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**City of Yarra - 30km/h Speed Limit:
Pre-Trial Final Report**

Authors:

Professor Brian Fildes
Assoc. Professor Jennie Oxley
Brendan Lawrence

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City of Yarra - 30km/h Speed Limit: Pre-Trial Final Report

Author(s):

Brian Fildes, Jennie Oxley, and Brendan Lawrence

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Abstract:

The City of Yarra in Victoria is contemplating the introduction of a trial of 30km/h in local streets in the ROSE region of Fitzroy. The Monash University Accident Research Centre was commissioned to provide advice and identify any potential issues for conducting such a trial and to develop clear parameters on quantitative and qualitative data collection and analysis to measure its success. This report documents our findings for the pre-trial study and makes several recommendations for implementing the proposed trial to ensure maximum benefits in terms of its success and safety to the residents. These cover areas such as the study region, the need for a control region, data collection and measures of success, trial implementation and evaluation, as well as other recommendations including funding, staffing, and timing for the program. It is acknowledged that the trial is expected to provide improved safety and other community benefits, and is a worthy initiative for the City of Yarra.

Key Words:

Speed Reduction, Safety, Accidents, Injuries,
Community Benefits

Disclaimer

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EXECUTIVE SUMMARY

The City of Yarra in Victoria is contemplating the introduction of a trial of 30km/h in local streets in the ROSE region of Fitzroy. The Monash University Accident Research Centre was commissioned to provide advice and identify any potential issues when conducting the trial and to develop clear parameters on quantitative and qualitative data collection and analysis to measure the success of the trial in the future. This report documents the issues surrounding the pre-trial study and makes recommendations implementing the trial to ensure maximum benefits in terms of its success and safety to the residents.

Pedestrian Safety

The evidence in terms of safety to residents in local streets from slower speeds is definitive. Findings by researchers such as Pasanen (1991) and Wramborg (2005) shows that the chance of a pedestrian dying when hit by a motor vehicle drops by more than half when the impact speed is reduced from 40km/h to 30km/h. In addition, the World Health Organisation noted that only a 1 km/h decrease in travelling speed would lead to a 2–3% reduction in road crashes.

There are other benefits in reducing speeds in local streets. Earlier evidence from the UK 20's Plenty initiative shows that speeds reduced with lower speed limits and with experience, residents supported these reductions and took more ownership of their streets.

The 20's Plenty Initiative

Lower speeds in local streets in the UK were first introduced in Sheffield in the early 1990s. The 20's Plenty program formally started 10 years ago and more than 60 councils in the UK have since signed up to the program. The Nottingham City Council conducted an initial trial program in the Sherwood precinct of Nottingham in 2012 and with its success, has now expanded into all the 10-precincts in the Nottingham region. Rod King, founder of the initiative noted that the program aims to have a 20mph default speed limit on all urban roads in the UK by 2020.

Findings from a survey conducted in Sherwood in 2014 found that there was significant support for 20mph speed limits where 63% of respondents supported the introduction of a 20mph speed limit on their street and 52% of respondents would like to see 20mph speed limits extended to other parts of the City. In terms of safety benefits, they found a speed reduction of 1mph average speed in the region with a 3mph reduction in the 85th percentile speed limit. These would amount to a significant reduction in crashes and injuries, especially to vulnerable road users, in the region.

Data collection and success of the trial

The need for data to demonstrate the success of the trial is key if this trial is to be successful and elicit the strong support of such a trial for the Yarra region and elsewhere. From the experience of the 20's Plenty successes, several relevant key issues were identified for the City of Yarra trial as below:

- There is benefit in expanding the trial area beyond just ROSE in Fitzroy to include the GOLD region of Collingwood will ensure the findings are more robust in such a trial;
- The need for a “control” area (untreated region) to separate the effects of the trial from more general speed influences in the region is recommended (suggestions included);
- Data collection can be undertaken by the City of Yarra but independent design and analysis of the findings will ensure that the benefits that are perceived to be less biased;

- Crash reduction may not be an indicative measure of success in such a small-scale trial. However, mean speed and 85th percentile speeds reductions are, compared with control speeds;
- Community acceptance is also a useful measure of success and community benefit, and needs to be collected before, during, and after the trial. Other measures are also outlined in the body of the report.

Implementation Recommendations

The following key messages of importance that were stressed from the experience in Nottingham for the City of Yarra trial are noted below:

- Principally, the need for patience, time, commitment, endurance, constant positive advice, and strong support by the Council;
- Workshops among the key stakeholders are critical to ensure ongoing support by these organisations and resolution of any major issues that might arise during the program;
- Workshops among the community are an important means of ensuring a collaborative approach between the council and residents in the trial regions;
- Letter drops, marketing materials, slogans, and simple brochures to promote the program and knowledge why it is important for the residents in the trial areas;
- Launch of the program can be a community event – children, police, community leaders, positive media and widespread attendance are other important measures;
- The use of “Champions” is also a key factor in the program’s success;
- Findings from local and other evaluations helps overcome concerns by the residents;
- Subsequent roll-outs in other areas, supported by previous programs showing the benefits can be easier, given findings and support by residents in the previous trial region;

Evaluation Recommendations

Evaluation is always a critical part of marketing the success of the trial and areas where lower speed limits across the region could be improved. The scientific credibility and independence of the evaluation is important when negotiating for a greater roll-out across the City of Yarra (and in other local government regions too) and for promoting the success of the trial among the key stakeholders. Indeed, many of the potential funders of the trial will insist on such an evaluation to justify their involvement in the trial.

