

4. 2003 SPEED LIMIT ASSESSMENT

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The purpose of this report is to inform the Board of the current status of the 2003 Speed Limit Assessment. This report is also being considered by the Sustainable Transport and Utilities Committee.

BACKGROUND

Enquiries from the public, along with an ongoing review of roads by Council staff, have identified a number of roads that should be reassessed for appropriate speed limits.

The 2003 speed limit assessment is part of an ongoing assessment programme of city speed limits.

PROCESS

When changing speed limits on roads in the city, the Council must undertake rating assessments for the roads under review using the Land Transport Safety Authority's (LTSA) RTS 17 "*Guidelines for Setting Speed Limits*". The results of the manual assessments are then checked with the LTSA computer programme "*Speed Limits New Zealand*".

The relevant data is then assessed and discussed with stakeholders including NZ Police, NZ Automobile Association (NZ AA), LTSA, Transit New Zealand (TNZ) and the Road Transport Forum.

On completion of this formal review, the Council needs to discuss the results of the speed limit assessments and promote the changes amongst local communities. Decisions must then be taken on the most appropriate speed limits for the roads being reviewed, the appropriate gazette notices prepared by the LTSA and changes made to the fourth schedule (Bylaw Speed Limits) of the Council's Traffic and Parking Bylaw.

SETTING SPEED LIMITS

The setting of speed limits in New Zealand is based on road controlling authorities being able to assess ratings on a roadside development basis. This process has been followed in the assessment of the speed limits under review which broadly fall into the following categories:

Speed Limit	Discussion	SLNZ Rating Range
100	The general open road rural speed limit	< 3
80	The speed limit on some local and arterial rural roads and is often used as a route speed limit on roads linking urban areas.	3 - 5
70	The speed limit along roads where there is urban development along one side only abutting rural areas and along short sections of rural road linking with urban 50 km/h speed limit areas.	5 - 11
60	The speed limit along selected arterial routes where there is a high standard of road geometry and is often used as a route speed limit in urban areas.	
50	The General urban speed limit.	> 11

AFFECTED ROADS

The 2003 Speed Limit Assessment is currently being undertaken on the following roads within the Shirley/Papanui Community Board area.

Road Name	Location	Existing Speed Limit	Operating (Mean) Speed	85th Percentile Speed	Proposed Speed Limit	SLNZ
Marshland Road	Briggs Road to Prestons Road	80	73	82	70	6.8
Belfast Road	From existing 50 km/hr sign in vicinity of Station Road to Marshland Road. Including Crawford Road.	100	79	86	80	3.5
Guthries Road	Belfast Road to Marshland Road. Including Ford Road and McDonalds Road.	100	73	82	80	4.8/7.6
Factory Road	From existing 50 km/hr speed restriction to Guthries Road	100	-	-	80	
Blakes Road	Radcliffe Road to Belfast Road	100	74	82	80	
Radcliffe Road	From 50m east of railway line to Hawkins Road	100	72	80	80	
Hawkins Road	Prestons Road to Marshland Road. Including Selkirk Road.	100	68	80	80	
Quaids Road	Hawkins Road to Prestons Road	100	-	-	80	
Lower Styx Road	Marshland Road to Spencerville speed change. Including Dunlop Road.	100	87	98	80	3.8
Lower Styx Road	Spencerville to Brooklands.	100	-	-	80	
Earlham Street	Earlham Street (Brooklands).	100			50	
Spencerville Road	Marshland Road to Spencerville. Including Farrells Road.	100	80 73	82 83	80	2.5
Kainga Road/ Harbour Road	Brooklands to Kainga.	100	77	88	80	3.33
Turners Road	From current restricted zone adjacent to Ouruhia School to Spencerville Road. Including Teapes Road	100	64	77	80	2.8/5.4
Spencerville	Spencerville Residential area.	70	-	-	50	
Cavendish Road	Styx Mill Road to the existing 50 km/hr speed restriction 100m north of Strurrocks Road.	80	65	72	70	6.0
Gardiners Road	Johns Road to 50m south of Wilkinsons Road	80	-	-	50	7.8
Husseys Road	Gardiners Road to a point 400m east of Gardiners Road	80	-	-	50	10.5
Wilkinsons Road	Gardiners Road to a point 150m west of Gardiners Road	80	66	77	50	8.0

DISCUSSION

Marshland Road

The Marshland Road section between Briggs Road and Prestons Road is currently rated at 80 km/hr. Recent development in the general area has placed an additional demand on the road network. A reassessment of the speed limit undertaken supports a reduced speed limit of 70 km/hr over this length.

