



Derby City Council

NEIGHBOURHOODS BOARD
14 November 2013

Report of the Strategic Director of
Neighbourhoods

ITEM 9

Highways Maintenance Funding

SUMMARY

- 1.1 Derby City has approximately 807km of roads and 1,828km of footways. This is by far the council's biggest property asset which is worth over £1.37 Billion.
- 1.2 Like all property assets, the condition of our roads and footways deteriorates over time, which causes a loss of value. In Derby the value of our roads and footways is currently reducing by £33 million per year.
- 1.3 Deterioration will always occur but the aim of asset management best practice is to target investment to slow this deterioration or ideally keep in check. Keeping deterioration in check is commonly referred to as steady state.
- 1.4 The 13/14 capital allocation for highway maintenance funding is £2.2 million which is just under 7% of the value of the annual deterioration and less than 0.2% of the asset value. It has been recognised for some time that this amount is insufficient to achieve a steady state but by optimising our investment we have slowed the decline as much as possible. As such our road condition compares well with our higher spending neighbours.
- 1.5 Section 4.7 of this report sets out the long term consequences of continuing to under invest at present levels, by modelling the continued deterioration of our roads and footways.
- 1.6 Section 4.9 examines an idealised funding scenario and suggests that to achieve steady state condition of our highway network we should be investing £9.2 Million in capital maintenance which is over four times our current investment levels.

RECOMMENDATION

- 2.1 To consider the report and note the options available to Derby City to optimise available funding to its most efficient use on the highway network.

REASONS FOR RECOMMENDATION

- 3.1 To manage the decline and maintenance of the carriageway and footway assets in a controlled manner, minimising hazards and maximising safety, where possible for the

users of the highway.

SUPPORTING INFORMATION

4.1 Derby City Highway Network

Derby City has approximately 807km of roads (categorised as A, B, C and unclassified roads) and 1,828km of footway.

The annual Whole of Government Accounts (WGA) for highway assets, submitted to auditors in October 2013, calculated a gross replacement cost of £1.369 billion for carriageways and footways. This is effectively the value of the highway network and is by far the Council's biggest property asset.

Like all property assets, the condition of our roads and footways deteriorates over time, which causes a loss of value. Using the methods prescribed by the WGA process, the value of our roads and footways in Derby, is currently reducing by £33 million per year.

These figures are based on the WGA methodology which considers only repairing the top 100mm of road surface and not using costly full reconstruction techniques. The real asset values are therefore likely to be much higher.

4.2 Asset Condition

The condition of our highway network is split into very poor, poor, fair and good. Very poor covers those roads in the most serious condition, which require the most expensive and extensive repair. Those in a fair condition require less extensive repairs such as a surface treatment. The overall condition of the network has been deteriorating through under investment over time and the percentage of roads which are in a poor or very poor condition are shown below

Class	A Roads	B Roads	C Roads	Unclassified	Footways (bituminous)
% poor or very poor	24%	19%	21%	13%	62%
Length	26.6 km	1.1 km	16.7 km	56.3 km	1262 km

4.3 **Asset Management Approach**

In line with Government best practice we aim to use a full asset management approach in Derby. The asset management approach aims to set investment at levels which prevent deterioration of the assets. Keeping assets in this steady state is accepted to be the most cost effective way to set the balance between over and under investment. All Highway Authorities are required to prepare a Transport Asset Management Plan (TAMP). The TAMP measures the condition of the assets which make up the network and recommend funding levels to prevent those assets from deteriorating. Section 4.6 looks at the recommendations of the TAMP in more detail.

