



# Gascoyne Country Zone

# Minutes

**Mt Augustus Tourist Park**

**1:00pm**

**Thursday 20 June 2019**

# Gascoyne Country Zone

Meeting held at the Mt Augustus Tourist Park on Thursday, 20 June 2019

The Acting Chair, President Karl Brandenburg, opened the meeting at 12:54pm.

## Minutes

### ATTENDEES

Shire of Carnarvon	President Karl Brandenburg (Acting Chair) David Burton – Chief Executive Officer David Neilsen – Executive Manager Infrastructure Services
Shire of Exmouth	Cr Ben Dixon Keith Woodward – Deputy Chief Executive Officer
Shire of Upper Gascoyne	President Cr Don Hammarquist OAM John McCleary – Chief Executive Officer Jarrod Walker – Works Supervisor
WALGA	Tim Lane, Manager Strategy and Association Governance Engel Prendergast, Senior Road Safety Consultant

### GUESTS

Gascoyne Development Commission Dept. of Local Government, Sport and Cultural Industries Main Roads WA	Tym Duncanson, A/Chief Executive Officer Richard Malacari, Regional Manager, Mid-West Gascoyne Benita Donda, Regional Officer Gascoyne Bernie Miller, Regional Manager Mid-West Gascoyne
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### APOLOGIES

Shire of Shark Bay	President Cr Cheryl Cowell (Chair) Paul Anderson – Chief Executive Officer
Shire of Exmouth Gascoyne Development Commission	Cameron Woods – Chief Executive Officer Andy Munro, Chair

## 1. Attachments

The following are provided as attachments to the agenda:

1. Minutes May 2019 Meeting
2. State Council Agenda – also available via link: <https://walga.asn.au/getattachment/a6732516-4261-4b43-a5e7-94187f99c7bf/State-Council-Agenda-3-July-2019.pdf>
3. President's Report

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## 2. DEPUTATIONS

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### 2.1 Gascoyne Development Commission

Mr Tym Duncanson, A/Chief Executive Officer updated the Zone on the activities of the Gascoyne Development Commission.

**Noted.**

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## 3. DECLARATION OF INTEREST

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Pursuant to our Code of Conduct, Councillors must declare to the Chairman any potential conflict of interest they have in a matter before the Zone as soon as they become aware of it. Councillors and deputies may be directly or indirectly associated with some recommendations of the Zone and State Council. If you are affected by these recommendations, please excuse yourself from the meeting and do not participate in deliberations.

**Nil.**

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## 4. CONFIRMATION OF MINUTES

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### 4.1 Minutes of the 1 May 2019 Meeting of the Gascoyne Country Zone

#### RECOMMENDATION

**Moved Cr Hammarquist  
Seconded President Brandenburg**

**That the Minutes of the meeting of the Gascoyne Country Zone held on 1 May 2019 be confirmed as a true and accurate record of the proceedings.**

**CARRIED**

### 4.2 Business Arising

**Nil**

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## 5. ZONE BUSINESS

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### 5.1 Zone Status Report

Agenda Item	Zone Resolution	WALGA Response	WALGA Contact
<b>2019 March 22 Zone Agenda Item 5.2 Restricted Access Vehicle Operating Condition</b>	That the Gascoyne Zone request WALGA to: 1. Advocate for thorough consultation with the Local Government sector regarding alternative approaches to the CA07 operating condition; and, 2. Establish a Working Group consisting of representatives from MRWA, WALGA, LGIS, DoT and the Local Government sector incorporating at least one member from each affected WALGA Zone to consider alternative approaches.	The Association is seeking an agreement from Main Roads WA to participate in the reference group as proposed by the Zone.	<b>Ian Duncan Executive Manager Infrastructure <a href="mailto:iduncan@walga.asn.au">iduncan@walga.asn.au</a> 9213 2031</b>

<p><b>2019 March 22 Zone Agenda Item 5.4 Ningaloo Coast Regional Strategy Carnarvon to Exmouth – Nyinggulu (Ningaloo) Coastal Reserves, Draft Joint Management Plan.</b></p>	<p>That the Gascoyne Zone requests WALGA to advocate to the State Government to undertake an independent economic assessment of Wilderness Camping in the Shire of Exmouth and the broader Gascoyne Region.</p>	<p>WALGA has commenced discussions with the Shire, the Department of Biodiversity Conservation and Attractions and the Gascoyne Development Commission on the development of the Regional Strategy, and the concerns raised by the Shire of Exmouth.</p> <p>The Shire of Exmouth will draft a statement outlining concerns with the proposal seeking that no decisions are made until an economic assessment is undertaken.</p>	<p><b>Mark Batty Executive Manager Environment and Waste</b> <a href="mailto:Mbatty@walga.asn.au">Mbatty@walga.asn.au</a> 9213 2078</p>
<p><b>2019 March 22 Zone Agenda Item 2.1 Integrated Planning and Reporting (IPR) Peer Support Program</b></p>	<p>That the Gascoyne Zone request WALGA to:</p> <ol style="list-style-type: none"> <li>1. Support Local Government in their tourism endeavours as a key component of the Economic Development project;</li> <li>2. Continue to prosecute the economic development and tourism agenda;</li> <li>3. Advocate to the State Government to review the regional development commission and tourism structures in WA aiming for a more strategic and collaborative approach; and,</li> <li>4. Advocate to the State for revitalization of the regional development commission regional plans.</li> </ol>	<p>State Council adopted the <i>Local Government Economic Development: Research Findings and Future Directions Discussion Paper</i> and <i>Local Government Economic Development Framework</i> at its meeting of 27<sup>th</sup> March 2019. This includes the endorsement of a range of Economic Development policy positions, including those relating to tourism. With the support of State Council's Economic Development Policy Forum, WALGA will now implement its Advocacy Strategy to prosecute this policy agenda.</p> <p>In response to the Gascoyne's resolution, as a matter of priority, WALGA will seek a response from the Minister of Regional Development on the status of the Regional Development Commissions and the development of regional plans.</p> <p>At the time of writing this update a response has not been received from the Minister's office.</p>	<p><b>Tony Brown Executive Manager Governance and Organisational Services</b> 9213 2051 <a href="mailto:tbrown@walga.asn.au">tbrown@walga.asn.au</a></p>
<p><b>2019 May 1 Zone Agenda Item 5.2 Financial Assistance Grants Allocations</b></p>	<p>That WALGA:</p> <ol style="list-style-type: none"> <li>1. Be requested to review the current Grant Commission allocation methodology, including the minimum grant, and the continuing suitability of the allocation methodology; and,</li> <li>2. Advocate to the Minister for Local Government and ALGA to request a review of the Financial Assistance Grants methodology, particularly the continuing applicability of the minimum grant.</li> </ol>	<p>WALGA supports the need for a review of the Financial Assistance Grants (FAGs) system, from the perspective of growing the overall size of the pool.</p> <p>This approach will benefit the whole sector by increasing the level of funding available to all Local Governments, rather than redistributing funds within the sector. It also recognizes that all Local Governments require an increased level of resources to deliver on the needs of the community, including addressing the infrastructure backlog.</p> <p>WALGA continues to work with ALGA to advocate to increase FAGS funding to 1% of taxation revenue.</p> <p>In relation to the review of the FAGs allocation methodology, this was recently undertaken through the 2013 Review, however the findings of this study were never made public. WALGA considers that the release of this report is necessary to inform any future analysis of the FAGs methodology and is seeking support from ALGA to call for its release.</p>	<p><b>Wayne Scheggia Deputy CEO</b> 9213 2024 <a href="mailto:wscheggia@walga.asn.au">wscheggia@walga.asn.au</a></p>

