

EMERGENCY LOCATION DISCS – Improving response times.

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ABSTRACT

A key factor, in the outcome of injury severity and recovery for road trauma casualties, is the response time of emergency services in attending crash scenes.

Vast traveling distances, particularly in rural and remote areas, greatly lengthen response times. This is further complicated by inaccurate reporting and poor directions given for the location of a crash site.

WA, as Australia's largest state, is characterized by vast traveling distances geographical isolation. In many of areas of the state, the minimum response time for emergency services (Police, Fire & Rescue, Ambulance or Royal Flying Doctor Service) is measured in hours – up to several hours.

St John Ambulance Services in WA (Khangure, 1999) have identified significant differences when comparing road crash deaths in rural areas to those in the Perth metropolitan region. In rural WA 91% of road crash deaths occur out of hospital and 9% in hospital, compared to 61% out of hospital and 39% in hospital for crashes in the metropolitan area.

This paper details the trial of Emergency Location Discs – roadside markers which enable improved identification and accuracy in reporting of the location of road crashes or other emergencies, facilitating faster response times by emergency service personnel in attending the scene and casualty treatment.

The Emergency Location Discs project was developed as an inter-agency collaborative effort. The markers have been designed to provide those reporting a crash with important details with which to identify the scene.

This initiative addresses the objective of “early detection of crashes” as documented in the WA Road Safety Strategy for optimized trauma services. Undertaken as a twelve month trial (in progress) within a defined geographic area, the development, implementation process and promotional activities are reported in this paper.

THE PROJECT

The Emergency Disc Location (ELD) project is an innovative road safety project developed by the City of Bunbury RoadWise Committee in coordination with the community and local road safety stakeholders in an effort to reduce road trauma in the Bunbury and Southwest region. The purpose of the discs is to allow road users to correctly state their location when involved in a crash or other emergency to ensure emergency services are able to respond to the call immediately providing for a quicker response time and reduced trauma for victims.

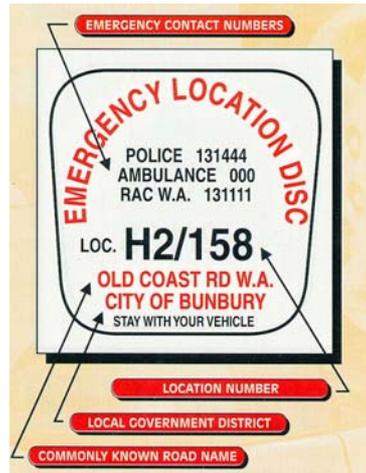
An important component of the ELD project is a community education campaign which raises awareness of the discs and demonstrates to the community the practical application of using these discs in the case of an emergency.

The concept for the disc was the idea of Mr Graeme Booth of Australind who brought it to the attention of the Bunbury RoadWise Committee. The project is being conducted as a 12-month trial on an eighty-kilometre stretch of the Old Coast Road, between Tims Thickett Road near Dawesville to the Eaton traffic control lights. Main Roads WA (MRWA) have indicated that subject to the success of the trial, consideration will be given to expanding the concept to other major State roads.

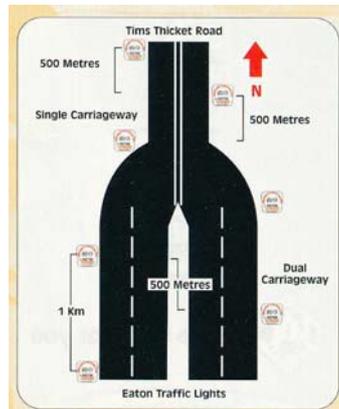
The ELD's are a disk measuring 150cm x 150cm with red and black lettering on a white reflective background (see diagram below). The disks are supported on a red marker post approximately 4 metres from and parallel to the bitumen surface.

The information found on each disk includes:

1. *The National Highway Code number (H2)*
2. *The SLK distance measurement (e.g. 145.5)*
3. *The common name of the road (Old Coast Road)*
4. *The Local Government area (e.g. Waroona Shire).*
5. *The emergency numbers for Police, Ambulance and the RAC of WA (Inc)*
6. *A message advising 'Stay With Your Vehicle'.*



A total number of 150 discs have been installed on markers by members of South West Rotary Clubs. The discs are placed both sides of the Old Coast Road carriageway and are off set providing one disk every 500 metres (see diagram below). Where the markers have been placed is within mobile phone range so that mobile phones can be used to call emergency services in the case of a road trauma incident or other emergency situation.



The success of establishing the program so far rests in the efforts and financial contribution of RoadWise and the RAC, with assistance from the City of Bunbury, who recognized the value of the trial and the lives that could be saved as a result.

ROAD SAFETY OBJECTIVES

To ensure that the project is consistent and in line with the State strategy and other road safety programs the ELD project meets three of the following Road Safety Council of Western Australia's objectives:

1. Better road safety Coordination: The ELD project is a true inter-agency collaborative project, enhancing the coordination of agencies working together in reducing road trauma. The Bunbury RoadWise Committee, emergency service agencies and other local community groups, such as Rotary Clubs and road safety agencies have worked

together to implement the project. The project also increases the coordination between emergency services (FESA, St John Ambulance and WA Police Services) to provide for a faster and coordinated response to incidents.

2. Safer Road Users: The ELD project is designed primarily to reduce the trauma of victims by increasing the response time of emergency services. RoadWise anticipates that the use of discs will assist in reducing serious injuries and fatalities caused by the delay in medical attention.