Speed profile readings indicate that the operating speed for this section of roadway is 73 km/hr.

The application of the reduced 70 km/hr speed limit should be done with consideration to the surrounding environment.

Belfast Road (including Crawford Road)

Belfast Road runs from Marshland Road through to Main North Road (SH 1). This road forms a minor arterial link between the two principle feeder roads into Christchurch from the north. Belfast Road has a total length of 2.7 km. A speed limit of 50 km/hr currently exists for the western portion within the Belfast zoning (600m). The remaining 2.1 km is currently open road with a speed limit of 100 km/hr.

Speed profile readings indicate that the operating speed for this section of roadway is 79 km/hr. The 85th % speed measured is 86.4 km/hr.

The application of a 80 km/hr speed limit to Belfast Road should be done in conjunction with the development of a precinct speed zone incorporating surrounding roads. Precinct speed zones can develop when pockets of development are established in a wide area. These pockets often qualify for a reduced speed limit over the development length. However, there are often 'gaps' in this development that do not support the lower speed limit. Where this happens there can be an inconsistent and confusing sequence of speed changes. Often the higher speed sections are of a short length when compared to the total road section.

Guthries Road

Guthries Road is a semi rural road that forms a link between Marshland Road and Belfast Road. There is rural residential development in the first 700m (city side) from Marshland Road. The road narrows in width from this point, southward to Belfast Road.

The narrow nature of this road, in association with the rural residential development, fits with the proposed precinct speed zone.

Speed profile readings indicate that the operating speed for this section of roadway is 73 km/hr. The 85th % speed measured is 82.5 km/hr.

McDonalds Road and Ford Road are short no exit side roads off Guthries Road. These roads should carry the speed limit associated with Guthries Road.

Factory Road

Factory Road runs from Main North Road through to Guthries Road. Residential development exists for 400 m east of Main North Road. The following 600m of road section bisects the Belfast Freezing Works. A speed limit of 50 km/hr exists to this point. The remaining 300 m is currently 100 km/hr. For continuity, this 300m section should carry the posted speed limit of Guthries Road.

Blakes Road

Blakes Road is a narrow road section from Belfast Road to Radcliffe Road of approximately 1.2 km in length. The road is rural in nature with farmland on each side of the road. Formal evaluation of the road does not support the creation of a 80 km/hr speed limit. However, with the application of a precinct speed zone of 80 km/hr for the surrounding roads, this road would be in isolation. For consistency, this road section should carry the speed limit of the adjacent road sections.

Speed profile readings indicate that the operating speed for this section of roadway is 74 km/hr. The 85th% speed measured is 82.6km/hr.

Radcliffe Road

Radcliffe Road runs from Main North Road indirectly onto both Marshland Road and Prestons Road via Hawkins Road. The road is rural in nature with farmland on each side of the road. The Supa Centa development is situated at the intersection of Radcliffe Road and Main North Road.

Formal evaluation of the road was not undertaken. However, with the application of a precinct speed zone of 80 km/hr for the surrounding roads, this road would be in isolation. For consistency, this road section should carry the speed limit of the adjacent road sections.

Speed profile readings indicate that the operating speed for this section of roadway is 72 km/hr. The 85th % speed measured is 80.3 km/hr.

Hawkins Road

Hawkins Road runs from Marshland Road, at the Hawkins Road/Lower Styx Road cross road junction, to Prestons Road. The road is largely rural in nature with farmland on both sides of the road.

Formal evaluation of the road was not undertaken. However, with the application of a precinct speed zone of 80 km/hr for the surrounding roads, this road would be in isolation. For consistency, this road section should carry the speed limit of the adjacent road sections.

