

## **TRANSPORT ASSET MANAGEMENT PLAN & PROGRAMME**

### **Introduction**

1. Oxfordshire County Council's Transport Asset Management Plan (TAMP) was approved in its original form by Cabinet in March 2008. This report provides an overview of proposed overarching TAMP policies and strategies and the 2-year rolling programme of maintenance capital schemes.
2. The TAMP is central to the identification of highway maintenance strategies, and the development of the new Transport Services contract. The TAMP contains both asset and financial data that enables more advanced forward planning, improved budget management and improved working practices. Crucially, in the current financial environment it provides a means of identifying where limited funding may be targeted to best effect through the implementation of the forward programme.
3. The Council recognises that reliable asset management information is key to the effective stewardship of the highway. It informs process, decision-making, and the development of short and longer term maintenance strategies that reflect customer needs and sound value-management. Its prudent and timely use drives operational improvements and the efficient use of funding, whilst managing the Council's exposure to risk and third party claims.
4. The TAMP spans all highway maintenance activities and all types of highway infrastructure including roads, footways, bridges, street lighting, traffic signals and so forth. Although, the document focuses on the asset groups where the majority of the maintenance budget is spent, information on other asset groups is also being collected and incorporated into the document as it develops.

### **TAMP Development**

5. The original TAMP provided the first comprehensive account of the Council's main highway assets with actions identified for the ongoing development of prudent highway stewardship and efficient asset management practice. Since then, a number of strategies for better managing our highway assets have been progressed.
6. The Council has considerably developed its knowledge of highway assets and made consistent overall improvements to carriageway and footway condition across the County. The level of highway inventory information has been substantially increased and financial/condition models and scenarios produced. The Council's systems' functionality and work processes have been developed further. It now has access to much more intuitive data for asset management planning, for operational performance monitoring and for managing risk.

## Service Levels

7. A series of Asset Management Service Standards has recently been developed as a supplement to the TAMP. The Service Standards contain Asset Management priorities, objectives, service levels, performance targets, work plans and risk register that together form a statement of the key areas of asset management focus and development.

## Network Condition

### Carriageways

8. The overall condition of the Council's network may be expressed for each road category as 'the percentage of those roads where structural maintenance should be considered' (as defined by national performance indicators):

Network Category Measure	2010/ 11 Indicator	2009/10 Indicator	Change in amount of Network requiring Treatment since 2009/10
A roads (NI 168)	4.3%	4.6%	0.3% (or 1.1 miles less)
B roads (NI 169 (part))	8.1%	7.6%	0.5% (or 1.5 miles more)
C roads (NI 169 (part))	10.3%	9.5%	0.8% (or 5.7 miles more)
U roads (BV 224b)	13.1%	11.6%	1.5% (or 22.1 miles more)

**Table 1a**

Network Category Measure	2011/ 12 Indicator	2010/11 Indicator	Change in amount of Network requiring Treatment since 2010/11
A roads (NI 168)	4.2%	4.3%	0.1% (or 0.7 miles less)
B roads (NI 169 (part))	7.3%	8.1%	0.8% (or 4.5 miles less)
C roads (NI 169 (part))	11.0%	10.3%	0.7% (or 5.1 miles more)
U roads (BV 224b)	16.0%	13.1%	2.9% (or 39.5 miles more)

**Table 1b**

9. Tables 1a and b show that the overall condition of A roads and B roads has improved over the 2-year period, whilst C roads and Unclassified roads have deteriorated. The deterioration may largely be attributed to the effects of the recent harsh winters which have affected the weaker local roads to a greater degree. Unclassified roads make up half of the County's road network. They generally have thin layers and poor drainage, so are very susceptible to damage caused by freezing and thawing.

10. The fragility of the highway network is evidenced by the effects of the harsh winters, with a 3-fold increase in reported potholes. Whilst the Council has received winter damage grant in excess of £5m in total, it is estimated that Oxfordshire's highway network has suffered over £12 million accelerated deterioration during the period. The number of registered claims relating to pothole and structural defects has also increased. In addition, £3.5 million of damage was caused by drought and heat in both 2004 and 2006 respectively.
11. The Council is currently developing defect threshold criteria for the County's roads that will be used to produce more accurate year by year measures of local network condition. These will also enable defective areas to be identified with greater accuracy for more efficient targeting of treatments. The local indicators will be produced annually along with the national indicators.

