

Date: 26 May 2005  
Your reference: 12/123456/1  
Our reference: ABC123

## ACTUARIAL REPORT

### Calculation of Loss of Support

Contents	Page
1. Client Instruction .....	2
2. Particular Issues to be Noted.....	2
3. Scenarios and Illustrations.....	2
4. Results of Calculations .....	3
Annexure 1: Demographic Details.....	4
Annexure 2: Income of Deceased.....	4
Annexure 3: Income of Spouse .....	5
Annexure 4: Accelerated Inheritance .....	6
Annexure 5: Calculation Basis and Assumptions .....	7



For Independent Actuarial Consultants (Pty) Ltd

***For any queries, recalculations, etc please contact  
Johan Olivier on (021) 422 4373***

## **1. Client Instruction**

The Client instructed us to estimate the present value of the loss of support suffered as a result of the death of Mr AB Surname in a road accident that occurred on 14 December 2002.

The loss of support calculated is in respect of the late Mr AB Surname's spouse, Mrs BC Spouse, and their dependent children Child1 and Child2.

Details of the information provided, assumptions made and calculation basis used are given in the following Annexures:

Annexure 1	Demographic Details
Annexure 2	Income of Deceased
Annexure 3	Income of Spouse
Annexure 4	Accelerated Inheritance
Annexure 5	Calculation Basis and Assumptions

These Annexures form part of this report.

## **2. Particular Issues to be Noted**

According to an affidavit provided, Mrs BC Spouse received various life assurance and pension proceeds as a result of the accident. However, according to the Assessment of Damages Act, 1969, life assurance and pension benefits resulting from the death may not be taken into account when calculating the loss. We have therefore not taken these into account.

## **3. Scenarios and Illustrations**

No instructions were given regarding the age when dependency of children is assumed to cease. We have therefore produced two sets of results, based on children's dependency until the end of the calendar year of reaching age 18 and age 21 respectively.

No instructions were given regarding contingency or remarriage deductions. For illustrative purposes we have therefore applied deductions as described in Annexure 5.

## 4. Results of Calculations

### Effective Date of Calculation

We calculated the present value of the loss of support as at 01 July 2005.  
Note all monetary amounts are denominated in South African Rand.

### Results

The following tables set out the present value of the loss of support as at the calculation date:

**Table 1: Children's Dependency Until Age 18**

Item of Loss	Mrs BC Spouse	Child1	Child2	Total
Past Loss	-	60 347	60 347	120 694
Less Contingency	-	- 3 017	- 3 017	- 6 034
Net Past Loss	-	57 330	57 330	114 660
Future Loss	156 579	103 667	217 502	477 748
Less Contingency	- 23 487	- 10 367	- 21 750	- 55 604
Less Remarriage	- 41 259	-	-	- 41 259
Net Future Loss	91 833	93 300	195 752	380 885
<b>Net Past &amp; Future Loss</b>	<b>91 833</b>	<b>150 630</b>	<b>253 082</b>	<b>495 545</b>
Less Accelerated Inheritance	- 58 138	-	-	- 58 138
<b>Net Total Loss</b>	<b>33 695</b>	<b>150 630</b>	<b>253 082</b>	<b>437 407</b>

**Table 2: Children's Dependency Until Age 21**

Item of Loss	Mrs BC Spouse	Child1	Child2	Total
Past Loss	-	60 347	60 347	120 694
Less Contingency	-	- 3 017	- 3 017	- 6 034
Net Past Loss	-	57 330	57 330	114 660
Future Loss	128 459	164 763	267 207	560 429
Less Contingency	- 19 269	- 16 476	- 26 721	- 62 466
Less Remarriage	- 33 849	-	-	- 33 849
Net Future Loss	75 341	148 287	240 486	464 114
<b>Net Past &amp; Future Loss</b>	<b>75 341</b>	<b>205 617</b>	<b>297 816</b>	<b>578 774</b>
Less Accelerated Inheritance	- 58 138	-	-	- 58 138
<b>Net Total Loss</b>	<b>17 203</b>	<b>205 617</b>	<b>297 816</b>	<b>520 636</b>

