

## Cabinet

<b>Report Title:</b>	Strategic Highway Asset Management
<b>Meeting Date:</b>	12 July 2016
<b>Lead Councillor(s):</b>	Councillor James Finch, Cabinet Member for Highways and Transport
<b>Local Councillor(s):</b>	All Councillors
<b>Director:</b>	Geoff Dobson, Director of Resource Management
<b>Assistant Director or Head of Service:</b>	Mark Stevens, Assistant Director Operational Highways
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### Brief summary of report

1. The Council has demonstrated an ongoing commitment to highway infrastructure asset management.
2. Officers are strengthening the Council's current approach to asset management by developing a new suite of documents, incorporating the latest thinking, philosophies and recognised best practice.
3. Cabinet is asked to agree the ambition and approach to highway infrastructure asset management by endorsing, for consultation, the Highway Infrastructure Asset Management Plan and to support the development of a local resilient network.

### What is Cabinet being asked to decide?

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| <ol style="list-style-type: none"> <li>4. To formally endorse the draft Highway Infrastructure Asset Management Plan and its associated appendices, for stakeholder consultation to strengthen the Council's current asset management mechanisms.</li> <li>5. To confirm that the draft Highway Infrastructure Asset Management Plan is consistent with the principles set out in the Council's Highway Infrastructure Asset Management Policy and Strategy Documents.</li> <li>6. To delegate authority to the Director of Resource Management in conjunction with the Cabinet Member for Highways and Transport to:           <ol style="list-style-type: none"> <li>a) Make minor additional changes to the draft Highway Infrastructure Asset Management Plan prior to undertaking stakeholder consultation;</li> <li>b) Consider the responses received from the stakeholder consultation exercise and make appropriate changes to the draft Highway Infrastructure Asset Management Plan and publish this final document on the Council's website;</li> </ol> </li> </ol> |
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| <ul style="list-style-type: none"><li>c) Make editorial changes to the Highway Infrastructure Asset Management Plan main document; substantive changes require the approval of Cabinet;</li><li>d) Conduct regular reviews of the Highway Infrastructure Asset Management Plan appendices and, when required, make necessary changes and publish these on the Council's website.</li></ul> <ul style="list-style-type: none"><li>7. To formally support the development of a local resilient network and the alignment and prioritisation of key maintenance activities to the network.</li><li>8. To approve the recommended timescales for the implementation of this work.</li></ul> |
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### **Reason for recommendation**

- 9. To ensure that there is alignment between the Council's Highway Infrastructure Asset Management (HIAM) Policy and Strategy documents and the underlying principles of local highway asset management expected of a local authority by the Government, as set out in relevant guidance documents issued by the Department for Transport (DfT).
- 10. To permit the inclusion of minor enhancements to the draft Highway Infrastructure Asset Management Plan, prior to stakeholder consultation, to reflect the on-going work being delivered through the Highways Transformation Programme.
- 11. To consider responses from stakeholders to ensure the Council's approach to asset management supports local needs and priorities.
- 12. The Highway Infrastructure Asset Management Plan (HIAMP) appendices are living documents which must be regularly reviewed to reflect the changing nature of Suffolk's highway infrastructure assets, customer feedback, and innovation. They also need to maintain pace with emerging best practice and be aligned with the capability of Suffolk Highways.
- 13. To ensure that there is a framework to support asset management and maintain highway infrastructure that is resilient to severe weather events that are projected to become more frequent due to climate change. This will ensure key infrastructure continues to perform and support access for the public and businesses to essential services.

### **What are the key issues to consider?**

- 14. The adoption of a new HIAMP is the next stage in further strengthening the Council's approach to asset management, building on the formal adoption of the HIAM Policy and Strategy documents by Cabinet on 10 November 2015.
- 15. Clear advice has been provided through the DfT's Highways Maintenance Efficiency Programme (HMEP) to assist local highway authorities in ensuring that its asset management documentation is presented in a manner that is consistent across the country. HMEP guidance recommends that local highway authorities should ensure that all asset management activities are documented. Additionally, it indicates that local highway authorities adopt a targeted approach to communication to ensure that all stakeholders have the opportunity to contribute to the HIAMP and any subsequent reviews.
- 16. The ultimate adoption of a new HIAMP will provide, to relevant staff and stakeholders, information and evidence on how the asset management process

is being applied to meet the wider objectives of the Council over the short, medium and long term.