Speed profile readings indicate that the operating speed for this section of roadway is 68 km/hr. The 85th% speed measured is 80.7 km/hr.

Quaids Road

Quaids Road is a short link road that runs from Hawkins Road to Prestons Road. The road is largely rural in nature with farmland on both sides of the road. The road has a general seal width of approximately 5.5m.

Formal evaluation of the road was not undertaken. However, with the application of a precinct speed zone of 80 km/hr for the surrounding roads, this road would be in isolation. For consistency, this road section should carry the speed limit of the adjacent road sections.

Selkirk Road

Selkirk Road is short no exit side road off Hawkins Road. This road should carry the speed limit associated with Hawkins Road.

Spencerville Speed Zone

The application of a 80 km/hr speed limit to the Lower Styx/Spencerville/Turners/Kaingā Road should be done in conjunction with the development of zone speed limits applicable to surrounding roads. Zone speed limits can be applied when pockets of residential development are established within a wide area. These pockets often qualify for a reduced speed limit over the development length. However there are often 'gaps' in this development that do not support the lower speed limit. Where this happens an inconsistent and confusing sequence of speed changes can result. Often these higher speed sections are of a short length compared to the total road section.

The evaluation of these roads has identified short sections of the road that, in strict accordance with the assessment process, do not qualify for a reduced speed limit. However, on-site observations indicate that the sections within this area contain restricted geometric alignments which do not generally allow a high speed to develop. Typically these sections are short in length (less than 1.5km) or are of a restricted speed due to the tight curved nature of the road alignment.

Lower Styx Road (Marshland Road to Spencerville)

Speed Limit New Zealand warrants a reduced speed limit of 80 km/hr for the first 1.8 km of road section from Marshland Road where there has been some residential development. Following this there is a road section of approximately 1.0 km that has a restricted geometric alignment with a general operating speed of 80 km/hr. Travelling eastward the road develops into a section of approximately 1.5 km that is open road before traversing into the 70 km/hr speed restriction for Spencerville. This short 1.5 km section of road is considered to be too short to support the existing 100 km/hr speed limit. Threshold signs are proposed for the entry into the Spencerville residential area.

Speed profile readings indicate that the operating speed for this section of roadway is 87 km/hr. The 85th % speed measured is 98 km/hr.

Lower Styx Road (Spencerville to Brooklands)

Exiting northward from the 70 km/hr restriction in Spencerville the road opens onto a 500 m straight prior to progressing onto a road section of approximately 600m that has a restricted geometric alignment with a general operating speed of 80 km/hr. This in turn leads directly into the 50 km/hr speed restriction for Brooklands. This short 1.1 km road section is considered to be too short to support the existing 100 km/hr speed limit. Threshold signs are proposed for the entry into the Brooklands residential area.

Earlham Street is a short (approximately 450m) no exit side road off Lower Styx Road. The road is formed as a gravel road and services one rural farm property. The road is currently designated 70 km/hr for the first 100m, followed by a 100 km/hr open road speed for the remaining section.

Earlham Street will be incorporated into the Brooklands residential area.

Dunlops Road is a short no exit side road off Lower Styx Road. These roads should carry the speed limit associated with Lower Styx Road. The first 300 m of Dunlops Road is a formed sealed roadway leading to a tight right-hand bend. The road changes to a poorly formed track of approximately 450m length at this point.

Spencerville Road (including Farrells Road)

Commencing at Lower Styx Road, the first 20m of Spencerville Road is 70 km/hr. The road then traverses through a one lane bridge, a short straight of 300m and a reverse curve alignment of approximately 80 km/hr operating speed leading into another short straight of 300m. West of this point the road traverses through a tight multiple curved section with a curve warning sign of 65 km/hr, then into an open section of road 1.4 km long through the plantation. The road alignment closes to multiple tight radius curves leading onto the rail crossing.

Speed profile readings indicate that the operating speed for this section of roadway is 80 km/hr. The 85th % speed measured is 82 km/hr.