### Footways

12. Prior to 2009, the condition of our busiest footways had remained stable. The subsequent deterioration in their condition may again be attributed mainly to the harsh winters and the reduction in the capital funding. This meant that investment had to be diverted from footways in recent years to enable costly schemes and drainage improvement schemes. The less busy footways have also deteriorated during the winter months.
13. It is intended to commence more comprehensive surveys of all the County's footways from next year. Alongside this, a local footway indicator is being developed that will be monitored together with the existing indicator that currently only measures the condition of the busiest footways (BV 187).

Network Category Measure	2010/ 11 Indicator	2009/10 Indicator	Change in amount of Network requiring Treatment since last year
Busiest Footways (BV187)	9%	6%	3% (or 4.3 miles more) <b>Table 2a</b>

Network Category Measure	2011/ 12 Indicator	2010/11 Indicator	Change in amount of Network requiring Treatment since last year
Busiest Footways (BV187)	18.0%	9.0%	9% (or 12.7 miles more) <b>Table 2b</b>

14. Due to the recent deterioration in footway condition (identified in Tables 2a and 2b) following the recent severe winters, £400,000 of additional investment has been identified to address this issue (Annex C Table 2).

### Drainage

15. The condition of Oxfordshire's Drainage Asset ranges from historical stone drains to recent plastic pipes or swales. The oldest known Medieval stone drains have been located in Dorchester while the latest Sustainable Urban

Drainage Systems (SUDS) are being constructed in all new developments. Generally all the stone drains should be upgraded to cope with the increased flows and the weight of the vehicular traffic, which is causing them to collapse slowly and increase localised flooding. The more modern clay and concrete systems, (on average approximately 60 years old), although stronger than the stone drains, are suffering from being undersized and a limited maintenance investment over the last 20 years.

16. The Flood and water Management Act 2010 places a Duty on the Lead Flood Authority (Oxfordshire County Council) to manage and record all surface water flooding within the County, and to ensure a publically accessible register of flood structures. The Act also puts a requirement on the Authority for the improvement of the quality of water flowing through our drainage systems. A GIS application has been developed as part of a surface water pilot project that allows the mapping of drainage assets and the critical infrastructure. This in turn enables work to be directed to flood prone areas.

### **Bridges**

17. The overall condition of OCC's bridge stock is declining following the reduction in capital funding as resources and funding have been diverted to support other priority assets like carriageways. Therefore, the bridge stock is being managed in a more reactive rather than proactive way. The Council is currently reviewing the Bridges Maintenance Programme to ensure that the future bridge maintenance schemes still provides value for money in terms of whole life costs.

### **Street Lighting**

18. The UK Lighting Board actively encourages highway authorities to use the risk assessment process, produced by TRL in 2002, in monitoring the condition of their lighting columns. In addition to this the ILP Technical Report 22 supports asset management requirements by providing Authorities with guidance in the day to day management of lighting supports. This includes:
  - i. Introducing strong management cycles – Routine checks every 3 years to assess condition
  - ii. Detailed condition assessment process – Independent structural testing & risk assessment approach
  - iii. Review of lighting column risk assessment data
  - iv. Age profiling
19. A simple system is used to assess the structural safety of lighting columns that provides an indication of the lighting column condition, which then forms the basis of a series of road lighting condition indicators. The interim report published in June 2002 proposed that the road lighting condition indicator should initially be based on the age of the lighting columns and any indicators of residual life that can be determined, whilst also taking into account environmental factors and other elements, such as luminaires and cable networks.