17. The main HIAMP document should cover a period of three to five years on a rolling basis and draws together the overarching principles on how the Council holistically manages its highway infrastructure assets. Substantive changes to the main HIAMP document will require Cabinet approval. The appendices, which cover the individual highway assets, are potentially subject to regular change as aspects of the asset management planning process become updated. These need to be living documents which can be adjusted to reflect the needs of the each highway infrastructure asset, customer feedback, innovation and to ensure the document maintains pace with best practice.
18. It is now widely accepted that global man-made climate change is and will continue to affect our local weather patterns. In the UK, this is likely to be reflected through greater incidence of intense rainfall, stronger winds and heatwaves which can combine with other natural events such as coastal storm surges to create adverse conditions for our transport network. Where practical, there is a need to make highway infrastructure assets more resilient to such events.
19. The *Transport Resilience Review*, commissioned and responded to by the Government in 2014 following a series of extreme weather events, reinforces the need for a robust approach to asset management, particularly in relation to the local resilient network.
20. The Council is designated as Lead Local Flood Authority under the Flood and Water Management Act 2010, and has the duty to provide strategic leadership to the partnership of Flood and Risk Management Authorities. Its roles and responsibilities are detailed in the Council's Flood and Risk Management Strategy. The Council needs a transparent framework to prioritise investment on the highway network that seeks to reduce flood risk.
21. Appendix A to this report sets out the draft HIAMP for approval to take to stakeholder consultation.

### **What are the resource and risk implications?**

22. Resources have been allocated to the task of establishing the documents set out in this report and for subsequent analysis and amendments to the HIAMP and resilient network following stakeholder consultation. The Director of Resource Management will keep the level of resource under review and make appropriate adjustments to ensure that the timescales set out below are adhered to.
23. The *Transport Resilience Review* identified 63 recommendations in its July 2014 report, applicable to a wide range of organisations and transport service providers, as well as local authorities. However, Recommendation 32 stated that "*the DfT should proceed with its proposal to consult on using part of the capital maintenance monies to encourage the development and adoption of asset management plans*".
24. Further to its November 2014 response to the Transport Resilience Review, the Government announced in June 2015 that local authorities would receive a portion of their highway maintenance funding based on performance, to be evaluated using a self-assessment questionnaire.

25. The Council submitted its first formal 'incentive fund' self-assessment questionnaire response (as approved by the Section 151 Officer) to the DfT in January 2016. The Council demonstrated in its submission that it was a 'Band 2 authority' and thus was entitled to and secured all available funding for the 2016/17 financial year. Only two local authorities attained the highest ranking (Band 3) but that attainment carried no additional financial reward.
26. The Council must demonstrate sustained progress against each of the 22 measures in the questionnaire. Endorsement of the HIAMP for public consultation and its ultimate adoption supported by the development and publication of a local resilient network will enable the Council to state that it has achieved Band 3 scores, particularly in relation to communication with stakeholders and asset management in regards to safeguarding Suffolk's highway infrastructure against current and future risks. Other activities are under way to secure improved scores in other assessment areas to achieve an overall Band 3 status for the next 'incentive fund' submission to the DfT in November 2016, avoiding any loss to available funding for the 2017/18 financial year.
27. An Equality Impact Assessment initial screening has been completed to assess the impact of the adoption of a suite of Highway Infrastructure Asset Management documents. This assessment concluded that the introduction of these documents is not expected to have a negative impact on the wider community and therefore a full Equality Impact Assessment is not required.

