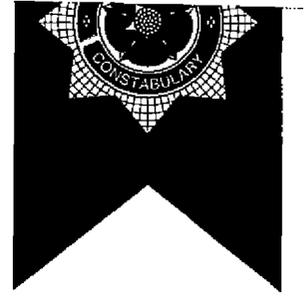


Lancashire Constabulary



CASUALTY REDUCTION

Crime & Disorder Reduction Category

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EXECUTIVE SUMMARY

As a result of rises in road crash casualties during the 1990's, Lancashire Constabulary examined methods to reduce casualty levels. This included looking at an approach to speeding, drink driving and seat belt wearing used in Victoria, Australia.

The Lancashire Constabulary joined with the County Council to develop a project based on this method. However, Government funding for a 'Victoria' model was not forthcoming. Following legislative changes the partnership was enhanced and revised its approach to take advantage of new financing procedures. The newly developed Lancashire Road Safety project uses a combination of existing funding streams (Local Transport Plan) and the fine revenue recovery scheme ('netting off') to deliver the nation's largest locally based road safety project.

This £11 million, 3-year project consists of four partner agencies:

Lancashire Constabulary
Blackburn with Darwen Unitary Authority

Lancashire County Council
Blackpool Unitary Authority

working with four stakeholder agencies:

National Health Service
Government Office for the North West

Highways Agency
Lancashire Magistrates Courts

to address speeding, drink driving and non-wearing of seat belts through Education, Enforcement, Engineering and Evaluation.

The project outcomes are: -

- Achieve the Government's 2010 **casualty reduction** targets by 2005.
- Bring about a reduction in **ambient speed** levels.
- Deliver significant savings to the **Health Service**.
- Produce significant change in road user **behaviour and attitude**.
- Prove the relationship between extensive focussed **publicity and enforcement and casualty reduction**.

As a problem oriented policing approach the project provides the mechanism for the Constabulary contributing to delivery of national casualty reduction targets, and achieving its corporate aim of reducing road crash casualties particularly those involving children. At the same time it produces associated crime and disorder benefits, and releases policing resources through its self-funding nature.

SCANNING



Lancashire is located in the North West of England. It is fringed on the south by the two large conurbations of Manchester and Liverpool, and in the north by the Lake District. It is bounded by the Irish Sea to the West and the Pennine uplands to the East.

The County has a population of just over 1.4 million people, and is characterised by a spread of closely spaced inter-linked medium sized towns, including Blackburn, Preston, Lancaster, Burnley and Blackpool. The County also has a number of small market towns, seaside resorts, ports and commuter settlements, together with large areas a countryside and moorland.

Lancashire has 7,401 km of roads and one of the most diverse networks in the North West of the Country. This includes busy motorways, urban and suburban routes, as well as quite country lanes in rural areas.

The Lancashire Constabulary policing area covers the county of Lancashire, including the unitary authority areas of Blackburn with Darwen and Blackpool. The Constabulary has a corporate vision to make 'to make the people of Lancashire feel safe, involved and reassured', and three corporate objectives that emanate from the vision, these are:

- To **Reassurance** the public, particularly those who are vulnerable
- To **Reduce Crime** particularly those offences that are of concern to the public
- To **Make Roads Safer**, particularly for children

