REVIEW OF THE WA STATE BLACK SPOT PROGRAM: RESULTS FROM A QUALITATIVE DESCRIPTIVE STUDY

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Title
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Abstract
This report presents the results of a qualitative descriptive study of the views of Local Government and Main Roads WA personnel who submit applications for WA State Black Spot Program funding. The study addressed areas including the Program’s funding model, including project cost limits and identification and application for funding of Black Spot projects including eligibility criteria, CRASHtool and road safety audits (RSA). Other issues included timeliness of projects and areas for improvement in the WA State Black Spot Program.

Keywords
Black spot treatment, qualitative interviews
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EXECUTIVE SUMMARY

This report presents the results of a qualitative descriptive study of the views of Local Government and Main Roads WA personnel who submit applications for WA State Black Spot Program funding. The study addressed the Program’s funding model including project cost limits, and the identification and application for funding of black spot projects including eligibility criteria, CRASHtool and road safety audits (RSA). Other issues included timeliness of projects and areas for improvement in the WA State Black Spot Program.

For the State Black Spot Program to continue to be effective and obtain maximum benefits, it is extremely important that the Program guidelines are regularly reviewed and revised.

Methods
This qualitative descriptive study consisted of a series of telephone interviews with a convenience sample of stakeholders employed in Main Roads WA and Local Government in Western Australia. Potential participants were recruited into the study via a letter of invite which was sent by email. The study utilised a semi-structured questionnaire using both open and closed-ended questions. It addressed participants’ role and experience with the Program, views on the funding model, type of projects submitted for funding, barriers to applying for funding, time periods for projects, appropriateness of CRASHtool, BCRs and RSAs and any other issues/improvements they would like made to the Program guidelines.

Results and Discussion
A total of 25 participants completed the questionnaire. These participants represented nine Main Roads WA employees, five from the metropolitan area and four from the rural area and 16 Local Government employees, five from the metropolitan area and 11 from the rural area. All participants or staff members in their section except one had requested State Black Spot funding in recent years.
Funding Model

The majority of participants were generally satisfied with the model and the division of funding. Over half thought that the 50/50 distribution of funds between metropolitan and non-metropolitan roads was adequate. Those who did not agree were generally from rural areas and suggested that the distribution of funds was arbitrary. Suggestions to improve funding included: should match crash distribution, be based on road length in the area, or should consider crash severity.

The majority of participants from Main Roads and from the metropolitan Local Government area stated they would have liked to submit projects costing over the $1 million limit. However less than half of the participants from rural areas agreed. The types of treatments most commonly acknowledged as costing more than the $1 million limit were treatments to intersections, treatments involving service relocations, treatments involving land acquisition and treatments over several kilometres of road. Suggestions for an upper limit that would allow these projects to be funded ranged from $1.5 million to $3 million plus.

At least half of the interviewees stated that the rising construction costs had affected their selection of projects when requesting funding. A higher proportion of Main Roads employees identified this as an issue than Local Government workers. The most commonly identified effects included difficulty in projects reaching the minimum BCR of 1 and as a result, more projects were nominated on the basis of Road Safety Audits, large percentage increases in costs needed to be factored into projects, the total number of projects undertaken each year had decreased and only smaller projects could be applied for.

CRASHtool

Less than half of the participants thought that CRASHtool continued to provide accurate BCRs and less than half used it regularly. Several commented that the values assigned to CRASHtool were out of date and that it was very technical to use. Several participants from rural areas commented that black spots are more frequently identified through RSA
rather than on the basis of crash criteria and BCRs so CRASHtool is not relevant. The majority of participants thought that a BCR of 1 was an appropriate cut off for funding.

Road Safety Audits (RSA)
The majority of participants had applied for funding for road treatments based on a Road Safety Audit and believed that they were a good choice to gain funding for road improvements. Several participants noted that an increasing number of projects were submitted on the basis of a RSA because few met the BCR of 1. Three quarters of participants answered that the types of black spot projects requested had changed in recent years. Some noted that projects submitted for funding now are usually larger and more complex while others stated projects were more minor due to rising construction costs. Several also noted that more projects are nominated on the basis of RSAs.

Black Lengths
Few respondents had ever requested funding for a black length. Reasons for not applying included the expense of black length projects, black lengths never met the crash criteria, few roads in the area were longer than 3km, black length treatments are not effective or they had never heard of black lengths.

Timeliness of Black Spot Projects
The majority of participants were aware of black spot projects that had been delayed in their area. Reasons for these delays included service relocations, resource limitations of Local Governments, obtaining clearing permits, Native Title issues, lack of planning and design prior to project submission, actual cost of projects being much higher than the estimated cost and the land acquisition process. However, most participants thought it was reasonable to expect some black spot projects to be completed in the one year following funding. The majority of respondents believed that the length of time required for project completion depended on the project.

Less than half the participants applied for funding of black spot projects in stages greater than one year but the majority responded positively to the idea of staging complex
projects. Over half agreed with mandatory staging while one third stated that staging should be an option and determined on a case to case basis rather than being made mandatory.

**Other Issues**

Over half of the participants agreed that issues other than the $1 million upper limit had resulted in them not submitting treatments for State Black Spot Program funding. The most common reasons cited, mostly by rural Local Government participants were lack of resources including internal funding constraints, difficulty for Local Governments in contributing to the project cost on a 2:1 basis as well as a lack of qualified and experienced staff.

Three quarters of the respondents believed there were always eligible projects to put forward for Black Spot funding under the current guidelines but some stated that few true black spots remained in some areas.

Participants offered a wide range of issues and improvements to the State Black Spot Program. Common suggestions included: an increase in the total amount of funding for the State Black Spot Program; Black Spot funding eligibility criteria should be more flexible; more project planning and design work should be required prior to applying for Black Spot funding so that informed cost estimates could be made; and there should be a capped proportion of funding allocated to the planning and design stage of Black Spot projects.

**Limitations**

Limitations of the study include the convenience sampling methodology which did not allow any inferences to be made in terms of generalisation to a larger population. However, the results obtained from the study should be considered as “well-informed” and will certainly provide constructive feedback to reviewing the WA State Black Spot Program.
Recommendations and Conclusions

The following areas should be considered when reviewing the Black Spot Program:

- Incorporating the rising construction costs into the total State Black Spot Program funding allocation
- Changing the BCR from one to allow funding of large scale projects
- Increasing the limit of $1 million for larger projects
- Regular monitoring and updating of CRASHtool
- Regular training programs in the usage of CRASHtool, particularly for rural groups.
- Training programs regarding the use of black lengths
- Consideration of flexible length of time required for completion of projects and/or staging of projects, on a case to case basis
- Training on how to stage projects
- The inclusion of more project planning and design information when submitting an application for Black Spot funding.
- Examination of the resources available in different regions and the actual costs of delivering a project with a view to re-evaluating the allocation of funding.
- The development of specific criteria to determine responsibility when a road is controlled by more than one Local Government and road treatment is required
- Regular review and monitoring of the Black Spot Program
ACKNOWLEDGEMENTS

This report was funded by Main Roads, WA. The authors would like to acknowledge the contributions of the following people: Grady Habib, Maurice Cammack and Delia Hendrie and the Black Spot Working Party.
1. INTRODUCTION

Black Spot Programs aim to reduce the social and economic cost and trauma of road injuries by targeting locations noted for a high incidence of crashes (Main Roads/WALGA 2004). Most black spot treatments involve relatively low costs compared with the benefits that accrue over time and therefore provide substantial economic returns (Australian Transport Safety Bureau 2004).