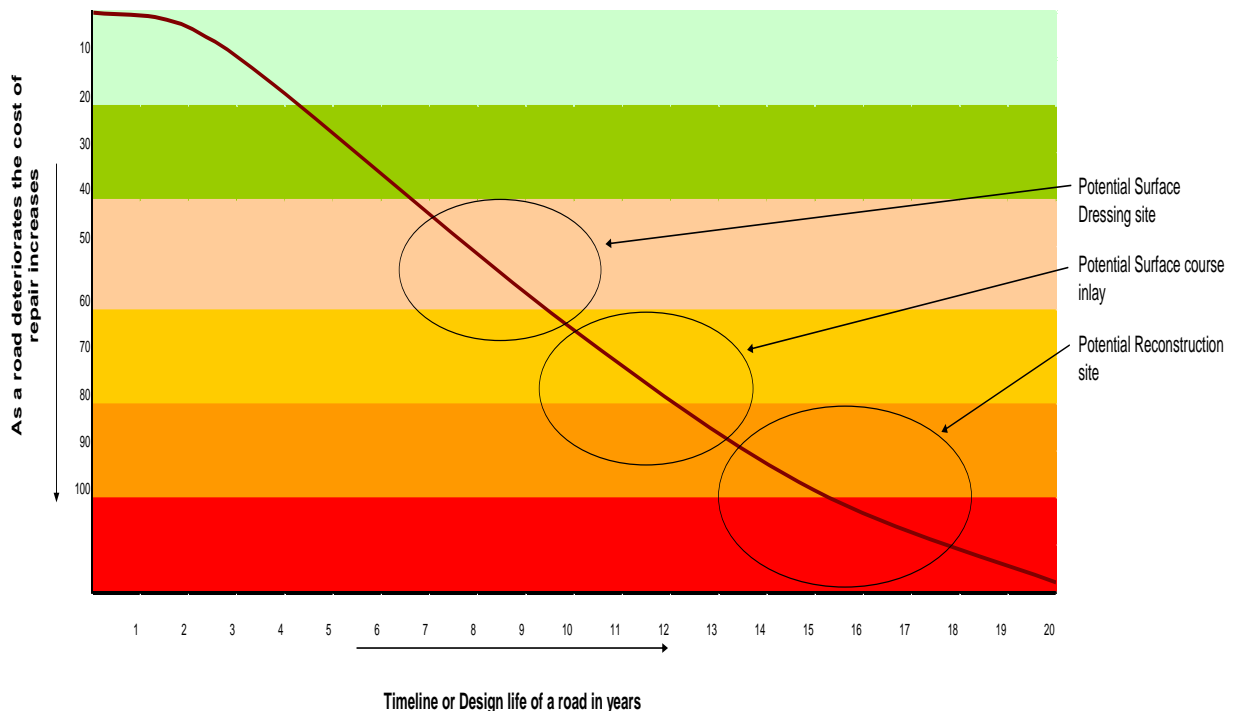
4.4 The asset management approach is about selecting the right treatment at the right time in the lifecycle of the asset. On a carriageway for example, this means using some form of surface treatment when the carriageway gets to a fair condition and not waiting until it requires an expensive full reconstruction. Using these principles we can prolong the life of the asset and make the most efficient use of our available funding.

These principles have been applied across our B, C and unclassified roads but because this does not result in a 'new surface' it has not been seen as a popular decision with members. This has led to it not being applied to A Roads and more expensive re-surfacing works has been chosen in preference.

The surface treatments that we carry out (namely surface dressing and micro-asphalt) involve sealing the road to protect it from any further water penetration, which can damage the surface when it freezes in winter. This greatly reduces the chances of it deteriorating and further potholes developing. Used at the right time in the life of a road, they can delay the need for a full reconstruction by up to 10 years. This is the correct asset management approach, provides the best value for money and should be adopted as the way forward for all highway assets.

The asset management approach indicating the differing levels of repair work at the different stages in the lifecycle of a carriageway is shown below.

Figure 1 – The life cycle asset management approach



4.5 Current funding levels

Funding for our highway network comes into the Council via the Integrated Transport and Highway Maintenance block grants from the Department for Transport (DfT) using their funding formula. Historically this has totalled between £4 and 4.5 million. This funding is not ring fenced for spending on the highway and so is then top sliced to help the Council's overall financial position.