Other Issues

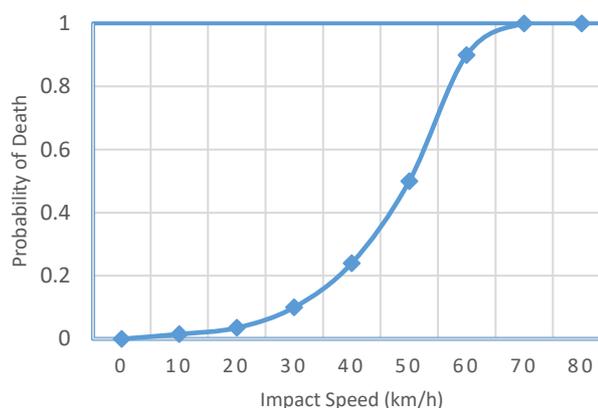
Funding for the trial will require considerable funding. Possibilities for external funding to help fund the increased size and scope of the trial could include the VicRoads Innovation Community Grant, the Safe System Road Infrastructure Program, and/or the TAC. It is hoped that the program described would help increase the chances for external funding to deliver the trial in 2017/18 and beyond.

Clearly, the need for sufficient, adequate funding, and an appropriate level of staffing are paramount for delivering a successful and beneficial program such as this. If funding can be provided by the end of 2017, it is recommended that the trial commence in January 2018 with introductory community consultations during the rest of 2017.

INTRODUCTION

The World Health Organisation identified speed as a key risk factor in road safety internationally¹. They note that in high-income countries, speed contributes to about 30% of deaths on the road and is a major factor in the severity of injuries that result from crashes. They claim that controlling vehicle speed can not only prevent crashes happening but can reduce the impact when they do occur, lessening the severity of injuries sustained by the victims. They note that studies suggest that a 1 km/h decrease in travelling speed would lead to a 2–3% reduction in road crashes.

Pedestrian fatality risk as a function of the impact



Source: Pasanen, 1991; From WHO (2004)

A trial of 30km/h area-wide speed limits is proposed by the City of Yarra, supported by the TAC Local Government Grant, 25 August 2016. This is an important initiative not only for the City of Yarra residents but for other regions in Victoria and elsewhere. This is an opportunity for the City of Yarra to show leadership in this area and help in addressing the Towards ZERO initiative, now accepted as a key goal in guiding road safety initiatives in this state².

Objectives

The Monash University Accident Research Centre were commissioned by the City of Yarra to undertake a pre-trial study of introducing a 30 km/h area speed limit in the Fitzroy area. The objectives for the study were to:

- Provide supporting evidence and justification to trial a 30 km/h area wide speed limit.
- Identify and address any potential issues when conducting the trial.
- Develop clear parameters on quantitative and qualitative data collection and analysis to measure the success of the trial in the future.

Background evidence

There is substantive evidence that motor-vehicle speed reduction is an effective approach to reducing the risk of crash and severe injury, some of which is derived from the following research (Anderson, McLean, Farmer, Lee, & Brooks, 1997; European Transport Safety Council, 1995; Islam, El-Basyouny, & Ibrahim, 2014; Kloeden, Ponte, & McLean, 2001; Oxley, Diamantopoulou, & Corben, 2001; Tefft, 2013). At lower motor-vehicle speeds, the driver is afforded greater time to recognise hazards, a reduced distance travelled whilst reacting to the hazard and after braking, and a reduced likelihood of losing control of their vehicle (Fildes, Langford, Andrea, & Scully, 2005). Other road users are afforded greater ability to judge the speed of an approaching motor-vehicle, and more opportunity to avoid the collision.

Importantly, should a collision ensue, the impact forces exchanged between road users decreases, and so too the probability that these forces exceed those able to be tolerated by the road users

¹ World Health Organisation (2004) Road Safety – Speed Fact sheet

² TAC Towards ZERO, <https://www.tac.vic.gov.au/road-safety/tac-campaigns/tac-latest-campaigns/towards-zero>

without sustaining an injury. Vulnerable road users are particularly sensitive to this interaction, and it has been demonstrated that the probability of severe or fatal pedestrian injury increases exponentially with impact speed (Elvik, 2013; Nilsson, Lund Institute Of Technology, & Society, 2004; Wramborg, Swedish National, & Transport Research, 2005). An often cited view, is that to offer greater protection for pedestrians in particular (as less is known about cyclists), the prevailing road conditions must discourage motor-vehicle speeds in excess of 30 km/h. It should not be overlooked; however, that the critical impact speed (above which severe injury is highly likely) may indeed be lower than 30 km/h (Jurewicz, Sobhani, Woolley, Dutschke, & Corben, 2015).

