

Cambridgeshire County Council's

Highway Infrastructure Asset Management Plan 2014 - 2024

First Edition
November 2014

Cambridgeshire County Council

Highway Infrastructure Asset Management Plan

CONTENTS

Section	Pages
1.Introduction	1
2.Asset Descriptions	3
3.Data management	6
4.Community requirements and customer communications	12
5.Asset Investment Strategies / Lifecycle Plans	15
6.Financial Summary	19
7.Service Standards (Planned, cyclic and reactive maintenance)	23
8.Future Demands	26
9.Performance Management and Benchmarking	31
10.Risk Management	32
11.Asset Management Planning Practice	36
12.Improvement Plan	36
13.Management of the Plan	38
14.Links to associated documents and references	39
15.Glossary of terms	40
Appendices	
Appendix I - Reactive Maintenance intervention Levels	i
Appendix II – Communications Strategy	v
Appendix III – BCI and RCI Indices	xiv
Appendix IV – Transport Delivery Plan Flow Charts	xv

1. Introduction

- 1.1 This Highway Infrastructure Asset Management Plan (HIAMP) sets out how the maintenance of the public highway asset of Cambridgeshire County Council is to be managed. It brings together the County Council Corporate and [Local Transport Plan \(LTP\)](#) 'goals and objectives and introduces how the principles of asset management will be increasingly used to ensure that the highway service meets the requirements of its users and delivers value for money.
- 1.2 The DfT document '*Gearing up for efficient highway delivery and funding*', published in January 2014 identifies how highway maintenance funding is likely to be allocated in the future. It suggests that authorities who have a highway asset management plan in place, and can demonstrate its use, will be incentivised through a revised highway maintenance block formula. As such this Plan plays an essential role in securing and maximising long term capital funding for the maintenance of Cambridgeshire's Highway network.
- 1.3 This Plan, along with the Highway Asset Management [Policy](#) and [Strategy](#) demonstrates the authority's commitment to Highway Asset Management in an approach that is tailored to Cambridgeshire's needs whilst also adopting national best practice. It outlines a process of continuous improvement year on year, based on clear and detailed recording of progress and performance.
- 1.4 Asset Management can be described simply as a process that demonstrates the prudent stewardship of valuable assets. The adoption of effective asset management signals the beginning of a process of continuous review and improvement in the way Cambridgeshire's highway assets are managed. By looking at all highway assets, a more integrated approach to the asset management is possible and wider consideration can be given to sustainable transport and growth.
- 1.5 Cambridgeshire's highway network is of high value, with a replacement cost in the order of £4 billion. The value of the asset together with how it depreciates will, in the future, need to be considered when funding for highway maintenance is assessed. The highway assets covered by this plan are outlined in Section 2.
- 1.6 The purpose of this Plan is to:
 - Define affordable highway service standards.
 - Publish investment and maintenance strategies for key highway asset groups.
 - Improve the way in which the county's highway are managed and maintained.
 - Enable the delivery of Value for Money through efficient and effective highway service provision.

- 1.7 This Plan is the Council's first HIAMP covering the period 2014 – 2024 and it supersedes the previous Highway Policies and Standards Document that was adopted in 2011. It has been produced in accordance with national guidance provided by the Highway Maintenance Efficiency Programme (HMEP) - 'Highway Infrastructure Asset Management' and 'Prevention and a Better Cure'.



Fig 1: HMEP Guidance documents

- 1.8 This Plan forms Volume 2 of the suite of Highway Management documents covering the development, maintenance and operation of Cambridgeshire's Highway network.

Volume 1 – Highway Policies and Standards

Volume 2 – Highway Infrastructure Asset Management Plan (HIAMP)

Volume 3 – Highway Enforcement

- 1.9 This Plan is a key operational document that is linked intrinsically to other County Council policies and processes. This relationship is illustrated in the Systems Diagram below - which expands on the Framework shown on page 2 of the Highway Asset Management Strategy.

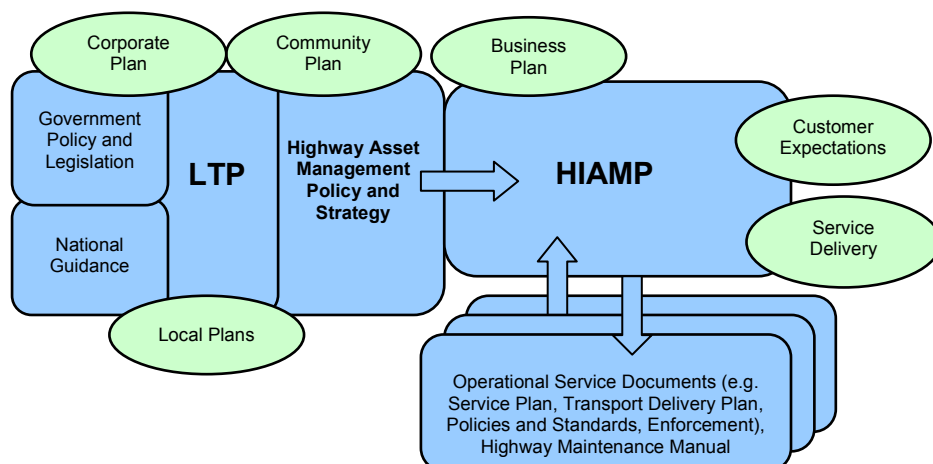


Fig 2: Asset Management Systems Diagram

2. Asset Descriptions

- 2.1 The official records of the overall status and extent of Cambridgeshire's public Highway Asset', is managed within the Assets and Commissioning (AAC) Service.
- 2.2 Within what is classed as 'highway' a series of asset groups are identified, in key which highway assets are given further detail. A summary of the main asset groups covered in this plan is provided in Figure 3 below:

Asset Group	Element	Quantity
Carriageway	A Road(including laybys, bus lanes etc) B Roads C Roads Unclassified Roads (incl. green lanes) Total Fords & causeways Traffic Calming features Road markings (include. anti skid) & studs	453 km 554 km 1141 km 2257 km 4405 km 7 no. * *
Footways and cycleways	Cat 1a Footways Cat 1 Footways Cat 2 Footways Cat 3 Footways Cat 4 Footways(estimate) Total Cycleways	13.1 km 38.3 km 54.2 km 175.0 km 2000.00* 2280 km. - (see Section 12)
Structures	Pedestrian / cycle bridges Road bridges Culverts (over 915 mm - not pipes / drains) Retaining Walls Underpass / subway	298 no. 538 no. 380 no. 43 no. 17 no. 1276 total
Street Lighting	Street Lights Illuminated signs and bollards	56000 no. 5700 no.
Intelligent Transport Systems (ITS)	Variable message signs Vehicle Activated Sign Parking guidance signs RTPI (bus stop displays) Rising Bollards (Cambridge City Centre) CCTV Cameras	42 No.(incl. 2 portable) 340 No. 35 No. 293 No. 21 No. 14 No.
Grassed areas and trees	Highway Trees (All trees within falling distance are collectively termed 'highway trees') Verge length	* *
Traffic Signals	Junctions Crossings Installations	164 198 362
Public rights of way	Surfaced (metaled) Other (natural / arable surface)	768 km 2432km

Asset Group	Element	Quantity
Drainage	Gullies Offlets Headwalls Sustainable Urban Drainage Systems Catch pits, interceptors, inspection chambers Highway carrier drains	107137 no. * 9237 no. " ** ** ** ** **
Street Furniture	Non illuminated signs Non illuminated bollards Grit bins Safety Cameras Pedestrian guardrail Vehicle restraint systems (safety fencing) Weather stations Automatic Traffic Counters	Unlit signs and bollards estimated at 88,000 * 815 No. 35 No (plus one average speed camera installation) * 54,374m 3 No. 63 no.

*Asset Register not complete – being collected during 2014/15

**Drainage asset data being digitised from As Built drawings and drainage surveys - ongoing

Fig3: Summary of Assets Managed

2.3 Assets not covered by this plan

This Plan covers the management of key highway infrastructure assets. This Plan does not cover the following 'transport' related Assets. Some are the responsibility of other authorities or agencies, whilst others are County Council assets that are currently managed outside of the Council's current Highway Services*.

