



North Tyneside Council

# Highway Asset Management Plan

2012 to 2017

Annual Information Report - November 2012

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## **Introduction**

The Council's Highway Asset Management Plan (HAMP) was formally adopted in December 2011 and was implemented on 1<sup>st</sup> April 2012. This sets out the Council's strategic approach to highway and infrastructure maintenance. In order to provide regular information about highways and infrastructure the HAMP contains a commitment to provide an annual information report to Cabinet.

The Council is currently operating within a challenging financial climate. Customer expectations are high and these have to be balanced against available resources. The aim of this report is therefore to highlight issues and provide information to support discussions about the maintenance of the highway network.

## **Value of the Highway Asset**

Under the Whole of Government Accounting procedure, all councils are required to submit an annual detailed valuation of their highways and infrastructure assets. The valuation returns are submitted in July. Each year, independent surveys of roads, footways and structures are undertaken to assess their condition. Unit rates are then applied to calculate a total value of the highway assets. The latest submission showed the following valuations:

Roads : £881 million

Footways : £128 million

Bridges : Estimated £350 million (exact figure not calculated this year due to gaps in data. Intention is to submit exact valuation next year)

Total value of highway assets as of July 2012 : **£1.359 billion**

## **Investment in the Highway Asset**

The tables on the following page provide a summary of the budgets that have been allocated to highway and infrastructure maintenance over the last 3 years. It also shows forecasted budgets for the coming next 2 years. The focus is on repair budgets and does not include associated highway work such as gully cleansing.

## Highway Maintenance

Workstream	Description of Work	2010/11	2011/12	2012/13	2013/14	2014/15
Revenue Work	Day to day highway repairs (eg potholes), patching programme, small planned road and footpath improvement schemes, drainage repairs	£855k	£855	£855k	£855k	£855k
Local Transport Plan Capital Work	Annual resurfacing programme, annual surface dressing and micro-asphalting programmes	£593k	£460k	£944k	£800k	£800k
Other Capital Work	Area Forum Road & Pavement Recovery Programme	£1m	£1m	£1m	£1m	-

## Bridges and Infrastructure Maintenance

Workstream	Description of Work	2010/11	2011/12	2012/13	2013/14	2014/15
Revenue Work	Day to day bridge repairs (eg potholes), emergency work, graffiti bus partnership, minor planned schemes	£74k	£74k	£74k	£74k	£74k
Local Transport Plan Capital Work	Major structural schemes (eg bridge replacement / refurbishment)	£608	£683k	579k	£750k	735k

It can be seen that annual revenue budgets have remained static in recent years and currently there are no plans to increase these. In real terms this represents a budget reduction as the cost of materials and overheads rises each year. In addition to this, inflation in the construction sector has been disproportionately high with the cost of construction work estimated to be 40% higher than it was 10 years ago.

It should be noted that the Area Forum Road & Pavement Recovery Programme (5 year project) and associated funding will be come to an end in March 2014. A capital business case for the continuation of this programme has recently been prepared for consideration as part of the 2013 to 2015 Financial Planning and Budget process.

## **Current Maintenance Priorities**

### Highway Maintenance

The current priority, especially following the impact of the recent severe winters, is to protect and improve where possible the strategic road network (main classified roads). These are the roads that carry the vast majority of local and through traffic. The improvement of estate roads has become increasingly reliant on funding from the Area Forum Road and Pavement Recovery Programme. Most estate road resurfacing work is now undertaken using this funding stream.

The approach to footway improvements is mainly reactive. There is relatively little planned larger scale footway improvement work from either the Area Forum or regular highway maintenance budgets. The use of inexpensive preventive road surfacing treatments has allowed us this year to divert an additional £150,000k of Local Transport Plan (LTP) funding towards quality footway improvement work. However, this will unfortunately have a limited impact on the current maintenance backlog which is described in more detail on page 8.

### Bridges and Infrastructure

This area of work is undertaken mainly using LTP funding. Maintenance priorities for major work for the next 6 years are set out in the HAMP. At present the work can be accommodated provided future LTP allocations remain relatively constant. Other than major planned schemes, repair work is reactive due to a relatively modest revenue budget.