## Annexure 1: Demographic Details

Mr AB Surname and Mrs BC Spouse had two dependent children. Their particulars are as follows:

Relationship	Name	Date of Birth	Status
Deceased	Mr AB Surname	27/05/1963	Died 14/12/2002
Spouse	Mrs BC Spouse	22/09/1964	Alive, normal health
Children	Child1	31/08/1991	Alive, normal health
	Child2	21/05/1995	Alive, normal health
Other Dependants	None		

## Annexure 2: Income of Deceased

### Earnings Details Provided

Mr AB Surname was employed by the Eastern Cape Department of Education as a Teacher. According to a payslip provided, his remuneration at the date of the accident was as follows:

- Basic salary: R9 002.25 per month
- Supervisor's allowance: R1 125.28 per month

### Additional Information

Based on salary scales and information of Government Employees in our possession:

- Mr AB Surname's basic salary, had the accident not occurred and had he not been promoted, would probably have been as follows:

From 01/07/2003	R117 208 per annum
From 01/07/2004	R124 476 per annum (assuming a 6.2% increase)

- Annual bonus amounts to 100% of one month's basic salary.
- The Government Employees' Pension Fund provides the following:

Employee Contributions	7.5% of basic salary
Pension at Retirement	1/55 of basic salary averaged over the two years before retirement, for each year of service
Gratuity at Retirement	370% of the initial annual pension

### Assumed Earnings After Date of Accident

Based on the above, we have assumed the following for Mr AB Surname's remuneration:

<u>Basic Salary</u>	
• From date of accident	R108 027 per annum
• From 01/07/2003	R117 208 per annum
• From 01/07/2004	R124 476 per annum (assuming a 6.2% increase)
• From 01/07/2005 increasing with inflation as per Annexure 5	
• Until assumed retirement at age 65	
<u>Fringe Benefits</u>	
• Annual Bonus	100% of one month's basic salary
• Other	12.5% of basic salary
<u>Pension Benefits</u>	
• Contributions to Pension Fund:	7.5% of basic salary.
• Based on service from 01/01/1986, an initial annual pension of 77.1% of the averaged basic salary at retirement.	
• Gratuity of 370% of the initial annual pension.	
• Pension after retirement assumed to increase as set out in Annexure 5.	

### Annexure 3: Income of Spouse

#### Earnings Details Provided

Mrs BC Spouse was employed by the Eastern Cape Department of Education as a Teacher. According to an employer's certificate dated 17 March 2004 provided, her salary was R8 327.50 per month.

#### Additional Information

Based on salary scales and information of Government Employees in our possession:

- Mrs BC Spouse's basic salary, had the accident not occurred and had she not been promoted, would probably have been as follows:

From date of accident	R92 100 per annum
From 01/07/2003	R99 930 per annum
From 01/07/2004	R106 124 per annum (assuming a 6.2% increase)

- Annual bonus amounts to 100% of one month's basic salary.
- The Government Employees' Pension Fund provides the following:

Employee Contributions	7.5% of basic salary
Pension at Retirement	1/55 of basic salary averaged over the two years before retirement, for each year of service
Gratuity at Retirement	370% of the initial annual pension

### Assumed Earnings After Date of Accident

Based on the above, we have assumed the following for Mrs BC Spouse's remuneration:

<u>Basic Salary</u>	
• From date of accident	R92 100 per annum
• From 01/07/2003	R99 930 per annum
• From 01/07/2004	R106 124 per annum (assuming a 6.2% increase)
• From 01/07/2005 increasing with inflation as per Annexure 5	
• Until assumed retirement at age 60	
<u>Fringe Benefits</u>	
• Annual Bonus	100% of one month's basic salary
<u>Pension Benefits</u>	
• Contributions to Pension Fund: 7.5% of basic salary.	
• Based on service from 01/01/1987, an initial annual pension of 68.6% of the averaged basic salary at retirement.	
• Gratuity of 370% of the initial annual pension.	
• Pension after retirement assumed to increase as set out in Annexure 5.	