### **What are the timescales associated with this decision?**

28. If Cabinet endorses the HIAMP for consultation and formally supports the development of a local resilient network, these can be publicised on the Council's website in the autumn, providing evidence to further support progress in relation to communication and asset management.
29. There are many other lower level activities that are being undertaken concurrently with the development of the HIAMP and resilient network which will support the plan and enable the delivery of the good practice. This includes trialling a revised Highway Maintenance Operational Plan (HMOP), better aligned to the risk-based approach being set out in the DfT's emerging '*Well Managed Highway Infrastructure*' document, culminating in a report to this meeting of Cabinet to endorse its adoption.
30. Further, significant strides have been made in documenting the quality, currency, appropriateness and completeness of all data supporting the asset management approach detailed in the HIAMP. There is a funded strategy for the collection of information which, as well as providing information for a performance management framework, is used to support investment decisions and demonstrate the management of risk. A robust regime for its ongoing management is in place and has been scrutinised and considered appropriate by the Council's internal Audit Services.

### **Alternative options**

31. The Council's existing Transport Asset Management Plan (TAMP) was approved in 2006 and later revised in 2011, predating the Highways Services Contract with Kier which commenced in October 2013. Government advice and industry practice has changed in recent years and the Council's existing

documentation needs to reflect the current approach to highway asset management in order to secure all available Government funding.

32. The existing TAMP could be retained, but to do so would constrain the Council's aspiration to improve performance in this area.
33. Failure to develop a local resilient network and an associated plan to deliver its resilience would have a negative impact on the Council's ability to safeguard its critical highway infrastructure assets against current and future climatic challenges.
34. Communicating the Council's approach to highway infrastructure asset management, encouraging and considering stakeholder feedback along with the development of a local resilient network are included as an elements to be delivered in the 'incentive fund' submission to the DfT. Failure to respond positively to Government guidance would see a significant reduction in the amount of capital funding allocated for highway maintenance.

### **Who will be affected by this decision?**

35. Ultimately, all users of the Council's highway network, including rights of way and public transport users, will be advised of, see and experience changes to the way in which Suffolk's local highway network (its most economically valuable asset) is being maintained and improved.
36. Similarly, there will be a positive impact on the 'Suffolk Highways' relationship between Council officers and representatives of Kier, its highways contractor. Consultation on and adoption of the HIAMP and a local resilient network will encourage Suffolk Highways personnel to fully and jointly explore the most efficient and effective means of maintaining and improving the local highway network. This will inevitably lead to improved work processes, financial management, programme management, customer relations, performance and the utilisation of innovation and, thereby, better ensure that Suffolk Highways can meet the Council's aspirations, particularly '*to make a positive difference for Suffolk*'.

## **Main body of report**

### **Background**

37. The highway network is the largest and most visible community asset for which the Council is responsible. It is used daily by the majority of people and is fundamental to the economic, social and environmental wellbeing of the community. It helps to shape the character and quality of the local area that it serves and makes an important contribution to wider Council's aims.
38. In 2012, the Government announced that it was launching its 'Highways Maintenance Efficiency Programme' (HMEP) to be managed by the DfT to help local highway authorities transform their services so as to attain better value for money through efficient ways of working. The DfT subsequently worked in collaboration with a number of local highway authorities, highways contractors and other organisations to develop HMEP 'products' that would provide appropriate advice and help steer local highway authorities to effect changes in service delivery.