The table below show the grants from the DfT and the actual allocations from the corporate capital programme.

	DfT Transport Block	DfT Maintenance Block	Total	DCC Transport Allocation	DCC Maintenance allocation	Total
11/12	2.225	2.088	4.313	1.0	2.0	3.0
12/13	2.034	1.957	3.991	1.0	2.5	3.5
13/14	2.034	1.875	3.909	1.0	2.8	3.8
14/15	2.860	1.689	4.549	1.0	2.8	3.8

The maintenance allocation is also used for schemes to maintain our bridges and highway drainage. In 2013/14, there was £2.2m allocated to repairing a number of roads and footways across all the categories on the network.

We have a long term list of locations which require some form of maintenance and at current funding levels and ignoring new additions; these would take 15-25 years to address. We have a shorter term work programme which is based on condition data and indices for prioritisation. This shapes our annual capital programme.

4.6 Long term funding needs

In December 2010, the Derby City TAMP was produced to forecast our long term funding needs and specifically to identify the funding requirements to maintain the highway assets to a steady state. Based on limited condition data, a figure of £2.3million was estimated for maintaining the carriageways and footways with a total of £6 million required for all highways assets.

Since then, we have completed further work to improve our understanding of the condition of our highway network and a number of these condition surveys have shown that principal and classified roads have deteriorated further.

The TAMP is currently being updated but preliminary work using tools supplied by the Highways Maintenance Efficiency Programme (HMEP) has been included in this report. We looked at two levels of funding and using the HMEP tools, looked at the impact this would have on the highway network over a 20 year period.

Scenario 1 assumed that current funding levels remained constant but assumed full asset management best practice and allowed surface treatment of A Roads.

Scenario 2 looked at increased capital investment in early years to bring the network up to an acceptable standard and then lowering the level of funding to keep assets in a steady state.

4.7 Long term funding needs. Scenario 1 – continue with existing funding levels.

This is based on our current budget of £2.2 million for carriageways and footways and assumes that this remains constant for the next 20 years. It does however accept the recommendation to allow surface treatment of A roads. We've examined the effect of the scenario on A roads which are our major traffic routes and unclassified roads which make up 78% of our network.

