Appendix A
CIPFA highways carriageway whole life costing

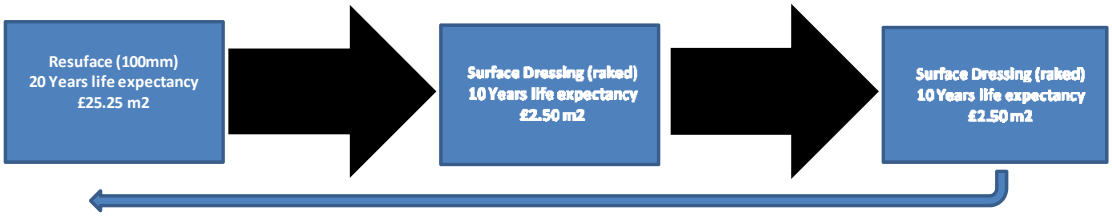
Highways Maintenance 15 year budget Proposal

Advanced CIPFA WHOLE LIFE COSTING Approach

Annual treatment 1 – Treating Principal (Urban / Rural) Non Principal (Urban / Rural) and Classified Roads (Urban)

Contributing factors

Length	
A Roads Urban and Rural	72.6km
B Roads Urban and Rural	32.1km
C Roads Urban	126.8km
Total	**231500m**
Treatment(£25.25m2 + £2.50m2 + £2.50m2)	£30.25m2
Width	8.1m
Whole Life cycle	40 years



Formula

$$\frac{\text{Whole Life Cost Treatment} * \text{Width (m)} * \text{Length (m)}}{\text{Whole Life cycle (40 yrs MKC Life Cycle)}}$$

Therefore

$$\frac{£30.25m2 * 8.1m * 231500m}{40\ yrs}$$

=£1,418,082.00 Per annum

Minimum amount required to maintain the Principal (Urban / Rural) Non Principal (Urban / Rural) and Classified Roads (Urban per year for 40 years at existing condition level

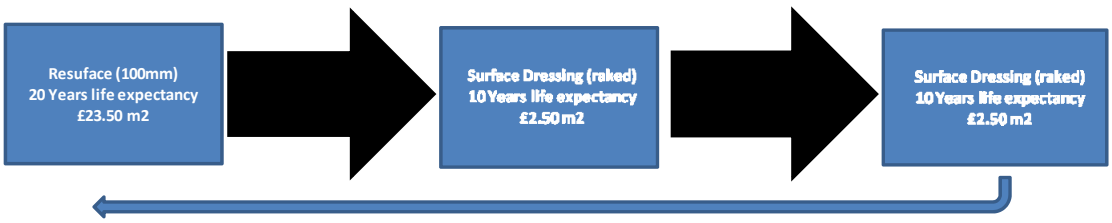
Please note: *HM Treasury and CIPFA insist on 25 year life cycles within the Whole Government Accounting submission this will dramatically increase the annual treatment, I have used a realistic life cycle.*

Advanced CIPFA WHOLE LIFE COSTING Approach

Annual Treatment 2 – Treating Classified Roads (Rural) and Unclassified (Rural)

Contributing factors

Length	
C Roads Rural	90.4km
Unclassified Rural	14.7km
Total	**105100m**
Treatment(£23.50m2 + £2.50m2 + £2.50m2)	£28.50m2
Width	7.7m
Whole Life cycle	40 years



Formula

$$\frac{\text{Whole Life Cost Treatment} * \text{Width (m)} * \text{Length (m)}}{\text{(40 yrs MKC Life Cycle)}}$$

Therefore

$$\frac{£28.50m2 * 7.7m * 105100m}{40\ yrs}$$

=£576,605 per annum

Minimum amount required to maintain the Classified Roads (Rural) and Unclassified Roads(Rural) per year for 40 years at existing condition level

Please note: *HM Treasury and CIPFA insist on 25 year life cycles within the Whole Government Accounting submission this will dramatically increase the annual treatment, I have used a realistic life cycle.*

Advanced CIPFA WHOLE LIFE COSTING Approach

Annual Treatment 3 – Treating Unclassified (Urban)

Contributing factors

Length

Unclassified Urban	887.4km
Treatment(£15.00m2 + £2.50m2 + £2.50m2)	£28.50m2
Width	6.4m
Whole Life cycle	50 years

Formula

$$\frac{\text{Whole Life Cost Treatment} * \text{Width (m)} * \text{Length (m)}}{\text{(50 yrs MKC Life Cycle)}}$$

Therefore

$$\frac{£20.00\text{m2} * 6.4\text{m} * 887400\text{m}}{50 \text{ yrs}}$$

=£2,271,744 per annum

Minimum amount required to maintain the Unclassified Roads (Urban) per year for 50 years at existing condition level

Please note: *HM Treasury and CIPFA insist on 25 year life cycles within the Whole Government Accounting submission this will dramatically increase the annual treatment, I have used a realistic life cycle.*

Summary

Advanced CIPFA WHOLE LIFE COSTING APPROACH

Annual Treatment

A / B / C rds (Urban <40mph)	£1,420,000.00
Unclass Rds / C rds (Rural)	£575,000.00
Unclass Rds (Urban)	£2,268,000.00
Annual Total	**£4,263,000.00**

Annual Treatment breakdown

A / B / C rds (Urban <40mph)

Treatment	Treatment cost m2	Minimum Treatment length (km)	Annual Cost (£)
Resurfacing	£25.50	**5.8**	£1,180,000.00
Surface dressing	£2.50	**5.8**	£120,000.00
Surface dressing	£2.50	**5.8**	£120,000.00
		Total	**£1,420,000.00**

Life cycle total 40 yrs

Unclass Rds / C rds (Rural)

Treatment	Treatment cost m2	Minimum Treatment length (km)	Annual Cost (£)
Resurfacing	£23.50	**2.6**	£475,000.00
Surface dressing	£2.50	**2.6**	£50,000.00
Surface dressing	£2.50	**2.6**	£50,000.00
		Total	**£575,000.00**

Life cycle total 40 yrs

Unclass Rds (Urban)

Treatment	Treatment cost m2	Minimum Treatment length (km)	Annual Cost (£)
Resurfacing	£15.00	**17.7**	£1,700,000.00
Surface dressing	£2.50	**17.7**	£284,000.00
Surface dressing	£2.50	**17.7**	£284,000.00
		Total	**£2,268,000.00**

Life cycle total 50 yrs

Report completed by Gary Morland 17/08/11