## **Summary of Work Undertaken During the Last 12 Months**

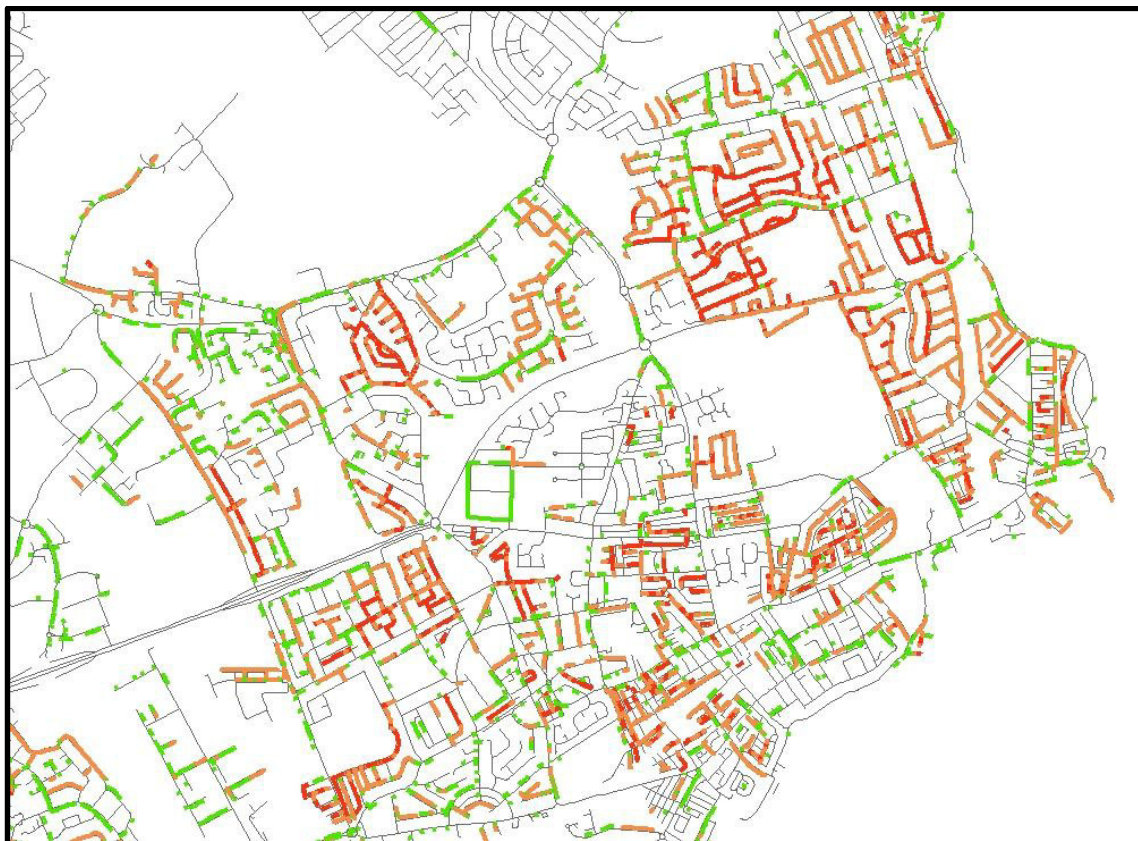
The introduction of the Scheme Engineer computer system as part of the HAMP has improved the way work can be planned. We were able to develop and finalise the full programme of highway improvement work well before the commencement of the current financial year. This allowed the service to “hit the ground running” and take full advantage of the good weather over the spring and summer period. At the time of this report publication, the majority of the programme has been completed. This included some difficult locations such as Billy Mill Roundabout and Whitley Bay town centre. However, these schemes were well co-ordinated and feedback from customers has been positive. In order to achieve better value for money a range of alternative construction products have been rolled out including micro-asphalt thin road surfacing and the use of polystyrene infill material in bridges schemes. By the end of this financial year we will have completed the following works:

- 5 Km of surface dressing
- 12 Km of micro-asphalt

- 7 Km of full resurfacing
- 125 substantial patching sites
- 30 footway improvement schemes
- 50 minor highway drainage improvement schemes
- Completion of Rockcliffe Viaduct major bridges scheme