The speed at which a motorist drives is influenced by a range of road, enforcement, road user, environmental, and vehicle factors (Fildes et al., 2005), and an intention to reduce speeds must take all into account. The speed limit has the greatest influence on the choice of speed; yet, only if the road environment is complementary. In low speed environments, reduced speed limits (30 km/h or 20 m/h) are often accompanied by traffic calming measures (e.g. narrowing, speed humps, conversion to one-way streets), and the effect of this combination on reducing the incidence and severity of injury is attracting growing research interest.

There have been several comprehensive reviews of the effectiveness of reducing speeds on injury incidence, in what are characteristically inner urban streets. One review systematically combined the findings of 33 studies that individually examined the effect of area-wide traffic calming on the safety of all road users (Elvik, 2001). The studies included in this review, examined the effect of traffic calming in areas that were predominantly residential, often close to a Central Activity District of a major city, and generally between 0.25 and 1.5 km² in size. This study found an average reduction in the number of crashes, associated with area-wide traffic calming on local roads (not necessarily speed limit reduction), of around 25%.

A more recent review also sought to systematically combine the findings of individual studies of similar remit (Bunn et al., 2009). This review included 22 studies (controlled before and after studies) that examined the effect of area-wide traffic calming on traffic-related injuries. The authors of this study concluded that area-wide traffic calming may be a promising approach to reduce the number of road traffic injuries and fatalities; yet, also noted that more rigorous evaluations of initiatives are needed.

In 1996, the United Kingdom's centre for research on transport safety (Transport Research Laboratory) evaluated 200 zones in Great Britain where the speed limit was reduced from 30 mph to 20 mph (equiv. 50 km/h to 30 km/h) (Webster, Mackie, & Trl, 1996). This study observed a reduction in speeds of 9 mph (14km/h), traffic flows by 27%, and fatal and serious injuries by 70%. In a follow-up study of 78 zones largely in residential areas of Great Britain, similar trends were observed. Specifically, there were marked reductions in mean traffic speeds and volumes, along with reductions in fatal and serious injuries for pedestrians, child pedestrians, cyclists, powered two wheelers, car occupants, and other child casualties (Webster & Layfield, 2007). The findings of this review have been supported by more recent studies of these 20 mph zones (Grundy et al., 2009; Li & Graham, 2016).

The "20s Plenty" for Us Initiative

The **20s Plenty** Initiative was formally setup in the UK by Rod King MBE in 2007. The very first scheme of a 20mph local speed zone was installed in Sheffield in the early 1990s (Forster, 2015). Today, approximately 60 local councils in the UK have signed onto the initiative (see Attachment 1) and it is planned to have a default speed limit on all urban roads in the UK by 2020.

The founder and campaign director, Rod King MBE, noted that these are not just the odd road but for all residential streets and many city centres, leaving just the arterial roads above 20mph. He claimed that they also have 350 local community campaigns running across the country to support

this initiative. Of special interest, he stressed that *“our experience tells us that the key to maximising compliance is community engagement and making the 20mph limit area wide enough so that most drivers will feel ownership on their own home streets”* (King, 2017).

Nottingham City Council

Nottingham City Council, United Kingdom, has successfully introduced 20mph speed limits to all 10 precincts under its jurisdiction (730,000 population), using the momentum of the 20’s Plenty initiative. To help understand the strategy used and issues faced by Nottingham City Council, Scott Talbot-Hartshorn, Team Leader, Walking, Cycling & Safety, Nottingham City Council, invited Professor Fildes, Monash University Accident Research Centre, to meet with Sarah Cooke and Chris Berry from the Road Safety Development division.

The Council conducted an initial trial program (case study) in a region in the Sherwood precinct of Nottingham (population approx. 16,000 people). It began in 2012 and the reduced speed limits were introduced in April 2013. The Sherwood Area was selected as the trial area due to it being relatively compact and containing a variety of residential, industrial, and retail parts therefore providing a useful representative study. The trial demonstrated positive benefits, and justified expanding 20mph speed limits across all the 10-precincts in the Nottingham region. Full details of the discussions are attached in Attachment 2. The following key issues of particular relevance to the 30km/h trial proposed in the City of Yarra are noted below:

- Principally, the need for patience, time, commitment, endurance, constant positive advice, and support by the Council they felt were vital factors for success.
- They kept stressing not to move too quickly and to bring the community along with them if the program is to succeed.
- Letter drops, marketing materials, slogans, simple brochures, all help.
- Launch of the program can be a community event – children, police, community leaders, positive media and widespread attendance are other important measures.
- The use of “Champions” is also a key factor in the program’s success.
- Findings from local and other evaluations helps overcome concerns by the residents.
- Subsequent roll-outs in other areas, supported by previous programs showing the benefits, were easier given findings and support by residents in the previous region.
- Any additional support from other trials is also important.

A survey conducted at the end of the trial (in 2014), identified significant support for 20mph speed limits. Specifically, 63% of respondents supported the introduction of a 20mph speed limit on their street, and 52% of respondents were supportive of extending 20mph speed limits to other parts of the City. The trial evaluation also identified meaningful reductions in travel speeds. They found a reduction of 1mph in average speed within the trial area, and importantly, a 3mph reduction in the 85th percentile speed. These would amount to a significant reduction in crashes and injuries in the region, especially to vulnerable road users.