20. Analysis of our inventory returns identified the following categorisation of our Lighting Stock:
- i. 58,711 Street lighting columns (Total number of units)
  - ii. 28,350 Lighting columns aged less than 20 years
  - iii. 7,432 Lighting columns aged between 20 to 30 years old
  - iv. 8,167 Lighting columns aged between 25 to 30 years old
  - v. 13,482 Lighting columns aged between 30 to 40 years old
  - vi. 1,280 Lighting columns aged at over 50 years plus

### **Structural Maintenance**

21. Structural maintenance activities include carriageway and footway resurfacing and reconstruction, structural patching, surface dressing, specialist treatments, bridge strengthening, street lighting column replacement and drainage improvements. This work is primarily funded through the Council's Capital Programme.
22. The Council is increasingly using value-engineering to qualify and prioritise work, and in assessing the whole life costs of alternative treatments. The value-engineering approach often means that more substantial treatments are specified to ensure longevity of repair and reduced overall disruption to road users. This means that schemes can cost more initially (but not always) but with the benefit of savings later on. However, the timing of the work is also very important so that interventions ideally take place before the onset of more serious and costly deterioration.

### **Financial/ Condition Modelling**

23. Analyses have been carried out to predict the effects of various levels of financial investment on the structural condition of the road network. These include a variety of budget/condition scenarios that have been used to inform the budget process to date. Other relevant data including accidents, traffic and highway claims have also been considered in identifying and prioritising maintenance work at scheme level.
24. The following considerations have been taken into account when determining the structural maintenance allocation across the next 5 years:
- The County Council has a statutory responsibility to maintain highways in a safe condition.
  - The state of our roads and footways remains a key priority for the residents of Oxfordshire.
  - The life of roads can be extended relatively economically if repairs are carried out in time. Conversely, delays in applying treatments can lead to rapid deterioration and a large increase in the cost of repair.
  - There is a need to reduce pressure on revenue budgets. Make-shift treatments and reactive maintenance such as pothole repairs will cost the Council much more in the medium to long term.

- Although road casualty accidents have decreased in recent years the number of accidents occurring in wet conditions has not. Therefore, there is a need to maintain/ improve the skidding resistance of our busiest roads.
  - The majority of the structural maintenance budget is allocated to carriageways, with the remainder being spent mainly on footways, bridges, drainage improvements, and street lighting column replacement. It is envisaged that carriageway integrity will continue to take precedence over these other activities whilst budgets are severely limited.
25. Schemes have been prioritised using a well-established rating system called HAMP. This produces relative need factors that effectively score roads and footways according to the level of deterioration present. However, this can sometimes result in relatively minor routes being promoted for treatment. In recognition of this issue, the Council has progressively applied a value-engineering approach to the assessment, prioritisation and design of carriageway maintenance schemes. Scheme appraisals include assessments of the importance of the route in the network hierarchy and the effects on through traffic and the local community. Whilst funding remains at a premium, maintenance schemes on higher category routes will take precedence over lower category routes, unless there are particular circumstances or significant cost benefits that would override this precedent. This approach does not detract from the Council's duty to maintain the network in a safe condition. Defects identified through highway inspections or reported by the public will be investigated and repaired if there is an implication for safety.
26. The Council recognises that 3<sup>rd</sup> party highway claims may increase if the network deteriorates given that during the next 5 years all authorities will be managing a likely decline in their overall asset conditions. All being equal, the analyses performed to date indicate that it will take 2 or 3 years for budget cuts to be reflected in a significant worsening of overall carriageway condition. Therefore, the Council will consider reinstating funding into structural maintenance if funding becomes available as part of the annual capital budget setting process, with a view to preserving the existing asset by early intervention where possible.

## **Systems & Inventory**

27. The Council's highway network comprises over one million individual items of apparatus. A detailed knowledge of the location, type and condition of the highway inventory is vital to the establishment of appropriate service standards and efficient maintenance regimes. The Council has also a statutory duty in accordance with the new Flood & Water Management Act to publish a register of flood structures for interrogation by the public during 2011.
28. A number of highway management systems are used currently to manage highway data and resources. These are vital for effective asset management and for responding efficiently to customer enquiries and they require investment and development. Geographical information systems (GIS) are being used increasingly to analyse asset inventory, condition information, and

other data, and to display the information against map backgrounds for greater interaction of information and easier interpretation of results.

