Background

The introduction of 20mph (32 kph) speed limits in residential areas and at schools has increased significantly since 1997, in response to growing concern about the problem of inappropriate speed and its contribution to Scotland’s poor record on child pedestrian casualties.

The Scottish Executive commissioned a three-year programme of research to examine the situation. The research considered speed data from 75 trial sites throughout Scotland where advisory 20s (speed limits are set for reasons of safety but are not legally enforceable) had been introduced as part of a campaign entitled ‘20’s Plenty’. At the majority of sites the results proved to be extremely positive prompting the Scottish Executive to issue guidance to Local Authorities permitting not only the introduction of advisory 20s limits but also the introduction of mandatory 20mph limits and zones. Mandatory 20mph limits and zones were required to be self enforcing and generally involved the introduction of traffic calming measures.

Prompted by Scottish Executive funding and a mandate that 20mph limits should be introduced outside all schools, in 2003/2004 Fife embarked on a comprehensive consultation and evaluation process to determine how this could be best achieved. Early findings proved that children were most at risk in the vicinity of their own homes, only occasionally on route to and from school but more often when at play in the evenings, at weekends or during school breaks. It was also found that parents and vulnerable groups including a high percentage of elderly people supported the introduction of 20mph zones in their community rather than simply 20mph limits being introduced outside schools. Studies within Fife and UK wide indicated that a 20mph mandatory limit with traffic calming features would achieve a higher rate of return in the long term.

Thus since early 2005 Fife has been committed (subject to available funding) to roll out a community safety programme to achieve the introduction of a mandatory 20mph limit within all residential areas by year end 2011 or earlier. Currently 80% of Fife’s residential streets are subject to a mandatory 20 mph limit supported by appropriate traffic calming features.

Policy Background/ Driving Force

Road accidents are the leading cause of accidental injury amongst children and young people. However in looking at solutions, children need the freedom to use the roads for their social development and through exercise for their general health and fitness and therefore should be able to walk and cycle in safety. A pedestrian has a 1 in 5 chance of being killed if hit by a vehicle travelling at 30 mph but at 20 mph this chance reduces to 1 in 40.

The UK Government’s Road Safety Strategy Document 'TOMORROW’S ROADS – SAFER FOR
EVERYONE’ (published 2000) set challenging targets for year 2010: to reduce by 40% the number of people killed or seriously injured, to reduce by 50% the number of children killed or seriously injured and to achieve a 10% reduction in the slight casualty rate.

Fife’s Road Safety Targets and Objectives were presented originally in Fife Council’s ‘Road Safety Strategy for Fife 2003 – 2007’ and are continued in the current ‘Safer Travel Strategy 2008 – 2011’.

Fife is currently engaged in the promotion of ‘Safer Routes to School’ and the development of ‘School Travel Plans’ at all schools. Intervention at an early age seeks to achieve a healthier and more sustainable life style for today’s children and future adults. Fife aims to achieve a target of 60% of children walking and cycling to school by 2012.

**Partners**
- The Scottish Government
- Fife Council
- Local Councillors & Community Groups
- Fife Constabulary including Road Safety Officers
- Fife Fire and Rescue Service
- National Health Service
- Local Bus Companies & Taxi Firms
- Schools and Teachers
- Parents, guardians and children

**Aims & Objectives**
- To reduce vehicle speeds and promote safer driving
- To reduce the number and severity of road casualties within residential areas
- To promote a community spirit and healthier safer lifestyle for all

**Evaluation**

The residential 20mph zones in Fife are proving to be a great success with a significant reduction in speeds and associated improved safety.

Surveys have found that, on average, around 81% of vehicles in these zones now travel below 25mph compared to 58% before the zones were introduced. This in itself represents a significant improvement in the quality of life for communities which, in turn, is helping to support other initiatives aimed at encouraging a greater share of the street space for walking, cycling and play. For example, Fife currently has 143 primary and 19 secondary schools with around 35% having a formal “Travel Plan” in place. Our target is to increase this to 100% by 2013.