The WA State Black Spot Program commenced in 2000 and operates complementary to AusLink’s federally funded Black Spot Program. An evaluation of WA projects implemented between 2000 and 2002 showed that black spot treatments have been effective overall, reducing all reported crash frequencies by 20% and casualty crash frequencies by 38% (Meuleners et al. 2008). Some of the typical road safety improvements that were implemented during that period included:

- the installation of roundabouts at various intersections;
- realignment and improvement of the road geometry at intersections and selected road sections;
- provision of pedestrian refuges and facilities for cyclists;
- improvements to road surface treatments such as anti-skid treatments; traffic calming treatments and improvements to street lighting.

The current annual allocation to the State Black Spot Program is $20 million and all road classifications are eligible for funding including State roads, local roads and national highways. Funding is distributed equally between local roads and State roads and of the $10 million allocated to each of these road categories, 50% is provided to the metropolitan area and 50% to the rural area. Nominations for projects are invited from State and Local Governments, community groups, transport industry groups, road user groups and individuals (Main Roads/WALGA 2004).
Funding is distributed differently between local and State roads. State road projects are determined by Main Roads Regional Managers based on an assessment of potential projects. For local roads in the metropolitan area, funding is distributed by Regional Road Groups based on project applications. For local roads in the rural area, each Region is provided with a pro rata allocation based on the output of the 4 way model incorporating road length, million vehicle kilometres travelled, million ton kilometres of freight moved and revenue raised from vehicle licenses. The Rural Regional Road Groups then distribute the funding to Councils based on project submissions. Local road projects are funded by a joint contribution of two dollars from the State Black Spot Program and one dollar from the Local Government in which the project resides. After approval, Main Roads and Local Governments are then responsible for managing and delivering the projects (Main Roads/ WALGA 2004).

The Program has two ways projects can meet eligibility criteria for funding. First, black spots or black lengths (stretches of road > 3km) can be eligible on the basis of their crash history. The Program’s minimum crash criteria vary according to whether the road is state, local, rural or metropolitan. This takes into account the lower traffic volumes on rural and local roads with a lower number of crashes required for eligibility in rural areas than in the metropolitan area and on local roads than State roads. Property damage only (PDO) crashes as well as casualty crashes are included in the analysis for State Black Spot projects. A Benefit Cost Ratio (BCR) is calculated for all nominated projects that meet the various crash criteria and can either be calculated manually or by using the Main Roads CRASHtool System. This measure allows projects to be prioritised for funding and projects with the highest BCRs are considered first. Projects nominated on the basis of crash data require a BCR ≥1 to be eligible (Main Roads/ WALGA 2004).

Secondly, potential crash sites that do not satisfy the crash criteria are also eligible for funding if they are recommended for treatment because they are likely to contribute to serious motor vehicle crashes. The recommendation is based upon an official Road Safety Audit (RSA). Up to 50% of total program funding can be provided to potential
crash sites and in the case of all local roads and rural State roads, this proportion may be increased up to 100% if needed (Main Roads/ WALGA 2004).

The maximum limit when costing an individual project for the State Black Spot program is $1,000,000 and these funds should be spent in the year of allocation. However, complex projects that cannot be completed in the required time period may be stage constructed (Main Roads/ WALGA 2004).

It is extremely important that the State Black Spot Program continues to be effective in reducing road crashes. Therefore, continual re-assessment and evaluation of both the process and outcomes of the Black Spot Program are needed to ensure that the program remains relevant and maximum benefit can be gained.

1.1 AIM OF THE STUDY

The aim of this study is to gain insight into the views of practitioners who submit Black Spot funding applications on a variety of issues relevant to the Black Spot Program. These include the funding model, type of projects submitted for funding, barriers to applying for funding, time periods for projects, appropriateness of CRASHtool, BCRs and RSAs and any other issues/ improvements stakeholders would like made to the Program guidelines.

1.2 SIGNIFICANCE

It is envisaged that the results of this study will provide valuable information to assist in the deliberation of the State Black Spot Program review and update and refine the Program in WA.
2. METHODS

2.1 STUDY DESIGN

The qualitative descriptive study consisted of a series of telephone interviews with a convenience sample of stakeholders employed in Main Roads WA, Local Government and Regional Road Groups in Western Australia.

The use of a qualitative descriptive study was chosen as it allows the researcher to undertake a comprehensive summary of a particular issue with the expressed aim of obtaining answers to questions of special relevance to practitioners and policy makers, in this case Main Roads WA (Sandelowski 2000). Another advantage of the qualitative descriptive study is it is not highly interpretive in the sense that a researcher deliberately chooses to describe an event in terms of a conceptual, philosophical, or other highly abstract framework such as in a phenomenological, ethnographic or grounded theory studies. The description in a qualitative descriptive study design entails the presentation of the facts in everyday language. Descriptions – whether in the form of descriptive summaries or observational data- entail researchers’ choices about what to describe. However, these descriptions must always accurately report events in their proper sequence, have descriptive validity and convey the meaning attributed by participants.

2.2 PARTICIPANTS

A convenience sample of Local Government and Main Roads’ employees who had experience in submitting applications for State Black Spot Program funding were recruited to partake in a telephone interview.

2.3 RECRUITMENT OF PARTICIPANTS

Potential participants were initially contacted with a letter of invite (Appendix A) which was sent by email to key personnel identified by the Black Spot Working Party. These emails were sent once a week for four weeks during April/ May 2008 to all Local Governments in WA and relevant Main Roads employees. The email explained the purpose of the research and invited potential participants to participate in an interview. The invite was also included in the Main Roads corporate newsletter. Those willing to be
interviewed were asked to contact the researcher by email and were in turn, contacted to arrange a convenient time to conduct the interview by phone and to establish their eligibility for participation. All phone interviews were conducted by the same interviewer to ensure consistency and reliability in the manner in which the interview was conducted. The interviews were conducted by phone rather than in person so that participants from various regions of Western Australia could be included. Telephone interviews also have the advantage of being impersonal. Some people prefer this form of interaction as it allows the interviewee the opportunity to reveal more information than they would face to face (Grobich, 1999).

The interview took approximately 35 to 40 minutes to complete. All participants were assured anonymity and confidentiality.

2.4 INTERVIEW SCHEDULE

A semi-structured questionnaire using both open and closed-ended questions was developed by the principal investigator. The questionnaire was based on a comprehensive literature review and the objectives of the overall project. The questionnaire was then given to experts in road safety (which included the Black Spot Working Group) for further development and refinement.