Asset	Responsibility
Guided Busway	County Council's Passenger Transport Service
Street Lighting	Covered by PFI contract with Balfour Beatty
Park and ride sites	County Council's Passenger Transport Service
Car Parks	Multi storey and street level managed by either private company or district council
Street name Plates (owned and managed by district councils)	District Council
Picnic site A10 Brandon Creek	County Council maintains barrier and cuts vegetation
Bus shelters (Parish Council owned)	Parish Council except Drummer Street Bus Station Cambridge which is managed within Passenger Transport Service
Pay and Display parking machines	County Council's Supporting Business and Communities

<p>Motorways and Trunk Roads</p> <p>M11 – A11 to A14 A11– A14 to M11 A428 – A14 to A1 A14 – A11 to Boundary with Northamptonshire near Keyston A1(M)– A1 near Alconbury to Peterborough Boundary North of A15 Norman Cross A1 – A428 to A1(M) near Alconbury A47– Norfolk Boundary near Emneth to Peterborough near Thorney Toll</p>	<p>Highways Agency</p> <p>In Cambridgeshire there is a further 280km of trunk road and motorway network with Highway Agency Areas 8 & 6. The link below provides further information.</p> <p>http://www.highways.gov.uk/our-road-network/managing-our-roads/operating-our-network/how-we-manage-our-roads/area-teams/</p>
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Fig4: Assets not covered by this Plan(* Subject to future review)

2.4 Operation and maintenance – existing arrangements

Existing arrangements for the delivery of Highway Services are outlined in Figure 5 below.

Area of work	Service Delivery
Provision of 'client' services including Asset and Network Management'	In House Team (within LISM and AAC) + partnership with Cambridgeshire Highways
Design and supervision of works	
Routine highway maintenance	Cambridgeshire Highways
Winter Maintenance	
Minor bridge maintenance	
Emergency works	
Localised highway resurfacing & reconstruction	
Signs and road markings	
Gully emptying and drainage	
Grass cutting	
Weed Spraying	
Planting maintenance	
Road and footway Sweeping (safety) Environmental sweeping is carried out by District Councils	
Street Lighting	Balfour Beatty PFI Contract 2011-2036
Traffic signal maintenance (incl VAS)	telent Plc
Carriageways surface treatments	Cambridgeshire Highways and Eastern Highways Alliance(EHA)
Footway Surface treatments	

Area of work	Service Delivery
Major bridge maintenance	Specialist contractors using individual Contracts and including Eastern Highways Alliance (EHA)
Major highway Resurfacing & Reconstruction	
Major Capital Improvements	
Major Revenue works	

Fig 5: Summary of existing Service delivery arrangements

(See sections 2.5 to 2.8 of the Highway Asset Management Strategy for an explanation of AAC and LISM functions within ETE)

3. Data management

3.1 The main purpose of data collection is to provide the County Council with information that helps make decisions on how to spend money. These comprise of three main activities.

- Safety Inspections
- Condition Inspections / Surveys
- Inventory collection.

(Safety inspections are either walked, driven or cycled inspections. Driven Inspections are carried out by 2 people in a slow moving vehicle as outlined in table 4a below)

3.2 Asset data is required to enable the following:

- Effective Management of the Highway Network.
- Assessment of the expected lives of individual assets or asset components.
- The assessment of current and the development of future levels of service.
- The assessment of current and the development of future performance indicators.
- The development of sustainable maintenance options.
- The identification of future investment strategies.
- The development of short, medium and long-term forward works programmes.
- Valuation assessments for each of the assets and the calculation of how they have depreciated in value since they were created.

Once completed, these processes will allow informed and cost effective Asset Management decisions to be made.

3.3 Network Hierarchy

The Councils Highway Network Hierarchy follows the criteria set out in the Code of Practice (CoP) Well Maintained Highways, which has been applied to reflect local needs and priorities. The hierarchies, which are shown in figures 6 a-f form the overarching framework for all data management activities. These were last reviewed in November 2013.

3.4 Safety Inspections

A primary source of information is a formal regime of safety inspections that identify defects and facilitate the ordering of reactive and planned routine maintenance work.

3.5 The frequency and method of these inspections is outlined in the tables below which shows the correlation to the Code of Practice standards. For Structure and Traffic Signals assets inspections are focussed on condition.

- a) All carriageway safety Inspections to be set as frequency in the COP
- b) Footways
- c) Cycleways
- d) Highway Structures
- e) Traffic Signals (incl.VAS)
- f) PROW's

6a) Carriageways				
Category	Hierarchy Description	Type of Road General Description	Description	CCC Inspection frequency and type
1	Motorway	Limited access motorway regulations apply	Routes for fast moving long distance traffic. Fully grade separated and restrictions on use.	Not inspected by CCC – responsibility of Highway Agency
2	Strategic Route	Trunk Roads and some Principal 'A' roads between Primary destinations	Routes for fast moving long distance traffic with little frontage access or pedestrian traffic. Speed limits are usually in excess of 40 mph and there are few junctions. Pedestrian crossings are either segregated or controlled and parked vehicles are generally prohibited.	County Council Roads (non-trunk) are inspected 12 times per year (monthly) – Driven
3a	Main Distributor	Major Urban Network and Inter-Primary Links. Short – medium distance traffic	Routes between Strategic Routes and linking urban centres to the strategic network with limited frontage access. In urban areas speed limits are usually 40 mph or less, parking is restricted at peak times and there are positive measures for pedestrian safety	12 times per year (monthly) – Driven
3b	Secondary Distributor	Classified Road (B and C class) and unclassified urban bus routes carrying local traffic with frontage access and frequent junctions	In rural areas these roads link the larger villages and HGV generators to the Strategic and Main Distributor Network. In built up areas these roads have 30 mph speed limits and very high levels of pedestrian activity with some crossing facilities including zebra crossings. On-street parking is generally unrestricted except for safety reasons.	12 times per year (monthly) – Driven

Category	Hierarchy Description	Type of Road General Description	Description	CCC Inspection frequency and type
4a	Link Road	Roads linking between the Main and Secondary Distributor Network with frontage access and frequent junctions	In rural areas these roads link the smaller villages to the distributor roads. They are of varying width and not always capable of carrying two way traffic. In urban areas they are residential or industrial inter-connecting roads with 30 mph speed limits random pedestrian movements & uncontrolled parking.	3 times a year (3 monthly) - Driven
4b	Local Access Road	Roads serving limited numbers of properties carrying only access traffic.	In rural areas these roads serve small settlements and provide access to individual properties and land. They are often only single lane width and unsuitable for HGV's in urban areas they are often residential loop roads or cul-de-sacs.	Annually (once per year) – Driven
4c	Soft Roads (Green Lanes)	Unmade unclassified.	Exclusively in rural areas carrying mainly agricultural vehicles and pedestrians	No formal inspection regime. Inspected on a reactive basis (standard is that they are passable in a 4 wheel drive vehicle)

6b) Footways

Category	Category Name	Description	CCC Inspection frequency and type
1a	Prestige walking zones	Very busy areas of towns and cities with high public space and street scene contribution	12 times per year (monthly) – walked with associated carriageway inspection
1	Primary Walking routes	Busy urban shopping and business areas and main pedestrian routes.	12 times per year (monthly) – walked with associated carriageway inspection
2	Secondary Walking Routes	Medium usage routes through local areas feeding into primary routes, local shopping centres etc	12 times per year (monthly) – walked with associated carriageway inspection
3	Link Footways	Linking local access footways through urban areas and busy rural footways	Annually (once per year) - Driven with carriageway inspection <i>(this is outside of CoP requirements which states that Cat 3 footways should be inspected twice per year (6 monthly))</i>
4	Local Access Footways	Footways associated with low usage, short estate roads to the main routes and cul-de-sacs.	Annually (once per year) – Driven with carriageway inspection

6c) Cycleways		
Category	Description	CCC Inspection frequency and type
A	Cycle lane forming part of the carriageway, commonly 1.5 metre strip adjacent to the nearside kerb. Cycle gaps at road closure point (no entries allowing cycle access).	Inspected with road at same frequency (Cycleways to be included in the improvement plan - asset data set to be reconciled and category assigned in line with the CoP- see Section 12)
B	Cycle track, a highway route for cyclists not contiguous with the public footway or carriageway. Shared cycle/pedestrian paths, either segregated by a white line or other physical segregation, or un-segregated.	Twice per year (6 monthly) (Cycleways to be included in the improvement plan - asset data set to be reconciled and category assigned in line with the CoP- see Section 12)
C	Cycle trails, leisure routes through open spaces. These are not necessarily the responsibility of the highway authority, but may be maintained by an authority under other powers or duties.	Annually (Once per year - cycled) (Cycleways to be included in the improvement plan - asset data set to be reconciled and category assigned in line with the CoP - see Section 12)

6d) Highway Structures		
Category	Description	CCC Inspection frequency and type
GI	General Inspection of all structures and gantries	Every 2 years
PI	Principal Inspection	Every 6 Years (approx. 200 structures identified) of structures with Technical issues / difficulties

6e) Traffic Signals (Incl. VAS)		
Category	Description	CCC Inspection frequency and type
Periodic Inspection (PI)	Physical condition of the site is checked visually, together with testing all of the electronic signal and communications equipment	Each installation is inspected once per year.

6f) Public Rights of Way		
Category	Description	CCC Inspection frequency and type
Metalled Un-metalled	PROW's surfaced with a bound material Unmade PROW's or those surfaced with an un-bound material	Inspected with adjacent Road / footway (walked) No formal safety inspection. Inspected reactively by PROW Officers.

