TRANSPORT ASSET MANAGEMENT PLAN & PROGRAMME 2013/14 – 2014/15

Introduction

1. Oxfordshire County Council's Transport Asset Management Plan (TAMP) was approved by Cabinet in March 2008. The TAMP will be refreshed during 2013/14 with a view to being more asset lead and targeted and a consultative approach with members will be undertaken to set out the prioritisation for investment.

2. This report provides the 2-year rolling programme for all highway maintenance activities and all types of highway infrastructure including roads, footways, bridges, street lighting and drainage in accordance with the current TAMP. The 2013/14 schemes (in Annex B) were presented in draft at the locality meetings held in October 2012, as part of the visualised two year programme (2012/14). Comments were taken from the meetings and the schemes were developed in accordance with feedback and condition assessments.

3. Annex A provides the Structural Maintenance Annual Programmes funding allocation for the medium term and the funding for major schemes and other activity. The detailed 2-year Structural Maintenance Programme is provided in Annex B.

Asset consideration and prioritisation

4. Each asset type has differing levels of deterioration and requires specific assessments to ensure that condition is maintained and risk is not increased which might lead to claims or the need for major investment. Each is discussed in turn below:

Carriageways & Footways

5. Carriageway structural maintenance activities include carriageway resurfacing and reconstruction, structural patching, surface dressing and specialist safety surfacing treatments.

6. Schemes are prioritised using a well-established rating system called HAMP (Highways Assessment Maintenance Priority). 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 (low use) 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. 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.

7. 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.

8. The County's highway network is particularly susceptible to the effects of the external environment and climate change such as harsh winters, excessive heat and flooding, the latter of which has caused the Embankment slip at Bagley Wood (see paragraph 31). 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. Effective targeting of these treatments and increased coverage should go some way to protecting vulnerable roads and footways.

Drainage

9. Poor drainage is a major cause of early carriageway failure. More revenue 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.

10. 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

11. 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 currently being managed in a more reactive rather than proactive way. The Council is reviewing the Bridges Maintenance Programme to ensure that future bridge maintenance schemes still provide value for money in terms of whole life

costs, and is investing one off money to survey key structures to support this activity.

12. Significant flood events such as that experienced in July 2007 and the more recent events in 2012 required emergency scour inspections (detailed underwater inspections) to be undertaken and then works to address any significant scour issues identified to be completed. 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. Climate change does lead to more frequent extreme flood events, hotter summers and colder winters which can only accelerate the rate of deterioration of OCC's bridge stock.

Street Lighting

13. 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 considering environmental factors and other elements, such as luminaires and cable networks.

14. 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. There are over 58,000 lighting columns in the county.

Structural Maintenance Programme 2013/14 & 2014/15

15. Annex B contains the programmes for structural maintenance for 2013/14 and 2014/15. They are presented in Asset type and schemes for each have been identified and the locality identified for further communication and clarity.

16. The main carriageway and footway schemes have been developed in advance where possible by allocating funding for advanced design and coring. This process allows for specific and appropriate treatments to be chosen, risk of Coal Tar to be identified and costed and therefore better cost estimates to be provided enabling more effective use of available budgets. Specific allocations of funding have been set aside within each year to ensure that this advanced work continues into future years to ensure that delivery can be assured and that the supply chain can be exploited for economy of scale and associated efficiencies.

17. Combined safety schemes are where there is low skid resistance and accident date recorded on particular roads. Schemes are evaluated by a combined assessment panel involving Asset management, Thames Valley Police and the council's Road Safety Advisor. This assessment is carried out late in the year to ensure that the sites of most importance are dealt with as soon as the

new funding is approved to reduce the likelihood of accidents and minimise the risk of insurance claims. Year 2 has an indicative allocation and schemes will be decided in the last quarter of the year for 14/15.

18. Routine surface dressing sites can only be presented for the first year of the programme as they are subject to pre-patching work a year in advance. All work is carried out within the summer months due to temperature sensitivities.

19. Pre-patching sites cannot be practically identified as a programme as these are iterative from condition assessments carried out within the same year. It is possible that some sites can be identified but they are subject to change dependent on the findings from the inspections. This work will determine the surface dressing programme for the 14/15 programme as highlighted above.

20. Footways are identified for both 2013/14 & 2014/15 and all 2013/14 schemes have been advanced designed to eliminate risk, confirm the treatment and obtain accurate budget estimates as per carriageway schemes.

21. Drainage schemes are identified for 2013/14 & 2014/15. Advanced design and investigation has not been undertaken for the 2013/14 programme, however, there is an allocation in 2013/14 & 2014/15 so that this is carried out in advance for the 2014/15 programme and beyond to eliminate risk, confirm the design/intervention works and obtain accurate budget estimates as per carriageway schemes. In addition, a third of the budget has been assigned to a “reactive works fund”. This is due to the nature of the works as they are not readily visible and due to the flooding issues this year, flexibility to react must be maintained to manage the asset. There is also an allocation made for lining and contributions to schemes which is based on previous years’ experience.