Footscray CBD

As part of the SSRIP program, the Maribyrnong City Council recently announced plans to introduce some 30 km/h speed limits in the Footscray Central Business District, primarily to reduce the incidence and severity of pedestrian injuries. This presents an opportunity for the City of Yarra to observe the reaction of residents and other stakeholders to these changes, so to address these concerns in the

consultation stages of the City of Yarra trial. To date, initial reactions to the proposed changes in Footscray were based on concerns of the motivation underpinning the change (revenue raising), that travel speeds already being suitably slow due to congestion, and the perception that a 40 km/h speed limit being appropriate in highly pedestrianised areas. These concerns are quite predictable in the early stages of such a trial and can be addressed during the consultation phase.

KEY ISSUES FOR THE CITY OF YARRA TRIAL

This interim report sets out some key findings to date and several issues that could impact on the success of the program. These findings have arisen from a review of the literature, discussions with Nottingham City Council, the 20s Plenty for Us program, and early discussions with the City of Yarra officers of the trial. It is important for road safety as well as the credibility of the study that these issues be fully considered by the Yarra City Council. The likelihood of success is maximised by addressing these issues.

Study area

The study area has been specified as the Rose precinct of Fitzroy as illustrated in Figure 1 opposite, comprising the area bounded by Johnston, Smith and Nicholson Streets and Alexandra Parade. It is proposed to trial 30 km/h speed limits on all local roads with the exception of Brunswick Street and Smith Street. The study region is comprised of approximately 3,800 residents, around 8 kilometres of (eligible) local roads, and land uses predominantly zoned as neighbourhood residential, commercial, and mixed-use. This is a small study region for conducting a speed-limit reduction trial, as there are likely to be specific qualities of this precinct that differentiate Rose from other precincts in Fitzroy. It is important that the study region be reasonably representative of Yarra if the outcome of the trial can be adopted across all precincts. An alternative would be to consider expanding the 30km/h trial into a broader region encompassing both the Rose and the adjacent Gold precincts of Fitzroy and Collingwood as shown in Figure 2.

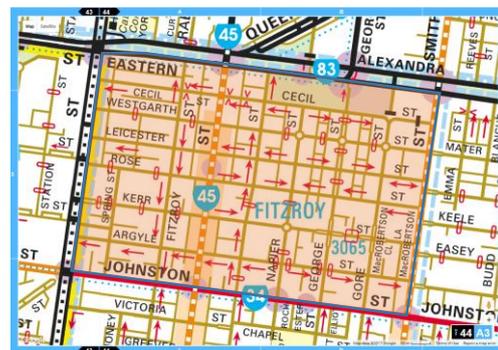


Figure 1: Rose Precinct in Fitzroy



Figure 2: Rose and Gold Precincts as an alternative trial site

likely to be dismissed as a simple unrepresentative outcome.

This would at least give a sizable increase in the population of residents in the study area (from 3,800 to 6,000 residents, a 60% increase), the length of local road eligible for speed-limit reduction, and help ensure that the results of the trial are more representative of the region at large. Of course, this would represent an increase in the cost of the study which is dealt with in a later section of the report, but would certainly make for a more definitive outcome of the trial and less

The need for a control area

In conducting an evaluation of the effectiveness of a treatment (eg: the 30km/h trial), it is normal to include a region nearby to act as a baseline for comparison³. The region must be representative of the control population so that any local influences that might unduly influence the effect of the speed limit trial are equal in both treatment and control regions (e.g. changes in traffic congestion). An example of this is when a new drug is being tested for which a control is used, often from a similar population who do not receive the treatment.

A control comparison is essential to minimize the effects of any other outside influences (apart from the treatment itself). Controls increase the reliability of the results, through comparing treatment and control results from the trial. Figure 3 shows one option for a control region assuming the treatment area is both the ROSE and GOLD precincts, but this can be negotiated. An implication of including a control area is the additional data collection requirements. These are outlined in the Outcome Measures section of the report.

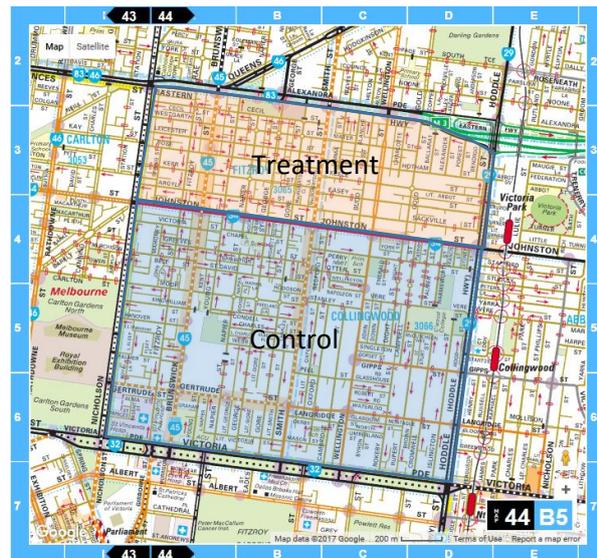


Figure 3: Possible treatment and control regions

Staging the project

It is understood that there is a need to carefully stage the introduction of a trial such as this one, to maximise its success. In the Nottingham City Council 20mph trial, for example, care was taken not to leap immediately into changing the speed limits without a reasonable period of consultation with the Council, local stakeholders, and especially residents. Often, the immediate response from these groups is to resist change. Without adequate consultation, positive benefits such as slower speeds and fewer crashes may not occur. This can be inferred to mean that the trial was not a success, rather than inadequate preparation to minimise resistance.