Fig 6: Inspection frequencies for main asset groups.

3.6 Condition surveys

Condition surveys are used to provide information for the prioritisation of carriageway / footway maintenance schemes and also for performance and benchmarking purposes. They provide key information used to determine the effectiveness of the Asset Management Strategy. Figure 7 below describes the extent of the condition surveys carried out – the coverage of which has been reduced to meet the government's minimum reporting requirements.

Survey Type and description)	Road Description	CCC coverage / frequency
Scanner	A Roads B Roads C Roads	100% of the network in both directions each year 100% of the network in one direction each year 100% of the network in one direction each year
CVI	Unclassified Roads	50% of the network each year
SCRIM	All hierarchy 2 & 3 roads	100% each year
Deflectograph	All hierarchy 2 & 3 roads	Scheme specific as required during development of forward programmes
FNS	All footways	All A,B&C and Huntingdonshire U roads have been surveyed. Remaining U road network being completed during 2014/15. Improvement action to develop new regime of condition assessment to suit local requirements for condition based scheme selection.- see Section 12.

Fig 7: Condition Survey extent and coverage

3.7 Inventory collection

The Council's Highway Management System (Symology's Insight) acts as the Council's Highway Asset register within which all highway inventory data is stored. Outstanding asset data is currently being collected, with the register due to be fully complete by mid-2015.

3.8 Insurance Claims

The number of highway related insurance claims received and repudiated can be a barometer of both network condition and how well the network is being managed. The graphs below show the insurance data over the last 5 years. These items will continue to be monitored through the life of this plan and will be reported within the Annual Status and Options Performance report.

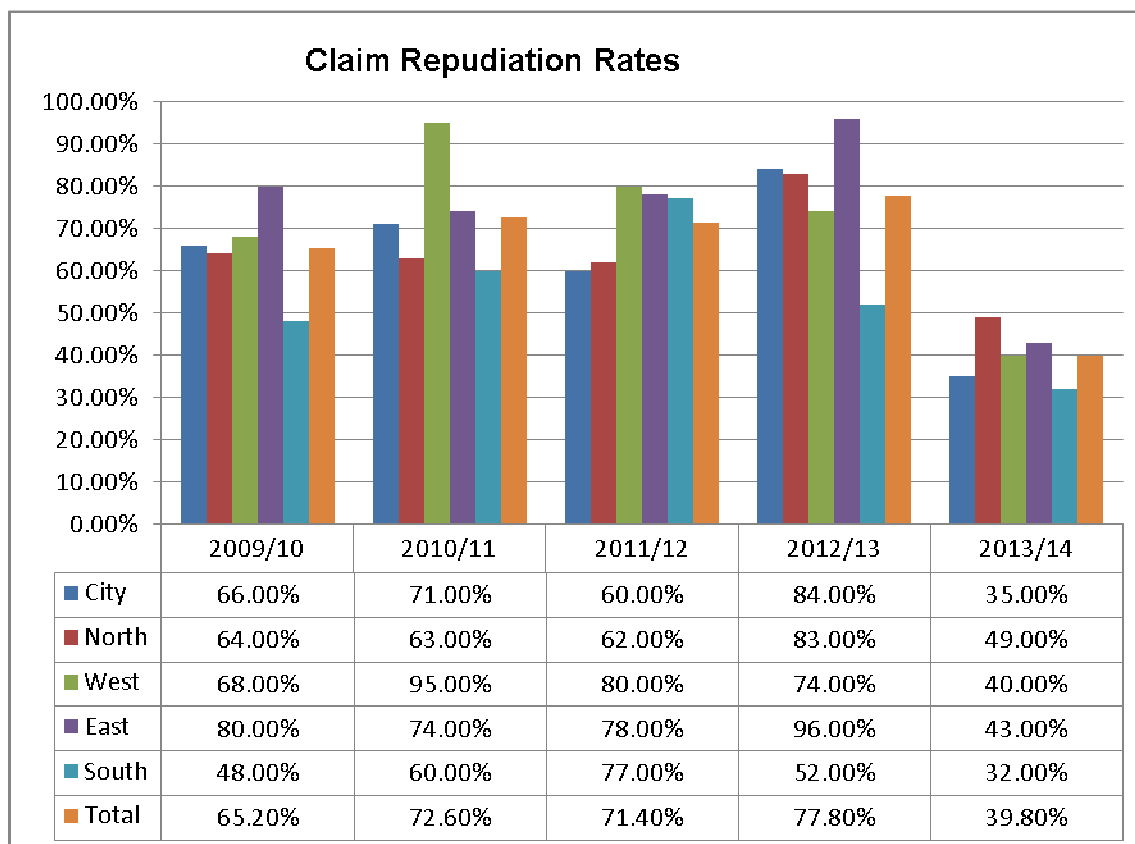
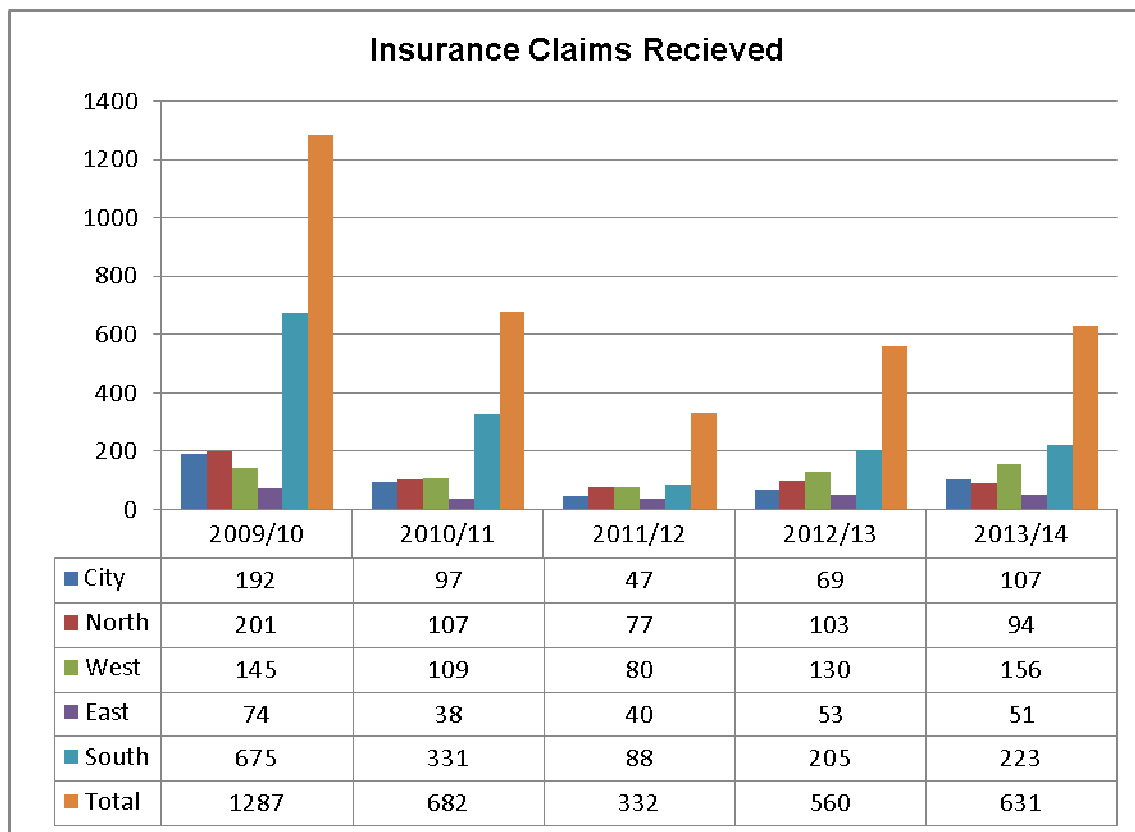


Fig 8: Insurance Claims Received and Repudiated (rejected) 2009 - 2014
(CCC repudiation target 60%)

3.9 Inspector Training

Highway Inspectors are trained to National Highway Inspector Competency Standards as set out in the Code of Practice (Well Maintained Highways) and are registered on National Register of Highway Inspectors. In addition, all Inspectors will attend the Level 1 Tree Inspectors training course (from April 2015). Refresher training for Inspectors is provided as per the CoP.

3.10 Highway Asset Management Training

Key staff within the AAC Service, responsible for the overall management of the HIAMP have attended the Institute of Highway Engineers Highway Asset Management Practitioners Training course (or equivalent). Training for operational staff will be provided on an ongoing basis should new developments / practice be introduced. This is identified in as an Improvement Action within this Plan.

4. Community requirements and customer communications

4.1 This section contains information about community requirements and how they have been identified. It also outlines how ongoing customer communications will take place in relation to highway maintenance activities.

4.2 Customer Priorities

The Council's Highway Asset Management Strategy was produced following analysis of customer derived highway data so that community needs could be built into the strategy and in turn used to inform the development of this plan.