Turners Road

Speed Limit New Zealand warrants a reduced speed limit of 80 km/hr for the first 1.3 km of road section from Marshland Road, where there has been some residential development and the Ouruhia school. Following this there is a road section of approximately 1.0 km that has a restricted geometric alignment with two short (approx 500m) straight sections bisected by a sharp 90 degree bend. This leads onto the Turners Road/Spencerville Road intersection. The area has a general operating speed of 80 km/hr.

Speed profile readings indicate that the operating speed for this section of roadway is 64 km/hr. The 85th % speed measured is 77 km/hr.

Teapes Road is a short (approximately 250m) no exit side road off Turners Road. This road should carry the speed limit associated with Turners Road.

Spencerville (including Earlham Road)

A reassessment has been made of the Spencerville residential area. Recent and ongoing residential development supports the reduction in legal speed from 70 km/hr to 50 km/hr on Lower Styx Road through Spencerville.

Threshold signs are proposed for the entry into the Spencerville residential area.

Kainga Road/Harbour Road

Harbour Road has a posted speed limit of 50 km/hr westward towards the Styx River bridge in the residential zone of Brooklands. From this boundary the road is currently an open road speed limit. The road extends through a short straight of approximately 220m to the Styx River bridge. The bridge forms the join of Harbour Road and Kainga Road. The bridge is elevated above the surrounding land and is the approximate mid point of a cresting vertical/horizontal curve. The road traverses along a short straight of 850m prior transitioning into a section of multiple curve road geometry with a 55 km/hr curve speed rating (700m). The remaining 600m road section to the Kainga township comprises of

two short straights bisected by a moderate curve. The restricted road geometry for this total section does not allow the development of 100 km/hr.

Threshold signs are proposed for the entry into the Kainga and Brooklands residential areas.

Speed profile readings indicate that the operating speed for this section of roadway is 77 km/hr. The 85th % speed measured is 88 km/hr.

Gardiners Road/Wilkinsons Road/Husseys Road.

The Gardiners Road/Wilkinsons Road/Husseys Road section is currently rated at 80 km/hr. At the time of the assessment for the 80 km/hr speed limit it was identified that the area should be re-evaluated at a future time when the density of residential development increases. Recent development in this area has highlighted the need for the re-assessment. The results concur with a reduced 70 km/hr speed environment. The assessment has been expanded down Husseys Road to include the section of road leading to the entrance of Willowbank.

Cavendish Road

The Cavendish Road section, between Styx Mill Road and a point 100m north of Sturrocks Road is currently rated at 80 km/hr. At the time of the assessment for the 80 km/hr speed limit it was identified that the area should be re-evaluated at a future time when the residential development of the remaining nine sections has occurred. The assessment undertaken at the time supported a reduced speed limit of 70 km/hr once these sections were developed.

Recent development in this area has highlighted the need for the re-assessment. The results concur with a reduced 70 km/hr speed environment.

Speed profile readings indicate that the operating speed for this section of roadway is 65 km/hr. The 85th % speed measured is 72.5 km/hr.

PROGRESS TO DATE

The review of the roads identified for the 2003 Speed Limit Assessment is underway. Antoni Facey Consulting undertook the fieldwork for the identified road sections in February 2003. The data has been processed and a report from the consultant was delivered in March 2003. The report covers all of the above proposals and will be used as a basis for discussions with the NZ Police, NZ AA, LTSA, TNZ and Road Transport Forum.

Council staff are currently undertaking speed measurements in the affected roads for completion of the analysis phase. Following this, full consultation will be undertaken with all stakeholders to gain their approval of the proposed speed limits. This is proposed for June 2003.

At the completion of the consultation, formal application will be made to the Council for approval of the proposed changes, the addition of these roads under the appropriate By-Laws and application for the Gazetting of the new speed limit.

Staff

- Recommendations:**
1. That the information be received.
 2. That the board support the schedule of proposed 2003 speed limit assessment for public consultation.

Chairperson's

- Recommendations:**
1. That the staff recommendations be adopted.
 2. That City Streets note that a Rural Threshold is required at Prestons Road.