In this research project, eleven sites in Christchurch with street calming devices were evaluated using field surveys and network modeling using TrafikPlan, and compared with findings from a literature review. The main findings of the studies were: 
- At seven sites that used vertical devices for treatment, five of them had reduced traffic volumes and speeds.
- At ten sites that used horizontal devices, eight of them had experienced reductions in volumes and speeds.
- From the crash history, it was found that road safety has been noticeably improved after installation of the traffic calming devices, with average crash reductions of 15-20%.
- In terms of network performance, TrafikPlan modelling seems promising for estimating traffic volume and speed changes on treated local streets and adjacent arterial roads.

This paper discusses these findings and speculates on how the devices investigated affect traffic behaviour. It is recommended that further research be conducted at more sites and for longer time periods to build up a comprehensive local database of traffic calming treatments. Future studies should also investigate the effectiveness of environmental impacts of the devices, i.e. noise and air pollution.

**Study Aims**

The objectives of this research project were:
1. To investigate the effectiveness of traffic calming devices on urban local roads in Christchurch. The effects of traffic calming devices on the following three aspects were analysed:
   - Vehicle’s operating speed
   - Traffic volume and types
   - Severity and number of crashes
2. To analyse the reliability of transport modeling software regarding prediction of the effects of each kind of treatment on road safety. More research should be done to evaluate the effects each of kind of treatment on road safety. This should include what types of crashes have reduced after installing traffic calming devices.
3. More research should be undertaken on the environmental impacts of the devices.

**Key Recommendations**

- More research should be conducted to determine why some traffic calming devices failed to achieve reductions in traffic volumes and/or speeds.
- More research should be done to evaluate the effects of each kind of treatment on road safety. This should include what types of crashes have reduced after installing traffic calming devices.
- Future research should be undertaken on the environmental impacts of the devices.

**Research for Details**

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