4.3 Customer contacts relating to carriageways dominate the service request statistics that have been received through the Council's Customer Service Centre over the last 5 years (see Figure 9). Analysis of these carriageway service requests shows that over 50% of requests relate to the condition of unclassified roads (Figure 10). These figures support a need to focus future investment towards dealing with carriageways across all hierarchies.

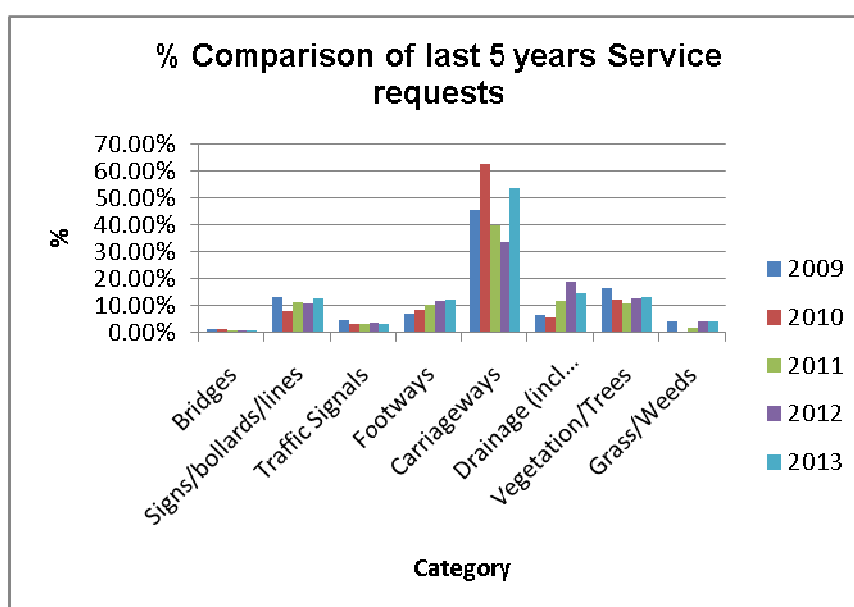


Fig 9: Customer Service Requests by Asset Group 2009-2013

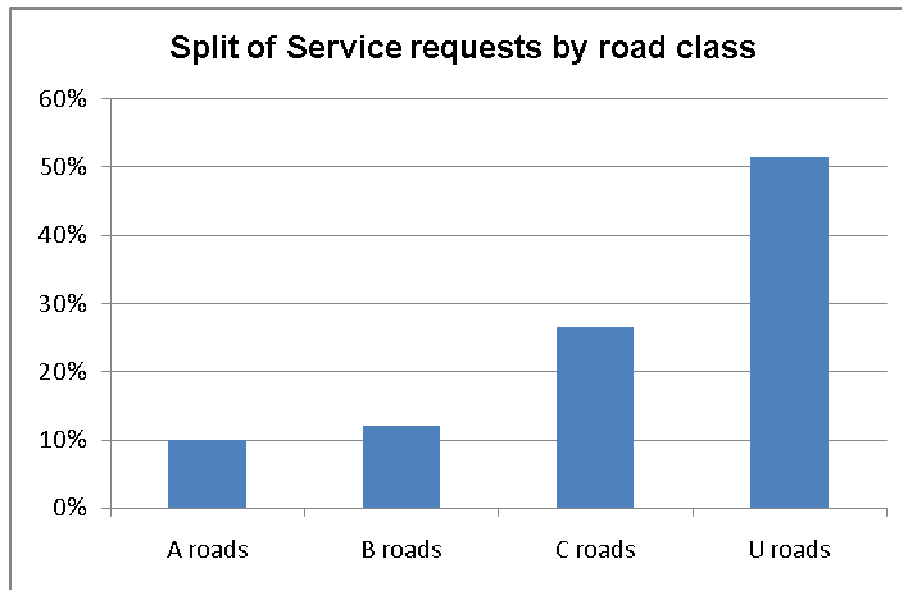


Fig 10:Carriageway Customer Service Requests totals for period 2009-2013

4.4 National Highways and Transportation Survey (NHT)

The Council currently participates in the NHT survey that it uses to gain an understanding of customer priorities and satisfaction, as well as for performance and benchmarking purposes (See Section 9).

- 4.5 The most recent results show “condition of roads” as the item of most importance to respondents (users). – see Fig’ 10. In this latest survey, the item respondents said was in most need of improvement was also the “condition of roads”. – see Fig’ 11.

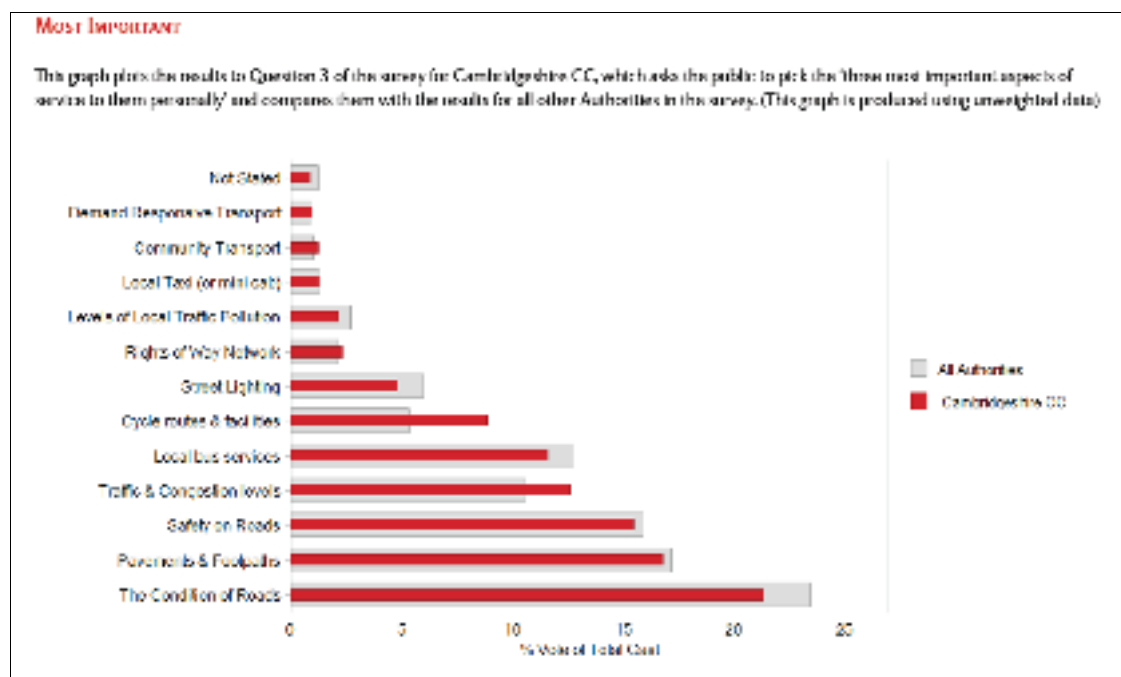


Fig 11:NHT Survey results ‘Most Important’

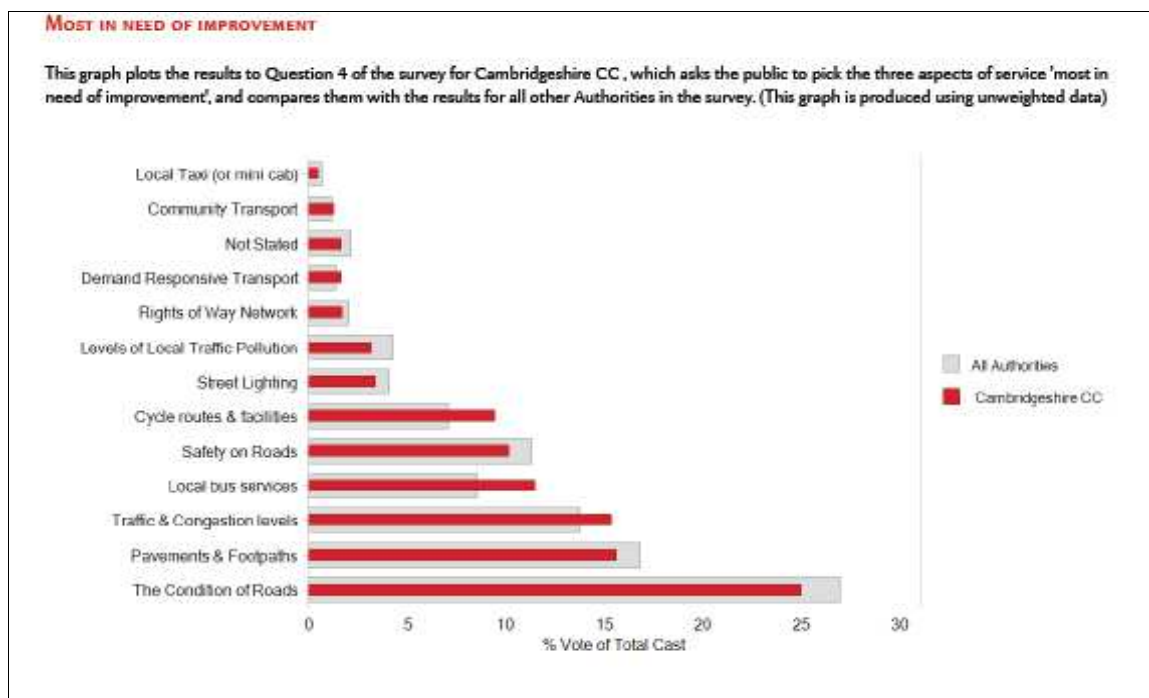


Fig 12:NHT Survey results 'Most in need of Improvement'

- 4.6 It is recognised that other highway subject areas mentioned generated significant levels of interest (in particular pavements, safety on roads). However, this customer derived data supports the need for increased investment in roads (carriageways) upon which the contents of this plan are founded. It also indicates a clear public preference for investment in carriageways ahead of other highway assets.

