The presence of rumble strips produces enough noise and vibration to deter deer from crossing the carriageway, in order to reduce the number of DVC in the county. In particular, on the B1106 through the King’s Forest – a length of road approximately 5km long – there have been 25 injured/killed deer recorded over the same period. It is this road which was proposed as a trial site in order to assess what effect this traffic-management measure might have on deer road-crossing behaviour and, in turn, accident rates.

This location is ideal because there is a considerable number of DVC on this route and it is a B-class road with a moderate volume of traffic. A route with a high volume of traffic would not be suitable, since the constant vehicle presence would restrict the opportunities for deer to cross safely.

Additionally, the length of forest is long enough for the trial area and the control area to be located in similar habitat, adjacent to each other. This reduces the variables for the control area and therefore improves the accuracy of resulting comparisons.

David Hooton, deer liaison officer for The Deer Initiative Eastern Region, and the person who will be responsible for the practicalities of monitoring the trial, also lives within the King’s Forest.

WARST has proposed the theory that laying rumble strips in locations where deer are regularly crossing the carriageway may reduce the number of DVC in Suffolk. The hypothesis is that the presence of rumble strips will reduce vehicle speed, improve driver awareness of the potential presence of deer, and possibly also produce enough noise and vibration to deter deer from crossing while cars are present.

In order to provide conclusive evidence to prove all or some of these hypotheses, it will be necessary to monitor the trial site. A comprehensive monitoring programme should include speed surveys, video surveillance of deer behaviour and monitoring of DVC records.

Monitoring of deer behaviour is required, in particular, to determine whether their crossing activity is delayed for longer where traffic passes over rumble strips or at the control area.

The speed surveys are to be carried out by the Suffolk County Council’s surveys team and the monitoring of DVC records by WARST and NDCP. As rumble strips are relatively cheap to install, the investment in the video surveillance system and the monitoring will be the biggest costs of the first phase.

The monitoring costs include up to £7,000 for the purchase of two video camera surveillance systems.

The equipment has a time-lapse function which records at eight frames per second, allowing 24 hours of monitoring to be viewed in good detail over three hours.

Hiring the equipment was not possible but, as the systems will remain the property of the county council, it is planned to reuse them for future projects requiring video surveillance, including possibly traffic monitoring.

The first phase will see the installation of rumble strips, signing and monitoring equipment, and several periods of video surveillance.

This is expected to start shortly and be completed in March 2005. A speed survey will be carried out before the construction work begins, and again after its completion.

The second phase will run from April to November 2005. A speed survey will be carried out before the construction work begins, and again after its completion.

Apart from the costs of installing rumble strips, there will be additional costs for each phase of the trial:

- Speed surveys: £2,000
- Video surveillance: £2,000
- Monitoring: £2,000
- Hiring equipment: £2,000
- Total: £8,000

The annual cost for car repairs alone is estimated to exceed £11M to limit. The value of prevention of a non-injury accident in a rural location is estimated at £2,060. There are additional costs if a ranger must visit the site, kill the deer if necessary, and incinerate the carcasses, too. These additional costs are in the range of £35 to £300, which is charged to the relevant district council.

The annual cost of car repairs alone, over and above losses associated with human injury costs from such incidents, is estimated to exceed £1M.

But because accurate information on the real scale of the problem, the geographical distribution of incidents, and the location of particular accident black spots remains incomplete, the NDCP is now compiling records of deer found injured or killed on the roadside (see box).

In the meantime, local authorities are taking steps to introduce new ways to help alleviate deer accidents. Suffolk County Council is already set to begin a trial, and measures are also under consideration in Buckinghamshire and Hertfordshire by the Chilterns Traffic Management Project.

In Suffolk, the figures already show that the county has the third-highest rate of DVC leading to human injury in England. In the last five years, there have been 55 slight injuries and non-serious injuries resulting from DVC recorded on the county’s Accrington accident database. However, the total numbers are likely to be higher, as there is no way of knowing whether those recorded were due to the deer being hit or killed in the road.

Much of NDCP’s data at present comes from carcass uplifts, accident records from the police, and insurance companies, but the information available concerning the deer itself is usually limited. Those persons in the best position to provide the most accurate information on considerations such as species and sex of the animal, and whether it was killed outright by collision or needed to be dispatched, are usually the local deer managers, hunt-kennet’s, vets, RSPCA, SSPCA and others.

Nevertheless, using data from the NDCP, an estimate can be made of the number of non-injury accidents occurring. Throughout Suffolk there have been 290 injured or killed deer recorded over the last 18 months.

Hence the Suffolk County Council West Areas Road Safety Team (WARST) has proposed the installation of rumble strips in locations where deer are regularly crossing the carriageway, in order to reduce the number of DVC in the county.
The National Deer Collisions Project was launched in 2003 in order to develop a national register for deer-related accidents throughout England, Wales and Scotland, and to undertake research into the effectiveness of various, different preventative measures at the roadside.

Its key objectives are:
- To assess the true scale and geographical distribution of the problem within mainland UK;
- To investigate key factors which affect deer accident risks;
- To assess the effectiveness of different measures employed to reduce animal road kills;
- To identify local deer accident black spots where future mitigation efforts should be targeted;
- To increase public awareness of deer-related traffic collisions and how to avoid them.

The project is administered by the Deer Initiative on behalf of the Highways Agency and Scottish Executive. They have provided financial support for the project, together with the National Forest Company, Woodland Trust, and The Deer Study & Resource Centre. The study is overseen by Deer Management Consultants Dr Jochen Langbein and Prof Rory Putman, together with David Hooton, Deer Initiative liaison officer for the east of England.

The initial 12 months of this project had always been planned as a period over which to raise awareness about the project and establish the data-collection networks. Hence the figures only represent a low percentage of the full toll of casualties. Nevertheless, preliminary mapping of those 10,000 or so records received by the end of 2004 can already be mapped much more closely. It is intended to use the more-precisely referenced records during the next stage of analysis in order to help identify locations with the highest deer collision risk, and so where mitigation measures might best be targeted.

Submissions of information are still required for 2004/5. A date is essential, together with an OS grid reference, remembering to give easting before north ing to avoid too many submissions from the same area. The more information which can be provided, the better – such as the species of deer, roadside habitat, time of day, mitigation measures and so on.

Records can be submitted online via the website and should include any incidents, even of just deer carcasses seen by the roadside. There are procedures in place to identify duplicate records, and it is important not to assume that someone else will already have reported it.

Contact the Deer Collisions Project for further information. DeerCollisions, PO Box 465, Bury St Edmunds, IP28 6XD. E-mail: info@deercollisions.co.uk or web: www.deercollisions.co.uk

![Figure 1: An Ordnance Survey map produced by the Deer Collision Project showing data recently submitted](image)