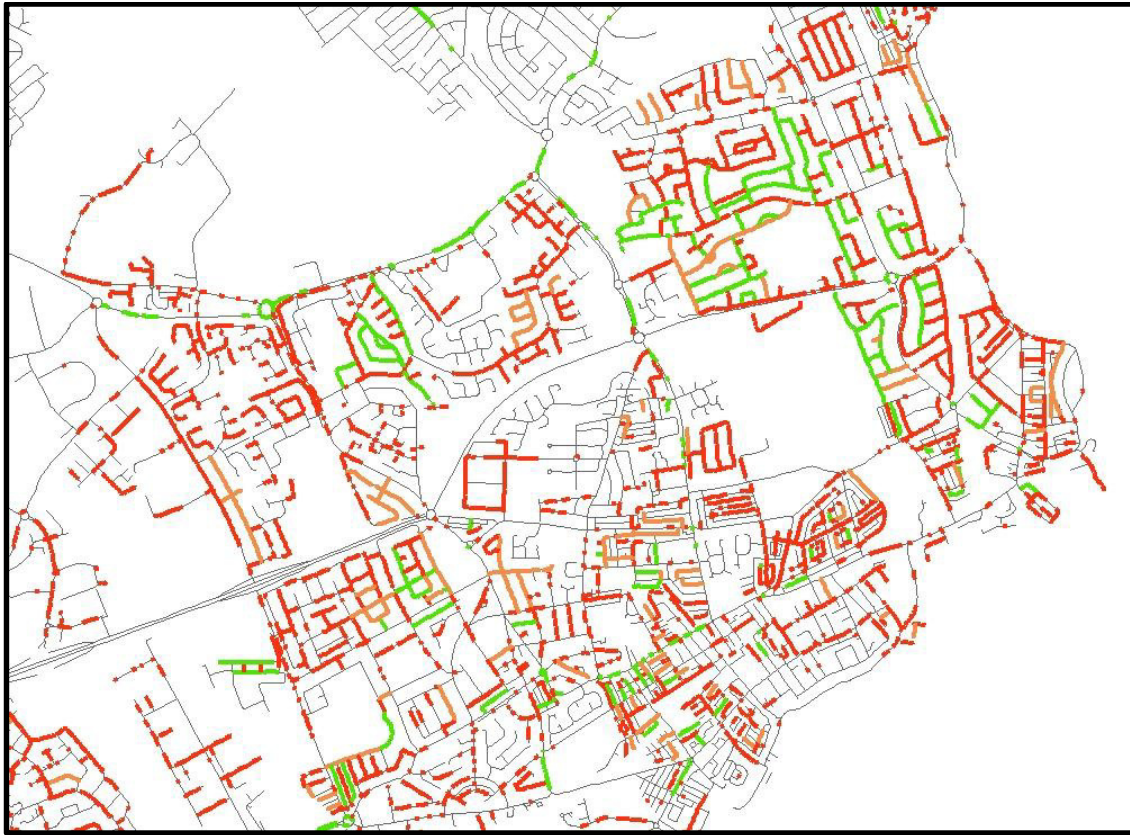
### Condition of the Highway Asset

The Council's Scheme Engineer System is an advanced computer application that has the ability to make accurate cost forecasts based on any number of time and budget scenarios. The system is based on whole life maintenance and is able to model the performance of the highway network taking into account the ideal maintenance regime ie undertaking preventative maintenance treatment at the most appropriate time to extend the life of the asset. The following map extract shows a typical area of the highway network and its **current** condition. The roads shown green have minor defects and require no structural maintenance. The roads shown amber are in a condition where maintenance needs to be considered and these roads can be "saved" by undertaking preventative maintenance now. The roads shown red are structurally defective and require more substantial maintenance. They are past the point where preventative maintenance would be of any benefit.



Typical Area of North Tyneside in 2012

The next map extract shows the forecasted condition of the same area in **10 years time** assuming similar levels of funding. The model incorporates an ideal theoretical maintenance regime.



**Same Area in 2022**

It is evident that, even under an ideal maintenance regime, the highway network will have deteriorated considerably in 10 years time if current investment levels remain constant with many of the roads turning to amber and red.

It should be noted that the above maps do not show footways. We are currently gathering detailed condition data for the whole of the adopted footway network and in due course we will be able to produce similar condition forecasting maps. However, at this time it is safe to assume that there will be a similar general deterioration in the condition of footways as current investment in the maintenance of this asset is less than that for roads.

The Scheme Engineer system can also calculate the current backlog of highway repairs ie the one-off cost of rectifying all highway defects and bringing the network back into a serviceable condition.

The estimated current carriageway repairs backlog is **£19.2 million**. This is an increase on the approximate figure from 12 months ago which was £18.4 million.

Again, if investment levels remain constant, the projected carriageway repairs backlog in 10 years time will be **£27.5 million**.

Detailed data in relation to the calculation of the footpath network maintenance backlog is still being gathered and developed. The early indications are that the footpath maintenance backlog will be a similar figure to that of carriageways.

A capital business case requesting additional funding to assist with the maintenance backlog has recently been submitted for consideration as part of the 2013 to 2015 financial planning and budget process.

The new technical partnership with Capita Symonds (explained in more detail on page 14) will look to achieve efficiency savings by:

- Better management of supply chain
- More productive use of plant and labour
- Securing more favourable unit rates for construction work

These efficiency savings are likely to increase the amount of work that can be done on the ground and stretch available resources further. More detail will be made available in the 2014 HAMP Annual Report.