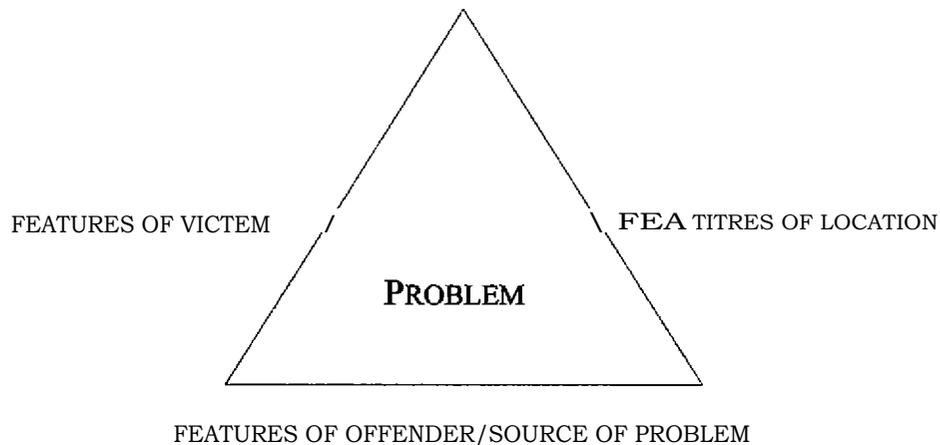
Each year almost 70 people are killed on the roads of Lancashire and over 8,000 are injured with more than a thousand of these being serious injuries.

Whilst this death and injury rate is lower than the national average it still represents an alarming and unacceptable cause of trauma to the public of Lancashire. As well as the human suffering there are many economic costs; road casualties in Lancashire cost a staggering £370 million per annum. Much of this human and financial burden falls on the County's Health Services.

.ANALYSIS

The use of the Problem Analysis Triangle (PAT) provides an understanding of the broad nature of this problem by breaking the incidents (crashes) into constituent elements:-

- (i) The features of the location
 - (ii) The features of the offender and the source of the problem
 - (iii) The features of the victim
- (Leigh et al 1996)



(i) FEATURES OF LOCATION

Although road crashes are thankfully rare occurrences, the rare and random nature of these events leads to difficulty in understanding the features of a location(s) unless long-term data is used. When crash data covering a sustained period is analysed clustering of casualty locations and crash causes become apparent.

Crash causes which are often linked to driver behaviour (offender) will be dealt with under the next heading relating to sources of the problem. Features of the locations in which road crashes occur are addressed first.

Lancashire Constabulary, in keeping with many organisation's working in the field of road safety, uses data gathered over a five-year period to analyse and thereafter direct its activities. When a road crash involving injury occurs the police officer attending the scene completes a report form that includes government statistical requirements, as well as other legal or policing information. This data is recorded onto a police information technology system, and later electronically transferred onto a Council system. The data meets all of the requirements, and provides a foundation for analysis and problem solving.

For example, the illustration below shows areas of the Lancashire town of Preston, with all categories of injury crashes for a five-year period mapped onto its roads.

Preston Docklands – Injury crashes overlaid onto a satellite image.



Preston town centre, Walker street.
Injury crashes overlaid onto street map.

By examining these longer periods of time, the Constabulary and Highways Authorities have been able to identify crash and casualty clusters. In the example given the data shows significant clusters' occurring on main routes in the town. Further analysis can also provide temporal and thematic trends as well as the spatial information shown on the maps. This type of analysis has been used throughout the county to enable the Constabulary and its partner agencies to identify hotspot locations and routes.

(ii) **FEATURES OF OFFENDER/SOURCE OF PROBLEM**

As suggested earlier, road crashes are rare, random and multi-factor events. However, international, national and local research shows that three factors account for a significant proportion of up to 50% of deaths and injuries on the roads.

These factors are drivers or riders of motor vehicles **speeding** and **drink driving** and drivers and vehicle passengers **not wearing seatbelts**.

The SARTRE report (Social Attitudes to Road Traffic Risk in Europe, 1998) examined crash causation across 15 European countries including the UK and very succinctly concluded that for European drivers there are "three main areas for safety measures. The 'three golden rules' are complying with speed limits, wearing a seat belt at all times and not drinking and driving".