The final questionnaire consisted of eighteen questions which addressed participants’ role and experience with the Program, views on the funding model, type of projects submitted for funding, barriers to applying for funding, time periods for projects, appropriateness of CRASHtool, BCRs and RSAs and any other issues/ improvements they would like made to the Program guidelines (Appendix B).

2.5 STATISTICAL ANALYSIS

Responses to the closed-ended questions were entered into SPSS version 11. Descriptive analysis was then computed for these responses.

Open-ended responses were transcribed at the time of interview into an Excel worksheet. Qualitative content analysis was then conducted on the responses to each question in
order to summarise the informational content of the data (Morgan 1993). Responses were analysed by theme or in the case of this study, headings and coded systematically. In qualitative content analysis, these codes are generated from the data themselves and continually modified to accommodate new data and insights during the course of the study (Sandelowski 2000). Then, a quasi-statistical analysis style was utilised to summarise the numbers of participants in each response category with descriptive statistics and reveal patterns in the data (Miller & Crabtree 1992, p. 18). Two researchers experienced in the analysis of qualitative information conducted the analysis and compared results to ensure consistency in the interpretation of the data before the final analysis was commenced. The final qualitative information was organised under major headings each containing one or more of the interview questions.
3. RESULTS

3.1 CHARACTERISTICS OF THE SAMPLE

A total of 35 participants responded to the initial email with 25 participants interviewed by phone. This represented a response rate of 71%. Twenty two participants were male (88%) and three female (12%). These participants represented nine Main Roads WA employees, five from the metropolitan area, four from the rural area; and sixteen Local Government employees, five from the metropolitan area and eleven from the rural area (Table 3.1).

Table 3.1: Participants by Place of Employment

<table>
<thead>
<tr>
<th></th>
<th>Main Roads</th>
<th>Local Government</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Metropolitan Area</td>
<td>5 (20%)</td>
<td>5 (20%)</td>
<td>10 (40%)</td>
</tr>
<tr>
<td>Rural Area</td>
<td>4 (16%)</td>
<td>11 (44%)</td>
<td>15 (60%)</td>
</tr>
<tr>
<td>Total</td>
<td>9 (36%)</td>
<td>16 (64%)</td>
<td>25 (100%)</td>
</tr>
</tbody>
</table>

Participants were employed at Main Roads or in Local Government for between 2 months and 40 years with the mean length of time being 10 years (SD=10.62). However, the mean length of employment for Main Roads employees was 19.6 years (SD=12.01) whereas it was only 4.6 years (SD=4.25) for Local Government employees.

The mean length of time participants were involved in the State Black Spot Program was 5.5 years (SD=2.82). This period of time was similar for both Main Roads and Local Government participants.

3.2 FUNDING MODEL

All participants or staff members in their section except one had requested black spot funding in recent years. This Main Roads employee had a more supervisory role in the Program and was not responsible for submitting black spot applications.
All participants (100%, n=25) were aware of the current model for funding black spot projects. When queried about their views of the funding model, 16 participants (64%) expressed that they were generally satisfied with the overall model and the division of funding. Eight (32%) were unsatisfied with one or more aspects of the model and one (4%) had no opinion. Of the eight participants who were unsatisfied with aspects of the funding model, seven (88%) were based in rural WA.

Concerns identified with the funding model included:

- **The total Black Spot Program funding needed to increase to match rising construction costs because the number and scope of projects that could be funded each year has decreased (n=5).**

- **Cities and towns located in rural areas eg. Mandurah should have to meet different crash criteria to regional areas where traffic volumes are much lower. Such cities take too large a proportion of the region’s funding pool (n=2, rural Local Government participants).**

- A rural Main Roads employee stated that **the funding model should factor in real money values and the actual cost of delivering a project across various regions of WA. For example the Pilbara’s percentage allocation of funds has remained the same for many years but costs have escalated in this region at a higher rate than the rest of WA.**

- **Local Governments should not always have to contribute to the project on a 2:1 basis but their contribution should be dependent on their resources (n=1, rural Local Government participant)**

- **Projects nominated on the basis of an RSA should not be given a lower priority than those nominated on the basis of crash data (n=1).**

- **In rural areas, a high proportion of crashes are not reported or are recorded inaccurately and the model does not consider these crashes (n=1).**
3.2.1 Funding distribution of 50 (metropolitan)/50 (non-metropolitan)

Fifteen participants (60%) thought that the percentage distribution of funds between metropolitan and non-metropolitan roads was correct. Nine (36%) participants did not think it was correct and one did not know (4%). Of the nine that did not think the distribution was correct, seven (78%) were from rural WA.

Their comments included:

- Three participants thought that the distribution was *arbitrary*. One suggested that a *review was needed and safety should be considered first and equity between metropolitan and rural areas considered second.*
- *The funding distribution should match the distribution of crashes* (n=2).
- *Funding should be distributed based on road length in each region* (n=2, rural participants).
- *The higher crash severity in rural areas should be considered in the funding model* (n=2).
- *The funding distribution should vary each year based on safety priorities* (n=2).
- *Rural areas should receive a higher proportion of funding due to underreporting of crashes in these areas* (n=1).
- *Metropolitan areas should receive a higher distribution of funding due to higher traffic volumes and percentage of crashes* (n=1, metropolitan participant)

A large majority of participants (76%, n=19) commented that there were always eligible projects to be funded by the Black Spot Program under the current guidelines, however six participants disagreed (24%). Four of these six were Local Government participants from rural area, one was a metropolitan Local Government participant and one was a metropolitan Main Roads employee.

Reasons cited for there not being eligible projects to put forward included:

- Three rural Local Government and one metropolitan Main Roads employee stated *few true black spots remain in some areas because they have all been treated*
• We can no longer find projects that meet a BCR of one and are thinking of submitting projects based on RSAs in the future (n=1).

• One rural Local Government employee stated that remaining projects in the area are not eligible because they cost under the minimum funding amount for the State Black Spot Program.

3.2.2 Funding for projects over $1 million
Overall, the large majority (64%, n=16) stated that there were black spot projects they would like to request funding for that were over the current $1 million dollar limit. The majority were either from Main Roads (n=8) and/ or the metropolitan area (n= 10). One participant qualified this statement and said at least 50% of the projects we would like funded cost over $1 million.

In contrast, only half of all the Local Government representatives (n=8) and 40% of all participants from rural areas (n=6) would like to apply for treatment funding over the $1 million limit. One rural representative noted that the whole region only receives half a million dollars in black spot funding annually so treatments costing over $1 million are not considered.