The current plan outlined in the Table attached, calls for the introduction of the trial within just a few months from conception. The Nottingham City Council stressed the importance of consultation in their finding of a 1mph reduction in average speed (and a 3mph reduction in the 85th percentile) in their Sherwood precinct trial. They also noted that this was further critical when they came to expanding the lower speed limit in other precincts. It would seem advisable to allow a sufficient period (perhaps 6 months or more) for continuing meetings, workshops, and other local forms of consultation with residents. This would increase the chance of a positive response when the new limits are introduced.

Timetable

A possible Timetable for an expanded study is shown in the Gantt Chart below, taking into account the comments and suggestions of previous successful trials and a keenness to ensure that the City of Yarra trial is of maximum success.

³ Wikipedia Scientific control - https://en.wikipedia.org/wiki/Scientific_control

Task	2017											2018	2019	
	02	03	04	05	06	07	08	09	10	11	12	01-12	01-03	04-06
MUARC Commissioned	GREEN													
Progress meeting		GREEN												
Meet with Victoria Police		GREEN												
Presentation to Council of the Interim Report by MUARC			GREEN											
Stakeholders workshop				GREEN										
Application to Victorian Government for continuing Grant				GREEN										
Finalise the community survey				GREEN										
Data collection community survey				GREEN										
VicRoads approval for speed limit change in Rose				GREEN										
Draft pre-trial report	GREEN	GREEN	Interim	GREEN										
Final pre-trial report						GREEN	GREEN							
Council report and presentation							GREEN							
Decision on funding for implementing the Trial							RED	RED						
Develop a communication and engagement plan							RED	RED						
Implementation of community workshops							RED	RED						
Implementation of community discussions							RED	RED	RED	RED	RED			
Additional community engagement initiatives								RED	RED	RED	RED			
30 km/h speed limit signs installed											RED			
Speed limit trial begins												RED		
Trial evaluation & report												RED	RED	
Stakeholders workshop & media														RED
Decision on expanding lower speed limit to other regions														RED

The **GREEN** bars represents the current project for which funding is secured.

The **RED** bars represent the implementation and evaluation stages for which additional funding is required.

Outcome measures

It is proposed that the evaluation trial will be predominantly a combination of qualitative survey responses, both before and after implementation, and quantitative speed and volume measures. These could include:

1. Travel speeds in selected streets similar to what is currently collected regularly in the regions. These include mean, median and 85th percentile speeds, both before and after in both the trial and control regions, enabling a definitive analysis of speed reductions as a result of the trial intervention throughout the trial period;
2. Surveys of community acceptance of 30 km/h speed limits, as planned for the before-study noted above. It would be advisable to conduct these during and after conclusion of the trial to show trends of greater acceptance with time during the implementation phase;
3. Given the small scope of the trial, it is not possible to conduct a robust statistical analysis of the number and severity of crashes. However, the number of police reported crashes before and during the trial will be reported for examining any trends in crash reductions;
4. Changes in the pedestrian and bicyclist traffic would be expected from the trial as people gain confidence in its usefulness. As these changes are traditionally determined from analysis of CCTV cameras, observation studies or detailed surveys (census analyses) they can be expensive. However, a select random observation study of the type and frequency of bicycle and pedestrian movements before and during the trial is recommended.
5. Further measures of community acceptance can also be gained by involvement and assessment at appropriate events during the trial. There are a number of possibilities that the council might consider during this period such as council updates (written and invites), BBQs, safety days, workshops, and forums, to help promote and spread information on the trial success. Media can also be recruited for these events to help spread-the-word and the image of City of Yarra.
6. Other opportunities of outcome measures should be explored when they come to notice. For instance, an origin-destination survey could also be considered. It might be that people driving through the study region are non-residents, who therefore, will not be targeted by the community consultation.

Implementation & evaluation

The UK experience showed the need for community engagement to ensure that most drivers (and residents) feel ownership of the program on their own home streets. It is important, therefore, that the pre-trial includes a reasonable period of consultation with the local residents. Surveys are important for assessing before, during, and after, the trial is implemented. These surveys become an additional outcome measure of the success of the trial that will help in rolling lower speed limits out more widely in the area.

In addition, Nottingham City Council found that several local resident workshops they conducted across the trial area was also an important initiative to help sway the non-believers in terms of the need for the trial, the personal benefits to them, and an opportunity to address the myths among the community. Workshop sessions with local traders might be particularly important to assure them their livelihood will not be affected. From the discussions held in February in the UK, it was apparent that through these workshops, resident support grew significantly.

Evaluation is always a critical part of marketing the success of the trial and areas where lower speed limits across the region could be improved. The scientific credibility and independence of the evaluation is important when negotiating for a greater roll-out across the City of Yarra (and in other local government regions too) and for promoting the success of the trial among the key stakeholders. Indeed, many of the potential funders of the trial will insist on such an evaluation to justify their involvement in the trial.