4.7 Communications

The aspirations of customers are likely to focus on visible and perceived safety related condition, whereas engineering needs will be based on detailed, and often complex, condition surveys coupled with knowledge and experience of how assets behave over time.

- 4.8 It is therefore essential that the County Council de-mystifies any complex engineering based information in a manner that is easily understood by communities. To help with this, a Communication Strategy for Highway Services has been produced and this can be found in Appendix II
- 4.9 Contact from members of the public will be handled in line with Cambridgeshire County Council's corporate standards. The involvement of local members, Spokespersons and relevant the Committee(s) will be in line with the Council's guide for member involvement. In addition to these standards, County Councillors, District / City Councils and Parish / Town Councils will be appropriately informed of work taking place in their area.
- 4.10 In line with the ETE Community Engagement Strategy, there will be a particular focus on:
- Communicating through a variety of channels, including social media

- Being clear about the level of influence stakeholders have
- Being open and make information available
- Using consistent messages
- Managing expectations
- Being digital by design and making use of corporate social media resources and Shape Your Place
- Be available in other formats and languages if required

4.11 In addition, all communications will:

- use Plain English
- be tailored to their target audience
- direct to further resources when appropriate
- be proactive about keeping the public informed about how 'their' money is being spent

5. Asset Investment Strategies

5.1 Prudential Borrowing Strategy

The need to invest in highway maintenance was recognised by the County Council in 2010/11 when a commitment to use prudential borrowing to invest an additional £90m in highways was made. This strategy assumes that the remainder of this funding that has not already been spent will be available – this has been approved by members. The strategy optimises the use of this funding in terms of which assets are invested in and when that investment is made.

5.2 The strategy assumes the funding below:

- Annual LTP Capital Funding for Highways £9.548m*
- Prudential Borrowing (remaining at end of 2014/15) est. £ 41.034m
- Annual Revenue Funding for Highways £ 12,117**

*New Capital Highway Maintenance allocations for 2015/16 to 2020/21 to be announced November 2014 so this figure is subject to change.

** As detailed in the 2015-2020 CCC Business Plan for 2015/16

and it

- Directs all the remaining prudential borrowing monies to carriageways
- Spreads the investment of prudential borrowing over a total of 11 years (8 years in this plan, 3 years already past). This provides significant advantage in terms borrowing costs, greater value in the selection of schemes and delivers a consistent programme level each year.

5.3 Maintenance Strategy

The maintenance strategy is the plan of action required in order to accomplish the specific performance targets for each asset group. The maintenance strategy targets intervention thresholds at or below where maintenance action is to be considered.

- 5.4 A preventative maintenance strategy is adopted for carriageways and footways, involving investing a greater proportion of the available budget to treat assets in the early stages of deterioration, where investigatory action can be considered. This is opposed to a 'worst first' approach which targets investment towards those assets that are at the end of their life and are in a poorer condition, both physically and perceived.
- 5.5 The preventative approach being adopted means that in some cases, roads which appear to be in poor condition might wait longer for repair, while roads which appear of better quality are prevented from getting worse. This HIAMP clearly sets out new and affordable Service Standards in line with this approach.
- 5.6 There will also be changes to seasonal maintenance and the way we respond to Issues reported by the public. For example, grass may be cut less often, white lines may be replaced less frequently and potholes in some locations may be allowed to further deteriorate before they are repaired.
- 5.7 The previous system of maintenance was not affordable and these changes need to be made so that we can keep the county's highway network in the best condition possible within the available resources.
- 5.8 This approach is reflected on the network with an increase to the quantity of surface treatments carried out each year (i.e.: surface dressing), and a decrease in the amount spent on traditional resurfacing - whereby the old surface is completely removed and replaced.
- 5.9 Structures and Traffic Signal Assets will be maintained on the basis of need, within the budgets available. In effect, the assets in the worst condition will be dealt with first.

5.10 Lifecycle Planning

The approach to maintaining the key highway assets takes a whole life costing approach that considers all of the costs associated with the maintenance of an asset until it needs to be fully replaced. Highway assets have lifecycles that include the following phases:

- Creation/Acquisition
- Operation and Maintenance
- Renewal, Replacement or upgrade
- Operation and Maintenance
- Disposal or Decommissioning

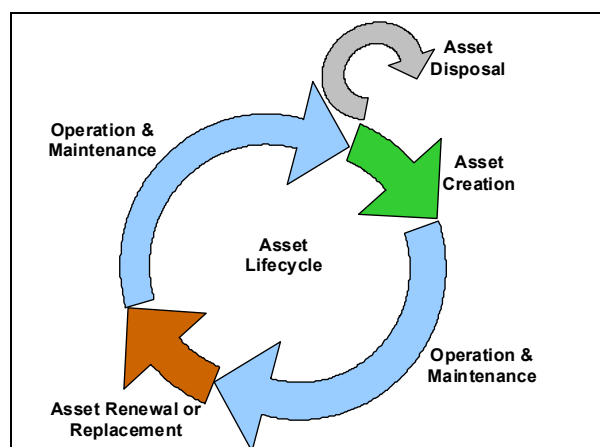


Fig 13: Asset Lifecycle

Consideration of each of these phases for the Council's highway assets will help drive a shift towards longer-term asset management and planning. Such a longer-term approach is a key element of the highway asset management approach.

5.11 Lifecycle Approach through Long Term Cost Prediction (LTCP) Models

In development of the council's Asset Management Strategy, lifecycle planning has been used to consider different treatment options whilst assessing their performance over the lifecycle with consideration to cost, maintenance, Council reputation and inconvenience of the public. For each key asset group the Lifecycle plan is linked directly to the Service Standards that can be found in Section 7.

5.12 Lifecycle Plan Outputs

For each of the key asset groups, LTCP models will be developed showing how they will be managed throughout their Lifecycle. Only Carriageway LTCP models are effective in this edition of the Plan. Work is in place to develop further LTCP models for footway, structures and traffic signals assets.

5.13 Carriageways

The LTCP model for carriageway maintenance allocates investment into 3 broad treatment categories - Strengthening Treatment, Resurfacing Treatment & Surface Treatment. Carriageway funding will be allocated to treatments as determined by the LTCP model with specific sites identified primarily through the Council's Pavement management System. Schemes will be put forward through the Transport Delivery Plan as outlined in Section 11.

5.14 The profile graphs below show carriageway condition predictions up to 2034 based on the funding assumptions made in Section 6. Banding for RCI values are given in Appendix III.