39. The Chartered Institute of Public Finance and Accountancy (CIPFA)'s Transport Infrastructure Code (updated 2013), looked at asset valuation for the Whole of Government Accounting (WGA) purposes. This encouraged authorities to correctly value key public assets and adopt a whole life cycle cost approach to their management.
40. Suffolk's highway infrastructure assets include (but is not restricted to) roads, pavements, public rights of way, cycleways, bridges, highway structures, lighting, traffic signals, drainage, traffic signs, road markings, fences, bollards, hedges, trees, verges, weather stations and bus stops/shelters. Using the WGA approach, the highway infrastructure in Suffolk is by far the Council's biggest financial asset and was valued at £19.2 billion (including £11.3 billion land) for the financial year 2014/15. A systematic approach to asset management is required to protect the value of the highway infrastructure in the most cost effective way.
41. In 2011, the Audit Commission published its '*Going the Distance*' report on value for money in road maintenance. The report highlights the case for developing asset management and the need to balance short-term repair pressures with the objective of long-term resilience. It emphasised the point that the pressure to tackle worst first could detract from more cost effective preventative interventions. This was echoed in the DfT's Pothole Review, published in 2012.
42. In 2013, the '*Highway Infrastructure Asset Management Guidance*' document and '*Lifecycle Planning Toolkit*' were produced jointly by DfT, the UK Road Liaison Group and HMEP. These set out a framework to support an asset management approach and outline the latest principles in highway asset management.
43. The Government commissioned a Transport Resilience Review after a series of extreme weather events (e.g. a particularly harsh winter in 2010/11 and severe flooding in the winter of 2013/14). The Transport Resilience Review identified 63 recommendations in its July 2014 report, applicable to a wide range of organisations and transport service providers, as well as local authorities.
44. Recommendation 35 stated that "*each local highway authority should make an early start in identifying a resilient network to which it will give priority through maintenance and other measures in order to maintain economic activity as access to key services during extreme weather*".
45. The Government Response to the 2014 Transport Resilience Review identified a need for local authorities to identify and develop a resilient network for their highway network which would be prioritised for repair and maintenance in extreme weather.
46. All councils were required to clarify whether they had met this requirement when responding in January 2016 to the asset management-based self-assessment questionnaire, used to determine the apportionment of the 2016/17 Incentive Funding from the DfT.
47. The Council published its first Transport Asset Management Plan (TAMP) in 2006 covering the period to 2010/11. The document was updated in 2011 and covers the period to 2023/24. However, as it now does not reflect current best practice, it has been clarified on the Council's website that it is now 'under revision'. This report is part of that revision process.

## **The Highway Infrastructure Asset Management Plan**

48. Since the launch of HMEP in 2012, a number of 'products' have been developed. One HMEP product entitled 'Highway Infrastructure Asset Management Guidance Document' details that a HIAMP is an appropriate way *"to record and communicate the approach to asset management in a single document, informing relevant staff and stakeholders how highway infrastructure assets are managed over a period of time"*.
49. The Council's draft HIAMP is separated into two distinct parts. The main document provides an overarching framework by which individual highway infrastructure assets will be managed. The appendices provide greater detail on how each unique highway asset will be managed.
50. The HIAMP will provide a strong, systematic link between maintenance treatments, costs, changes in condition and the value of the asset. This will allow the Council to:
  - a) Define, quantify, validate and evaluate short and long-term maintenance strategies;
  - b) Calculate the costs and benefits associated with maintenance strategies;
  - c) Ensure appropriate maintenance strategies, in so far as is reasonable practicable, meets the needs of users;
51. The HIAMP sets out levels of service, performance targets and how these are met through lifecycle planning and that these will be used to inform both a forward and annual programme of work.
52. The HIAMP explains the basis for the allocation of budgets and the development of financial plans, providing evidence to justify the levels of budgets that are necessary and the likely impact of different funding scenarios may have on the performance of the asset.
53. The publication of the HIAMP will help inform and manage stakeholder expectations about levels of service, condition of highway assets and treatments to be applied across the network providing a transparent and accountable process for deciding treatments and priorities.
54. It is intended to continue to develop the HIAMP over a number of years to enable better management of the assets on a long-term basis using whole life costing within a statutory framework, and to move further away from reactive repairs towards planned preventative maintenance and repairs. Such arrangements allow assets to be checked and monitored on a regular basis and a greater control on expenditure being directed to where it is most needed.

## **Resilient network**

55. A resilient network is expected to be based on risk and need as well as the road classifications of the network. It will align with the networks of neighbouring areas supporting wider resilience of East Anglia's road network.
56. This resilient network is to ensure that, during extreme weather conditions, the access to key services and the necessary support to the economy is maintained. The network identified will also be of relevance for other incidents where the prioritisation of route clearance and repair is needed.