When queried about treatment types that were not eligible for funding because of the $1 million upper limit the most common treatments listed by participants were intersection treatments, treatments involving service relocations, treatments involving land acquisition and treatments over several kilometres of road (Table 3.2).
Table 3.2: Treatment Type by Number of Responses

<table>
<thead>
<tr>
<th>Treatment types costing more than $1 million</th>
<th>Number of participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intersection treatments (includes traffic signals and roundabouts)</td>
<td>7</td>
</tr>
<tr>
<td>Treatments involving service relocations including water, power and gas</td>
<td>5</td>
</tr>
<tr>
<td>Treatments involving land acquisition</td>
<td>3</td>
</tr>
<tr>
<td>Treatments over several kilometres of road including mid block and intersection treatments, realignments and sealing</td>
<td>3</td>
</tr>
<tr>
<td>Links</td>
<td>1</td>
</tr>
<tr>
<td>Channelisation involving multiple treatments</td>
<td>1</td>
</tr>
<tr>
<td>Floodway treatments including widening, raising and sealing</td>
<td>1</td>
</tr>
<tr>
<td>Relocation of a State highway where it meets a Local road</td>
<td>1</td>
</tr>
<tr>
<td>Safer systems treatments over whole systems of roads</td>
<td>1</td>
</tr>
</tbody>
</table>

Participants (n=16) who suggested increasing the upper limit for funding, stated the funding limit should range from at least $1.5 million to $3 million plus. One Main Roads employee noted that large service relocations alone could often cost half a million dollars and have cost up to $1.5 million in the past.

Only two respondents felt that no upper limit to funding should be set. One of these was a Main Roads employee who felt that the cost should not matter if the treatment prevented death and serious injury on the roads. The other, a rural Local Government employee suggested that if a nominated project cost over $1 million, more work and justification of the cost should have to be included in the application but no upper limit should be set. Another Local Government participant from the metropolitan area suggested that the upper limit for project construction should be set at $1 million but other project costs, for example service relocations should be funded separately based on the individual project requirements.
3.2.3 Rising construction costs

Over half the participants (52%, n= 13) stated that rising construction costs affected their selection of projects when requesting black spot funding. A higher proportion of Main Roads employees identified this as an issue (78%, n=7) compared to Local Government employees (38%, n=6).

Participants’ responses about the rising construction costs and how it affected the selection of projects are listed below:

- Difficulty in projects reaching the minimum BCR of 1 and as a result, more projects were nominated on the basis of Road Safety Audits (n=5);
- Large percentage increases in costs need to be factored in to projects between the application and construction phases and often result in a BCR of less than one (n=3);
- The total number of projects that can be undertaken each year has decreased due to rising construction costs (n=3);
- Only smaller projects can be applied for now due to rising construction costs (n=2);
- Specific projects such as those involving service relocations can not be submitted now because they are too expensive (n=1);
- Past projects tried to cater for all road users when modifying a black spot eg. pedestrians, cyclists but more modifications came at extra cost so these additions were not being done or the project was stopped altogether (n=1).
3.3 IDENTIFICATION OF BLACK SPOTS

The next major area of questioning involved the identification of black spots. The results will be discussed below under the following headings: types of black spot projects nominated, the appropriateness of a BCR of one, CRASHtool, road safety audits, and applications for black lengths.

3.3.1 Types of Black Spot projects nominated

A large majority of participants (76%, n=19) stated that the types of black spot projects requested had changed in recent years.

Reasons for these changes included:

- The majority of projects that could be treated with small or simple treatments have already been done. Projects submitted for funding now are usually larger and more complex than in the past (n=9).
- Due to rising costs of construction, recently requested projects have been smaller and more minor than in the past, for example delineations, island and median constructions (n=3).
- Fewer projects can be nominated each year now than in the past because the funding does not buy as much (n=2).
- Emphasis has changed from projects based on crash data and BCRs to potential black spots based on RSAs (n=7).

Other feedback included:

- Cycling networks have recently been targeted (n=1).
- Black lengths are more frequently targeted now (n=1).

3.3.2 The appropriateness of a BCR of one as the cut-off for road treatment funding

The majority of participants (72%, n=18) thought that a BCR of one was an appropriate cut-off for road treatment funding, six (24%) did not know and only one (4%) did not think it was appropriate. The Local Government participant who did not think it was
appropriate was from the metropolitan area. He commented that *with the rising construction costs, it is increasingly hard to reach this cut off so it should be lowered.*

Additional anecdotal comments from participants included that *a BCR of at least one is necessary to ensure benefits from the project.* Several participants (from rural areas) commented that *the lowest funded project in their region had a BCR well above one and perhaps the BCR could be raised to 2 so that projects are more easily eliminated and money is not wasted planning projects that do not end up getting funded.* One rural-based Main Roads employee stated that *crashes in rural areas were underreported and if a project did not meet the BCR of one, there should be flexibility to include anecdotal crash evidence in the calculation like remains of truck and car bodies on the roads.*

### 3.3.3 CRASHtool

Less than half of the participants interviewed (48%, n=12) felt that CRASHtool continued to provide accurate BCRs. Seven (28%) participants did not think that it continued to provide accurate BCRs and six (24%) participants were unsure. No pattern was identified between Main Roads and Local Government or metropolitan and rural participants.

Some of the concerns identified by participants when using CRASHtool included:

- *Values assigned to CRASHtool are very out of date with the increased cost of hospital treatment, insurance and construction.* It was suggested that these values need to be updated regularly. One Main Roads employee stated *there needs to be a corporately supported program to support its function and ensure regular updates* (n=5).

- *CRASHtool was found to be very technical* and one rural Local Government employee stated that you had to be a *rocket scientist* to use it. For those individuals who found it difficult to use they *relied on experts or consultants to use CRASHtool* (n=4).

- Two participants from rural Local Governments knew of instances where CRASHtool had been manipulated to produce the necessary BCR eg. *by entering every treatment*
possible for a site until the BCR reaches >1 or by leaving out aspects of the treatment such as resurfacing that was being undertaken by the council anyway so that the overall cost was lower (n=2).

- A Main Roads employee was concerned that CRASHtool does not account for implications such as road efficiency, travel time saving and impact of a treatment on the road network. This could allow safety problems to be transferred to another spot e.g. banning right turns at an intersection could result in traffic turning right at a less safe intersection and trucks having to travel around a block. They stated that CRASHtool should consider these factors (n=1).

- One metropolitan Local Government employee stated that CRASHtool frequently misses crashes in the area because if it could not interpret the data, it left the crash out. He suggested more accurate data entry of crashes into CRASHtool.

- The same participant commented that the treatments listed in CRASHtool are too restrictive and several are missing. This resulted in calculations having to be done manually and not many staff are skilled enough to do this so projects miss out. He suggested more treatments be added to CRASHtool.

- One rural Local Government participant noted that there were errors with CRASHtool when entering street lighting treatments.

When participants were queried about their use of CRASHtool only 12 participants (48%) stated that they used it regularly. A further six (24%) did not use it regularly and seven (28%) stated that they never used it. Six of the seven participants who never used CRASHtool were from rural areas.

Reasons cited for not using CRASHtool included:

- Black spots are more frequently identified through RSA rather than on the basis of crash criteria and BCRs so CRASHtool is not relevant (n=2, both rural participants).

- RSAs are a better method because crashes may be due to human factors and not be due to fault of the road design (n=1, rural Local Government participant).

- RSAs are a better method because people shouldn’t have to be killed or injured before a road is recognised as dangerous and treated (n=1, rural Local Government).
• CRASHtool and BCRs should not feature in road safety because they are economically based and safety work should be based on the safe system approach and human tolerance levels for death and injury (n=1, metropolitan Main Roads participant).