## RESOLUTION

**That John McCleary be nominated as the Gascoyne Zone's representative to the CA07 Working Group.**

**CARRIED**

## RESOLUTION

**That the Gascoyne Zone:**

- 1. Request WALGA continue to advocate to the State Government that an independent economic assessment of Wilderness Camping in the Shire of Exmouth and the broader Gascoyne Region be undertaken prior to any decisions being made; and,**
- 2. Note that the Shire of Exmouth will draft a statement to be sent to Gascoyne Local Government Chief Executive Officers outlining concerns with the current proposal.**

**CARRIED**

## 5.2 Asset Preservation Model

*Shire of Upper Gascoyne*

### RESOLUTION

**That the Gascoyne Country Zone request WALGA to undertake a review of the Asset Preservation Model that informs the distribution of road funding to ensure equity, recognition of Local Government circumstances and the validity and accuracy of assumptions that inform the model.**

**CARRIED**

### Secretariat Comment

The Asset Preservation Model that underpins the distribution of road funding through the WA Local Government Grants Commission has been in place since the early 1990s.

The model splits the state into 21 'cost zones' which reference the cost of road maintenance in different parts of the state acknowledging regional cost differences.

Background information regarding the Asset Preservation Model is attached as an appendix to this agenda.

## 5.3 National Redress Scheme – Update from the State Government on Engagement with WA Local Government regarding participation in the National Redress Scheme

*Director, Strategic Coordination and Delivery, Department of Local Government, Sport and Cultural Industries, Gordon MacMile, presented to the Gascoyne Zone at the 1 May 2019 meeting.*

*The item below is an update from Gordon MacMile on behalf of the State Government regarding Local Government's participation in the National Redress Scheme.*

*Note that State Council Item 5.1 also relates to the National Redress Scheme and the State Council Item recommends that Local Government's participation in the scheme be supported in principle.*

*Gordon's item follows:*

### **Background**

- The Royal Commission into Institutional Responses to Child Sexual Abuse (the Royal Commission) was established in January 2013, to investigate systemic failures of public and private institutions to protect children from child sexual abuse, report abuse, and respond to child sexual abuse.
- The Royal Commission's Redress and Civil Litigation (September 2015) Report recommended the establishment of a single national redress scheme to recognise the harm suffered by survivors of institutional child sexual abuse.
- The National Redress Scheme (the Scheme):
  - acknowledges that many children were sexually abused in Australian institutions;
  - recognises the suffering they endured because of this abuse;
  - holds institutions accountable for this abuse; and

- helps people who have experienced institutional child sexual abuse access counselling and psychological services, a direct personal response, and a redress-payment.
- The State Government, specifically the Department of Local Government, Sport and Cultural Industries and the Department of the Premier and Cabinet, is undertaking engagement with WA Local Governments about their (potential) participation in the Scheme.
- Engagement with the sector is ongoing and will enable an understanding to be developed about the capacity and capability of Local Governments to join the Scheme. This engagement will also allow discussion and agreement to be reached about how participation in the Scheme is best facilitated.
- The State Government committed to provide an update to each of the Zone meetings at the June/July schedule.
- To date, the Scheme has not received any applications naming a WA local government as the institution in which child sexual abuse occurred.

## **Discussion**

### Royal Commission

The Department of Local Government, Sport and Cultural Industries (DLGSC) has previously engaged with the WA Local Government Association (WALGA), Local Government Professionals (LGPro) and WA local governments on the recommendations, findings and (potential) key implications of the Royal Commission.

This preliminary engagement occurred between July and September 2018 through the distribution of an Information and Discussion Paper (31 July 2018), the hosting of webinars (August 2018) and an invitation for submissions that concluded in late September 2018.

Information and feedback gathered from the Royal Commission engagement is being used to advise the policy positions and implementation approaches of future Royal Commission reforms and child safeguarding initiatives.

### Stage 1 Redress Engagement

The Department of Premier and Cabinet (DPC) and DLGSC approached WALGA in late October 2018 regarding engagement with the sector about the potential for WA local government to participate in the National Redress Scheme with the State Government.