## **Customer Engagement**

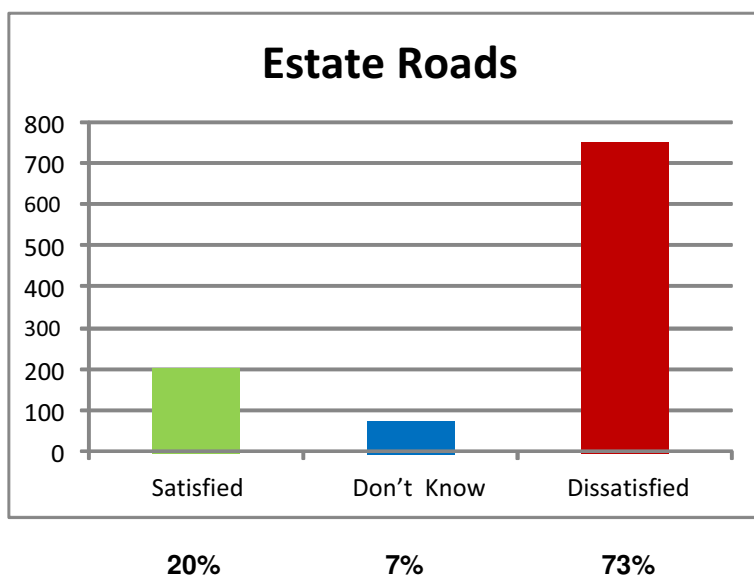
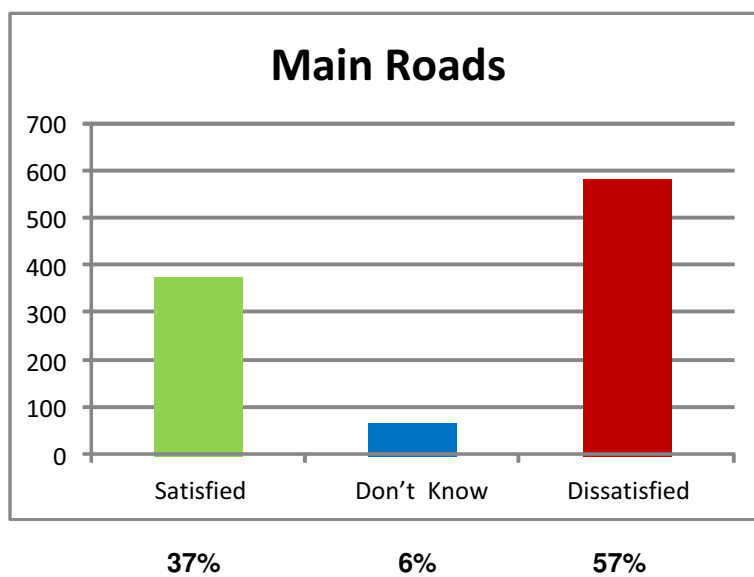
The annual Council Resident Survey has, in recent years, indicated a general dissatisfaction in the condition of roads and pavements. In order to better understand this, the HAMP makes a commitment to develop a customer engagement strategy. The purpose of this is to determine what is important to people, what their priorities are with regard to highways and infrastructure maintenance and to look at the resident satisfaction issue in more detail. In summary, we know that customers aren't satisfied but need to determine the reasons for this so that services can be aligned to reflect their needs.

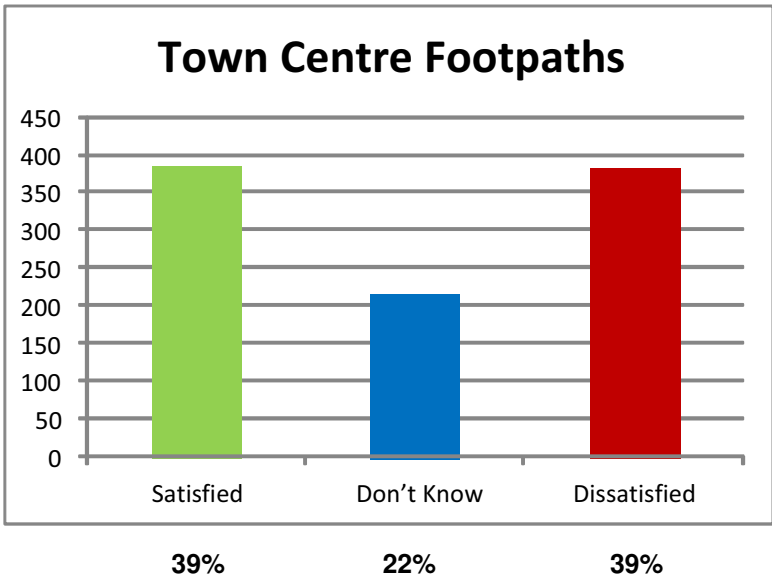
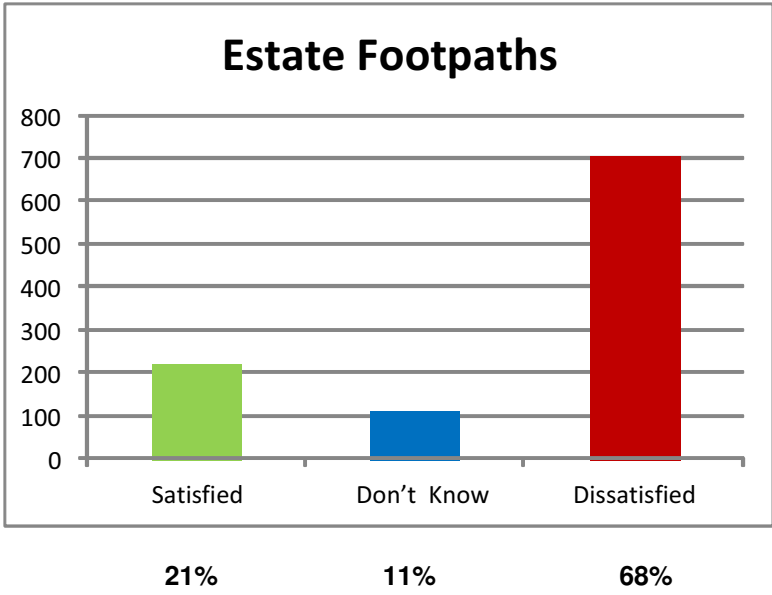
In June a highway maintenance survey was undertaken. A postcard questionnaire was sent to every household in the Borough through the Widening Horizons magazine. A copy of the questionnaire is attached at the end of this report as an appendix. The survey asked some simple questions about what was most important to residents and where they would most like to see resources prioritised. Importantly, it also asked residents whether they had seen any recent improvement in any aspects of the highway network.