3.3.4 Road Safety Audits (RSA)

Twenty one participants (84%) had applied for funding for road treatments based on a Road Safety Audit and four had not (16%). Of these four participants, two were metropolitan Main Roads employees, one of whom has a supervisory role in the Black Spot Program. The other stated that he did not rate RSAs because RSAs do not consider the safe systems approach or human tolerance levels for death and injury. The remaining two participants were metropolitan Local Government employees who stated there are still enough remaining projects to submit based on crash data.

A large majority of participants (92%, n=23) stated that road safety audits are a good choice to gain funding for road improvements.

Feedback about the positive aspects of road safety audits included:
• A road may be dangerous even if it did not meet the crash criteria and RSAs allow these to be identified without people dying first.
• RSAs define the scope of work prior to the project being funded.
• RSAs provide a holistic view of the road.

Feedback about the negative aspects of road safety audits included:
• RSAs do not always provide realistic outcomes.
• RSAs hold a lot of influence and are sometimes done by people who are not appropriately skilled or experienced, such as trainees.
• Projects submitted on the basis of a RSA receive lower priority than those submitted on the basis of crash data.
• An increasing number of projects have to be submitted on the basis of a RSA because few meet the BCR of one. A metropolitan Main Roads employee stated that in the past
three years, 95% of submissions have been RSA based. This participant stated because CRASHtool values are outdated, even the top 10 crash sites in WA had to be submitted on the basis of a RSA when RSAs should be the exception, not the rule.

3.3.5 Applications for Black Length (sections of road > 3 km)

Only 5 respondents had ever requested funding for a black length (20%). Three of these nominations were for rural local roads, one for a metropolitan local road and one for a metropolitan State road. Of the 20 participants who had never applied for funding, the reasons given were:

- **The high expense of black length projects prevent their application** (n=7; with six of these respondents from rural Local Government).
- Four Local Government participants (2 from rural and 2 from metropolitan area) said that they focus on black spots because black lengths never meet the crash criteria.
- Four participants (three from the metropolitan area and one from rural area) noted that few roads in the area were longer than 3km.
- Two Main Roads employees added that black length treatments are not effective for their cost.
- Three participants had never heard of black lengths. Two of these were rural Local Government employees and one was a Main Roads employee.
- One Main Roads representative had not applied for a black length because they focus on Intelligent Transport Systems.

3.4 TIMELINESS FOR COMPLETION OF BLACK SPOT PROJECTS

The majority of participants (88%, n=22) were aware of black spot projects that had been delayed in their area. A Main Roads employee stated that over 50% of local road projects are not completed within the 12 month period.

A variety of reasons were provided for the delays:

- The most common reason cited was service relocations. Participants explained that when service relocations are required as part of a black spot project, they have to
rely on other services, especially Western Power to do their part before road construction can begin. This often causes long delays (n=11).

- Ten respondents also cited resource limitations of Local Governments including lack of funds, manpower, skilled workers and contract workers as a reason for black spot project delays. Six of these (60%) participants were from rural Local Governments.
- Eight participants noted that environmental issues including obtaining clearing permits and Native Title issues had caused delays. Seven of these participants (88%) were again, from rural WA.
- Four rural participants stated that lack of planning and design prior to submitting a black spot funding application meant that this phase had to be completed in the 12 month period following funding, as well as the construction phase. This was difficult to achieve.
- Four respondents explained that projects were delayed due to the actual cost of projects being much higher than the estimated cost, resulting in project modification, cancellation or delay.
- Three participants found the land acquisition process caused delays. One of these explained that this process is more difficult than it used to be, requiring more paperwork, involvement of lawyers and time.
- Other reasons for delays included the process of public consultation, wet weather, road sealing treatments that needed to be performed over intervals greater than 12 months, uncompetitive tenders for projects, delays caused by shopping centre construction, requests for works lost by Main Roads and waiting for the Minister to announce projects before commencement.

Only seven respondents (28%) stated they thought that most projects could be completed within the 12 month period and six of these were from Local Government. This finding may reflect the smaller scale projects conducted on local roads. The remaining participants thought that less complex projects could be completed within 12 months or that it depended on the individual project. The majority of respondents (n=20) believed that the length of time required to complete a project depended on the specific project. Only five made specific suggestions for time period increases ranging from 15 months up
to three years but most of these participants noted that time period required depended on
the specific project.

Also, six participants added that the State Black Spot Program should distinguish
between the planning/design and construction phases of the project. All of these were
Main Roads employees. One stated that the whole process from the development stage to
completion of construction took over one year and Main Roads projects are always
planned and designed well in advance. Another suggested that all projects should spend
one year on planning and design and one year on construction.

When queried about applying for funding of black spot projects in stages greater than one
year, ten participants (40%) stated that they had applied, 14 had not (56%) and one did
not know if they had applied (4%). There was no pattern observed between Main Roads
or Local Government representatives or metropolitan or rural participants.

Reasons provided for not applying for funding in stages greater than one year included:

- No projects have been large or costly enough to require staging.
- It is preferable to finish projects within one year.
- Did not know that staging projects was an option.
- It is easier to ask for an extension on the project than apply in stages.

When participants were asked their opinion on staging projects being made mandatory
for complex projects (for example projects including service relocation or land
acquisition) the majority of participants (96%, n=24) responded positively. While 16
(64%) agreed completely with mandatory staging of complex projects, eight participants
(32%) stated that staging should be an option and determined on a case to case basis
rather than being made mandatory. The only participant who did not agree with staging
projects was a metropolitan Local Government employee who commented that it is
difficult to know if a project needs to be staged at the time of application for funding
because not much planning has been done by that stage.
Those who agreed with mandatory staging of projects felt it would be a positive change because:

- *It would prevent funds being carried over to the next year meaning other projects miss out.*
- *It would prevent projects being rushed to completion within the 12 month period.*
- *It would reduce stress.*

The eight participants who believed that staging of projects should not be mandatory but be determined on a case to case basis provided several comments on this issue including:

- *Four Local Government employees stated Local Government should receive training and guidance from Main Roads on when staging projects is appropriate, how to stage projects and what the stages should be (n=4 Local Government employees).*
- *Main Roads should develop criteria for Local Governments detailing which projects should and should not be staged (n=1 Local Government employee).*
- *There should be a mechanism in place by which complex projects can be completed within the one year period if all aspects of the project run smoothly (n=2; 1 Main Roads and 1 Local Government employee).*
- *It is hard to predict how long projects will take at the time of application so staging should be optional, not mandatory (n=1 Main Roads participant).*
- *Making staging of complex projects mandatory would make the process more complex and the guidelines for staging projects should be flexible (n=1 Main Roads participant).*
- *Applications for staged projects should require more detailed planning and design before submission than other projects (n=1 Local Government employee).*
3.5 OTHER ISSUES WHEN SUBMITTING AN APPLICATION FOR BLACK SPOT FUNDING

Fourteen participants (56%) agreed that issues other than the $1 million upper limit had resulted in them not submitting treatments for State Black Spot funding. For Local Government employees, 63% agreed (n=10) but for Main Roads participants only 44% agreed (n=4).