Signage

At some point of the trial, the Council need to consider additional signage placed at critical threshold entry points along the area trial boundary or where there is no change with new speed limit.

This is important in terms of alerting local travellers of the trial in progress, the sponsor's needs, as well as to keep stressing the road safety message currently being promoted, not only in Victoria but in the rest of Australasia too. Of course, there will be a need for installation of standard 30kmh speed limits in the affected areas.



It could also be useful to consider other signage, too, such as *"The residents would like to thank you for driving at 30km/h"* or *"The residents would like to thank you for lowering your speeds"* or more simply, just *"Thank you for driving slowly"*. The idea is to transfer the wish of the low speed limit from road authority to the community and also to convey the purpose of the low speed limit to the drivers. These signs could be installed say 6 months after the installation of the 30km/h signs and after the initial assessment to help reinforce drivers to comply. Speed surveys are required to assess the effectiveness of these signs.

Project funding

What is outlined above will clearly require substantial funding, but importantly, bring not only the local residents along, but also the key stakeholders. Possibilities for external funding to help fund the increased size and scope of the trial as outlined may include the VicRoads Innovation Community Grant, the Safe System Road Infrastructure Program and/or the TAC Local Government Grant. It is hoped that the changes described above would help to increase our chances for external funding to deliver the trial in 2017/18 and beyond.

Total Cost of the Sherwood scheme

Financial Year	Total Allocation*
2011/2012	\$165,000
2012/2013	\$410,000
2013/2014	\$50,000
Total Cost	\$625,000

*GBP converted to A\$ at 1.642 (4/4/17)

Of interest, the total cost of the Sherwood Scheme are shown in the Table opposite, and are indicative of what a comprehensive (and successful) trial might cost. These costs of course are in GBP more than 5 years ago and may need to be inflated to current values. They also only included costs to the Nottingham City Council and don't include any additional allowances for external consultants or any other local special

requirements such as any special signage discussed above or other needs. These costs, however, allow for salary costs for the two fulltime members of the Road Safety Development team.

Study Team

The final key issue and one that should not be overlooked in terms of guaranteeing success of the program is the resources required to manage and implement the program outlined above. By way of example, the Sherwood pilot involved 2-fulltime officers as well as contributions from the Team Leader, Walking, Cycling & Safety and other key council members. This was considered to be a minimal team needed to address all the issues, including program management, consultations with key stakeholders, attendance at council meetings and addressing council issues and concerns, media involvement, and most of all, consultation and communication with local residents to address their issues and concerns. As noted in their lessons learned from the citywide 20mph speed limit trial, "The main challenge when undertaking a project of this scale was that few, if any (similar) schemes of this size had been carried out ... previously" (Nottingham Sherwood Pilot, May 2014).

Clearly, the need for sufficient, adequate funding, and staffing are paramount for delivering a successful and beneficial program such as this one.

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Attachment 1 - “20s Plenty for Us” – UK Council’s committed

Already more than half of the largest 40 urban authorities in the UK have a policy of setting 20mph as the default for all their streets. The complete list of places implementing a community-wide 20mph default with populations include:-

Bath & NE Somerset (175500)	Edinburgh (495360)	Otley (14124)
Bolton (139403)	Fife (368,100)	Oxford (150200)
Brighton & Hove (273400)	Fressingfield (900)	Portsmouth (205400)
Bristol (428100)	Glasgow City (598830)	Rochdale (211900)
Bury (60718)	Greenwich (LB) (255500)	Sefton (272000)
Calderdale (200100)	Hackney (LB) (247200)	Sheffield (551800)
Cambridge (122700)	Hammersmith & Fulham (LB) (182400)	Shipley (28162)
Camden (LB) (220100)	Haringey (LB) (255500)	Southampton (239700)
Cheshire West & Chester (332000)	Hounslow (LB) (265568)	Southwark (LB) (288700)
Chichester (22731)	Islington (LB) (206300)	St Helens (102629)
City of Birmingham (1074300)	Lambeth (LB) (304500)	Tower Hamlets (LB) (256000)
City of Cardiff (346100)	Lancashire (1461400)	Tregony (1000)
City of London (LB) (400000)	Leicester (329600)	Waltham Forest (LB) (259700)
City of Manchester (502900)	Lewisham (275885)	West Dunbartonshire (89,600)
Clackmannanshire (51,400)	Limpley Stoke (900)	Wandsworth (LB) (312145)
Coventry (316900)	Liverpool (465700)	Warrington (202700)
Croydon (LB) (364800)	Middlesbrough (138400)	Westbourne (2309)
Darlington (106100)	Middleton (500)	Whitchurch, Hants (4800)
Ealing (LB) (342500)	Newcastle-upon-Tyne (279100)	Wigan (318100)
	Norwich (213,166)	York (197800)
	Nottingham (303900)	

Attachment 2 - Nottingham Urban Area Local Sustainable Transport Fund **Case Study: Citywide 20mph Speed Limits – Sherwood Pilot, May 2014**

1. Description of Project/Scheme

Nottingham City Council is committed to providing more 20mph speed limits across the City, where public support exists, such as around educational establishments, shopping areas, residential areas and community facilities. The 20mph scheme supports the Council's strategic priority for Safer, Neighbourhood, Family and Healthy Nottingham partnership visions. The scheme aims to consult, develop and consider 20mph speed limits with citizens in all residential areas of Nottingham.