29. The Council has a framework of inventory and attributes visible on GIS that can be easily updated. It is a main objective of the new Transport Services contract to update the inventory as part of the routine day to day business to ensure data is current and easily interrogated. There is also a pressing business need to digitise our large stock of highway records and plans.

### **Highway Valuation**

30. The value of our Highway and Transport assets exceeds £4.6 billion. Highway authorities are now required by central government to collate sufficient highway inventory information for the submission of progressively accurate annual calculations of highway network net present values, gross replacement values and maintenance backlog (the value of outstanding maintenance work that has accrued over the years). This will require more regular and detailed surveys of highway assets, and rural footways in particular. The information gathered will also enable life cycle plans to be created for sections of the network and for various assets so that treatment types and intervention periods can be optimised. The collection of this information is subject to national audit.

### **Route Hierarchy**

31. The County Council is responsible for over 4,500 kilometres of carriageway and approximately 2600 kilometres of footway. An exercise has recently been undertaken to re-categorise these routes according to the type and volume of traffic they carry and by their relative importance to one another. This exercise has enabled a modified network hierarchy to be established that may be used to inform budgetary decisions and treatment types, and to prioritise activities such as the frequency of statutory safety inspections and winter maintenance gritting routes.

### **Safety Inspections**

32. In its role as Highway Authority, Oxfordshire County Council has a statutory duty to maintain the network in a safe condition. A revised policy for Statutory Safety Inspections has recently being produced that aligns with the revised network hierarchy and new operational processes. The new policy and practice will assist the Council in managing resources and risk, and provide a robust mechanism for claims defence.

### **Customer Satisfaction**

33. There is a strong correlation between customer satisfaction and the condition of local roads. In a 2009 survey, 58% of respondees said they were dissatisfied with the condition of roads and pavements in Oxfordshire (NHT). More recent research work suggests that more than 60% of customers are

likely to be dissatisfied with a Council's service when more than 12% of its local roads are defective or have poor surface condition (Seasig).

### **Additional Pressures**

34. We are currently assessing the implications of new guidance relating to the exposure, treatment and disposal of coal tar and derivatives. These substances are found in many existing road constructions and are classified as hazardous waste. It is likely that coal tar will be identified at many locations on our network, however, the financial implications of dealing with the problem will only become clearer after further site investigation work and research has been carried out. Where its presence is detected we may have to recycle material on site, or remove it to special treatment facilities or to the approved disposal sites.
35. In the absence of further advice from government agencies, our approach to dealing with this problem is to undertake early site coring and testing and to design maintenance treatments to limit disturbance of the coal tar as far as possible or, where feasible, to utilise suitable on-site recycling methods that should help reduce disposal costs.
36. Consequently, dealing with the coal tar will add significant costs in addition to the extra cost of increased coring and testing. Core samples are now taken at the majority of sites in the forward programme. The cost of coring, testing, analysis and associated Traffic Management is approximately £3k/ km and has been allowed for in our budget planning. However, it is harder to budget for the additional cost of dealing with the coal tar, once identified. At some sites where coal tar was detected the increased costs have varied between 11% and 38%.

## **Resilience to Extreme Weather and Climate Change**

### **Carriageways and Footways**

37. The County's highway network is particularly susceptible to the effects of harsh winters. Water and ice entering the road construction are the main factors that cause widespread damage, with the prospect of massive repair costs and increased claims. To help address this, additional funds have been directed to surface dressing and similar treatments in the forward programme that economically seal road surfaces from water ingress.
38. Work has commenced to identify the areas of County road network that are most at risk from weather events with an aim to inform management action plans, material and apparatus specification, life cycle planning and risk management.
39. Effective targeting of these treatments and increased coverage should go some way to protecting vulnerable roads and footways. A more pro-active approach is also being taken to the management of the structural patching



programme to ensure that these repairs are targeted and specified to best effect

### **Drainage**

40. Poor drainage is the main cause of early carriageway failure. More funds will be directed in future to addressing local drainage issues such as grip and ditch clearing in an effort to keep road formations drier. Formal drainage investigations are now included in early feasibility work for schemes in the carriageways forward programme with costs built into the annual site investigation and works allocations.
41. The weather patterns in the country are changing dramatically giving increased severity of storms, as well as unusual hot and cold periods. The Environment Agency is predicting a 30% increase in rainfall to be added to the 1 in 100 year return period to be used on all calculations involving flood storage. If this scenario were to occur, many of the current highway drainage systems, with the exception of the more recent porous pavement systems and swales, would not be able to cope.
42. The Flood and Water Management Act 2010 has been introduced to encourage a holistic approach to flood management and promotion of sustainable systems to help manage the intense storms which can happen due to climate change. These systems are currently being advocated for new drainage systems where appropriate.