A wide variety of issues other than the $1 million upper limit were raised by participants. The most common issue cited by eight participants was a lack of resources. This included internal funding constraints, difficulty for Local Governments in contributing to the project cost on a 2:1 basis as well as a lack of qualified and experienced staff. Six of these participants were Local Government participants from rural areas, one was a metropolitan Local Government employee and the other a Main Roads employee from the rural area.

Other issues that prevented participants from applying for black spot treatments included:

- Treatments were more complex that first thought.
- Stakeholders wanted project design changed so dramatically that the project was no longer appropriate or cost effective.
- Treatments to footpaths do not fit Black Spot Program criteria well so funding was sought elsewhere as advised by the Regional Road Group.
- Large highway repairs were not viewed favorably by Regional Road Groups because giving millions of dollars to one shire, meant that others missed out. Each intersection or section of highway had to be submitted separately for funding even though this was not technically ideal.
- Crash data appeared in the wrong Local Government area.
- Applying for treatment to a road controlled by more than one local council was difficult and time consuming so these projects missed out. There were issues over which council got the funding, provided funding and was responsible for undertaking the construction work.
• Projects in Kings Park and on Rottnest Island were not submitted because we didn’t think they would be viewed as a priority.
• Intelligent Transport System treatments were not considered eligible under the State Black Spot Program.

3.6 IMPROVEMENTS TO THE CURRENT GUIDELINES/PROCEDURES
All but one participant (96%) had issues/improvements they would like made to the current guidelines or procedures for the State Black Spot Program. Suggestions covered a wide range of issues which were divided into the following categories: funding issues, provision of information about the Program, eligibility criteria, application process, procedural issues and other.

3.6.1 Funding Issues
• Five participants suggested that an increase is needed in the total amount of funding for the State Black Spot Program to keep up with market costs.
• One rural representative suggested that funding should be allocated on the basis of the real cost of completing work in each region.
• One wanted increased funding to rural areas.
• One suggested that funding should be allocated based on road length in each region.
• Two Local Government participants felt the proportion of funding expected to be provided by Local Governments should be reduced.
• One rural Local Government participant suggested that the total funding or number of projects in large cities in rural regions should be capped. This is to prevent them taking all the funding allocated to the region due to high traffic volumes and booming industry. They also suggested that black spot funding be divided into major and minor projects so that smaller projects in non-built up rural areas can still get funded.
• One rural Local Government participant felt it should be the responsibility of Main Roads to fund projects on all rural roads located outside of town centers.
3.6.2 Provision of information about the Program

- Two participants stated that *there should be more information provided to Local Governments on the differences between and eligibility for State and National Black Spot Program funding.*
- A Main Roads employee stated that *Local Governments need to be encouraged to submit projects.*
- A metropolitan Local Government participant said they *require more information about how RSAs are assessed for eligibility and prioritised for funding.*

3.6.3 Eligibility criteria

- Three participants suggested that black spot funding eligibility criteria should be *more flexible*
- A rural Local Government employee noted that *in rural areas many crashes are never reported to police and the eligibility criteria should find a way to include these.*
- *Increasing the $1 million limit for funding projects* was reiterated by several participants
- A rural Local Government participant felt that *the minimum funding for a project should be increased to $50 000 because projects costing less than this do not achieve anything and increasing the limit would force better planning by Local Governments.*
- *A decreased BCR for funding* was suggested by a metropolitan Local Government participant.

3.6.4 Application process

- Four participants suggested that *more project planning and design work should be required prior to applying for black spot funding so that informed estimates of the project scope, cost and time period can be made.* One Main Roads participant stated that in terms of these estimates, some Local Governments personnel just *pluck them out of the air.* Two of the four participants also suggested *there should be a capped proportion of funding allocated to the planning and design stage of black spot projects.* One stated that *many Local Governments cannot afford in depth assessment and planning of projects pre-application so projects are submitted blindly and it is*
discovered later that the requested funding is not adequate. Funding this planning stage would make treatments more cost-effective, produce less carry-overs of funding to the next year and make the unknown about a project known before they are funded.

- A metropolitan Local Government participant felt that it would be beneficial to receive the crash data earlier in the year to allow more preparation and forward planning of projects.

3.6.5 Procedural Issues

- Two participants suggested that RSAs should be mandatory for all projects after funding has been acquired to ensure the initial assessment of the site did not miss anything.

- Two participants reiterated that it should be compulsory for complex projects to be staged.

- A rural Local Government participant stated that Black Spot Program guidelines should be more realistic in costing, reporting and fund claiming requirements for Local Governments. For example, carry-overs of funding to the next year happen for genuine reasons and the Local Governments should not be penalised and denied funding for other projects in the next year. This participant also suggested that Local Governments should be able to claim the total amount of funding when the project is within 10% of being finished.

- A Main Roads representative suggested that project funding be withdrawn if not spent within three years.

- A rural Local Government participant suggested that it should be mandatory to try cheaper treatments such as signage first and monitor their effects, especially on low volume roads. This participant believed that shires do more expensive treatments than necessary for enhancement rather than safety reasons and to keep work crews funded.

- A metropolitan Main Roads participant suggested mandatory reporting of the effects of the project one to two years post treatment.
3.6.6 Other issues

- Three participants raised issue with the overall approach of the State Black Spot Program. One Main Roads employee disagreed with the scattered approach of the Program and believed that a major proportion of the funds should be designated to whole route, link or section treatments that make whole areas safe. Another participant from Main Roads stated that the Program should take a more holistic approach considering social, environmental and economic effects of projects, not just the economic aspects. He believed that all projects should sustainably achieve human tolerances for death and injury and if not, they should not be funded. He also suggested a second tier of funding for risk reduction measures including Intelligent Transport Systems. A rural Local Government employee also suggested that the Program begin upgrading all Y-intersections in the state to cross or T-intersections.

- Two participants suggested that the Black Spot Program and CRASHtool be reviewed regularly.

- One Metropolitan Local Government representative noted that for projects on interfaces between Local and State roads, Main Roads should be responsible for the RSA, data analysis, project design and application rather than the Local Government because this is a costly process.

- A review of the issues surrounding service relocations was suggested by a participant from Main Roads. This review should include negotiations with the service providers, agreement on a reasonable time frame for service relocations, sharing the cost of some relocations and provision of compensation if the relocation is delayed. This participant stated that service providers are using black spot projects as opportunities to upgrade their services and charging Main Roads.

- A Main Roads participant suggested that guidelines or requirements for considering cyclists, pedestrians and road users with disabilities in road design be developed. This participant stated that considering these groups in every treatment makes them complex, expensive and not viable. The concept of simple treatments for big returns has gone.
4. DISCUSSION

The purpose of this report was to seek the views and opinions of people involved in applying for funding from the State Black Spot Program to assist in a review of the Program, its criteria and assessment tools and to identify opportunities for improvement. Overall, the majority of participants were generally satisfied with the Program. However, certain issues were raised in terms of the effectiveness of the program including project limits of $1 million, the reducing effectiveness of CRASHtool to provide accurate BCRs and the impact of environmental/policy/economic factors.