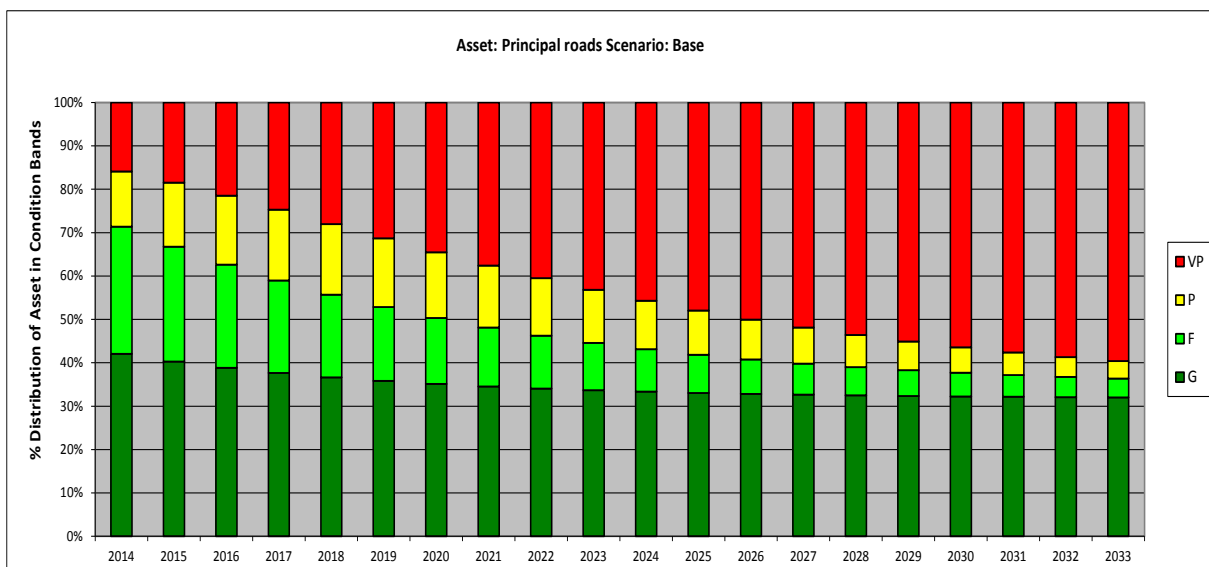


Figure 2 – Impact of current budget provision on principal A roads over 20 years.

This shows that with our current funding levels, even with the acceptance that surface treatments are applied to A roads, the percentage of poor and very poor carriageway condition exceeds 50% in 10 years.

4.8 The impact is similar for our unclassified roads with the percentage of poor and very poor condition roads reaching nearly 50% in 10 years.

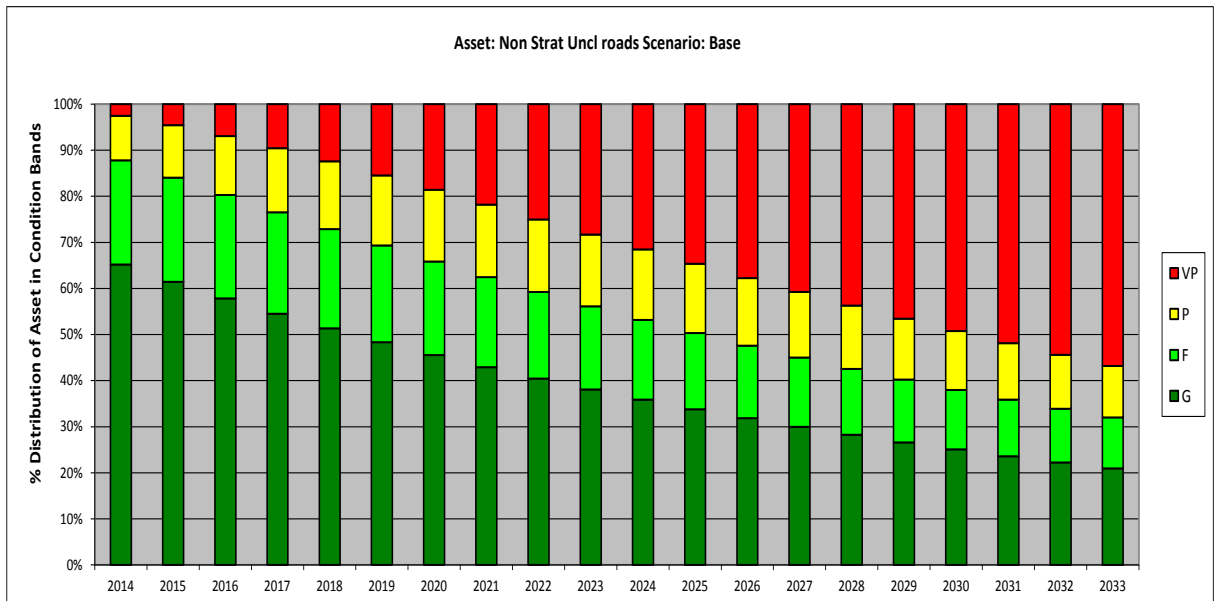


Figure 3 – Impact of current budget provision on Unclassified roads over 20 years.

4.9 **Long term funding needs. Scenario 2 – increase funding levels to achieve steady state asset condition.**

This is the idealised scenario based on increasing the investment to £12.5 million initially and gradually reducing this level of funding to £9.2 million to keep assets in a steady state. The initial period of higher investment will bring the network up to an acceptable standard.