### **Bridges**

43. Significant flood events such as that experienced in July 2007 required emergency scour inspections to be undertaken, detailed underwater inspections to follow and then works to address any significant scour issues identified to be completed. Extreme local events also seem to lead to local pressure to enlarge the flow capacity of individual bridges perceived to be restricting flows. Extreme winters require higher volumes of salt to be spread on the highway which is detrimental to the durability of steel and reinforced concrete bridges. Freeze thaw is detrimental to the durability of certain stone, mortar and brickwork and therefore affects numerous OCC bridges constructed with these materials. Hotter summers and colder winters would increase the thermal movement that bridges experience and therefore the magnitude of movements that bridge joints and bearings have to accommodate. If climate change does lead to more frequent extreme flood events, hotter summers and colder winters this can only accelerate the rate of deterioration of OCC's bridge stock.

### **Street Lighting**

44. Using the latest street lighting technology i.e. dimming, trimming & LED equipment will reduce the operating hours and allow for reduced lighting levels. As well as reducing the consumption of electrical energy these measures will also provide reductions in carbon emissions. Our long term plan

is to reduce energy consumption in our street lighting and gain the benefits from dimming / dynamic lighting strategies.

45. We are currently looking to undertake a pilot scheme (£0.3m) to convert 750-1000 street lighting columns to LED or dimmed ballast lanterns across the County, as part of the planned repairs and maintenance work. This will result in a year on year saving on our street lighting running costs of between £4.5k and £9k, equivalent to 49,000 – 100,000kWh or 27-54 tonnes of CO<sub>2</sub>. If the pilot is successful, we will endeavor to roll out the scheme fully across the County, providing the additional budget (£1.2m) can be allocated.

## **Budget**

46. The 5 year capital programme for highways structural maintenance was approved by Council in February 2011 and subsequently updated in October 2011. Structural maintenance comprises carriageways, footways, bridges, street lighting and drainage. The carriageways allocation is sub- divided according to treatment type (Annex A).
47. Annex B shows an amended budget profile that takes account of the October 2011 updates.
48. Annex C shows the allocations for major Principal Road and General Maintenance schemes. In addition to the £9.6m for Major Maintenance Schemes and £2m for general maintenance have been identified in the proposed programme. The details of the proposed general maintenance allocations as follows:-
  - i. £1m has been identified to maintain carriageways.
  - ii. £0.6m will be targeted at bridge maintenance schemes. Recent inspection works have identified a number of defects and therefore need for further site investigation and evaluation to identify the most appropriate treatments.
  - iii. £0.4m of this additional funding would be targeted at footway schemes which have suffered a sharp deterioration due to recent severe winters.

## **Drainage**

49. The two year programme targets work to locations with drainage or flooding problems. The work is prioritised according to risk e.g. the severity of the flooding, the number of properties affected, type of property (schools, old people's homes) and impact on infrastructure and the community.

## **Bridges**

50. The Bridges Programme of works generally arises from the faults, deterioration and shortcomings found during routine bridge inspections, inadequate structural capacity identified by assessment or monitoring and by faults reported by the other highway staff, external organisations and the public.

### Street Lighting

51. With an average life expectancy of 30 years it would be necessary to renew an average of 1460 lighting columns per year in order to keep pace with natural deterioration in the condition of Oxfordshire's lighting stock. However, the current budget allocation allows a programme of work to replace approximately 900 columns a year which have reached the end of their expected life. Installations are mostly based on High Intensity Discharge lamps and Low pressure systems requiring appropriate ballasts and optical systems.