A consultation process in accordance with the State Local Government Partnership Agreement commenced in December 2018 with the direct distribution of an Information and Discussion Paper in early January 2019 to all WA local governments, the WA Local Government Association (WALGA), Local Government Professionals WA (LG Pro) and the Local Government Insurance Scheme (LGIS).

Between March and May 2019, DLGSC completed the first round of engagement with local governments that included:

- An on-line webinar to 35 local government, predominantly from regional and remote areas;
- Presentations at 12 WALGA Zone and LG Pro meetings;
- Various responses to email and telephone enquiries from individual local governments.

These consultations have reached 115 out of 137 local governments

Key observations and discussion themes from the Stage 1 engagement has been:

#### Observations

- A very low level of awareness regarding Redress existed in the WA local government sector prior to the initial, stage 1 engagement;
- Little to no discussions had occurred within the sector or within individual local governments regarding Redress because of the initial low-level awareness.

#### Themes

- Local governments were concerned about:
  - The cost of any Redress payment;

- The availability of historical information;
  - The capacity of local governments to provide a DPR (apology) if requested;
  - Maintenance of confidentiality, particularly in small Councils and communities;
  - Whether LGIS insurance would cover any aspect of a Redress payment.
- Early preliminary feedback from the stage 1 engagement indicated that the sector may favour participation in the Scheme with the State Government.
  - WALGA released their own Discussion Paper to the sector and LGIS, covering specifically the insurance aspect, in April 2019.

## **Next Steps**

### Stage 2 Redress Engagement

Through June and July 2019, DPC will undertake briefings to relevant State Ministers, Ministerial officers and relevant Cabinet Sub Committees on the engagement to date with the WA local government sector and key observations from Stage 1.

DLGSC, in consultation with DPC and the Department of Justice, will then prepare a follow-up information paper for WA local government, that will focus on and outline the confirmed options for participation in the Scheme. This will allow the local government sector to identify and endorse the preferred approach, which the WA Government can formally consider when deciding about the participation of local governments in the longer term.

Phase 2 engagement will commence in late August 2019 with the release of the 2nd Paper, continue through the November zone meetings and conclude at the December 2019 WALGA State Council meeting.

DLGSC requests that engagement undertaken with the sector to date on the participation of WA local government with the State Government in the National Redress Scheme is noted and subsequent engagement with the sector will occur, including:

- the release of a Stage 2 discussion paper in late August 2019;
- attendance and discussions with a DLGSC representative at the November 2019 Zone meetings;
- A final preferred position on the WA local government sector's participation in the National Redress Scheme will be sought at the WALGA State Council meeting in early December 2019.

For further enquiries please contact:

Gordon MacMile  
 Director Strategic Coordination and Delivery  
 Planning and Service Delivery

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 PO Box 8349, Perth Business Centre, WA, 6849  
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 Website: [www.dlgsc.wa.gov.au](http://www.dlgsc.wa.gov.au)

**NOTED**

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## **6. STATE COUNCIL AGENDA – MATTERS FOR DECISION**

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*(Zone delegates to consider the Matters for Decision contained in the WA Local Government Association State Council Agenda and put forward resolutions to Zone Representatives on State Council)*

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### **MATTERS FOR DECISION**

#### **5.1 National Redress and Local Government**

That WA Local Government participation in the State's National Redress Scheme declaration with full financial coverage by the State, be endorsed in principle, noting that further engagement with the sector will occur in the second half of 2019.

#### **5.2 Draft Guidelines for Local Heritage Surveys and *Heritage Act 2018* Proclamation Regulations**

That the interim submission on the Draft Guidelines for Local Heritage Surveys and *Heritage Act 2018* Proclamation Regulations be endorsed.

#### **5.3 Review of the *Aboriginal Heritage Act 1972* (Phase Two)**

That the interim submission on the Aboriginal Heritage Act Review Phase Two be endorsed.

#### **5.4 Planning for Bushfire Guidelines: Element 3 Vehicular Access**

That:

1. the interim submission to the Western Australian Planning Commission on the proposed modifications to Appendix 4 Element 3: Vehicular Access of the Planning for Bushfire Guidelines, be endorsed; and
2. WALGA formally advise the Western Australian Planning Commission that draft Appendix 4 Element 3 is not supported, due to significant concerns with the proposed modifications to road designs and difficulties in implementing the draft Guidelines.

#### **5.5 Remote Area Tax Concessions**

That WALGA's interim submission to the Productivity Commission Inquiry into Remote Area Tax Concessions be endorsed.

#### **5.6 Directions Paper for the 10 Year Strategy on Homelessness**

That the interim submission to the Directions Paper for the 10-Year Strategy on Homelessness be endorsed.

### **MATTERS FOR NOTING / INFORMATION**

- 6.1 Report on Local Government Road Assets and Expenditure 2017/18
- 6.2 2019-2020 State and Federal Budgets
- 6.3 Public Library Assets
- 6.4 Climate Change Policy Advocacy Update
- 6.5 Report Municipal Waste Advisory Council (MWAC)



## **ORGANISATIONAL REPORTS**

- 7.1.1 Report on Key Activities, Environment and Waste Unit
- 7.1.2 Report on Key Activities, Governance and Organisational Services
- 7.1.3 Report on Key Activities, Infrastructure
- 7.1.4 Report on Key Activities, People and Place
- 7.2 Policy Forum Reports

## **RECOMMENDATION**

**Moved: Cr Hammarquist**  
**Seconded: Keith Woodward**

**That the Gascoyne Country Zone endorse State Council items 5.1 – 5.6.**

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## **7. EXECUTIVE REPORTS**

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### **7.1 State Councillor's Report to the Zone**

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Tim Lane provided an update an update to the Zone on behalf of Cr Cheryl Cowell.

**Noted.**

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### **7.2 President's Report to the Zone**

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Tim Lane outlined the President's Report on behalf of Cr Lynne Craigie.