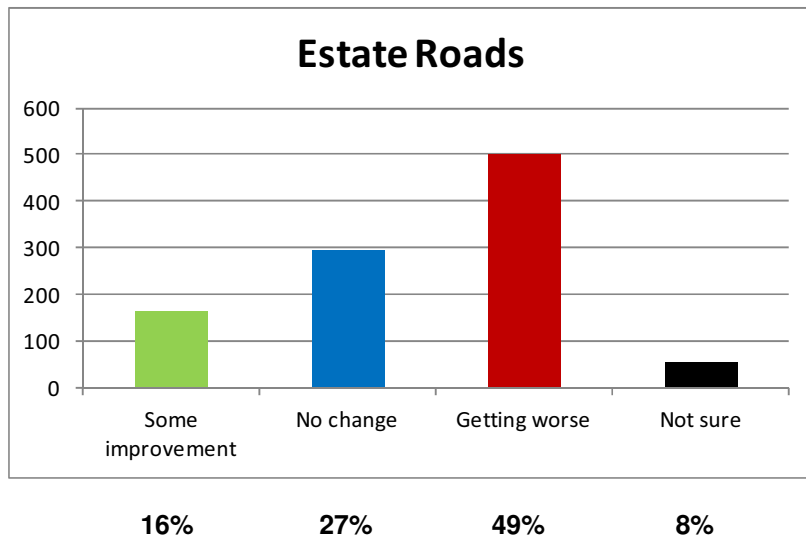
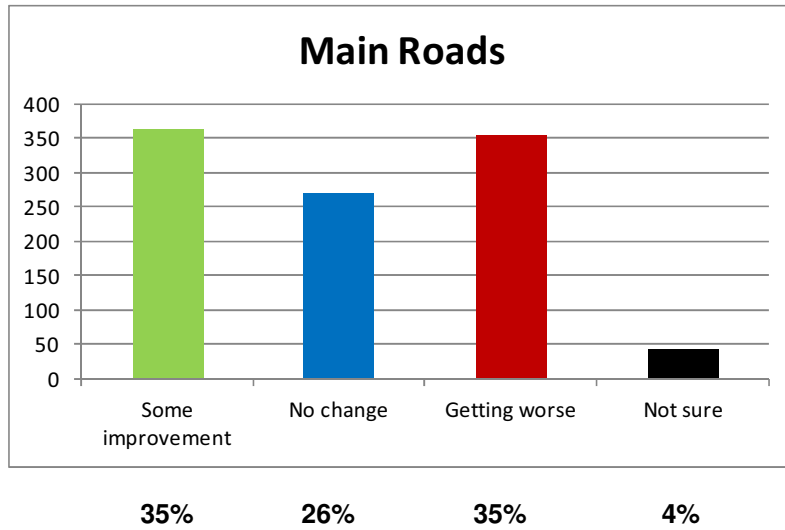
There was a very positive response to the survey with around 8,000 questionnaires being returned. At the time of publishing this report there has not been sufficient time to analyse all the returns. However, a representative sample of 1,000 questionnaires has been analysed and the main findings are shown as follows. The number of respondents is indicated on the left hand axis of each table