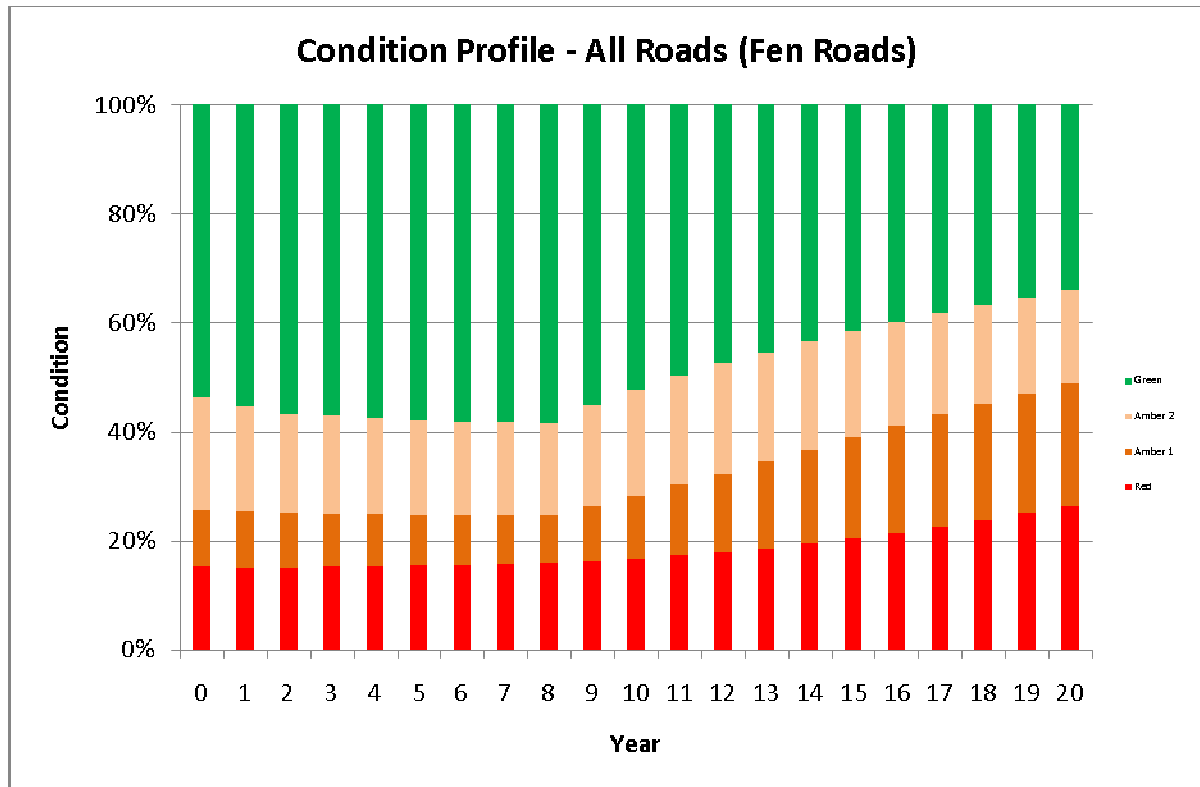


Fig 14:Condition ouput from LTCP Models for Fen Roads

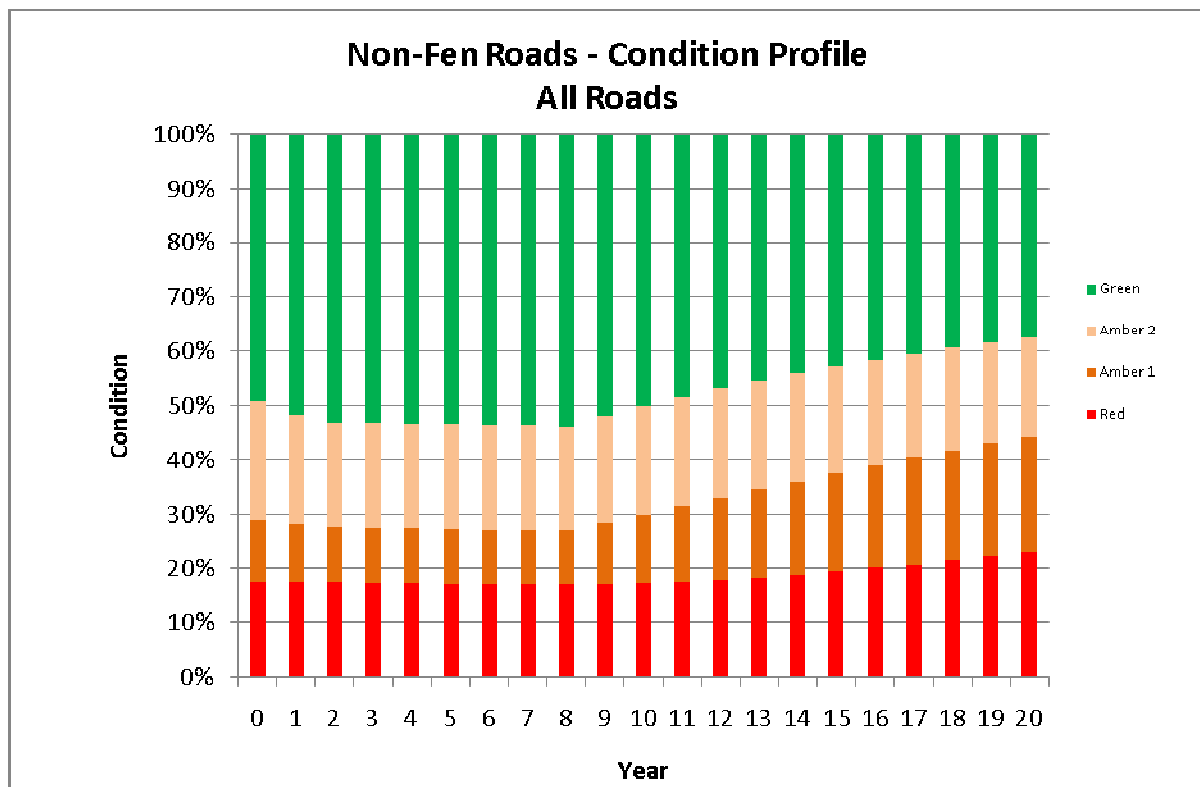


Fig 15:Condition ouput from LTCP Models for Non-Fen Roads

6. Financial Summary

6.1 Funding for highway asset maintenance and improvement can be split into revenue and capital expenditure. It is important to understand what funding streams exist and how they function, in order to be able to present robust business cases for defending existing levels of funding, seeking higher levels of funding or for securing ad-hoc funds as they become available. Bringing levels of service into the development process together with stakeholder interaction, risk management and whole life cost arguments will serve to support ongoing investment decisions.

6.2 Valuation

As at July 2014 Cambridgeshire County Council's Highway Assets is valued as follows. All financial figures within the HIAMP are based on current values and are not discounted or adjusted for inflation.

Asset	Gross Replacement Cost (GRC) £m	Depreciated Replacement Cost (DRC) £m	Annualised Depreciation Cost (ADC) £m	Comments
Carriageways	4,198.6	3,897.0	36.347	ADC Figure from PMS
Footways and Cycleways	266.1	58.2	-	Lifecycle Plans under development – No ADC figures available
Structures	325.4	269.8	-	Lifecycle Plans under development – No ADC figures available
Street Lighting	117.4	69.0	2.9	Assume average 40 year life
Traffic Management (incl. Signals & ITS)	39.0	15.3	2.0	Assume average 20 year life
Street Furniture	28.9	10.8	1.2	Assume average 25 year life
Total	£4,975.4Bn	£4,320.1Bn	£42.447 m	

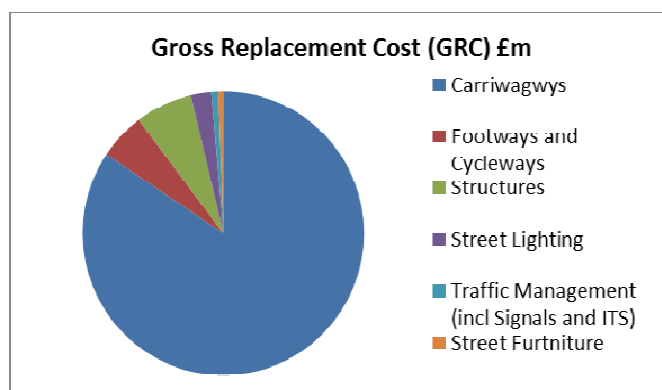


Fig 16: Asset Valuation Figures

6.3 Historical expenditure

The table and graphs below summarise the historical investment on highway assets from April 2008 to March 2014.

		Year					
Asset Group	Budget / works	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14
Carriageways	Revenue (routine & reactive)	5,162	6,238	7,328	6,830	3,937	3,622
	Capital LTP (planned)	7,974	6,916	7,250	9,030	5,700	5,700
	Capital Prudential Borrowing (planned)	0	0	0	0	6,757	10,109
Footways	Revenue (routine & reactive)	1,189	724	1,011	1,331	1,359	1,261
	Capital LTP (planned)	1,261	1,781	747	1,325	1,378	2,032
	Capital Prudential Borrowing (planned)	0	0	0	0	1,000	1,000
Traffic Signals	Energy Costs	126	127	106	163	187	166
	Revenue (routine & reactive)	393	429	487	444	456	522
	Capital LTP (planned)	461	649	870	779	614	559
	Capital Prudential Borrowing (planned)	0	0	0	0	124	1193
Structures	Revenue (routine & reactive)	456	497	512	550	447	486
	Capital LTP (planned)	2,217	2,295	2,915	2,535	2,271	2,485
	Capital Prudential Borrowing (planned)	0	0	0	0	2,532	1,229
Drainage	Revenue (routine & reactive)	660	756	669	736	1,020	1,207
	Capital LTP (planned)	0	0	125	45	1,606	0
Safety Fencing	Revenue (routine & reactive)	61	69	103	217	202	78
	Capital LTP (planned)	0	0	0	0	0	0
Street Furniture Signs and markings	Revenue (routine & reactive)	664	637	780	921	1,023	619
	Capital LTP (planned)	0	0	0	0	0	0
Cyclic (Grass Cutting, Weeds, Gully Emptying)	Revenue	1,576	1,716	1,642	1,259	1,261	971
Winter Maintenance	Revenue	1,905	2,027	2,003	2,076	3,000	1,617
Public Rights of Way	Revenue (routine & reactive)	220	229	240	173	161	202
	Capital LTP (planned)	144	115	148	134	133	137