## **RESOLUTION**

**The Gascoyne Country Zone of WALGA formally congratulates the following Local Government representatives for receiving the Medal of the Order of Australia:**

- 1. President Cr Lynne Craigie OAM**
- 2. President Cr Don Hammarquist OAM; and,**
- 3. Former Councillor and Shire President, Mr Lachlan McTaggart OAM**

**CARRIED**

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### **7.3 RoadWise Report**

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Engel Prendergast provided an update to the Zone.

**Noted.**

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## **7.4 Department of Local Government, Sport and Cultural Industries Report to the Zone**

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Richard Malacari and Benita Donda will provide an update to the Zone, particularly relating to:

- Flagship Project Brief 2019/20
  - Gascoyne Outdoor Recreation Strategy
  - Gascoyne Sports Modelling and Activation Planning

**Noted.**

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## **8. OTHER BUSINESS**

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**Nil.**

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## **9. DATE, TIME AND PLACE OF NEXT MEETING**

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Discussion is sought regarding the next Zone meeting.

Originally the meeting was scheduled for Friday 23 August via teleconference, however it is suggested that the meeting could be held on the morning of Thursday, 5 September in Denham immediately prior to the Zone Forum to be held as part of the WALGA regional State Council meeting.

That is, the meeting could be held at 10:30am on Thursday, 5 September, to be followed by lunch with the arriving WALGA contingent with the Zone Forum to be held after lunch.

### **RESOLUTION**

**The next meeting of the Gascoyne Country Zone of WALGA will be held at 10:30am on Thursday, 5 September, to be hosted by the Shire of Shark Bay.**

**CARRIED**

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## **10. CLOSURE**

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There being no further business the Chair declared the meeting closed at 3:35pm.

## APPENDIX TO ITEM 5.2:

### THE ASSET PRESERVATION MODEL

#### INTRODUCTION

The Local Government Grants Commission has used an Asset Preservation Model to distribute Commonwealth road funds to local governments in Western Australia since 1991-92. This report describes the current version of the Asset Preservation Model.

#### BACKGROUND

The original Asset Preservation Model was developed by Main Roads and local government in 1989-90 and was used in 1990-91 and 1991-92 for distributing Commonwealth local road funds. It was derived from a theoretical model developed by the Australian Road Research Board. [Ref 1]

The Commission assumed responsibility for the distribution of Commonwealth local road funds in 1991-92, following the decision of the Special Premiers Conference in October 1990 to untie these funds. Although the funds were untied, the Commonwealth Government agreed to continue identifying the funds for roads. This meant that these funds would continue to be distributed in accordance with road needs.

When the Commission took over responsibility for distributing the identified Commonwealth road funds, it undertook a comprehensive review of the Asset Preservation Model. The aim of the review was to establish that it was the most appropriate method; that it reflected Local Government road needs; and was compatible with principles that were being developed by the National Office of Local Government for the distribution of the road funds. The review found that the Asset Preservation Model was the most appropriate method of distributing road funds.

Many refinements were made to the original Main Roads model and the Commission's new Asset Preservation Model was widely accepted by Local Government.

#### PRINCIPLES FOR DISTRIBUTION OF ROAD FUNDS

The National Principle relating to the allocation of the identified road component of the financial assistance grants under section 12 of the Commonwealth Local Government (Financial Assistance) Act 1995 is as follows:

*The identified road component of the financial assistance grants should be allocated to local governing bodies as far as practicable on the basis of the relative needs of each local governing body for roads expenditure and to preserve its road assets. In assessing road needs, relevant considerations include length, type and usage of roads in each local governing area.*

The following additional policies, developed in consultation with the National Office of Local Government, are also applied.

1. *Seven percent of the funds will be reserved for special projects: two-thirds for bridges and one-third for roads serving Aboriginal Communities.*
2. *The remaining 93 per cent of funds will be distributed according to Asset Preservation Needs as determined by the Western Australian Model.*
3. *The Asset Preservation Needs will be adjusted to provide for minimum standards as determined by the Western Australian model.*
4. *All roads that are the responsibility of local government will be used in assessing asset preservation needs.*

#### ROAD FUNDING

In accordance with the above policies 7% of the Federal road funds are allocated for Special Projects and the remaining 93% distributed according to Asset Preservation Needs.

Two thirds of the 7% for special projects is allocated for preservation of bridges. The Commission allocates these funds in accordance with recommendations by Main Roads WA, which assesses priorities using bridge condition reports.

One third of the special project funds is allocated to roads serving remote Indigenous communities. The Commission has established a committee, comprising representatives from the WA Local Government Association, Main Roads WA, Aboriginal Affairs Department, the Commonwealth Department of Families, Housing, Community Services and Indigenous Affairs and the Department of Local Government to recommend allocations for roads serving remote Aboriginal communities. The Committee has established

funding criteria based on factors such as the number of Aborigines served and the distance of the Community from a sealed road. The aim of the criteria is to better meet the needs of Aboriginal communities.

The Commonwealth special project funds for bridges and Indigenous Roads are augmented by State funds. Main Roads WA contributes a third of the cost of all projects funded under the special projects program. This contribution of State funds is subject to the condition that local governments spend the special project funds on the project for which the funds were allocated.

## AN OVERVIEW OF THE ASSET PRESERVATION MODEL

The Asset Preservation Model assesses the average annual cost of maintaining each council's road network. It takes into account:

- annual and recurrent maintenance costs; and
- reconstruction at the end of the road's useful life.

The model recognises the different needs of urban and rural roads, and the different levels of development of these roads. Thus the needs of sealed, gravel and formed roads are each treated according to their particular needs.

