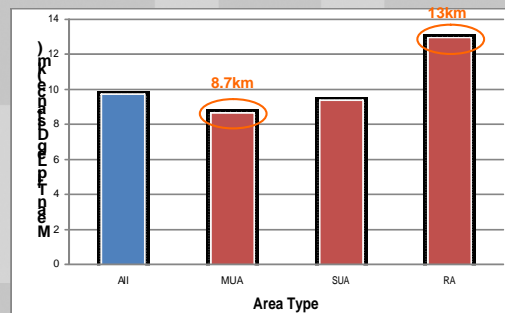


- Personal Travel
- Travel Mode
- Travel Purpose
- Social Inclusion and Accessibility
- Travel by Time of The Day

3. Results



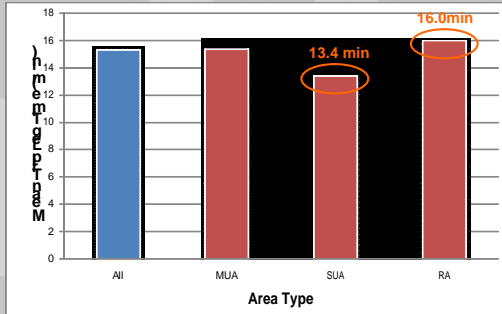
Personal Travel



3. Results



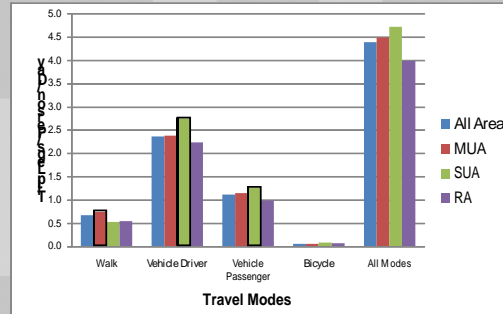
Personal Travel



3. Results



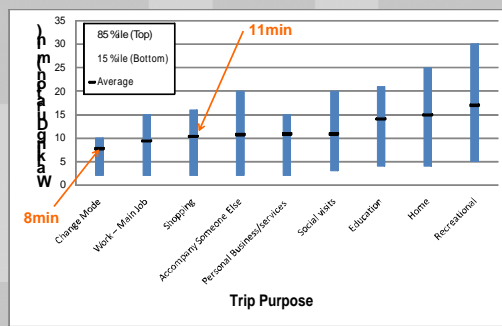
Travel Mode – Private Travel Mode



3. Results



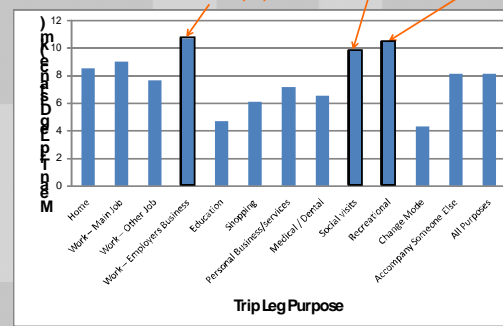
Travel Mode – Walking Duration by Purpose in MUAs



3. Results



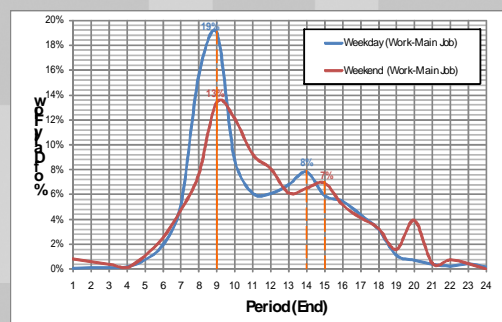
Travel Purpose



3. Results



Travel by Time of Day – Arrivals at Work (Main Job)



4. Summary



- Summary description of New Zealand travel profiles on a national basis.
- Already in application.
 - Timaru Residential, Retail and Industrial Development Strategy
 - Public Transport Interchange, Christchurch
 - Transport assessments – Walking duration by trip leg purpose

Applicability of TDB Research



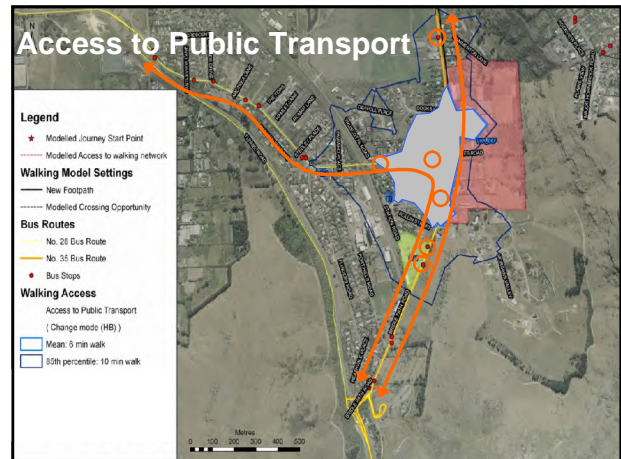
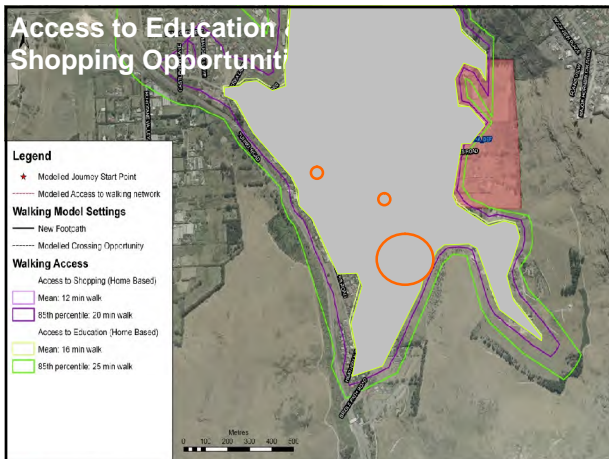
- Rezone 19 ha from rural to urban
- 170 residential units
- Policy assessment ...
 - ✓ Does rezoning support travel modes other than private vehicle for a variety of trip purposes?

Application of TDB Research



- Accessibility Modelling
 - ✓ Walking network
 - ✓ Land use activities
 - ✓ Public transport services
 - ✓ Walking durations for different trip purposes

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Questions