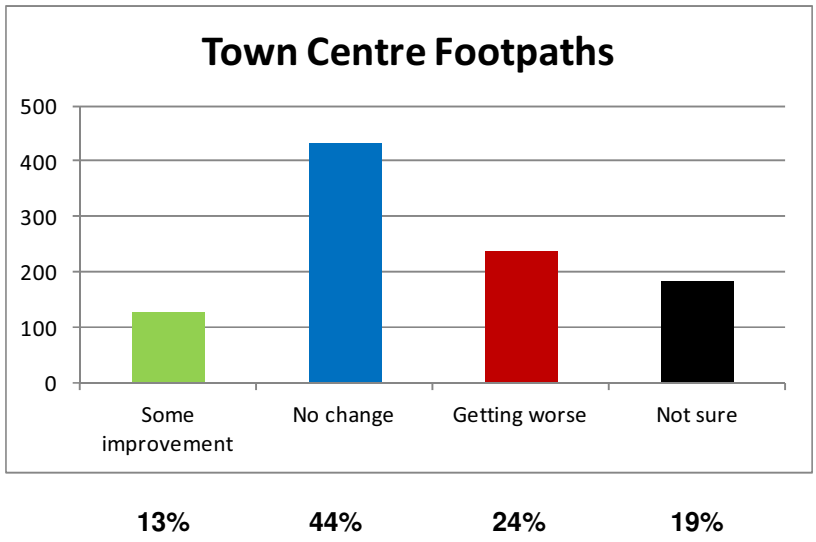
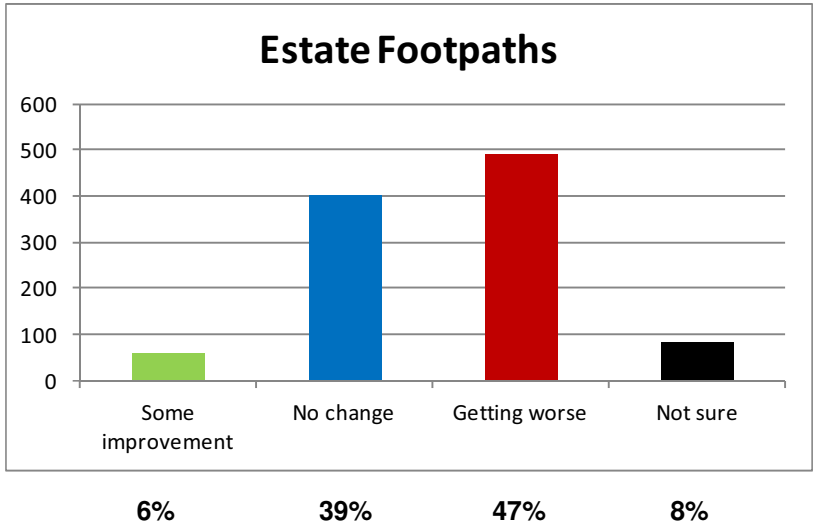
**Question 1 - How satisfied are you with the condition of the roads and footpaths in North Tyneside in each of the following categories?**



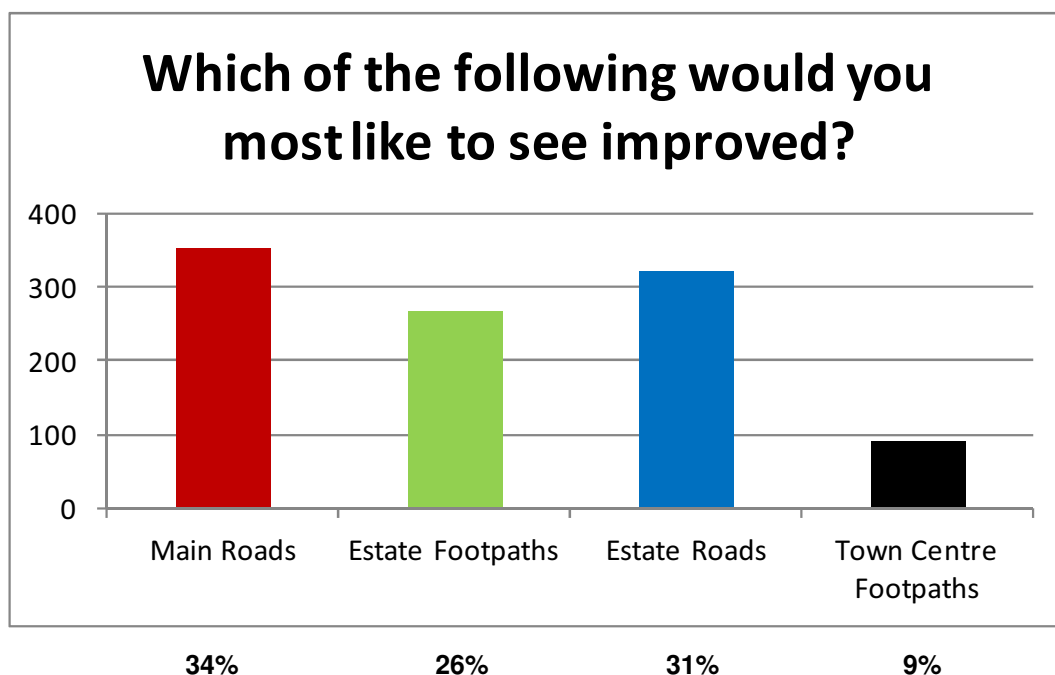


**Question 2 - Have you noticed any improvement in the condition of the roads and footpaths in North Tyneside in the last 2 years?**