The project forms part of Workstrand B 'Establish a network of Community Smarter Travel Hubs', specifically measure B6.1 Places for People; Delivery of a programme of 20mph speed limit schemes across the City. Additional funding is provided from the Local Transport Fund (LTP).

This case study will provide an overview of the 20mph programme, focusing on the pilot area of Sherwood.

A reduction in speed limit across the City to 20mph in residential areas will benefit all citizens and focuses on reclaiming residential streets for the community, improving safety and creating a more attractive walking and cycling environment.

Nottingham has been divided into areas for consideration of 20mph speed limits. The Sherwood Area was selected as the pilot area due to it being relatively compact and containing a variety of residential, industrial and retail parts therefore providing a useful representative study. These areas are not based on ward boundaries but the natural intersection of roads and have been labelled as Sherwood, Bestwood, Bulwell, Radford and Lenton, Meadows, Wilford, Clifton, Dales, Bilborough and Wollaton (please see appendix 1 citywide plan).

The pilot area of Sherwood helped to shape the process and policies for extending 20mph speed limits to other areas of the City. Lessons learnt from each stage of the development of the proposals have influenced the overall progression of the scheme.

The engagement work carried out in the Sherwood area was the first stage in developing a strategy for the city-wide 20mph proposals. With this first area proposals were sent out as a blank canvas showing all roads within the area as roads to be considered for a 20mph speed limit, this included residential, busier distribution and A&B roads within the area. A questionnaire accompanied the proposals and asked whether citizens would like to see 20mph speed limits include major roads such as the A and B roads within the area, 75% of respondents replied no to this question. Based on this feedback for future areas all A and B roads were identified as remaining at their existing speed limits at the beginning of the engagement period and removed from the proposals. Many citizens also requested the exclusion of a number of busier local distributor roads within the area, it was therefore decided to retain these roads within the proposals and use the feedback received during the engagement, consultation and advertisement period for the proposals to decide whether they would be included or excluded from the 20mph limit.

Consultation with stakeholders such as Nottinghamshire Police, public transport and private hire companies also helped to develop the proposals and to create effective partnership working in moving forward with the 20mph speed limits across the City.

The pilot area established a signing strategy for the 20mph speed limit striking a balance between ensuring that the speed limit is clearly signed whilst reducing unnecessary street clutter through reviewing the general signage within the area.

Following the Sherwood pilot the process for introducing 20mph speed limits begins with community engagement work followed by a formal and legal consultation and advertisement of the Traffic Regulation Order. All of these stages help to develop 20mph speed limit proposals which are unique and relevant to each specific neighbourhood, establishing which roads are suitable for inclusion and exclusion from the 20mph speed limit based on the feedback received. Data is also collected for vehicle speed and flow and walking and cycling counts on a number of roads within each area. The 20mph speed limit is then constructed on site using speed limit terminal signage and additional repeater signage within the speed limit to act as reminders for drivers, the legal order is sealed and the new speed limit is brought into force. Shortly after the speed limit comes into force a community launch event is held within the area promoting healthy, sustainable transport for all. Approximately one year after the 20mph speed limit has been introduced the after data for the scheme is collected.

1. Background

The implementation of 20mph speed limits outside of schools in Nottingham City has been previously identified as a beneficial project to decrease speeds and improve road safety for children and students on school journeys. Legislation to introduce 20mph speed limits in residential areas has now been implemented allowing a more flexible approach to creating a 20mph speed limit which covers roads within the wider community. Benefits of the lower speed limit will be shared with the wider community moving towards a safer and more pleasant street environment for all.

Following consultation with the Portfolio Holder for Planning and Transportation, considering 20mph speed limits in residential areas was adopted as Council policy and investigations began on developing an area-wide 20mph speed limit in the pilot area of Sherwood using £100,000 from the Local Transport Plan 2011/12 to begin work on the proposals. Following the successful award of the Local Sustainable Transport Fund (LSTF) main bid funding allocation to the City Council in June 2012 the 20mph programme was accelerated utilising both LSTF and LTP funding allocations.

The first stage of the Sherwood scheme began in January 2012 with the launch of community engagement activities for the 20mph speed limit proposals. The public engagement period ran until the end of June 2012 with the formal consultation and traffic regulation advertisement following from August to December 2012. Following consideration of all of the feedback received a final decision was recorded by the Portfolio Holder for Planning and Transportation in January 2013 regarding the roads to be included within the 20mph speed limit and giving approval for the scheme to go ahead. Construction began on the Sherwood area-wide 20mph speed limit in February 2013 with the new speed limit completed and coming into force on the 24th April 2013, a launch event was held on the same day. The full costs for the Sherwood area amounted to approximately £380,000, these costs included much of the preliminary investigation work and forward planning required for considering area-wide 20mph speed limits across the City. The scheme was delivered by the Traffic & Safety Team and constructed on site by the Highway and Energy Infrastructure Team.