The model calculates annual asset preservation expenditure needs for each work activity by the formula:

$$\text{Annual expenditure need} = \text{unit cost per km} \times \text{frequency factor} \times \text{road length}$$

For example, the annual expenditure need for resealing for a local government that has 10 kilometres of road sealed 6 metres wide would be:

$$\$38000 \text{ (unit cost per km)} \times 1/15 \text{ (frequency factor)} \times 10 \text{ (length)} = \$26000$$

The frequency factor refers to how often the work is carried out. In this example, resealing is carried out every 15 years.

The annual cost of all relevant road work activities is calculated in this way for each local government, to obtain its total asset preservation expenditure needs.

The Asset Preservation Model has the facility to equalise road standards through minimum standards. These standards help councils that have not been able to develop their road systems to the same degree as more affluent councils.

The model requires comprehensive road statistics, costs and work standards. These are discussed in the following sections of this report.

## ROAD STATISTICS

WA's road classification has three categories – Commonwealth Government roads, State Government roads and **Local Government roads**. Local Government roads consist of local distributor roads and local roads. Roads that were classified as arterial roads prior to 1994 are included as local distributor roads

Statistics for all **Local Government roads** are used in assessing councils' needs. These include public roads provided by developers, but exclude National Park and Forestry roads that are the responsibility of the Department of Conservation and Land Management.

Road statistics are obtained from Main Roads in March each year. These statistics represent a snapshot of the road inventory at the time they are provided by Main Roads.

Roads are divided into two types - roads in built up areas and roads outside built up areas. This was necessary because roads in built up areas involve greater expenditure needs than roads outside built up areas, because of higher traffic, large numbers of intersections and the need for expensive treatments such as kerbing and longitudinal drainage. The definition of built up areas is given in Appendix 1.

The road statistics used in the model are shown in Table 1.

**Table 1**  
**Road Classes and Statistics Used in the Model**

<b>Roads in Built up Areas</b>	<b>Roads Outside Built up Areas</b>
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ROAD CLASSES	
Residential streets	Local Roads
Local industrial and distributor roads	
STATISTICS	
Aggregate seal (L) x (W)	Aggregate seal (L) x (W)
Asphalt seal (L) x (W)	Gravel (L)
Gravel (L)	Formed (L)
Kerbing (L)	Unformed (L)
Longitudinal piped drainage (L)	
Bridges (A)	Bridges (A)
	River crossings (A)
Lanes (L) x (W)	
Footpaths (L)	

Where L = length in kilometres  
W = width in metres  
A = area in square metres

Sealed roads have many different widths. To simplify the model, the sealed road lengths are converted to lane kilometres with a standard width of 3.5 metres. One lane kilometres = 3500 square metres.

### Widening of Highways and Main Roads through Country Cities and Towns

In country cities and towns, Main Roads are responsible for the through lanes on highways and main roads, and councils are responsible for any widening required for local traffic and parking. To make allowance for local government responsibility on these roads, the widened sections of highways and main roads through country cities and towns were classed as local roads. These roads are referred to as T – roads in the Asset Preservation Model.

### Roads Serving Remote Aboriginal Communities

Aboriginal access and internal community roads are included in the statistics used in assessing asset preservation needs, provided that they satisfy the following conditions:

- Are open to the public,
- Councils accept responsibility for them and include them in their road inventories
- Councils maintain them regularly

Many roads serving small Indigenous communities and most internal community roads do not meet these conditions and are therefore not recognised in the grant determination process.

For background information on Aboriginal access roads see Ref 2.

### UNSEALED ROADS CARRYING HIGH VOLUMES OF TRAFFIC

In 2000 the Commission undertook a Heavy Haulage Study [Ref 3] to examine:

- The impact of heavy haulage on the local government road system; and
- Means of considering the impact of heavy haulage through the Commission's Asset Preservation Model.

The Commission adopted the recommendations of the Heavy Haulage Study. The following arrangements now apply:

1. Equivalent Average Annual Traffic [EQ AADT], based on the equivalence factors in Table 2, will be used as the measure of traffic.

**Table 2**  
**Equivalence Factors for Trucks on Gravel Roads**

Vehicle	Number of axles	Equivalence Factor
Classes 1 and 2		1
Class 3 truck	2	4
Class 4 truck	3	6
Class 5 truck	4	8
Class 6	3	6
Class 7	4	8
Class 8	5	10
Class 9 semi trailer	6	12
Class 10 B double	8	16
Class 11	8	16
Class 12 Triple road train	6-19	26

The equivalence factors apply to unsealed roads only

- Gravel or formed roads with an EQ AADT of 75 or greater will qualify for an allowance.
- The allowance for traffic will be made by increasing the allowances provided in the Asset Preservation Model. The allowances are set out in Table 3. The maximum of \$8,460 per km is equivalent to the allowance for a road sealed 7.0 metres wide.

**Table 3**  
**Allowances for Traffic on the Cost of Maintaining Gravel Roads**  
\$ per Year

EQ AADT	Annual Maintenance	Resheeting	Total Allowance
Less than 75	970	2417	3387
75 to 99	1721	2902	4623
100 to 149	2459	3341	5800
150 to 199	3442	3908	7350
Greater than 200	4098	4362	8460

The maximum allowance of \$8460 is the allowance for a road sealed 7.0m wide.  
Local governments receive 14% of these allowances because the Commonwealth funds are 14% of assessed asset preservation needs

- Local governments on minimum standards will not be eligible for an allowance, except in situations where the allowance lifts the grant above the minimum standard. This is because these councils are already receiving higher grants through the minimum standards.
- Gravel and formed roads that meet the criteria in Table 4 will be deemed to qualify for sealing, and these will be taken into account in setting minimum standards.

**Table 4**  
**Intervention Levels for Sealing Gravel Roads**

Traffic EQ AADT	Seal Width
75 - 300	6.0 m
> than 300	7.0 m

- Two traffic counts are required at each location, one taken during peak traffic such as wheat carting and one in the off peak period. The EQ AADT is estimated by weighting the counts using estimated periods of peak and non peak traffic.

