

1 Road Safety Schemes



1. Introduction

Statutory Responsibilities

The Road Traffic Act 1988 (Section 39) places statutory responsibilities on Local Authorities in respect of Road Safety to:

1. Carry out studies into collisions arising out of the use of vehicles on roads or parts of roads, within their area and for which they are the responsible Highway Authority.
2. In the light of those studies, take such measures as appear to the authority to be appropriate to prevent such collisions. This includes the dissemination of information and advice relating to the use of roads, the giving of practical training to road users or any class or description of road users, the construction, improvement, maintenance or repair of roads for which they are responsible and other measures taken in the exercise of their powers for controlling, protecting or assisting the movement of traffic on roads.
3. In constructing new roads, take such measures as appear to the authority to be appropriate to reduce the possibilities of such collisions occurring when the roads come into use.

The Safer Essex Roads Partnership



The [Safer Essex Roads Partnership \(SERP\)](#)

comprises of Essex County Council, Southend-on-Sea Borough Council, Thurrock Council, Essex Police, Essex Fire and Rescue Service, Highways England and Essex and Herts Air Ambulance Trust, East of England Ambulance Trust and The Safer Roads Foundation.



Essex Highways is responsible for the following functions:

- **The Data Analysis Team** validates road collision data and provides analysis which steers the work of SERP and allows us to monitor performance.
- **The Safety Engineering Team** analyses collision data to identify cost effective sites for road safety interventions intended to reduce collisions particularly those causing death or serious injury.
- **The Education, Training and Publicity (ETP) team** delivers ETP to key target groups, often in partnership with other stakeholders.
- **The Bikeability Team** delivers nationally recognised cycle training to children and adults.
- **The County Council's Driver Improvement Team** delivers national educational courses (known as NDORS) on behalf of Essex Police, and works closely with the partnership manager who organises the safety camera function across Essex (including Southend-on-Sea, Thurrock and Highways England cameras).

2. Typical Problems

'That road is dangerous!'

'There are always accidents happening at that junction'

'Does someone have to be killed before anything gets done?'

'It's an accident waiting to happen!'

3. Things to Consider

There are many occasions where minor collisions occur but no one is injured. In these cases the damage is rarely reported to the police and it is not possible to monitor the sites. Local Authorities do not have access to insurance claims to enable them to analyse damage-only collisions.

All local authorities have a statutory duty to analyse the collisions that occur resulting in road casualties and investigate whether engineering solutions are available to reduce the number of casualties.

The LHP budget available for Road Safety is mainly Capital money which can only be used for the physical implementation of the Safety Schemes. Education, Training, Publicity and Enforcement cannot be funded from the LHP budget. The Safer Essex Road Partnership (SERP) has been set up to address these elements of Road Safety. Information about SERP activities can be found on it's website at [Safer Essex Roads Partnership](#).

If there are safety concerns being raised by the public that have not resulted in injury collisions, these can be investigated to establish whether there are any options that will reduce the perception of danger in the area. These can be funded as LHP schemes but will not be classified as Safety Schemes. Alternative solutions may be found in the other sections within the Members' Guide.

3.1 Priorities and Targets

Although there are currently no government targets for casualty reduction, the Safer Essex Roads Partnership has set targets for 2020 against the baseline average of casualties between 2005 and 2009:

Essex County Council Road Safety Targets		
	2005-2009 ² Casualties	2020 Target
All KSI ¹	839	709
Slight Casualties	4371	3073

¹KSI = Killed or seriously injured

²2005-2009 Base line average

3.2 Sites selected for engineering-based highway schemes

The severity of the collisions are taken into account when prioritising remedial sites; those sites where there are killed or seriously injured (KSI) casualties are given a higher priority.

With the current level of injury collisions in Essex it is necessary to tackle the sites where road casualties are already happening.

The County's Road Safety Engineering Team is responsible for identifying Road Safety Remedial sites, analysing any contributory factors and developing engineering options to address the collisions. It prioritises sites for remedial measures using the Department for Transport economic justification which is based on an estimated First Year Rate of Return. This is the monetary benefits to be gained in collisions savings in the first year set against the cost of the scheme.

4. Typical Measures

4.1 Engineering solutions

The pattern of collisions may indicate which aspect or aspects of the highway environment road users are failing to cope with. Sometimes the pattern relates to one particular road user group such as elderly drivers, young pedestrians or motorcyclists. At other sites it may be rear end shunts due to poor visibility at a junction. Each site will be unique and not all sites have a common causation factor for the collisions that are occurring.

Safety Schemes must be identified and promoted by a qualified Safety Engineer. The safety engineering solutions will differ depending on the causation factors. Engineering solutions will then be designed that aim to reduce the likelihood of similar collisions.

All Safety Engineering schemes are designed with the specific purpose of reducing the number of casualties at the site, taking into account the causation factors leading to the collisions that have occurred.

Upon the identification of the Casualty Reduction sites for the year the Safety Engineers will informally meet with the relevant County Members to explain the scheme which is proposed to mitigate against the causation factors of the collisions.

4. Typical Measures continued

The scheme design can be reviewed and the LHP can request alternative designs, but the design must address the causation factors that have been identified and must be approved by the Road Safety Team.