Asset Group	Budget / works	2008/9	2009/10	2010/11	2011/12	2012/13	2013/14
IHMC and RTP1	Revenue (routine & reactive)	0	0	0	0	110	105
	Capital LTP (planned)	641	829	670	763	598	663
CCC Staff Costs, Surveys, Fees, Inspections etc.	Revenue (routine & reactive)	3,844	4,912	6,436	6,170	4,059	2,897
Highway Service Contractor Overheads	Revenue (routine & reactive)	2,153	2,049	1,561	1,138	904	550
	Capital LTP (planned)	1,911	1,338	1,850	1,714	784	1,013
	Capital Prudential Borrowing (planned)	0	0	0	0	917	986
Income*	To Revenue Budget	-3,961	-4,305	-7,172	-5,047	-2,621	-2,084
Total Revenue		14,448	16,105	15,706	16,961	15,505	12,219
Total Capital (LTP)		14,609	13,923	14,575	16,325	13,084	12,589
Total Capital (PB)		0	0	0	0	11,330	14,517

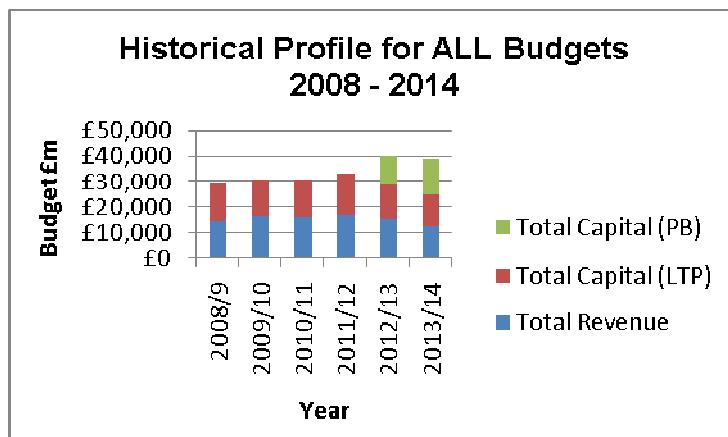
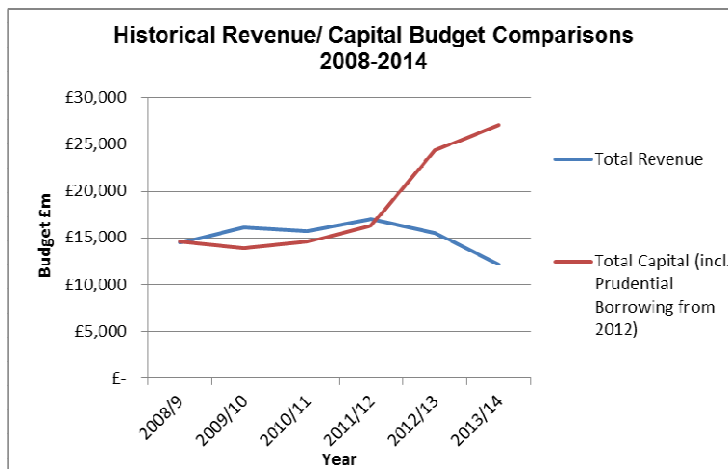


Fig 17: Historical Expenditure Tables and Graphs

6.4 Planned funding and investment

The Service Standards Shown in Section 7 assume the future investment forecasts detailed below in Figure 18. These allocations have been optimised to meet the requirements of the Highway Asset Management Strategy.

		Budget	Anticipated funding (excluding inflation)		Long Term funding assumptions	
Asset Group	Budget / works	2014/15	2015/16	2016/17	Annual Y4 to Y8	Annual Y8 to Y20
Carriageways	Revenue (routine & reactive)	3,450	3,450	3,450	3,450	3,450
	Capital LTP (planned)	5,058	4,700	4,700	4,700	4,700
	Capital Prudential Borrowing(planned)	12,287	6,925	6,000	6,000	0
Footways	Revenue (routine & reactive)	572	572	572	572	572
	Capital LTP (planned)	1,000	1,000	1,000	1,000	1,000
	Capital Prudential Borrowing(planned)	1,022	0	0	0	0
Traffic Signals	Energy Costs	220	175	175	175	175
	Revenue (routine & reactive)	565	565	565	565	565
	Capital LTP (planned)	600	600	640	650	650
	Capital Prudential Borrowing(planned)	750	0	0	0	0
Structures	Revenue (routine & reactive)	501	501	501	501	501
	Capital LTP (planned)	2,248	2,248	2,264	2,264	2,264
	Capital Prudential Borrowing(planned)	2,800	0	0	0	0
Drainage	Revenue (routine & reactive)	988	988	988	988	988
	Capital LTP (planned)	937	1,000	1,000	1,000	1,000
Safety Fencing	Revenue (routine & reactive)	99	99	99	99	99
	Capital LTP (planned)	250	250	250	100	0
Street Furniture Signs and markings	Revenue (routine & reactive)	614	469	469	469	469
	Capital LTP (planned)	0	0	0	0	0
Cyclic (Grass Cutting, Weed Spraying, Gully Emptying)	Revenue	1,092	992	992	992	992
Winter Maintenance	Revenue	2,205	1,455	1,455	1,455	1,455
Public Rights of Way	Revenue (routine & reactive)	153	202	182	182	182
	Capital LTP (planned)	140	144	155	165	165

Asset Group	Budget / works	2014/15	2015/16	2016/17	Y4 to Y8	Y8 to Y20
IHMC and RTPI	Revenue (routine & reactive)	161	161	161	161	161
	Capital LTP (planned)	316	350	365	365	365
CCC Staff Costs, Surveys, Fees, Inspections etc.	Revenue (routine & reactive)	2,944	2,131	2,111	2,111	2,111
Highway Service Contractor Overheads	Revenue (routine & reactive)	360	300	300	300	300
	Capital (planned)	1,916	1,916	1,916	1,916	1,916
Income*	To Revenue Budget	-3,087	tbc	tbc	tbc	tbc
Total Revenue*		12,407	12,117	11,981	11,670	11,864
Total Capital (LTP)		12,149	12,060	12,060	12,060	12,060
Total Capital (PB)		16,859	6,925	6,000	6,000	0

Fig 18: Historical Expenditure Tables and Graphs

7. Service Standards

7.1 This section sets out the primary Service Standards and performance targets that can be expected from Cambridgeshire's Highway Assets.

7.2 The Service Standards:

- Are closely linked with asset condition (both existing and desired) and demand aspirations from both the Council and Customer (what it is expected to deliver now and throughout its life cycle).
- Relate to any number of factors and demands such as quality, quantity, reliability, responsiveness, environmental effect, cost and performance.

7.3 Use of Service Standards

This plan is based on the delivery of affordable Service Standards (based on the funding levels shown in Section 6). The Service Standards will be used:

- To inform customers of the proposed type and level of service to be offered.
- As a focus for the asset management strategy outcomes developed to deliver the required level of service.
- As a measure of the effectiveness of this asset management plan.
- To help identify the value and benefits of the services offered.
- To enable customers to assess suitability and affordability of the services offered.
- To inform members of the levels of service available.

7.4 The prescribed Service Standards are shown in the tables below – Headline Service Standard Statements are shown at the top of each table.

a) We will inspect the carriageway & footway for defects with the busiest routes inspected most frequently.

Service	Measured by	Target Standard
Safety Inspections	Percentage of Safety inspections completed on time within a 5 day tolerance.	80%

b) We will respond to make safe emergency incidents.

Service	Measured by	Target Standard
Emergency Incidents	Percentage of emergency incidents answered within response times*	90%

c) We will repair known defects that meet our repair criteria.

Service	Measured by	Target Standard
Road defects	% of high priority (Cat 1) defects repaired within response times*	Strategic & Main Distributor
		90%
		Secondary Distributor
	% of other defects (Cat 2) repaired within response times*	All other roads
		90%
		90%
Road condition (see Appendix III for RCI bandings)	Percentage of the road network where maintenance should be considered	Strategic & Main Distributor
		90%
		Secondary Distributor
		90%
Skid resistance	Percentage of the skid resistance network at or below the skidding investigatory level (3 year average value)	All other roads
		90%
		A Roads
		7.5%
Footway / cycleway defects	% of high priority (Cat 1) defects made safe within response times*	B Roads
		7.5%
	% of other defects (Cat 2) repaired within response times*	C Roads
		10%
Footway / cycleway defects	% of high priority (Cat 1) defects made safe within response times*	Unclassified Roads
		35%
	% of other defects (Cat 2) repaired within response times*	Primary walking / cycling routes
		90%
Footway / cycleway defects	% of high priority (Cat 1) defects made safe within response times*	Others
		90%
	% of other defects (Cat 2) repaired within response times*	Primary walking / cycling routes
		90%

d) We will maintain safe structures and bridges.