A brief summary of some key points from research in each of these areas now follows: -

SPEEDING

Research in Britain proves that speed is a major contributing factor in about one-third of all road crashes. As such it represents the biggest single contributor to death and injury on our roads. The evidence from national and international research that lower speed reduces crashes and their severity is overwhelming:-

- Introduction of the 30mph limit in Britain in 1934 was accompanied by a 15% reduction in fatal and a 6% reduction in all crash severity's.
- The 1973-74 oil crisis led to a compulsory 50mph limit, for fuel conservation on roads that usually had a higher limit. Accident rates on motorways fell by 40% and on other roads by 21%.
- Evidence from the United States indicates that 'an increase of only 2-4mph in the mean rural interstate traffic speed resulted in an increase of between 19 and 34% in fatalities'.
- In Britain the Government concluded from research that the 'speeding driver is a major cause of death and injury on our roads'.
- Research shows that 'accident frequency rises disproportionately with increasing speed' e.g. on urban roads a 21% increase in collisions can result from a 10% increase in mean speeds.
- About a fifth of rural accidents involve vehicles going too fast for the situation, with a further quarter likely to be associated with speed.
- Surveys show that one in three drivers 'penalised for speeding offences in the last three years had been involved in an accident as a driver in the same period'.
- Speed has other adverse community effects; above 30mph 'any increase in speed leads to a steep increase in carbon dioxide emissions'.

- Speed of traffic affects people's quality of life, with long streams of traffic contributing to the severance of communities' and social exclusion by making access to facilities such as shops, schools and medical services difficult for those without cars.
- Recent survey evidence shows that motorists felt "that mobile cameras would be a greater deterrent than fixed cameras".

DRINKING AND DRIVING

Over the last twenty years there has been a dramatic reduction in the number of people killed in drink-drive crashes each year. However, despite a two-thirds reduction in the numbers killed, approximately 500 people are still killed every year on British roads in such crashes.

The Government recognises that 'drink-driving still leads to too many deaths and serious injuries on our roads' (DETR, 2000). Research shows that it is still an important area for casualty reduction and the public support robust action:-

- 'One in seven road deaths is a result of a drink-drive related accident'.
- Each year around 2,500 people are seriously injured in drink drive crashes.
- Nationally in 2000 there were 18,000 casualties of all severities from drink drive crashes.
- In 2000, almost 8,000 drivers and riders involved in road crashes failed breath tests.
- In England and Wales 1999 - 94,000 motorists provided a positive breath test or refused to take the test.
- Evidence shows that 'high test rates act to deter drink/driving: forces which have high test rates tend to have a falling trend for drink drive accidents compared with forces with low test rates'.
- Research indicates that "driver behaviour is responsive to significant increases in perceived detection risks and that long term improvements may be sustained if enforcement levels and the media profile of police activity remain high".
- An independent study of Lancashire motorists found that almost 98% thought drink driving was a serious offence with 85% supporting high profile enforcement.

RESPONSE

"the need for partnership in problem solving is well established. Resources, competence, and capacity to make a difference are not all lodged in one organisation."

Read and Tilley (2000)

The Constabulary has joined with the County Council, Blackburn with Darwen and Blackpool Unitary Authorities to deliver a partnership approach to dealing with these problems. It has also combined with other agencies that have a stake in casualty reduction or the criminal justice process; these are the National Health Service, Government Office North West, the Highways Agency and the Magistrates Courts Committee.

This multi-agency grouping to achieve joint aims is the Lancashire Partnership for Road Safety.

The Partnership has been established to address casualty reduction in Lancashire through sustained approaches to speeding, drink driving and the non wearing of seat belts. These approaches are delivered within a structured framework utilising Education, Enforcement, Engineering and Evaluation.

The Partnership has obtained over £11 million of funding for a three-year project. The successful funding bids have been achieved through two sources, the County Council Local Transport Plan mechanism (£4.2 million) and fine revenue recovery under the Vehicles Crime Act known as 'netting off' (£7 million).

The Partnership is using this funding to deliver the nations' largest locally based road safety project.

In Britain, the 3 E's of education, enforcement and engineering became the doctrine for improvement in road safety in the late 1930's, and this framework still holds good today. During the last thirty years substantial benefits have been achieved from vehicle safety and road engineering. However, for the reasons detailed in the analysis section of this report influencing driver and passenger behaviour especially in relation to speeding, drink driving and seat belt wearing is now considered the most likely approach to achieve further casualty reductions.