If alternative schemes are implemented that do not address the safety issues then there is a risk that in the event of a further fatality, the decisions taken leading to the alternative scheme design could be taken into account at an inquest.

4.2 Education Training and Publicity

Not all sites are suitable for engineering-based highway schemes. Sites having clusters involving similar types of road user, or similar behaviours not suitable for engineering treatment are targeted through other forms of remedial action such as police enforcement, education or training.



More information about education, training and publicity resources can be found on the following Safer Essex Roads' website pages:

[Education](#)

[Training](#)

[Publicity Campaigns](#)

5. Scheme Investigation

4.3 Enforcement Essex Police undertake enforcement. The police website states that “excessive and inappropriate speed is the cause of many road traffic collisions throughout the county every year and has been identified as a priority for many communities through neighbourhood policing.” More information can be found on the [Essex Police Website](#).

5.1 Investigating fatal collisions Sites where collisions have occurred, in which at least one road user has died as a result of injuries sustained in the collision, are investigated within 10 working days of the authority being notified. The investigation is undertaken by an Essex Highways Road Safety Engineer together with the police and includes a visit to the site of the collision to determine whether there

are any highway improvements that could be made to prevent further collisions in the same location, or to determine whether the collision forms part of a pattern at the site that should be further addressed through other forms of remedial action such as education, training or police enforcement.

5.2 Investigating collision sites

Schemes are prioritised at a countywide level on the basis of the cost benefit in the predicted reduction in people killed or seriously injured and the cost of implementing the scheme.

If a pattern in the collisions is identified, road safety engineering specialists will determine the sort of measures that could be cost effectively applied to address the pattern. Guidance contained in the RoSPA Road Safety Engineering Manual, together with the experience of local highway and traffic engineers, is used to develop such measures. This approach ensures that limited resources are invested to the best effect to reduce collisions.

Where there has been a pattern of personal injury collisions, recorded by the police, involving vehicles losing control/skidding on a wet or flooded road surface within a three-year period; such a pattern indicates that the condition of the road surface may need further investigation with surface condition data. Sites requiring surface treatment, identified via this process, are usually included in a future road maintenance programme.

If there are a number of personal injury collisions along the length of a route rather than at a specific location, these can also be analysed to determine whether there are treatable patterns. For example, whether all the left-hand bends are the scene of one or two collisions, whether people turning right from the major route are experiencing problems, or where a number of junctions along a route are the scene of repeated collisions.

It is not normal practice to recommend treatment at sites where there are insufficient injury collisions to justify the need, or there is not an acceptable return on the level of financial investment required. However, account will be taken of information supplied by members of the public as to where non-injury collisions are occurring on a regular basis. This information, combined with the recorded personal injury data, can help to determine a more complete picture of the issue.

Each identified collision site is monitored on a regular basis in case of further collisions, or a change in the collision pattern occurs. Treated sites are monitored to determine whether the predicted return on the financial investment has been achieved and to ensure the treatment has had the desired effect.

5. Scheme Investigation

5.3 Prioritising Road Safety engineering sites

Sites will be prioritised on the basis of collision sites where people have been killed or seriously injured and the benefit in terms of reduction in those injuries in the first year after implementation against the cost of the scheme. This is the accepted prioritisation process and is known as the First Year Rate of Return (FYRR).

6. Costs and Timescales

Schemes are delivered either via a target cost format which was agreed by Essex County Council as the best contract mechanism for highways works or via the newer direct delivery format.

An explanation of the contract set up for Essex Highways and how schemes are costed process can be found in Appendix 1

A safety engineer will look at all the options and present a scheme that will have the most cost effective benefits in reducing casualties at that site. The success of road safety engineering solutions is measured and reported based on the first year rate of return; this is the cost of the scheme in relation to reduction of casualties at that site.

When delivering prioritised road safety schemes, it is important to deliver the scheme as quickly as possible to reduce the likelihood of future collisions. If a scheme is delayed and further fatalities occur, the reason for the delay may be taken into account during an inquest.

When proposing the scheme the Safety Engineering Team will advise on costs and timescales. Any safety schemes that are over the budget available to the LHP will be put forward as a separate scheme through the Council's capital budget allocation.

7. Glossary of Terms

AVL	Automatic Vehicle Location (similar to RTPI)
CMA	Cabinet Member Action
CMB	Cabinet Member Briefing
EA	Environment Agency
ECC	Essex County Council
EH	Essex Highways
LHP	Local Highways Panel
NEPP	North Essex Parking Partnership
PP	Parking Partnership
RTPI	Real Time Passenger Information
S106	Section 106 (Money provided by a Developer to County Council to implement infrastructure as an obligation of the planning permission)
S278	Section 278 (Infrastructure required to be implemented by the Developer as an obligation of the planning permission)
SERP	Safer Essex Roads Partnership
SID	Speed Indicating Device
SEPP	South Essex Parking Partnership
SLO	Speed Limit Order
SSSI	Site of Special Scientific Interest
TRO	Traffic Regulation Order
TSRGD	Traffic Signs Regulations and General Directions
VAS	Vehicle Activated Sign