# 1 Creating a forgiving road system

## Why we need a safe system

### The Cambridge section of the Waikato Expressway adopts a safe system approach to road design.

The Safe System approach works on the principle that it is not acceptable for a road user to be killed or seriously injured if they make a mistake.

**As well as asking**
*'Why did that driver crash into the power pole?'*

**We now ask**
*'Why does that power pole need to be there and how can it be made safer?'*

Research from Scandinavia and South Australia shows that even if all road users complied with road rules, fatalities would only fall by around 50% and injuries by 30%. So if everyone obeyed the road rules, New Zealand would still have more than 130 deaths on the road each year.

The Safe System approach looks beyond the driver. It identifies and addresses all the causes of crash trauma because serious crashes are system failures. A more forgiving system means that when someone makes a mistake it is less likely to result in loss of life or limb.

### What a safe system looks like

A safe road system means that all parts of the system will be much safer than they are now. For example:

Vehicles will have advanced safety features, including electronic stablitliy control, front and side curtain airbags and better maintenance of tyres and brakes.

Roads and roadsides will be safer because the planning and design will make them more forgiving of errors. Surfaces will be improved and roadside hazards removed or barriers installed.

Speed will be managed to survivable levels through a wide range of techniques such as greater use of technology and speed limits that are appropriate for the road.

Road users will be alert and aware of the risks, and drive or ride to the conditions.

The Safe System approach aims for a more forgiving road system based on these four principals:

**1 People make mistakes**
*We need to recognise that people make mistakes and some crashes are inevitable*

**2 People are vulnerable**
*Our bodies have a limited ability to withstand crash forces without being seriously injured or killed*

**3 We need to share responsibility**
*System designers and people who use roads must all share responsibility for creating a road system where crash forces do not result in death or serious injury.*

**4 We need to strengthen all parts of the system**
*We need to improve the safety of all parts of the system - roads and roadsides, speeds, vehicles, and road use so that if one part fails, other parts will still protect the people involved.*

When we have a safe road system, everyone will expect a very low road toll and serious injuries will be increasingly rare. All parts of the system will be much safer than they are now.

The safe system