Outcomes to date show that over the period in which 20 mph zones have been introduced there are indications of increasing numbers of children cycling to school, with an increase from 1.2% to 3.5% between 2007 and 2009 alone against a local target of 2%. This improvement is considered to be in part related to the reduced speed zones which are helping to make the implementation of school travel plans more effective. Changing children’s’ travel habits in this way will contribute to reversing the health issues associated with obesity and a less active life. Around 37% of Fife’s schools are currently involved in cycle training and efforts are being made through Fife’s Cycling Charter, which will hopefully be further enhanced through the awaited Cycling Action Plan for Scotland, to increase the number of children receiving this training to 100% by 2011. 20mph zones, in conjunction with these other sustainable travel initiatives, will help Fife work towards the Government’s target to increase the modal share of journeys undertaken by bicycle to 10%.

In terms of road accidents and associated casualties, whilst a number of years' worth of data is essential to help identify trends (requiring further evaluation work to be done), an analysis of the number of road deaths within a cluster of 60+ established 20mph zones in part of Fife shows the number has fallen from one person killed per year from 2000 to 2003 (before period) to zero in 2005, 2006, 2007, 2008 and 2009 (after period). Further work is being undertaken to establish correlations to show a corresponding reduction in the severity of non-fatal casualties.

Overall, there is a growing acceptance of 20 mph limits throughout Fife, evidenced by the small number of objections received against their introduction in contrast to the substantial number of requests for limits to be introduced.

**Key Steps**
- Approval given to introduce three trial 20mph limits as part of Scottish Executive Study (1999/2002) – two advisory limits and one mandatory limit introduced.
- Results of trial evaluated to determine the best way forward examining the merits of advisory limit verses mandatory limit with traffic calming features.
• Assess the most appropriate traffic calming features to suit the local environment/available budget and any specific problems.

Funding Considerations:
• Single set of Speed Cushions - £1000
• Full set of Road Humps/Junction Tables - £5,000-£10,000
• Road Narrowings - £5,000
• Signing – Cheaper for zones than individual streets

Features:
• Speed cushions adopted as the favoured traffic calming feature on existing roads based on effectiveness, practicality of provision and cost.
• Full Road Humps/Junction Tables recommended for use on new development roads.
• Road Narrowings recommended for use where there are road noise issues or layout/on site benefits.

• Determine availability of budget based on phased scheme projection costs.
• From evidence based casualty data determine a realistic programme.
• Seek appropriate Local Committee approval recognising the availability of Scottish Executive funding.
• Engage with Local Communities regarding individual scheme proposals, timescale etc.
• Promote required Traffic Regulation Orders prior to the commencement of any works.
• Record for evaluation pre scheme speeds.

• Publicise works programme within local community.

Lessons Learned
• Ensure the Local Community fully understand the reason for speed changes and support the measures to be introduced.
• Ensure any residents who will be directly affected by traffic calming features are consulted.
• Initial problems of the severity of road humps and cushions resolved by improved quality control and the introduction of standard practices (development & use of road cushion template etc)
• Where there are problems on distributor roads 20mph limits can be applied within zones (i.e mass treatment 20mph village)

Advice to Countries/Transferability
• A small sample of results may not always produce significant benefits.
• Listen to individual concerns and introduce design changes where appropriate.
• Engage with Communities & Schools after the completion of works and speed changes not just before.

References, Additional Information
1. Road Hump Regulations and Studies (various)
2. A Road Safety Good Practice Guide (1st edition) - DTLR
3. Scotland’s Road Safety Framework to 2020 (‘GO SAFE on Scotland’s Roads it’s EVERYONE’S RESPONSIBILITY’)
4. ‘Put the HEART back into our COMMUNITIES’ – leaflet Fife Community Safety Partnership
5. Safer Travel Strategy 2008 to 2011 – Fife Community Safety Partnership

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