### Annexure 4: Accelerated Inheritance

Mr and Mrs BC Spouse were married out of community of property. According to the liquidation and distribution account, Mr AB Surname's estate was made up as follows:

<u>Assets</u>	
Fixed Property	R143 600
Moveable Property	R86 850
Policies	R10 596
	R241 046
Liabilities & Costs	R139 936
Balance for distribution	R101 110

According to the Liquidation and Distribution Account, Mrs BC Spouse inherited the above balance in terms of the will dated 13 February 1992.

After omitting the proceeds of the policies, Mrs BC Spouse's inheritance for the purpose of this report amounted to R95 514. The amount of accelerated inheritance in respect of Mrs BC Spouse was calculated as R58 138. This amount allows for the possibility of future inheritance had the accident not taken place, and assumes that the value of the assets would have increased with inflation.

To allow for the value of the use of the assets had the accident not occurred, we have allowed for R5 761 pa (i.e. 2.5% of the property assets) as income for Mr AB Surname.

## Annexure 5: Calculation Basis and Assumptions

### Apportionment of Income

When the actual apportionment of family income is not known, it is usually assumed that the total combined income of both parents is apportioned two parts to each adult and one part to each dependant child. Each parent's income is firstly applied to his/her own apportionment.

We have therefore assumed that the family's combined past and assumed future income would be apportioned as follows:

Mrs BC Spouse	For each child	
$\frac{2}{6}$ <sup>ths</sup>	$\frac{1}{6}$ <sup>ths</sup>	while two children are minor dependants
$\frac{2}{5}$ <sup>ths</sup>	$\frac{1}{5}$ <sup>ths</sup>	while only one child is a minor dependant
$\frac{2}{4}$ <sup>ths</sup>	Nil	thereafter

The apportionment for children above is adjusted to allow for the probability of survival of the remaining adult.

### Method of Calculation

For each month after the date of death, the income discussed in Annexures 2 and 3 were projected forward allowing for inflation and tax as discussed below. For each such month, the projected net income was apportioned as discussed above.

The present value of the loss of support was calculated by discounting each projected apportionment allowing for interest and the hypothetical joint probabilities of survival of the deceased and dependants.

### Income Tax

In respect of past earnings, we applied the relevant income tax tables.

In respect of future earnings, we applied the 2005/06 income tax tables adjusted to allow for inflation as discussed below.

### Financial Assumptions

The following table shows the financial assumptions used:

Financial Variable	Rate
Future Inflation	5.0%
Interest Rate for Discounting	7.65%
Future Pension Increases	70% of future inflation

The above rates imply a net pre-retirement discount rate of 2.5% pa.

Past inflation is assumed to be in line with increases in the Consumer Price Index (CPI up to 06/2000, CPIX thereafter).

Past Loss is accrued without interest.

### **Mortality Assumptions**

The table below shows the mortality tables used for each of the lives in this calculation:

Life	Mortality Assumption
Mr AB Surname	Life Table 2 (Quantum Yearbook) Males
Mrs BC Spouse	Life Table 2 (Quantum Yearbook) Females
Children	Mortality ignored

### **General Contingency Deduction**

For illustrative purposes we have applied the following general contingency deductions:

Contingency in respect of:	Past Loss	Future Loss
Surviving Spouse	5%	15%
Children	5%	10%

### **Remarriage Deduction**

Based on published statistical studies of average remarriage rates in population groups and allowing for Mrs BC Spouse's age at the date of calculation, we have applied a remarriage deduction of 31%.

### **Limitation and Adjustments**

The results in this report are the expected present values of the assumed loss of support only, based on the information, instructions and assumptions as noted above. No allowance has been made for possible apportionment of merits, possible limitation of the claim or possible curator fees.

If any COID benefits were received the capitalised value of this should be deducted from the net total loss.

If the date of settlement is different from the calculation date used in this report, an adjustment for interest should be made.

If any further evidence becomes available that conflicts with the information used or assumptions made in this report, further calculations may be required.