Funding Model

The majority of participants were generally satisfied with the model and the division of funding. However eight participants, seven of which were from rural areas were not satisfied with the model. The main issue concerned the rising construction costs and the suggestion that black spot funding needed to increase to match these costs. Consequently, the number and scope of projects that could be funded each year has decreased.

Over half thought that the 50/50 distribution of funds between metropolitan and non-metropolitan roads was adequate. Interestingly, those who did not agree were mostly from rural areas and suggested that the distribution of funds was arbitrary. Suggestions to improve the funding distribution included: should match crash distribution, be based on road length in the area, or should consider crash severity. A difference was evident between metropolitan and rural participants with the latter stating that rural areas should receive a higher proportion of funding due to underreporting of crashes in these areas. Metropolitan participants suggested that their areas should receive a higher proportion of funding due to higher traffic volumes and percentages of crashes. Participants also suggested that cities and towns located in rural areas eg. Mandurah should have to meet different crash criteria to regional areas where traffic volumes are much lower.

The majority of participants from Main Roads and from the metropolitan Local Government area stated they would like to submit projects costing over the $1 million
limit. However, less than half of the participants from rural areas agreed. The types of treatments most commonly acknowledged as costing more than the $1 million limit were treatments to intersections, treatments involving service relocations, treatments involving land acquisition and treatments over several kilometres of road. Suggestions for an upper limit that would get these projects funded ranged from $1.5 million to $3 million plus.

Again, rising construction costs were a concern for participants with half of the participants stating that the rising construction costs had affected their selection of projects when requesting funding. A higher proportion of Main Roads employees identified this as an issue than Local Government workers. The most commonly identified effects included difficulty in projects reaching the minimum BCR of 1 and as a result, more projects were nominated on the basis of Road Safety Audits, large percentage increases in costs needed to be factored into projects, the total number of projects undertaken each year had decreased and only smaller projects could be applied for.

**CRASHtool**

Less than half of the participants thought that CRASHtool continued to provide accurate BCRs and less than half used it regularly. Several commented that that the values assigned to CRASHtool were out of date and that it was very technical to use. Several participants from rural areas commented that black spots are more frequently identified through RSA rather than on the basis of crash criteria and BCRs so CRASHtool is not relevant. While the majority of participants thought that a BCR of one was an appropriate cut off for funding the comment again was made that due to rising construction costs, it was increasingly hard to reach this cut-off.

**Road Safety Audits (RSA)**

The majority of participants had applied for funding for road treatments based on a Road Safety Audit and believed that they were a good choice to gain funding for road improvements. Several participants noted that an increasing number of projects are having to be submitted on the basis of a RSA because few meet the BCR of one.
quarters of participants answered that the types of black spot projects requested had changed in recent years. Some noted that projects submitted for funding now are usually larger and more complex while others stated projects were more minor due to rising construction costs.

**Black Lengths**
Few respondents had ever requested funding for a black length. Reasons for not applying included the expense of black length projects, black lengths never met the crash criteria, few roads in their area were longer than 3km, black length treatments were not effective or they had never heard of black lengths.

**Timeliness of Black Spot Projects**
The majority of participants were aware of black spot projects that had been delayed in their area. Reasons for these delays included service relocations, resource limitations of Local Governments, obtaining clearing permits, Native Title issues, lack of planning and design prior to project submission, actual cost of projects being much higher than the estimated cost and the land acquisition process. However, most participants thought it was reasonable to expect some black spot projects to be completed in the one year following funding. The majority of respondents believed that the length of time required for project completion depended on the project.

Less than half the participants applied for funding of black spot projects in stages greater than one year but the majority responded positively to the idea of staging complex projects. Over half agreed with mandatory staging while one third stated that staging should be an option and determined on a case to case basis rather than being made mandatory.

**Other Issues**
Over half of the participants agreed that issues other than the $1 million upper funding limit had resulted in them not submitting treatments for State Black Spot Program funding. The most common reasons cited, mostly by rural Local Government participants
were lack of resources including internal funding constraints, difficulty for Local Governments in contributing to the project cost on a 2:1 basis as well as a lack of qualified and experienced staff.

Three quarters of the respondents believed there were always eligible projects to put forward for black spot funding under the current guidelines but some stated that few true black spots remained in some areas.

**Improvements to the Black Spot Program**

Participants offered a wide range of suggestions for improvements to the State Black Spot Program. Common suggestions included:

- An increase in the total amount of funding for the State Black Spot Program;
- Black spot funding eligibility criteria should be more flexible;
- More project planning and design work should be required prior to applying for Black spot funding so that informed estimates could be made;
- There should be a capped proportion of funding allocated to the planning and design stage of black spot projects.

**Limitations of study**

Limitations of the study include the convenience sampling methodology which did not allow any inferences to be made in terms of generalisation to a larger population. However, the results obtained from the study should be considered as “well-informed” and will certainly provide constructive feedback to reviewing the WA State Black Spot Program.
5. **RECOMMENDATIONS AND CONCLUSIONS**

In conclusion, based on the results of this qualitative descriptive study the following areas should be considered when reviewing the Black Spot Program.

- Incorporating the rising construction costs into the total Black Spot Program funding allocation as it is impacting on selection and number of projects that are currently being treated.
- Changing the BCR from one to allow funding of large scale projects.
- Increasing the limit of $1 million for larger projects which may include intersection treatments, treatments over several kilometres of road, service relocation and treatments involving land acquisition.
- Regular monitoring and updating of CRASHtool to provide accurate BCRs. The addition of new treatment types is also suggested.
- Regular training programs in the usage of CRASHtool, particularly for rural groups.
- Training programs regarding the use of black lengths as a means of securing funding for road safety treatments.
- Consideration of flexible length of time required for completion of projects and/or staging of projects, on a case to case basis particularly for large scale projects requiring service relocation, land acquisition, clearing permits etc.
- Training on how to stage projects, what projects are appropriate and what the stages should be.
- The inclusion of more project planning and design information when submitting an application for black spot funding
- Examination of the resources available in different regions and the actual costs of delivering a project with a view to re-evaluating the allocation of funding, particularly in rural and remote WA.
- The development of specific criteria to determine responsibility when a road is controlled by more than one Local Government and road treatment is required.
- Regular review and monitoring of the Black Spot Program, its criteria, and assessment tools.
REFERENCES


APPENDIX A

EMAIL SENT TO RECRUIT POTENTIAL PARTICIPANTS

The State Black Spot Program has been operating since 2000 and has made a significant impact on road safety across the state.

To ensure the program continues to maximise safety returns it is now necessary to review the historical effectiveness of the program and identify opportunities to improve the program through refining the criteria and processes.