In May 1999, the European Transport Safety Council (ETSC) published the result of a study of almost one hundred pieces of road safety research. The ETSC concluded that "the cost effectiveness of enforcement programmes related to excess speed, drinking and driving and seat belt use is invariably positive". They also point out that enforcement is most effective when "integrated into a package of measures, which also include information campaigns and engineering measures".

As such, each element of the Lancashire Road Safety Project is being delivered in a complementary and integrated way, with evaluation processes to provide ongoing assessment. The 'assessment' elements will be dealt with in the next section; the 'responses' will be covered under the three headings of Education, Enforcement and Engineering.

EDUCATION

Communication Strategy



A broad range of techniques are being utilised to educate the road-using public of Lancashire. A comprehensive internal (for the staff of the agencies involved) and external (for the public) communication strategy has been developed.

The methods used include radio, written news media, internet web-site, countywide household leafleting, ad-vans, ad-shells, bus backs and cinema advertising. Lancashire videos are being produced for cinema and for use as an educational tool.

Specific media launch days are used for the different aspects of the project.

Driver Education



A further education element, a speed awareness course, has been designed for those motorists who are caught just above the speed threshold at which the police would usually prosecute. This course diverts offenders from entering the criminal justice system by offering the opportunity to attend a professionally designed one-day course. The course consists of facilitated client centred group work and in-car training with an advanced instructor to raise awareness of motorists speeding behaviour and change it.

Television

Whilst there is strong research to show that publicity education combined with enforcement is more effective in delivering road safety outcomes than either method used in isolation, the efficacy of peak time television coverage is unknown. Currently, the government obtain television at low volume viewing times owing to cost restrictions.



Television is a strong medium for getting messages to the public and the project includes the showing of impactful DTLR advertisements more frequently and at times of higher audience rating. The increase from April 2003 is throughout the Granada TV region and allows comparison with other areas who receive 'Granada' TV but not other Lancashire project elements.

ENFORCEMENT

Speed

Pilot schemes for netting off of speeding fines have demonstrated the effectiveness of targeted enforcement of speed crash hotspots. The Lancashire Road Safety Project involves significant increases in police enforcement activity through a mix of mobile and fixed speed cameras.



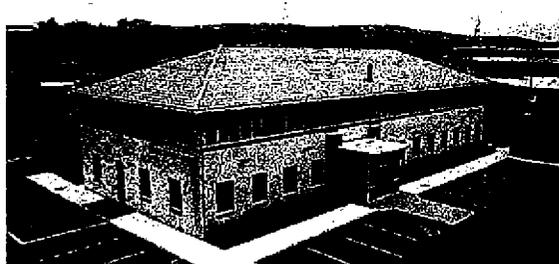
During the life of the Project fixed safety cameras locations will be increased from a level of 70 sites to more than 320 in a rolling programme. At the same time fully liveried police vehicles, equipped with laser speed enforcement systems, service mobile locations. The initial six such vehicles operate in Lancashire, doubling to twelve in the second year of the Project.

The sites for fixed cameras are based on analysis of crash hotspots. The mobile locations are similarly focussed on the routes that have the highest casualty rates, however, some activity is directed to areas of community concern. The selection of the areas of community concern involves the Community Safety Officers for the fourteen districts of Lancashire acting as liaison through Crime and Disorder Reduction / Community Safety Partnerships. Community sites are then evaluated for appropriate attention of the mobile units.



All of this activity creates the need for 'back of house' procedures that are streamlined to deal with significant growth in speeding offence detection. To achieve this the Constabulary has joined its processes with those of the Lancashire Magistrates Courts. This has involved the Constabulary developing a Central Processing Unit to deal with the identification and ticketing of those offenders through to the court process.

This is the first time nationally that the police and courts process has been joined up and co-located in this way.