3. Optimised Trauma Services: The ELD project specifically targets the objective of providing for the "early detection of crashes". The disc allows for the road user to provide the emergency services with the exact location of the road trauma incident. This accurate information enables a quicker response time by the appropriate emergency service ultimately reducing the fatalities and serious injuries sustained.

DEVELOPMENT

The ELD project set out to provide emergency services with accurate information as to the location of a traffic related or other emergency incident, so that the turn around time of the emergency services attending to the incident is reduced. The reduction in time taken for emergency services to attend to the scene is likely to significantly impact on injury severity and recovery time for casualties of road crashes.

Mr Graeme Booth of Australind, following a fatal crash on the Old Coast Road, developed the concept for the discs. In one particular incident, incorrect information provided on the location of the crash resulted in the emergency services attending the wrong location. The ensuing delay in obtaining more accurate information to locate the crash was a factor in the loss of three lives.

Over the years, emergency services have lost valuable time trying to locate the scene of a crash or other incident because people do not know the name of the road they are on or what local government area they are in at the time. Information received from various emergency agencies, indicates that incorrect information regarding the location of crash sites (in particular, confusion between South West Highway and Old Coast Road and other major roads in the South West) is a regular concern.

The project aims to enable persons involved in emergency situations, or those calling for assistance, to provide the emergency services with accurate information as to the location of the incident. By providing the exact location details, the response time of emergency services to an incident can be greatly reduced.

CONSULTATION and COLLABORATION

The ELD project is a true inter-agency collaborative project involving the Bunbury RoadWise Committee, RAC of WA (Inc), Main Roads WA, St John Ambulance, FESA, WA Police Service, Rotary Clubs and Road Care.

These interested groups were identified through the membership of the Bunbury RoadWise Committee.

Whilst the Bunbury Regional RoadWise Committee is managing the ELD project, many agencies are playing important roles in the development and implementation of the project.

The City of Bunbury are supporting the RoadWise Committee as well as providing expert advice in preparing brochures, marketing plans and are undertaking to print replacement discs as needed during the project. Local Rotary clubs have assisted in the erection of the posts and discs, whilst RoadCare have marked the road with the location of the posts and have provided equipment for the installation. RAC Bunbury have been instrumental in the development of the program, including liaison with Main Roads Bunbury for project approval, funding the manufacture of the discs and posts and support in preparing maps for all emergency call centres.

There are many other agencies and individuals that have contributed to the project to date. However, the most important link in this project is the support of the Emergency Services. FESA, St John Ambulance and the WA Police Service have regular representation on the RoadWise Committee and have gained support from their respective hierarchy to participate in this trial. All of the above mentioned emergency services have been provided with a map identifying the road and the location of the disks to accurately locate the caller and send a response team to the correct location, as well as an evaluation form to complete when taking a call from this section of road. All Call centre staff have been briefed on the project and the important role that they play in putting the project into action.

These interested groups have been included in the ELD project through the coordination of the Bunbury RoadWise Committee, which has held regular meetings through out the process of developing and implementing the project.

COMMUNICATION

The project launch introduced the ELDs to the community of Western Australia in an attempt to capture the large number of people who travel this road at various times throughout the year. The media coverage of the event was excellent with the project promoted through a television news item, newspaper editorials and radio coverage.

Brochures and posters have also been developed to outline the ELD project. They provide clear instructions to road users on what the discs are, how to find them and how to use them in the case of an emergency. These brochures have been distributed to Roadhouses, Local Government Offices, Police, Tourist Bureau Offices and other places of public interest.

To further promote the ELD project in the wider community, an e-mail message was distributed by RoadWise to a wide range of agencies with an interest in road safety and emergency services. The email outlined the problems experienced by emergency services in locating crash scenes on our country roads and attached a copy of the ELD brochure. It is believed the email message will travel around the world and promote awareness of the ELD project so that when visitors to Western Australia travel on our roads they will know how to use the discs in case of an emergency. Feedback has already been received from other states of Australia in response to the email sent by RoadWise.

RoadWise is currently in the process of developing an advertisement to be placed on tourist radio outlining the ELD program and advising tourists on how to use the discs in the case of an emergency.

An extensive promotional plan has also been developed by the City of Bunbury which outlines a marketing strategy for the project.

EVALUATION AND THE FUTURE OF THE PROJECT

Evaluation is a major consideration of the program and a thorough evaluation plan has been prepared to monitor the program from its inception to end.

A survey has been sent to a total of 32 emergency service agencies in the vicinity of the trial. The survey was designed to confirm whether stakeholders had an understanding of the ELD concept, the reporting process and sufficient promotional material. The survey also asked for suggestions that may lead to further refinement of the concept. RoadWise received 19 responses to the survey which indicate a need for additional information on the project to be provided to emergency service agencies. RoadWise has addressed this concern by sending out a memo to all relevant agencies in the area outlining the project and providing additional resources such as brochures, posters and maps.

RoadWise have also developed and distributed a report form to all emergency services to be completed and returned to RoadWise on a monthly basis. The report form is designed to record the time emergency assistance is requested and the time of arrival on the scene. The collection of this information is central in evaluating the effect discs have on the response time to emergencies.

The evaluation process will continue throughout the 12-month trial phase. At the end of the trial, further evaluation will be conducted according to the evaluation plan which will indicate the success of the project in reducing serious injuries and fatalities on the trial stretch of highway.

Main Roads of WA have already advised that subject to the success of the trial, consideration will be given to expanding the concept to other major roads in the State.

The project is a simple concept that could be implemented by other groups elsewhere. The installation of discs on other roads in Western Australia would further promote the concept and raise community awareness, enhancing the effectiveness of the project.