### Structural Maintenance Programme 2012/13 & 2013/14

Annex D contains the programmes for structural maintenance for 2012/13 and 2013/14, including reserve schemes.

52. The proposed programmes are provisional for a number of reasons:
- a) More feasibility work is required to be carried out on some of these schemes
  - b) Schemes not included in the schemes lists may assume a greater priority, for example, if their rate of deterioration suddenly increases. This may influence the 2013/14 programmes more than the 2012/13 programmes.
  - c) When the implications of the harsh winter, coal tar, the Flood & Water Management Act and other factors are known, there may be changes to the overall structural maintenance budget
  - d) Network Rail are likely to adjust their works programme which and this will have a knock-on effect on the County's bridge programme
  - e) At the time of writing, Oxford City's Section 42 allocation has yet to be finalised and this may mean that some schemes are substituted in the final carriageways and footways programmes.
53. Due to the requirement for additional feasibility work (i.e. site investigation and evaluation), the Carriageways, Footways and Drainage schemes have a contingency allowance built into the estimates. Reserve lists of schemes have therefore been identified which can be brought forward if the contingency allowances are not fully utilised.
54. Oxford City's S42 allocation is based on a combination of capital and revenue maintenance activities. The City's qualifying capital schemes for carriageways and footways are shown in the programme lists in Annex D. The City's surface dressing allocation is based on a proportional split of the County's surface dressing budget (capital). The City's revenue allocation is based on a proportion of the County's allocations for relevant routine maintenance activities which have yet to be decided.
55. Prior to last year, we have managed to consistently improve the overall condition of Non-Principal Roads whilst maintaining funding for Principal Roads at a reasonable level. The Council considers that it is now necessary to transfer funds from Principal Roads in order to control deterioration of non-Principal Roads as best we can. This approach was approved in principle by

Cabinet in 2008, when the Transport Asset Management Plan was originally produced. The rationale for taking this approach is that Principal Road condition has remained fairly stable in recent years, and significantly better than the condition of other categories of road in Oxfordshire. Schemes on Principal Roads are also considerably more expensive to deliver.

56. If further reductions to capital funding are announced in future years, the bridges, street lighting and drainage improvement budgets will be mainly unchanged as it is unrealistic to cut these further. Consequently, the number of carriageway and footway schemes will be reduced.
57. It should also be noted that future year's allocations may subsequently be influenced by potential pressures arising from the Flood & Water Management Act, which may require additional capital investment in drainage depending upon the level of responsibility imparted upon the authority within its duty as Lead Flood Authority.
58. Funding is also identified in the capital programme for major schemes. Additional bids for major elements of highway maintenance scheme funding will be submitted separately for consideration. However, in the absence of any additional funding, schemes would have to be paid for from the highway maintenance block allocation in order to be progressed. Consequently, if bids are unsuccessful, it is likely that schemes currently identified in the draft programmes will be deferred to allow the higher priority/ more expensive works to progress.
59. The Footway programme to deliver the additional £0.4m of funding identified in Annex C Table 2 will be developed by targeting the most strategic footways in the County. Schemes will be developed by grouping areas of deterioration identified in recent condition data. It is anticipated that a developed programme of work for 2012/13 will be available at the end of February 2012.
60. The Bridges Programme for 2012 is currently being evaluated based on the findings of the inspections and assessments carried out in 2011/12. A programme of works for 2012/13 is expected to be available on completion of this exercise at the end of February 2012.

## Annex A

Structural Maintenance Budget Allocations (Approved 15 Feb, 2011)					(£m)
Financial Period	2012/13	2013/14	2014/15	2015/16	Total
<b>Carriageways</b>	7.240	7.430	7.505	7.490	29.665
<b>Footways</b>	1.350	1.350	1.350	1.300	5.350
<b>Bridges</b>	1.400	1.060	1.015	0.930	4.405
<b>Street Lighting</b>	0.500	0.500	0.500	0.500	2.000
<b>Drainage</b>	1.100	1.100	0.950	0.950	4.100
<b>Total</b>	<b>11.590</b>	<b>11.440</b>	<b>11.320</b>	<b>11.170</b>	<b>45.520</b>
<b>Carriageways:</b>					
Assessed Carriageway Schemes (inc VE)	3.250	3.495	3.530	3.500	
Safety Schemes	1.100	1.150	1.100	1.250	
Routine Surface Dressing (2011/12)	1.900	1.800	1.950	1.800	
Surface Dressing Pre-Patching (2012/13)	0.900	0.900	0.850	0.850	
Advance Site Investigation/Coring/Testing	0.090	0.085	0.075	0.090	
<b>Total</b>	<b>7.240</b>	<b>7.430</b>	<b>7.505</b>	<b>7.490</b>	