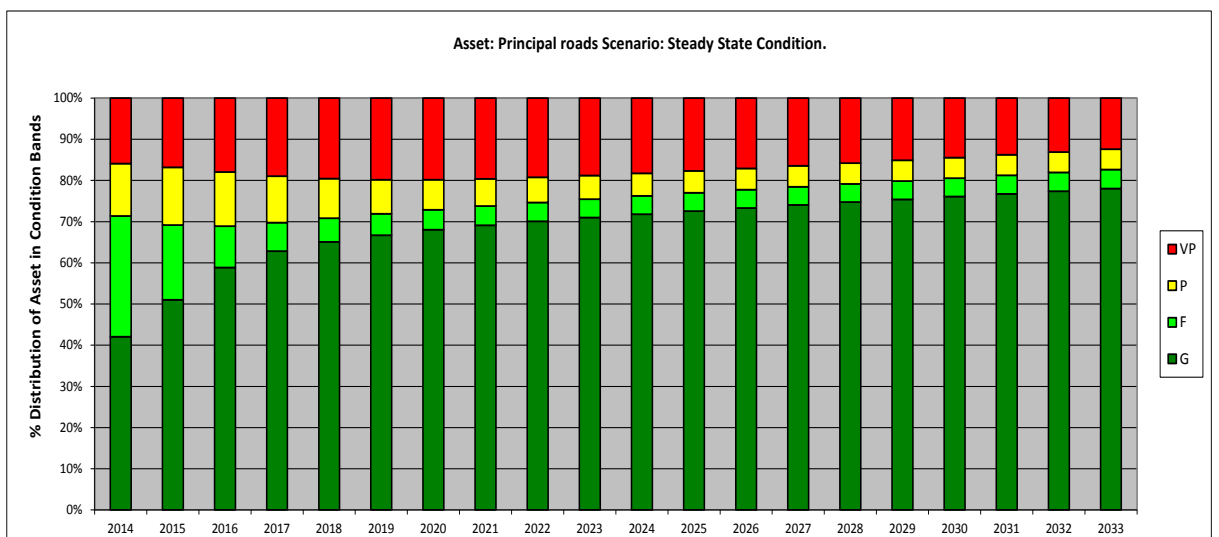
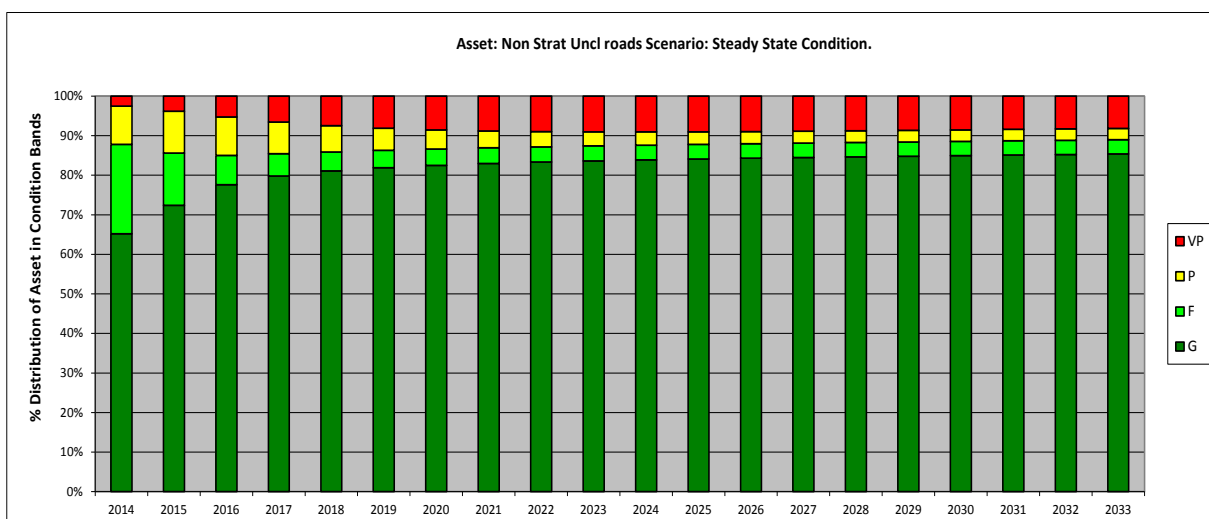


Figure 5 – Impact of increased investment on principal A roads over 20 years.