57. Severe weather is no longer considered to be only snow and ice. Consideration should be made for such weather events as the changing of seasonal temperatures which can bring with them the increased frequency of heavy and extreme rainfall and more extreme winds and storms as well as prolonged droughts.
58. Ongoing changes to the climate are set to have significant impacts on the construction and maintenance of local authority highway networks. Drier and hotter summers will lead to more incidences of pavement deterioration and subsidence. Wetter winters and more frequent heavy rainfall events will result in more frequent incidences of flooding, particularly in low-lying areas and floodplains, and a higher risk of landslides. This will have an impact on pavement performance and resilience, drainage capacity and condition and highways structures.
59. The increase in potential for extreme weather events is generally acknowledged to be an impact of climate change. This is likely to increase the severity and magnitude of weather events.
60. Drainage is considered an important function in addressing localised flooding issues and assists in minimising the damage caused by extreme weather events. The Government, in its response to the 2014 Transport Resilience Review, identified the importance of the maintenance of drainage to ensure a reduction of scale and threat of flooding with a focus on known problem areas.
61. The Flood and Water Management Act 2010 places the Council in a leadership role and gives it greater responsibility for surface water management in particular. The Act reinforces the need to manage flooding holistically and in partnership with public and private partners. The highway authority is identified in the Suffolk's Flood Risk Management Strategy as a "Flood and Risk Management Authority" with responsibility for managing drainage and flood risks on public roads. The highway service needs to ensure that it takes into account the Council's responsibilities under this Act and effectively prioritises activity relative to identified flood risk.
62. The prioritisation process for developing Suffolk's resilient network will require consideration by key business and interest groups and the community to help identify the network of critical routes. This process should also identify services which are essential. These may include:
  - a) Hospitals with accident and emergency departments;
  - b) Police, fire and ambulance stations;
  - c) Bus and railway stations;
  - d) Power stations, key electricity sub-stations, water pumping stations;
  - e) Strategic transport hubs (e.g. the Port of Felixstowe);
  - f) Other key strategic locations such as military bases, fuel depots and salt storage depots (in winter).
63. While under all but the most extreme conditions, the presumption will be to keep the network open, although the closure of some routes for safety could be considered and alternatives planned. Locations where closures could be affected, for public safety, may include:
  - a) Sections of road liable to flood;



- b) Bridges in extreme weather conditions;
  - c) Exposed locations in extreme weather conditions.
64. It is expected that the resilient network would be utilised by the Suffolk Joint Emergency Planning Unit (JEPU) when prioritising planning for reacting to emergency situations.
  65. Following the identification of the network, a more detailed action plan to deliver the network resilience will be undertaken. Detailed cost consideration would need to be undertaken in creating the action plan with the current expectation that it is mainly about prioritisation of work, not the creation of new work.
  66. The development of the action plan will insure that actions are coordinated with neighbouring authorities to ensure that we work together to deliver resilience.
  67. As part of the prioritisation of works, local authorities are expected to make the best use of the most up-to-date forecasting information available.
  68. The Government's 2014 Transport Resilience Review praised the South West Highways Alliance (SWHA), comprising 13 authorities, for its development of methodology for prioritising adaptive actions to build resilience and embedding these within their respective asset management plans. The review panel believed *"it should be further developed and then disseminated so it can be used more widely"*.
  69. The SWHA has developed a Highway Infrastructure Resilience Assessment Modelling (HIRAM) tool in partnership with Climate UK, the Meteorological Office, the Environment Agency and the consultant Wilson Pym and May. The latter was engaged to build the online tool.
  70. The tool enables local authorities to understand what and where the risks are across its assets on its local resilient network, allowing them to better understand the impact on communities and financial impact on businesses when the network is disrupted.
  71. The system recognises the impact of the risks on the economy, communities and businesses and uses this data to assist prioritising where money can be appropriately spent, improving network resilience, supporting existing and future businesses in the area and ensuring that, when putting in measures to improve resilience, consideration is given to both the upfront cost but also the future maintenance cost of such measures.
  72. In the eastern region, the Eastern of England Highway Alliance (EEHA), a coalition of 11 highway authorities, established in 2010 to create a public partnership to improve highways services through performance benchmarking, best practice sharing and fostering innovation. Members make a small annual financial subscription as well as providing staff time to support chosen strands of work.
  73. The EEHA, through its Maintenance Group, recognises the potential of the tool for supporting the management and prioritisation of maintenance works on resilient networks, supporting local and the wider resilience of East Anglia's road network and is considering financially supporting the rollout of the tool to its members. In Suffolk, this tool will help manage the resilient network and support the development of the aforementioned action plan.