## Annex B

Revised Budget Allocations (excluding Major Schemes)	2012/13	2013/14	2014/15	2015/16	2016/17	Total
Repayment of b/f capital				-2.600		
Assessed Carriageway Schemes (inc VE)	3.749	3.555	3.175	1.639	3.630	
Safety Schemes	1.100	1.150	1.100	1.100	1.100	
Routine Surface Dressing	1.900	1.800	1.950	1.300	1.800	
Surface Dressing Pre-Patching	0.900	0.900	0.850	0.850	0.850	
Advance Site Investigation/Coring/ Testing	0.092	0.085	0.075	0.075	0.075	
<b>Carriageways</b>	<b>7.741</b>	<b>7.490</b>	<b>7.135</b>	<b>7.564</b>	<b>7.455</b>	<b>37.400</b>
<b>Footways</b>	<b>1.350*</b>	<b>1.350</b>	<b>1.350</b>	<b>1.300</b>	<b>1.300</b>	<b>6.650</b>
<b>Bridges</b>	<b>1.123**</b>	<b>1.010</b>	<b>0.965</b>	<b>0.880</b>	<b>0.800</b>	<b>4.778</b>
<b>Street Lighting</b>	<b>0.500</b>	<b>0.500</b>	<b>0.500</b>	<b>0.500</b>	<b>0.500</b>	<b>2.500</b>
<b>Drainage</b>	<b>1.102</b>	<b>1.098</b>	<b>0.950</b>	<b>0.950</b>	<b>0.945</b>	<b>5.045</b>
<b>Total</b>	<b>11.816</b>	<b>11.448</b>	<b>10.915</b>	<b>11.194</b>	<b>11.000</b>	<b>56.373</b>

## Notes:

- 1- £11.690m of Structural Maintenance during 2011/12 is being funded with Corporate Resources.
- 2- The Cabinet agreed to bring forward £2.6m SM works into 2011/12. This will be paid back in 2015/16.
- 3- A further £2m is requested as part of 2012/13 S&RP process for Carriageways (£1m), Bridges (£0.6m\*\*) and Footways (£0.4m\*) which is shown in Annex C Table 2

## Annex C- Additional Resources Requirement for the next 5 years

Table 1- Structural Maintenance Budget Allocations (Major Schemes)							(£m)
Financial Period	2012/13	2013/14	2014/15	2015/16		Total	
<b>Major Schemes</b>							
Iffley Road	0.600						
	<b>0.600</b>				<b>Total</b>	<b>0.600</b>	
<b>Major Schemes (Additional Bid)*</b>							
A4130 Bix Duals	0.570	4.370				4.940	
A420 Shrivenham Bypass	0.350		3.070			3.420	
A420/A34 Botley Road Jnctn & Cumnor Bypass		0.080	0.030	1.040		1.150	
A415 Clifton Hampden		0.130				0.130	
<b>Total</b>	<b>0.920</b>	<b>4.580</b>	<b>3.100</b>	<b>1.040</b>	<b>Total</b>	<b>9.640</b>	

Table 2- General Maintenance Budget Allocations							(£m)
Financial Period	2012/13	2013/14	2014/15	2015/16		Total	
<b>Carriageway Schemes</b>	0.544	0.456				1.000	
<b>Bridges Schemes</b>	0.600					0.600	
<b>Footways</b>	0.400					0.400	
<b>Total</b>	<b>1.544</b>	<b>0.456</b>			<b>Total</b>	<b>2.000</b>	