## ANNUAL MAINTENANCE OF BRIDGES

The Asset Preservation Model makes provision for annual bridge maintenance, but not for major maintenance and replacement of bridges. The reason for this is that the Commission makes Special Project grants for major maintenance and replacement of bridges. These grants are matched with a one third contribution from Main Roads WA.

The allowance for annual maintenance is based on deck area. It is \$11.1 per square metre for concrete and steel bridges and \$22.1 for timber bridges in the southern part of the State. These rates are adjusted to compensate for higher costs in the northern regions.

## **MAINTENANCE OF TRAFFIC CONTROL DEVICES**

The model makes provision for annual maintenance of traffic control devices in both built up areas and outside built up areas. Traffic management devices include:

- Traffic control signals
- Intersection treatments
- Islands and medians
- Passing lanes
- Pavement marking
- All traffic signs
- Etc

The allowance includes work carried out to maintain visibility. The current allowances in the model need updating.

## **GROWTH IN THE ROAD NETWORK**

The different rates at which councils' road networks grow are brought to account through updated road statistics that are used every year.

## **ROAD COSTS**

The Commission pays special attention to road costs because the reliability of the Asset Preservation Model depends on realistic unit costs and work standards.

The State was divided into 21 regions to properly reflect the main cost differences within the State. These regions are defined in Appendix 2. They were identified using the Commission's disability factors, which take into account the effect of location, climate and terrain; and a report Environmental Regions of Australia [Ref 4] which divided the State into regions based on climate, landform, lithology, soils etc.

Costs for each region were reviewed in 2012 using information provided by the ten Regional Road Groups. The costs are in 2012 prices, but in future years these costs will be adjusted using ABS Road Price Indices for WA.. Current costs are therefore used each year.

Costs in the six country cities and towns are higher than the costs in their regions. To avoid creating six new regions, the regional costs were adjusted for these six councils. The regional costs were increased by 30% for Albany, Bunbury and Geraldton, 20% for Narrogin and by 15% for Kalgoorlie and Northam.

## **DISABILITY FACTORS**

The regional costs reflect regional factors such as isolation and climate that influence road costs. For example, the costs obtained from the Kimberley shires reflect the cost of labour, plant and transporting bitumen to the region. However, there are differences within a region that affect standards and costs. such as the distance that gravel has to be carted and terrain.

Four disability factors have been included in the model to take these differences into account. These factors are:

- the distance that gravel has to be carted for resheeting gravel roads and reconstructing sealed roads;
- soil conditions which affect the thickness of sealed pavements;
- terrain; and
- Salt

Each of these disability factors has been calculated, using quantitative data. They are discussed in the next section.

## **Cost of Pavement Materials for Sealed Roads**

The cost of pavement materials varies considerably depending on whether they are bought from a supplier or obtained from a Council controlled gravel pit. Many councils do not pay for gravel, but have informal arrangements with land owners that involve grading and gravelling their roads.

The distance that pavement materials are carted has a big impact on road costs. The distance varies from 5 km to 50 km. These distances and the amounts paid for the materials were obtained from a questionnaire sent to all councils. A model was developed to

estimate the cost per cubic metre of sub base and base course materials delivered and placed on the road for every local government.

It was found that in the metropolitan area pavement material costs depend on individual contractual arrangements rather than geographical factors. Average costs were therefore used for the metropolitan region. Elsewhere, however, individual costs were used for each council.

The cost of pavement materials was reviewed in 2012.

### Pavement Thickness for Sealed Roads

Pavement thickness has a significant influence on reconstruction costs. Evaluating pavement thickness requires data on soil strengths and traffic volumes.

Data on soil types were obtained from a report 'Biophysical Attributes of Local Government Areas' [Ref 5]. The soil types were based on agricultural classifications rather than their suitability as a road subgrade. The Main Roads Materials Engineering Branch estimated design Californian Bearing Ratios (CBR) for each of these agricultural classifications, using CBR records which were available for many of the soil types in WA. The CBR is a measure of the bearing capacity of a soil obtained from a standard soil penetration resistance test.

The Materials Engineering report [Ref 6] identified four ranges of design CBRs.

- < CBRs less than 5
- < CBRs between 5 and 10
- < CBRs between 10 and 15
- < CBRs greater than 15

The design CBRs take rainfall and drainage conditions into account.

The Equivalent Standard Axles (ESAs) in Table 5 were used to calculate pavement thicknesses. The ESAs were estimated from information supplied by councils and Main Roads. They were based on small samples and will require refinement in the future. However, as fairly large changes in ESAs are required to make an appreciable change to pavement thickness, the ESAs in Table 5 can be used with reasonable confidence.

**Table 5**  
**Equivalent Standard Axles for Local Government Roads**

Road Type	Equivalent Standard Axles (ESA)	
	Metropolitan	Country
<b>Roads in Built Up Areas</b>		
Residential Streets	60 000	30 000
Local Industrial and Distributor Roads	2 000 000	800 000
<b>Roads Outside Built Up Areas</b>		
Local Roads	400 000	400 000

Pavement thicknesses were calculated using Australian Road Research Board report ARR 150 [Ref 7] and Main Roads Engineering Road Note No. 9 [Ref 8].

### Terrain

Information on terrain, obtained from a report 'Physical Attributes of Local Government Areas',<sup>6</sup> gave the percentage of each local government area in each of four terrain categories - plains, undulating, rolling and hilly.

Analysis of the questionnaires on road costs indicated the effect of terrain on the costs of forming a road would be:

Flat	1.0
Undulating	1.2
Rolling	1.4
Hilly	1.6



Based on this information, disability factors for terrain were calculated for each municipality. The disability factors vary between 1.0 in shires that are predominantly flat to 1.3 in shires that have extensive hilly areas. These were applied to the cost of formation in the reconstruction of sealed roads.