2. Project/scheme objectives

The potential benefits of a 20mph speed limit area are;

- Streets that are more cycle and pedestrian friendly
- Greater ownership of streets and public places
- Improved air Quality
- Safer Road junctions
- Reduced Traffic Noise
- Minimal effect on overall journey times
- Potential reduction in the number and severity of accidents

It is important to emphasize that as well as influencing safety; 20mph speed limits can influence quality of life, the environment and the local economy. Levels of walking and cycling and the speed and flow of traffic within each area will be collected as part of the proposals to assess the effectiveness of the 20mph speed limits implemented.

3. Outcomes/ impacts of scheme

The Sherwood area consisted of approximately 11,000 properties all of which were consulted with regarding the 20mph speed limit proposals. Leaflets and questionnaires were distributed in January 2012 to all properties within the area, of these 9% (937) of completed questionnaires were returned. This initial consultation showed significant support for 20mph speed limits; 63% of respondents supported the introduction of a 20mph speed limit on their street and 52% of respondents would like to see 20mph speed limits extended to other parts of the City. During the consultation and advertisement period which ran between July 2012 and December 2012, 192 further direct responses were received regarding the 20mph speed limit proposals.

Various data collection was conducted prior to the introduction of a 20mph speed limit in Sherwood in April 2013. Speed and flow data was collected at locations on 12 varying types of roads and walking and cycling counts conducted on 12 roads within the Sherwood area. After surveys were conducted once the 20mph speed limit had been in place one year in April 2014. Reported injury accident data is not yet available for the full year post implementation. Summary sheets of the before and after data for all data collected are attached in appendix 2.

The data collected thus far shows that there is not a great change in mean speeds in the area, this is perhaps because, for the most part mean speeds were already low, making a number of the roads suitable for inclusion within the 20mph schemes (advice from the Department for Transport suggests that roads with existing mean speeds of 24mph are most appropriate for inclusion within a 20mph scheme). Where mean speeds have increased they were already, and remain, below the given speed limit on the road in question be that 20mph or 30mph. As the table shows perhaps the most encouraging sign is that in 6 of the 7 sites included in the 20mph speed limit have seen a reduction in 85th percentile speeds. This means a drop in speeds of those drivers who were driving the fastest on those roads.

The walking and cycling data is also positive showing that levels of walking are increasing overall across the area, it is also interesting to note that cycling appears to have decreased on many of the roads excluded from the 20mph speed limit, although disappointing to see a reduction in cycling overall in the area.

The information available to date is representative of the results in other cities who have implemented large scale 20mph speed limits which have been enforced through signing only and not supported by the implementation of additional engineering methods such as traffic calming features.

4. Detailed financial information

The table below summarises the total cost of the Sherwood Scheme.

Financial Year	LTP £	LSTF £	Total Allocation £
2011/12	100,000	0	100,000
2012/13	0	£250,000	£250,000
2013/14	0	£30,000	£30,000
Total	£100,000	£280,000	£380,000

5. Lessons learned

The main challenge when undertaking a project of this scale was that few, if any schemes of this size had been carried out within the Nottingham City conurbation previously. Guidance was therefore sought from other Core Cities and authorities who had experience in implementing area wide, large scale 20mph speed limits. Following the completion of the pilot area there is now a better understanding of the complexity of delivering an are wide 20mph speed limit, a lessons learnt session was used to improve the delivery of 20mph speed limits in other areas of the City.

Following the pilot we have simplified the engagement process and have created a 20mph page on Nottingham City Council's Website which provides more information on Nottingham's 20mph speed limit proposals providing both area specific information and a more general overview.

Additional challenges encountered during the installation of the scheme was ensuring that the signing strategy was clear in informing drivers of the lower limit whilst keeping sign clutter to a minimum. Managing the existing signage already in place on street with the new speed limit signage requirements also proved difficult at locations where there is a need for multiple signs such as controlled parking zones, bus lanes and traffic calming.

Our work in the Sherwood area has helped to establish partnerships with Nottinghamshire Police, the Greater Nottingham Partnership, Public Health and Neighbourhood Development Teams all of which will assist with progressing with 20mph proposals in other areas. We will continue to adapt and improve our processes based on our experiences in each area.

Key lessons learnt from the Sherwood pilot scheme are;

- The importance of effective community engagement particularly engaging with local champions to promote 20mph speed limits within their own community.
- Early consultation with key stakeholders to ensure a coordinated approach to implementing the proposals and identifying challenges early on in the process.
- Ensuring simple, clear information on the proposals is available from a variety of sources such as Council website and social networking sites, local media and in local facilities such as libraries and schools.
- Committing to a signage strategy to maintain consistency across the City and ensure the 20mph speed limit is clear to all road users.

- Completing a full review of signage once a scheme is installed to ensure all legal requirements for the new speed limit are met.

6. Future plans

To progress the programme for delivering 20mph speed limits in its current format continuing to consult and develop 20mph speed limits with each neighbourhood on an area by area basis, using the allocations from the LSTF and LTP to complete as many areas as possible by the close of 2015/16. Area-wide 20mph speed limits are now complete in the Sherwood, Bestwood and Bulwell areas. During this financial year (2014/15) the areas of Radford and Lenton, Meadows, Clifton and Wilford will be completed.