Drinking and Driving

Lancashire Constabulary has taken a robust stance to enforcement of drinking and driving, running high profile campaigns in conjunction with the government's summer and winter (Christmas) publicity initiatives. The Constabulary now co-ordinates its approach to drinking and driving through the Lancashire Road Safety Project.

As well as supporting the two main government led objectives, a further two are now run locally involving a variety of enforcement techniques including: -



- High profile checkpoints carrying out roadside breath testing.
- Breath testing in the proximity of licensed premises.
- Breath testing of all drivers involved in crashes (injury and damage only).
- 'Crimestoppers', telephone line allows the public to anonymously pass information to the police and is used to gather information on offenders.

All of which is carried out with education and publicity, both within the media and at the roadside.

Seat belts



Whilst those not wearing a seat belt could be considered 'offenders' within the PAT model, many also fall victim to injury when a road crash occurs. The Lancashire Road Safety Project involves heightened education in relation to the dangers of not wearing a seat belt. Analysis of research shows that rear seat passengers are less likely to wear a seat belt, and that they are often themselves seriously injured or seriously injure front seat passengers as a result.

As part of the project, the Constabulary links seat belt enforcement to these educative elements at least twice a year.

ENGINEERING

Engineering to reduce crashes will continue at appropriate locations. However, to support the project there is increased street signing of speed limits and of the zones of camera activity. A new database has been developed for the project to record information about vehicle speeds at hotspots and other locations (ambient speed), as well as police activity, to identify changes in driver behaviour.

CRIME AND DISORDER / COMMUNITY SAFETY

This partnership project has road casualty reduction and its associated benefits as key outcomes. However, from a policing and community safety perspective there are a number of additional benefits that can be achieved by using this approach.

Research shows that crime and disorder hotspots are centred on areas of multiple social deprivation. The National Neighbourhood Renewal Strategy Action Plan describes neighbourhoods "stuck in a spiral of decline" with high crime, vandalism, unemployment, empty homes, low education attainment and health problems. The plan also suggests that family breakdown and the declining popularity of social housing results in "an ever greater concentration of vulnerable people in poor neighbourhoods".

As identified in the 'features of victim' section of this paper these are the same areas and people, especially children who represent the most vulnerable communities in terms of road death and injury.

By operating highly visible road policing in these areas to reduce road casualties, the Lancashire Constabulary also addresses its corporate objective to provide reassurance to the communities of the county, particularly those who are most vulnerable. Policing visibility at this time is considered to be a high priority; a message reinforced in the government's police reform white paper, where it states that "awareness of a policing presence is an important part of the general level of reassurance".

Further evidence of public reassurance is to be found in a Home Office study of the cost effectiveness of speed and traffic light cameras. A study found that as well as being cost effective such cameras provided additional benefits including:

- Increased criminal intelligence
- Up to date police national computer (PNC information)
- Greater community reassurance

The large increase in interactions with vehicles through speed enforcement or at drink driving checkpoints gives an opportunity to gather intelligence on the criminal use of motor vehicles. Intelligence effects include the ability to draw association between vehicles, people and locations. This can be used for intelligence purposes, investigations, prevention and disruption of criminal activity.

As Rose (2000) indicates "certain groups of traffic offenders are also highly likely to commit mainstream offences, targeting these offenders could help disrupt mainstream crime". Whilst this research shows that the strongest link is between disqualified driving and other criminality, it also suggests that "drink drivers were estimated to be twice as likely to have a criminal record as a member of the general population of the same age and gender". Thus, in carrying out drinking and driving checkpoints there is a potential for research to identify "self selected groups" engaged in other forms of criminality.

Similarly, the Home Office draws links between serious road traffic offending and violent criminality, by pointing out that "some of the more serious road traffic offences amount to crimes of violence and are expressions of violent intent on the part of the perpetrator"

ASSESSMENT

"Evidence is useful for policy and practice: for informing decisions about priorities and for identifying promising responses to deal with problems" - *Tilley (2001)*

The Lancashire Road Safety Project has used international, national, and local research evidence to identify the responses to deal with the problems identified. However, the diversity of the responses brings with it complexities in assessment and evaluation.