## Salt

It is well known that roads built over salt areas cost more to maintain and do not last as long as roads elsewhere, but there is no quantitative information on the increased costs and how long salt affected roads will last. Some local governments estimated that the presence of salt could reduce road life by up to half. Discussions with Main Roads and council engineers suggested that a reduction of a third would be more realistic, and this reduction has been used in determining a disability factor. The effect of salt is shown in Table 6.

**Table 6**  
**Effect of Salt on Road Life**

	Normal Life Years	Life in Salt Affected Areas Years
Unsealed gravel pavements	12	8
Sealed gravel pavements	45	30
Seal	15	10

Disability factors were calculated for each local government using data obtained from the Department of Land Administration – Land Monitor Project. The project measured the area affected by salt using satellite imagery. Currently some 1.2 million hectares are affected and the projections are that the affected area will double in the next 15 to 25 years and will double again before equilibrium is reached.

The disability factors were applied to all gravel and sealed roads.

## WORK STANDARDS IN THE MODEL

Road works, which have the largest effect on asset preservation needs, are reconstruction and resealing of sealed roads, regravelling of gravel roads and reforming formed roads. Work standards for these operations were based on road engineering practice and were adopted after discussions with local government and Main Roads engineers. These work standards are set out in the following pages:

### Resealing - Aggregate Seals

A resealing frequency of 15 years was used throughout the State, except in the Pilbara and Kimberley where 12 years was used.

### Resealing - Asphalt Seals

The thickness and frequency of asphalt reseals are shown in Table 7.

**Table 7**  
**Standards for Resealing Asphalt Roads**

Category	Thickness (mm)	Frequency Years
Residential Streets	25	25 <sup>(1)</sup>
Local Industrial and Distributor Roads	30 <sup>(2)</sup>	20

<sup>(1)</sup> In the Pilbara and Kimberley the frequency for residential streets was reduced to 20 years.

<sup>(2)</sup> Outside the metropolitan area a thickness of 25mm was used for local distributor roads.

### Regravelling of Gravel Roads

The model recognises that part of the gravel pavement is lost each year through the wear of traffic, road grading and wind and water erosion, and makes provision for periodic replacement of the gravel. Estimates, of how frequently regravelling is necessary, varied from about 6 years to 20 depending mainly on traffic. The model provided for all gravelled roads to be regravelled every 12 years to a thickness of 100mm.

Gravel and formed roads in pastoral and mining areas and on the fringes of the agricultural area are of a low standard. In order to provide for improvement of the standard of these roads, the allowance for regravelling was increased by 30% in pastoral and mining areas and 10% on the fringes of the agricultural area.

### Reformation of Formed Roads

Formed roads lose their shape through traffic and repeated road grading and eventually reach the condition where the side drains are filled with material graded off the running surface. Roads in this condition present drainage problems and are difficult to maintain. Reformation is the process of restoring the raised formation and side drains. The Model provided for all formed roads to be reformed every five years.

As with the gravel roads, the allowance for reformation was increased by 30% in pastoral and mining areas, and 10% in the fringe areas to allow for improvement of the standard of formed roads.

### Reconstruction of Sealed Roads

The frequency of reconstruction has a big impact on asset preservation costs. There is very little factual information on how long roads last because most of the State's roads are still in their first life cycle.

The Task Force on Road Funding<sup>11</sup> considered this issue using road life - road roughness curves and concluded that secondary roads could be expected to last 40 to 50 years. Based on this work, a road life of 45 years was adopted for sealed local government roads outside built up areas.

A road life of 45 years was also used for local distributor roads within built up areas.

For residential streets, however, allowance was made for the fact that these streets carry very little heavy traffic and have high standards of construction in the metropolitan area. Discussions with local government engineers indicated that 55 years would be realistic life in the metropolitan area.

Shorter life cycles and higher levels of reconstruction were adopted for residential streets in country areas as shown in Table 8. The reasons for this are:

- Metropolitan Councils have ready access to crushed limestone and crushed rock, materials that are produced under controlled processes and have high quality and uniformity. These materials result in high quality pavements with a low risk of failure.
- While some country councils have good natural gravels, most councils have to use low quality gravels which have a high degree of variability. This situation is made worse by the lack of soil testing facilities. As a consequence, there is a greater risk of pavement failure on streets in country towns.
- Many streets in country towns were built without proper drainage. The deficiencies are not only in the drainage systems themselves, but in the longitudinal grades. Because of this, reconstruction works not only involve rebuilding the pavement, but also grade modification and drainage reconstruction.
- Country councils are also disadvantaged in the availability of important items of plant, such as compaction equipment, pavement stabilisation equipment and recycling equipment. These items of plant can only be obtained at a much higher cost than in the metropolitan area.

**Table 8  
Standards for Reconstruction**

ROAD	METROPOLITAN		COUNTRY	
	Frequency	Standard	Frequency	Standard
All roads outside built up areas	45	Reshape and add 75% of pavement <sup>(1)</sup>	45	Reshape and add 75% of pavement <sup>(1)</sup>
Local distributors in built up areas	45	Remove asphalt, replace 25% of pavement and add 75mm of rockbase <sup>(2)</sup>	45	Remove asphalt, replace 50% of pavement and add 100mm of gravel <sup>(2)</sup>

Residential streets	55	Remove asphalt, replace 25% of pavement and add 30mm of rockbase <sup>(2)</sup>	45	Remove asphalt, replace 50% of pavement and add 75mm of gravel <sup>(2)</sup>
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- (1) The Model provides for single lane seals to be widened to two lanes during reconstruction.
- (2) The Model provides for kerbing to be reconstructed at the same time as the pavement. Longitudinal drainage will be reconstructed at twice the reconstruction interval for the road (ie. if the road is reconstructed every 45 years, the longitudinal drainage will be reconstructed every 90 years).

## MINIMUM STANDARDS

An earlier criticism of the Asset Preservation Model was that it favoured local governments with highly developed road networks, and discriminated against those which have not been able to develop their roads adequately.