74. The Council will take the opportunity to align many of its key maintenance activities to its local resilient network to provide consistency in approach and to ensure that the level of service provided across its highway network is consistent and appropriate to importance and use.
75. The Highways Transformation Programme has undertaken a number of reviews into how the Council's maintenance activities are undertaken, their scope and overall efficiency.
76. The Council provides a winter maintenance treatment for 51% of its road network in certain situations – the combined Priority 1 and Priority 2 routes. This is one of the highest proportions of an authority's network in the country with typical percentages elsewhere in the order of 35%.
77. The Council has recently commissioned a thermal mapping exercise to explore opportunities by which unnecessary salting of the network can be mitigated by understanding the relative road surface temperature on each part of the treated network in a given set of weather conditions.
78. There are, for example, considerable opportunities to reduce the length of network treated on 'marginal' nights. A marginal night is one where road surface temperatures are forecast to be below +1°C, a trigger for the Council to undertake a salting treatment.
79. The forecast received by the Council's winter service decision maker focuses on the coldest parts of the highway network. There are significant parts of the network which, in these marginal situations, will be substantially warmer, particularly in urban areas, and therefore would not require salting as the road surfaces would not be at risk of freezing.
80. This report also identified there has been some 'mission creep', particularly in urban areas where some minor roads have been added to the treated network in response to local pressure. However, these are invariably roads which do not meet the criteria detailed in the Council's Winter Service Plan.
81. There is the opportunity, whilst reviewing the winter salting network, to align this to the local resilient network. This would mean that, during times of severe winter weather, the most important parts of the network to the travelling public and the local economy are provided with suitable levels of service to ensure they are serviceable and available at all times.

### Sources of further information

- a) Appendix A – Draft Highway Infrastructure Asset Management Plan
- b) Cabinet Meeting 10 November 2015, Agenda Item 7, Asset Management Policy and Strategy Cabinet Report
- c) Highway Infrastructure Asset Management Policy  
<https://www.suffolk.gov.uk/roads-and-transport/highway-maintenance/highway-asset-management/>
- d) Highway Infrastructure Asset Management Strategy  
<https://www.suffolk.gov.uk/roads-and-transport/highway-maintenance/highway-asset-management/>
- e) Transport Asset Management Plan (TAMP) 2011  
<https://www.suffolk.gov.uk/roads-and-transport/highway-maintenance/highway-asset-management/>
- f) DfT Transport Resilience Review July 2014  
<https://www.gov.uk/government/publications/transport-resilience-review-recommendations>
- g) Audit Commission - Going the Distance May 2011  
<http://www.lgcplus.com/Journals/3/Files/2011/5/24/AC%20Going%20the%20Distance.pdf>
- h) HMEP Guidance Asset Management Guidance May 2013  
<http://www.highwaysefficiency.org.uk/efficiency-resources/asset-management.html>
- i) Suffolk's Flood and Risk Management Strategy March 2016  
<http://www.greensuffolk.org/assets/Greenest-County/Water--Coast/Suffolk-Flood-Partnership/19431A-Flood-Risk-Management-Strategy-v12.pdf>