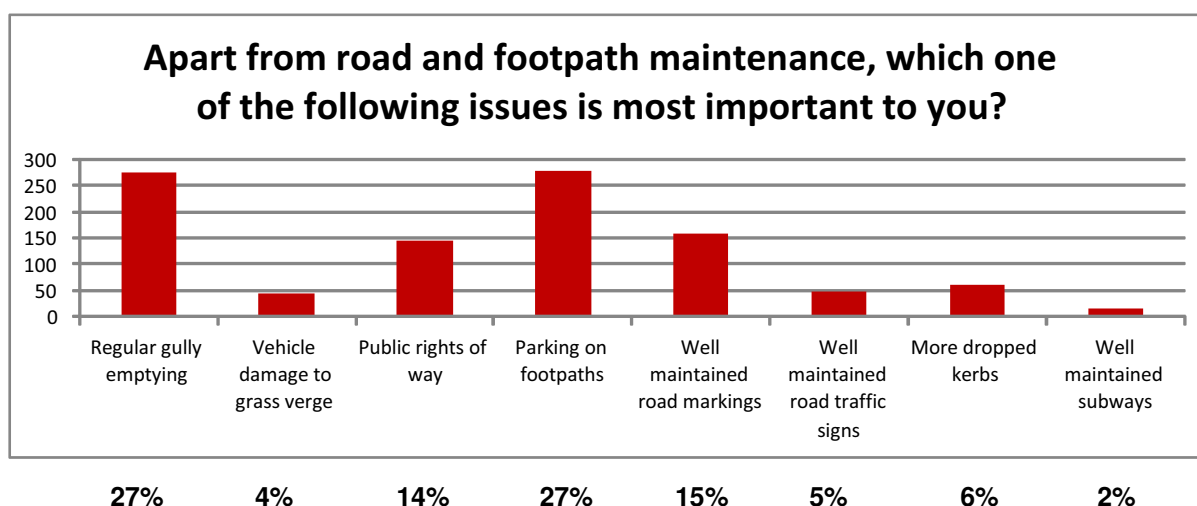




**Question 3 - Given that funding is limited, which ONE of the following would you most like to see improved?**



**Question 4 - Apart from road and footpath maintenance, which ONE of the following issues is of most importance to you?**



The results of this survey are discussed in more detail in the Conclusions section of this report. The remaining 7,000 responses will be analysed over the next few months. This will provide some useful pointers as to where the Council might want to prioritise its highway budgets. It will also provide a means to look for possible differences in priorities amongst different customer groups. For example, it may be that older age groups see footway repairs as being a higher priority than road repairs.

## Performance

The Council gathers performance data in relation to the condition of its main classified roads. Independent condition surveys are undertaken and the data is used to calculate a performance indicator figure. The results for recent years are shown in the table below (lower is better). The data for the current 2012/13 year has just been collected and the results will be available in the early part of 2013.

Performance Indicator	2009/10	2010/11	2011/12
Percentage of A class roads that should be considered for structural maintenance	4%	5%	3.5%
Percentage of B and C class roads that should be considered for structural maintenance	5%	8%	5.6%

The above figures represent good performance when compared nationally. The latest figure for A class roads (3.5%) represents excellent performance and indicates that we are improving. This is likely due to the recent introduction of lower cost preventative maintenance treatments that have allowed more work to be completed on the ground.

## Other Information of Interest

This section of the report outlines items of general interest.

### New Technical Services Partner

On 1<sup>st</sup> November 2012, highways and infrastructure services were transferred to Capita Symonds, the Council's new technical services partner. Capita Symonds will manage all aspects of the service for the next 10 to 15 years and will work with the Council's retained client team to improve the business. The following are some examples of the type of work we intend to undertake over the next 12 months:

- Review of Council's highway inspection regime with a view to making efficiency savings
- Improvements to the gully cleansing service
- Looking at more permanent solutions to pothole repairs
- Improvements to ICT systems, in particular bridges asset management systems
- Better integration with the front line operational workforce
- Significant extra investment in utility reinstatement inspections and quality control leading to properly reinstated roads and footways.
- Improvements in productivity of front line operations leading to lower unit costs.

## Highways Maintenance Efficiency Programme

In 2011 the Government launched its Highways Maintenance Efficiency Programme (HMEP). The HMEP is a sector-led initiative which is concerned with maximising efficiency in highway maintenance through development and sharing of best practice.

A significant area of work has been the publication in April 2012 of the HMEP's Pothole Review (titled Prevention and a Better Cure). This report was compiled by experts from the highway maintenance industry and it sets out a number of recommendations in relation to dealing with potholes. It is encouraging to note that North Tyneside Council has already implemented many of the recommendations made in the report (eg a move towards preventative maintenance and development of customer engagement plans to help set priorities). The Council is currently working through the report with a view to meeting all recommendations that have been made. During a recent visit to North Tyneside, Matthew Lugg (Chair of the HMEP Project Board) complimented the Council on its approach to highway maintenance and requested that we provide some case studies to assist with the ongoing development of the HMEP.

## Skid Resistance Policy

The HAMP made a commitment to develop a formal skid resistance policy ie. a system of monitoring and maintaining sufficient grip on the main road network. The policy was finalised and approved in May 2012. This means the Council now has a means of proactively managing skid resistance of the highway network which will assist with road safety and advance works planning.