The Commission addressed this criticism by using minimum standards that were assigned to each road type. Councils that fell below the minimum standard had their asset preservation assessed on the minimum standards, while those above the minimum standards had their asset preservation assessed on their actual standards.

There are two sets of minimum standards, one for roads inside built up areas, and one for roads outside built up areas.

### Minimum Standards for Roads within Built up Areas

Residential streets and other local roads in built up areas generally have similar functions throughout the State, so it is possible to set State wide minimum standards for these roads. For example, if 97% of the streets in the Metropolitan area are kerbed, it would be reasonable to set a standard that 97% of all streets in the State should have kerbing.

Using this principle for roads inside built up areas, the average standards for the inner metropolitan area were used as the minimum standard throughout the State. The average width and the percentages in Table 8 were calculated for the inner metropolitan area. These were applied as a minimum standard for all gravel and sealed roads in built up areas throughout the State.

**Table 9**  
**Minimum Standards for Roads within Built up Areas**  
**Residential streets**

	Standard
Seal	100%
Minimum Seal Width	7.4m
Asphalt Seal	87%
Kerbing	97%
Longitudinal Drainage	63%

In the case of local distributor roads no attempt was made to specify a minimum width, because the variations in traffic volumes are so great on these roads that the appropriate width could vary from a single 6 metre carriageway to dual 11 metre carriageways. The model is based on existing widths.

### Minimum Standard for Local Roads outside Built up Areas

Roads outside built up areas vary from quite heavily trafficked sealed roads to tracks serving isolated Aboriginal Communities and farms. Ideally traffic volumes are needed to define minimum standards. As traffic volumes are not universally available an alternative method was used.

The State was divided into regions, each composed of councils with similar characteristics and development. In doing this population density and geographical factors were taken into account. The regions are shown in Appendix 3. Percentages for the five road types, shown in Table 10, were calculated for each region and applied as minimum standards for that region.

**Table 10**  
**Criteria used in Applying Minimum Standards to**  
**Local Roads outside Built Up Areas**

Type of Road	Percentage for Region
Sealed roads - narrower than 4.6 m	%
Sealed roads - wider than 4.6 m	%
Gravel roads	%
Formed roads	%
Unformed roads	%

The Commission is conscious of the subjective nature of the minimum standards for roads outside built up areas. A more objective method of defining minimum standards would be based on traffic volume, except for very lightly trafficked roads where soil conditions, and not traffic volumes, dictate standards. However, little progress can be made until comprehensive information on traffic volumes becomes available.

In 2005 a limit was imposed on the length of unformed roads that would be used in calculating the percentage of unformed roads in the minimum standards. This was necessary to prevent thousands of kilometres of unformed roads in the pastoral areas of the State from distorting road grants. The limit was set at 25% of each council's total 2004-05 road length outside built up areas.

The only changes that will be accepted to these limits in the future are:

- Decreases in the length of unformed roads below the datum; and
- Increases where new unformed roads to Aboriginal communities are accepted for Special Project funding

A topical example of the latter is the access road to the Tjuntjuntjarra Community. While this 190 km access road is unformed, it has been included in setting minimum standards because it receives Special Project grants and will be upgraded to a formed standard within a few years.

## **DISTIBUTION OF FUNDS**

The Federal road funds are distributed among local governments in proportion to their asset preservation needs.

## **TRANSPARENCY**

One of the Commonwealth Government's requirements was that the method of distributing the funds should be 'transparent' to local government. This requirement is met by providing every council with a simple statement showing how its asset preservation needs were calculated. This statement allows local governments to work through the assessments for their councils, and make submissions to the Commission if they feel that their needs have not been correctly assessed.

## **FUTURE REFINEMENT OF THE MODEL**

The Commission believes that further improvements can be made to the Asset Preservation Model, as additional data and improvements to the current data become available. It is therefore proposed that reviewing the model should be an ongoing process.

## REFERENCES

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3. 'Heavy Haulage Study' – Unpublished Report to the Steering Committee, 2000, WA Local Government Grants Commission, Perth.
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6. Materials Engineering Report No, 92/25 M. 'An Estimation of Subgrade Soil Strengths of all Local Government Authorities in Western Australia', 1992, Main Roads Western Australia, Perth.
7. Research Report ARR150 'Structural Design Guide for Residential Street pavements; Preliminary Draft', 1987, P J Mulholland, ARRB, Melbourne.
8. Engineering Road Note No. 9, 'Procedure for Thickness Design of Flexible Pavements' 1988, Main Roads Western Australia, Perth.
9. Task Force on Road Funding, 1991, 'Report on Road Funding Needs and Issues in Western Australia' Main Roads Western Australia, Perth.

## APPENDIX 1

### DEFINITION OF BUILT UP AREAS

Built up areas are identified because roads within them generally involve greater expenditure than roads in non built up areas. This is because roads in built up areas :

- have high traffic volumes;
- have large numbers of intersections, necessitating intersection treatments, pavement markings, signs, etc;
- require kerbing for traffic control and or drainage;
- require an asphalt surface where traffic volumes are high, or where noise reduction is important;
- require underground drainage because surface drainage is impractical;
- involve high cost of service alterations during reconstruction;
- involve high costs because road works have to be carried out under heavy traffic.

The following definition is intended to limit built up areas to localities where the above conditions prevail.

Residential localities, which have lots with areas less than 0.45 ha, and commercial and industrial areas that meet the following criteria are classed as built up:

- at least half the blocks are developed;
- existing roads have a minimum standard of a gravel road for old subdivisions and a sealed road for new subdivisions.

Areas serving sporting complexes, schools and caravan parks are classed as built up where:

- they are located in an area which is developed as residential; or
- the existing roads serving these facilities are already sealed and kerbed.

A road connecting two built up areas is classed as a road in a built up area where the connecting road is less than 300m in length.