22. Bridges schemes are identified for 2013/14 & 2014/15. It is not possible to have advanced design in the majority of cases as the engineers have to dig up the road to enable decisions to be made on site in many cases. The costs for traffic management and advanced design in these cases would not be value for money and therefore the schemes are presented with a higher contingency within the budget figure. In addition, a reactive works fund is established based on experience of retaining walls works required within year and to deal with problems arising from underwater scour inspections. The bridge management system is integral to the asset management of bridges stock and this year it is necessary to assign some funding to secure a new one that can provide valuation information. The Commercial Leadership have recognised the risk of not having a robust system and have proposed that an entry be made for the programme.

23. Network Rail Electrification – A resource for the design of betterment associated with bridge decks being replaced or renewed has been assigned. This design resource is essential to ensure that the Network Rail programme is managed appropriately and that design considerations to facilitate the highways are implemented where appropriate.

24. Street Lighting column replacements and essential pole bracket replacements are identified for 2013/14. Previously this has been presented as a single line item but as the programme is known for 2013/14 this work can be visualised for all concerned. The 2014/15 programme has yet to be developed but this will move into a 2-year programme in next year's structural maintenance programme.

25. Oxford City's Section 42 allocation is based on a combination of capital and revenue maintenance activities. The City's qualifying capital schemes for carriageways and footways are included within the programme and the budget allocation is made to the city council for the delivery of these schemes. The City's surface dressing allocation is based on a proportional split of the County's surface dressing budget (capital). The City also receives a revenue allocation which is based on a proportion of the County's allocations for relevant routine maintenance activities.

Systems & Inventory

26. 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.

27. Bridge Management System is identified in the bridges programme to ensure that the control of work is improved and a full inventory can be maintained with confidence.

28. The Council has a framework of inventory and attributes visible on GIS that can be easily updated. It is a main objective of the current 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.

Additional Pressures

29. Asset Management 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 now known 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 on each location. 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. As a result of this there are some "donor" schemes identified within the forward programme that have "treated" ex-situ recycled material used to avoid costly hazardous waste disposal costs.

30. 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. Consequently, dealing with the coal tar will add significant costs in addition to the extra cost of increased coring and testing if recycling options and donor schemes cannot be found and the resultant material has to be disposed of as hazardous waste.

31. Embankment Stabilisation – A new entry to the programme has been made for the Embankment slippage at Bagley Wood funded from efficiencies in the current year programme and supplementary estimate. There are a further 7 sites of strategic network importance that are currently being monitored which would need to be addressed without delay if slippage is imminent, a provisional budget allocation has been included within the earmarked reserves of the capital programme for this purpose.

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Annex A : Approved Resources Requirement for the next 4 years

Table 1 - Structural Maintenance Budget Allocations - Annual Programmes (details shown in annex B) (£m)						
	2013/14	**2014/15**	**2015/16**	**2016/17**		**Total**
Assessed Carriageway Schemes (inc Value Engineered and Advanced Site Investigation)	3.224	3.666	1.959	3.180		**12.029**
Safety Schemes	1.023	1.393	0.849	1.050		**4.315**
Routine Surface Dressing	1.800	1.950	1.281	1.515		**6.546**
Surface Dressing Pre-Patching	0.900	0.850	0.750	0.800		**3.300**
Total Carriageways	**6.947**	**7.859**	**4.839**	**6.545**		**26.190**
Footways	1.350	1.350	1.140	1.140		**4.980**
Bridges	1.410	0.965	0.780	0.700		**3.855**
Street Lighting	0.500	0.500	0.440	0.440		**1.880**
Drainage	1.100	0.950	0.845	0.754		**3.649**
Total	**11.307**	**11.624**	**8.044**	**9.579**		**40.554**

Table 2- Structural Maintenance Budget Allocations (Major Schemes)						(£m)
Financial Period	**2013/14**	**2014/15**	**2015/16**	**2016/17**		**Total**
A4130 Bix Duals	4.320	0.430				**4.750**
A420 Shrivenham Bypass	0.195	2.728	0.362			**3.285**
A420/A34 Botley Road Jnctn & Cumnor Bypass	0.036	0.036	0.564	0.514		**1.150**
A415 Clifton Hampden	0.130					**0.130**
Thames Towpath	0.207					**0.207**
PROW Footbridges	0.100	0.100	0.100	0.100		**0.400**
Oxford Road, Bagley Wood Reconstruction	0.720	0.090				**0.810**
Total	**5.708**	**3.384**	**1.026**	**0.614**		**10.732**