## **Conclusions**

The following conclusions can be drawn from this report:

- The highway network is the most valuable asset in the Council's ownership. The current total value of highway assets is **£1.359 billion**. Further work is required to obtain more robust bridge valuation data.
- The Area Forum Roads and Pavements allocation has allowed the Council to make some good highway improvements, particularly in housing estates.
- The condition of the highway network is generally deteriorating, although there has been some improvement in main roads.
- If current resource levels remain the same, the condition of highway network will continue to deteriorate and do so at an ever increasing rate. This will occur even when a perfect theoretical long term asset management strategy

is applied ie full use of whole life planning, best value and preventative maintenance regimes.

- There is a significant backlog of highway repairs that cannot be addressed properly with current resources. A one-time large capital cash injection is the only way to quickly deal with the backlog in full. If this cannot be achieved then consideration should be given to increasing annual maintenance budgets to assist in dealing with the backlog at a more gradual pace (capital business case for this has recently been submitted as outlined on page 8).
- The maintenance backlog will increase if resources remain the same.
- The Council is performing well in relation to the maintenance of classified main roads. This would indicate that the increased use of preventative maintenance treatments and a relatively high financial investment in main roads is producing the expected benefits.
- The Council is performing less well in the maintenance of estate roads and footpaths. This is reflected in the increased maintenance backlog and results of the recent customer survey which is explained in the next section in more detail. The service should look to maximise the amount of work that can be done in these areas by use of alternative materials, better productivity etc.

The following conclusions relate specifically to the recent HAMP customer engagement survey:

- Overall, there is high customer dissatisfaction in the condition of the highway network.
- Estate roads and estate footpaths appear to be of greatest concern to customers with 73% of respondents feeling dissatisfied with roads and 68% dissatisfied with footpaths.
- There is less dissatisfaction with main roads (57%). The percentage of customers who are satisfied is 37% - significantly higher than the results shown in previous corporate annual resident satisfaction surveys (most recent figure is 22% covering all types of road). This indicates that the current priority of investing more in main roads is making a noticeable impact.
- There is less concern about the condition of town centre footpaths with 39% of customers dissatisfied but equally 39% satisfied.
- It is encouraging to see that 61% of customers have either seen an improvement or at least no decline in the condition of main roads over the last 2 years with only 35% saying these have got worse. However, the opposite can be seen in relation to estate roads and footpaths. 76% of people say that estate roads are getting worse or have not improved and 86% say that estate footpaths are getting worse or have not improved. Again, these results are consistent with our current maintenance priorities.
- When customers were asked which type of highway asset should be prioritised for maintenance, the highest response was main roads (34%). This



indicates that although there is a large degree of dissatisfaction in the condition of estate roads and footpaths, there is an acceptance that the maintenance of the strategic road network should be given a high priority. It is comforting to know that this aligns with our actual current maintenance policy.

- Other than highway condition, the issues of most importance to customers are
  - Regular gully cleansing – in light of climate change and increased risk of flash flooding it is important that the Council's drainage infrastructure is functioning as efficiently as possible
  - Parking on pavements – this not only causes obstruction issues but has a significant adverse impact on highway maintenance budgets due to having to deal with damage to footways

## Appendix – Copy of HAMP Customer Engagement Questionnaire



### Engineering Services Customer Engagement Survey 2012

Please complete and return to address on reverse (no stamp required)

1. How satisfied are you with the condition of the roads and footpaths in North Tyneside in each of the following categories?				
	Satisfied	Don't know/ have no opinion	Dissatisfied	
Main roads e.g. A class roads, bus routes etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Estate roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Estate footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Town centre footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

2. Have you noticed any improvement in the condition of the roads and footpaths in North Tyneside in the last 2 years?				
	Some improvement	No change	Getting worse	Not sure
Main roads e.g. A class roads, bus routes etc.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estate Roads	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Estate Footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Town centre footpaths	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. Given that funding is limited, which ONE of the following would you most like to see improved? (tick one only)	
<input type="checkbox"/> Main roads e.g. A class roads, bus routes etc.	<input type="checkbox"/> Estate roads
<input type="checkbox"/> Estate footpaths	<input type="checkbox"/> Town centre footpaths

4. Apart from road and footpath maintenance which ONE of the following issues is of most importance to you? (tick one only)	
<input type="checkbox"/> Regular gully emptying	<input type="checkbox"/> Well maintained road markings
<input type="checkbox"/> Dealing with vehicular damage to grass verges	<input type="checkbox"/> Well maintained road traffic signs
<input type="checkbox"/> Well maintained public rights of way/wagon ways	<input type="checkbox"/> Well maintained subways
<input type="checkbox"/> Dealing with parking on footpaths	<input type="checkbox"/> More dropped kerb crossing points

What is your age profile?  Under 30  30 to 50  51 to 65  Over 65

<input type="checkbox"/> I'm responding as a resident	Please provide your postcode
<input type="checkbox"/> I'm responding as a business	<input type="text"/>