This review is being conducted by a Working Group comprising of the following members:

Terri-Anne Pettet - RoadWise Program Manager, WALGA
Anthony Vuleta - Director Technical Services, Town of Victoria Park
Maurice Cammack - Incident Management Manager, MRWA
Grady Habib - Program Development Coordinator, MRWA

To ensure key stakeholders views are incorporated into the review, the Working Group is calling for nominees who are willing to be interviewed on issues associated with the State Black Spot Program.

The interview will take approximately 45 minutes and will be conducted over the telephone or face-to-face. The questions to be asked will be provided to the interviewee prior to the interview.

Should you be interested in being interviewed please contact:

Dr. Lynn Meuleners
Centre for Population Health Research - Curtin University
Tel: 08 9266 4636
L.Meuleners@curtin.edu.au

Your input is critical to the review of the State Black Spot Program and your nomination prior to the May 16 2008 would be appreciated.

Thank you for taking the time to make your road network safer.
APPENDIX B
Review of the State Black Spot Program Questionnaire

Respondent’s Details

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<th>Organisation</th>
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Introductory Section

Hello, my name is ____________ and I am from the School of Public Health at Curtin University.

Your name has been given to me as a contact person for a study that is currently being undertaken by Main Roads WA regarding the State Black Spot Program. The study is being undertaken on behalf of the Working Group for the Review and Evaluation of the State Black Spot Program. I am involved in conducting the field work for the study and preparing a report for the Working Group.

As part of the study, Main Roads is reviewing the program’s operations to improve the efficiency and effectiveness of the program. As a stakeholder in the program, Main Roads would like to get your viewpoint on these issues by asking you to answer a few questions. These questions should not take up too much of your time.

Are you able to answer these questions?

Yes ☐

No ☐

If YES, then –

Is this a convenient time or would you like me to phone back at a later time? Arrange alternative time if necessary.

If NO, then –

Is there anyone else at your <NAME OF ORGANISATION> I should talk to?

If YES, then ask for the person’s name and phone number.
If NO, then thank the person and end the interview.

### State Black Spot Program

***Please note that the questions below are referring to the State Black Spot Program and not the National Black Spot Program***

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| **1.** | Are you aware of the current model for funding black spot projects?  
*(For interviewer: Please read out the attached funding model sheet)* |
<p>|   | Yes ☐ No ☐ |
|   | What are your views of this funding model? |
|   | __________________________________________ |
|   | __________________________________________ |
|   | __________________________________________ |
| <strong>2.</strong> | The funding distribution criteria provide 50% of black spot funding to metropolitan roads and 50% to non-metropolitan roads. Do you think the percentage distribution of funds between the metropolitan and non-metropolitan roads is correct? |
|   | Yes ☐ No ☐ |
|   | If YES – Do you have any additional comments? |
|   | __________________________________________ |
|   | __________________________________________ |
|   | __________________________________________ |
|   | If NO – What changes do you suggest and why? |
|   | __________________________________________ |
| <strong>3.</strong> | Have you or a staff member in your section requested black spot funding in recent years? |
|   | Yes ☐ No ☐ |</p>
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<th>If NO - What prevented you from requesting funding for black spot projects?</th>
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4. Have the types of black spot projects requested by you or a staff member in your section changed in recent years?

   Yes ☐ No ☐

If YES – In what way have the projects changed?

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

5. Have you or a staff member in your section ever applied for funding for a black length (section of the road > 3 km)?

   Yes ☐ No ☐

If NO, what reason(s) have prevented you from applying for funding for a black length?

______________________________________________________________________
______________________________________________________________________
______________________________________________________________________

6. Are there black spot projects that you would like to request funding that is over the current $1 million limit?

   Yes ☐ No ☐

If YES – What types of treatments are not eligible for funding because of the $1 million upper limit? What upper limit would be needed for these projects to get funding?

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<th>Treatments</th>
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7. For reasons other than the $1 million upper limit, are there other treatments that you wanted to request black spot funding but other issues resulted in you not submitting them (i.e. internal funding constraints, delivery issues, procedural issues)?

Yes ☐ No ☐

If YES – What were the reasons that the treatments were not suitable or eligible for black spot funding?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

8. Has the rising construction costs affected your selection of projects when requesting black spot funding?

Yes ☐ No ☐

If YES, how has the rising construction costs affected the selection of black spot projects?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

9. Black Spot projects are often not completed by the expected finish date. Are you aware of any black spot projects that were delayed in your area?

Yes ☐ No ☐

If YES, what were the reasons for the delay?

_________________________________________________________________
_________________________________________________________________
_________________________________________________________________

10. In your opinion, do you think that it is reasonable to expect any treatment to a black
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<td>spot project to be completed in the one year following funding?</td>
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<td>If NO, what is a reasonable length of time for the completion of a black spot treatment?</td>
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<td>11. Have you ever applied for funding of black spot projects in stages greater than one year?</td>
<td>□ Yes □ No □</td>
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<td>□ Yes □ No □</td>
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<td>If No, why have you not applied?</td>
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<td>How would you feel if staging projects was made mandatory for complex projects (for example projects including service relocation or land acquisition)?</td>
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<td>12. Do you think that CRASHtool continues to provide accurate BCRs?</td>
<td>□ Yes □ No □</td>
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<td>□ Yes □ No □</td>
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<td>If YES – Do you have any comments to make about this?</td>
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<td>If NO – What changes are needed to CRASHtool to improve it?</td>
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13. Currently the BCR for nominated project selection is set at one. Do you think a BCR of one is the appropriate cut-off for funding?

Yes ☐ No ☐

If YES – Do you have any comments to make about this?

_________________________________________________________________

_________________________________________________________________

If NO – What do you think the BCR should be for selecting black spot projects and why?

_________________________________________________________________

_________________________________________________________________

14. Have you or a staff member in your section ever applied for funding for road treatments based on a road safety audit?

Yes ☐ No ☐

If NO, what reason(s) have prevented you from applying for funding based on a road safety audit?

_________________________________________________________________

_________________________________________________________________

15. In your opinion, are road safety audits a good choice to gain funding for road improvements?

Yes ☐ No ☐

If NO, why are road safety audits not a good funding choice?

_________________________________________________________________

_________________________________________________________________
16. In your opinion, are there always eligible projects available to put forward for black spot funding under the current guidelines?

Yes ☐ No ☐

If NO – What are the reasons for this?
____________________________________________________
____________________________________________________
____________________________________________________

17. Are there any issues/improvements you would like made to the current guidelines or procedures for State Black Spot Program?

Yes ☐ No ☐

If YES – What are these changes?
____________________________________________________
____________________________________________________

Demographic and Background Information

I’d like to finish the interview by asking you a few questions about yourself and the length of time that you have been working at <NAME OF ORGANISATION>.

| 18. Gender | Male ☐ Female ☐ |
| 19. | What is your current position at <NAME OF ORGANISATION>? |
| 20. | How many years have you been working at <NAME OF ORGANISATION>? |
| 21. | How many years have you been involved in preparing black spot funding applications? |
| 22. | Have you worked at other local governments organisations before this position? Yes ☐ No ☐ Not applicable ☐ |
| 23. | How many years did you work for this organisation? |
Thank you very much for your time