The project utilises the 'mechanisms' contained in the education and enforcement elements to influence changes in driver and rider behaviour. It operates in a broad 'context' on a range of roads covering the entire county of Lancashire.

The Lancashire Partnership for Road Safety has set itself five outcome targets which will have significant community benefits, they are to:

- Achieve the Governments 2010 **casualty reduction targets** by 2005.
- Bring about a reduction in **ambient speed** levels.
- Deliver significant savings to the **Health Service**.
- Produce significant change in road user **behaviour and attitude**.
- Prove the relationship between extensive focused **publicity and enforcement and casualty reduction**.

Assessment of these high level outcomes requires a number of input and output measurements to support the assessment of progress, as well as longitudinal, attitudinal and behavioural assessment to establish less tangible changes within the public.

This ongoing evaluation recognises the need for improvements to be fed back into policy and practice through the project steering group, and the need for cumulation of evaluative evidence. In order to do this a number of mechanisms have been established: -

Casualty Reduction

Police data collected at crash scenes provides the foundation for assessment of this area. The government has set targets for casualty reduction to be achieved by the year 2010, these are: -

- a 40 % reduction in the number of people killed or seriously injured in road accidents;
- a 50% reduction in the number of children killed or seriously injured; and
- a 10% reduction in the slight casualty rate expressed as the number of people slightly injured per hundred million vehicle kilometres.

The project intends to achieve these targets by 2005.

In addition to these countywide targets, assessment will be carried out of individual casualty hotspots and routes addressed by fixed sites or mobile activity. Casualty reduction specific to these locations is also monitored and assessed.

Ambient Speed

Readings from on-street recorders have provided baseline speeds at fixed camera and mobile enforcement locations to measure the effectiveness of enforcement on driving speed.

However, baseline readings have also been taken at sites across the county which are not subject of the increased enforcement. Details of these recordings are mapped, as are input details such as hours of police enforcement activity by type (fixed/mobile), and locations. Output information, in terms of the numbers of offenders detected during the period of enforcement are also recorded.

In time, this will allow the study of activity, output and locational speed. The non-enforced locations will provide information on any changes in the underlying ambient speed of motorists.

Health Service

The Health Service are members of the Lancashire Partnership for Road Safety, and are represented on the Project Board by the Chair of the NHS North West Regional Accident Task Force.

The Health Service has undertaken to monitor changes in Accident and Emergency cases and hospital bed day usage created by road crash trauma.

A baseline has already been established from which the cost to the Health Service of road crashes in Lancashire can be evaluated. At this stage it is understood that road crashes in Lancashire account for 6% of all hospital bed occupancy. In addition, there are disproportionate effects on long term care delivered by the Health Service when injuries sustained by children require lasting or protracted treatment.

Behaviour and Attitude

The Parker Report (1999) referred to earlier provided an independently researched view of the behaviour and attitudes of the motoring public in Lancashire. Further attitudinal studies will examine whether the public perceptions have changed.

The first of these was an independent survey conducted immediately prior to the launch of the project. This survey found comparatively high levels of public support for the use of speed cameras, but with some concerns regarding fine recovery. There is also considerable support for more enforcement of seat belt regulations (77%) and drink driving, especially in the vicinity of 'pubs' (88%). Opinions on a wide range of other project related issues were obtained to provide a base line.

The 'road users' of Lancashire are its public, and the opportunity was taken to assess their attitudes during the audit and public consultation phase of the development of the 2002 Crime and Disorder Strategies. Comparison will be made in 2004 when the next audit/consultation process is undertaken.

Further attitudinal surveys specific to motorists or assessing the general public are to be supplemented by the use of the Lancashire Citizens Panel from which the Constabulary and the County Council draw information to benchmark public perceptions.

This data gathered from surveys can then be compared with the crash involvement levels and speed data to provide a more precise account of changes in behaviour and attitude.