Increasing investment to address poor condition assets and then maintaining steady state funding, almost halves our percentage of poor and very poor A roads. Its also brings the percentage of good condition A roads from just over 40% to nearly 80%.

- 4.10 The impact is similar on our unclassified roads, which sees the percentage of poor and very poor condition roads dropping to just over 10% and good condition rising to 85%.



4.11 Revenue budget support and additional funding

In addition to our capital programme we have utilised funds from our revenue budget to target pothole hotspots by completing larger scale patching works. This was triggered by the DfT pothole funding after the severe winter of 2010/11. The pothole project was so successful at reducing our most problematic areas, it was decided to allocate some revenue funding to do the same every year since. In the last 2 years we have spent a total of £500k on this work at the end of winter. This has placed a pressure on the revenue budget but it has very definitely shown the value of proactive rather than reactive repairs.

The Chancellors Autumn Statement in December 2012 awarded £339k in 13/14 and £174k in 14/15 to Derby City for essential maintenance to renew, repair and extend the life of the highway network. We have targeted this funding on expanding our micro-asphalt and slurry sealing programmes to halt further deterioration. In 2014/15, we aim to continue expanding our early intervention programmes, tackling more problematic locations (i.e. traffic sensitive streets). If we were to receive any available funding, we would continue this programme of investment in surface treatments.

OTHER OPTIONS CONSIDERED

- 5.1 Do nothing, continue with our current maintenance funding and continue to ignore the use of surface treatments on our A roads. By continuing with the status quo we are not following asset management best practice and not making the most effective use of the limited funds we have. The continued reliance on expensive reconstruction schemes on our A roads will use money that could have been spent on arresting the deterioration of a larger number of assets.

This report has been approved by the following officers:

Legal officer	N/A
Financial officer	N/A
Human Resources officer	N/A
Estates/Property officer	N/A
Service Director(s)	N/A
Other(s)	Mahroof Hussain – Scrutiny and Civic Services Manager

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Background papers:	None
List of appendices:	Appendix 1 – Implications

IMPLICATIONS

Financial and Value for Money

- 1.1 The report outlines the need for increased investment in our highway network and recommends more cost effective repair methods in line with asset management best practice. Increased investment will require additional funding which in the current climate of huge revenue pressures is unlikely.
- 1.2 A reduction in capital maintenance which leads to deteriorating asset condition, increases the need for reactive maintenance to make safe defects. This puts an increased burden on already stretched revenue budgets.

Legal

- 2.1 None arising from this report

Personnel

- 3.1 None arising from this report

Equalities Impact

- 4.1 None arising from this report

Health and Safety

- 5.1 If under investment continues and the condition of carriageways and footways deteriorates there will inevitably be an increase in 3rd party claims against the Authority. Poor condition highway assets can put the safety of the highway user at risk and lead to the increased likelihood of accidents.

Environmental Sustainability

- 6.1 Surface treatments are less intensive, use less primary aggregates and hence have a lower carbon footprint.

Property and Asset Management

- 7.1 Our current highway maintenance funding levels are below those recommended by our own Transport Asset Management Plan and below those required to maintain a steady state for our highways assets. In practise this means we are only slowing their deterioration and highway conditions will continue to get worse.

Risk Management

- 8.1 Poor condition highways, impact on the reputation of the Council, cause delays due increased reactive maintenance requirements and increase the risk of accidents and 3rd party claims. A severe winter will have a serious effect on already deteriorating roads.

Corporate objectives and priorities for change

- 9.1 Good management of our highway assets will contribute towards the goals of
- A thriving sustainable economy
 - Good-quality services that meet local needs