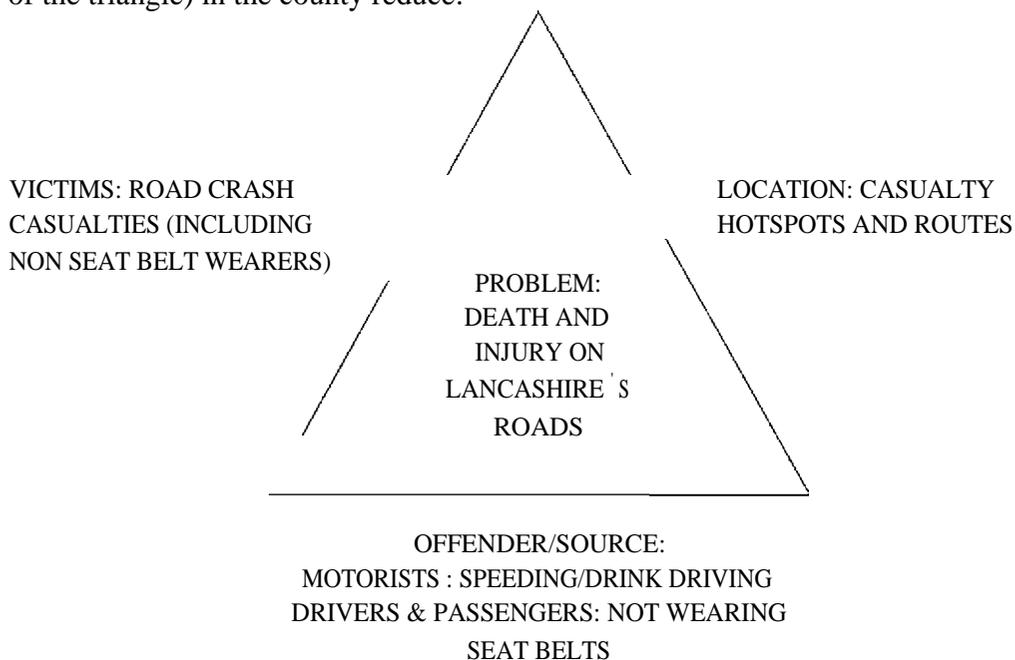
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Research to establish the effectiveness of the marketing and publicity strategy is being carried out by the use of focus group assessments and benchmarking against 'netting off' pilots in other parts of the country.

By utilising all of the data sources outlined conclusions about the overall effectiveness of the Project, and the linkage between publicity, enforcement and casualty reduction can be assessed.

CONCLUSION

The Lancashire Constabulary has worked with its partners to develop the Lancashire Road Safety Project. By taking away two sides of the triangle the Constabulary will see road casualties (the third side of the triangle) in the county reduce:



Using this problem-oriented approach the Constabulary will achieve its strategic vision of 'making the people of Lancashire feel safe, involved and reassured'.

Lancashire Constabulary

Paul R Stephenson QPM Assistant Chief Constable (Designate)

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29 May 2002

Home Office Policing and Reducing Crime Unit
Clive House (Room 415)
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London
SW1H 9HD

The Tilley Award 2002

As Chair of the force 'Problem Oriented Policing Steering Group' I am delighted to forward Lancashire Constabulary's nominations for the Tilley Award 2002.

There has been an enthusiastic response from the force's divisions/departments in respect of this Award, therefore the Lancashire Constabulary is submitting a total of 19 applications, all of which have been quality assured.

I personally endorse each individual entry and commend each one on its own particular merit. Many of the nominations were used as case studies in the Constabulary's own Annual 'POP' Conference that took place in May of this year.

A handwritten signature in black ink, which appears to read 'P.R. Stephenson' followed by a flourish.

Lancashire Constabulary

CASUALTY REDUCTION

Crime & Disorder Reduction Category

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Endorsed By. Deputy Chief Constable **Paul Stephenson**

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