Service	Measured by	Target Standard
Structures and bridges (see Appendix III for BSCI bandings)	Bridge Stock condition Indicator average (see Appendix III for bandings)	80%
	% of bridges in very/severe poor condition	5%
	% of retaining walls in poor/very poor condition	5%
	Number of structures requiring strengthening	100

e) We will maintain a reliable traffic signals network.		
Service	Measured by	Target Standard
Traffic signal faults/defects	% of Category 1 defects made safe within response times**	90%
	% of compliance with fault repair response times for Category 2 defects**	90%
Traffic signal condition	% of traffic signal installation exceeding average expected service life (20 years)	5%

f) We will ensure that the identified gritting routes are treated during periods of snow and ice.		
Service	Measured by	Target Standard
Winter Maintenance	Percentage of the network treated by salting during periods of snow and ice	30% (47% 2014/15)
	Percentage of precautionary road salting completed on time*	100%

g) We will cut the grass on highway verges to maintain visibility.		
Service	Measured by	Target Standard
Cut the grass on highway verges	Number cuts of grass verges and visibility splays (at junctions etc.) per annum	2 (3 in 2014/15)

h) We will empty roadside gullies cyclically.		
Service	Measured by	Target Standard
Empty roadside gullies	Full cycle of gully cleansing per year on the full network (cycle content will be reviewed regularly to ensure work is based on need)	1

Fig 19 a – h: Service Standards Statements, measures and targets

*Time standards may be exceeded by a reasonable period due to unforeseen delays such as adverse weather conditions, emergency road closures, excessive traffic congestion or plant breakdown.

** There is a maximum of 10 days for DNO/IDNO (electricity supplier) administration prior to commencement of the 30 days target.

7.5 Reactive Maintenance Interventions

Achievement of the Council's Asset Management Strategy objectives is reliant on the efficient application of affordable reactive maintenance standards. The interventions have been developed taking into account the need to carry out routine maintenance work in a planned and efficient way, balanced with the need to maintain high levels of highway user safety. These interventions support the right first time principles outlined in the HMEP document - Prevention and a Better Cure.

7.6 Response times

The [Code of Practice](#) defines defects in two categories:

- Category 1 - those that require prompt attention because they represent an immediate or imminent hazard or because there is a risk of short-term structural deterioration
- Category 2 - all other defects.

7.7 The Council's response time categories and timescales are show below:

Type of defect/incident	Timescale	Response
Emergency incidents	up to 2 hours	Attend / make safe
Category 1 excluding potholes (urgent)	up to 36 hours	Make safe or repair
Category 1 potholes (urgent)	up to 5 calendar days	Make safe or repair
Category 2 defects (planned)	up to 12 weeks	Repair during next available programme

Fig 20:Response Timescales

7.8 Where defects with potentially serious consequences for network safety are made safe by means of temporary signing or repair, arrangements will be made for a special inspection regime to ensure the continued integrity of the signing or repair is maintained, until permanent repairs are undertaken.

7.9 The reactive maintenance defect intervention levels shown in Appendix I have been developed using a risk based approach in line with the above response times.

8. Future Demand

8.1 The future usage and demand on the network need to be assessed to allow for the development of this plan to meet future needs, together with the initiation of proposals to seek funding to facilitate these.

The main demands that could become influential are:

- Asset growth.
- Traffic growth
- Population growth
- Legislation Changes
- Changes in Technology
- Climate Change – Environmental conditions

8.2 Asset growth

New development and growth within Cambridgeshire has and will continue to create additional highway assets that ultimately need maintaining and will require future maintenance. Official figures show that asset has grown marginally due to the adoption of new infrastructure.

Year	Carriageway (km)	Footway** (km)	Structures (No.)	Traffic Signal Installations (No.)
2009/10	4327.32	168.39	6	11
2010/11	4321.60*	168.43	13	5
2011/12	4334.30	168.94	3	7
2012/13	4377.57	175.80	1	7
2013/14	4414.23	177.20	1	1 (7 so far in 14/15)

Fig 21: Highway Asset Growth 2009-2014

(*reduction in carriageway length due to reconciliation of asset register over the period, ** does not include cycleways – data set currently incomplete)

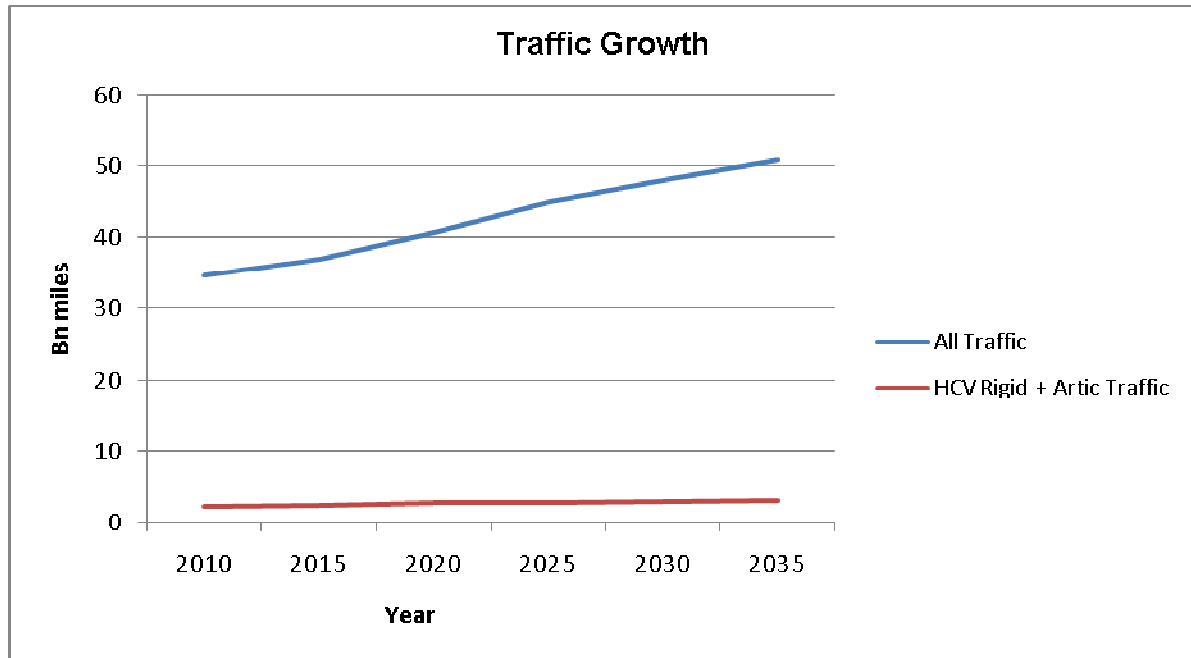
8.3 Traffic growth

Traffic Growth in the County is monitored regularly and is detailed in the Annual Traffic Monitoring Report. The 2013 Report key headlines are:

- The density of HGV traffic on Cambridgeshire's trunk 'A' roads is almost three times the national average, and on non-trunk main roads it is 78% above the national average.
- On the County's principal road network, the greatest growth in traffic over the past ten years has occurred on the A10 (22%)
- Last year there was a 6.9% increase in HGV traffic, although the numbers can fluctuate year on year. There has been a 9% decrease in HGV traffic in Cambridgeshire since 2004. Over the same period the decrease nationally is 14%.

8.4 East of England Forecast Traffic growth

For the East of England, forecast growth in all motor vehicle traffic between 2010 and 2015 is 6.6%, with a forecast growth of 13.6% in HGV traffic over the same 5 year period. Figures for both time periods are shown below.



Year	2010	2015	2020	2025	2030	2035
All Traffic	34.6	36.9	40.6	45	48	50.8
% Increase	-	6.65%	10.03%	10.84%	6.67%	5.83%
HCV Rigid + Artic Traffic	2.2	2.5	2.8	2.9	3.1	3.2
% Increase	-	13.64%	12.00%	3.57%	6.90%	3.23%

Fig 22: East of England Traffic Forecasts for All Traffic and HCV's

Source - <http://www.dft.gov.uk/publications/road-transport-forecasts-2013/>

8.5 Traffic Composition

The composition of traffic is a major factor that influences the rate at which the highway network deteriorates. In Cambridgeshire, this is a particular concern in areas where agricultural activities are prevalent on roads that are effectively 'evolved' and have never been designed to deal with such heavy loads. This accelerated deterioration is of significant concern in the north of the county.

8.6 Population growth

Population in the County is forecast to increase by 22% (from 2010 to 2035 – Office for National Statistics). In order to satisfy this, there will be a need to ensure that the road network and supporting framework will satisfy the increased potential demand.

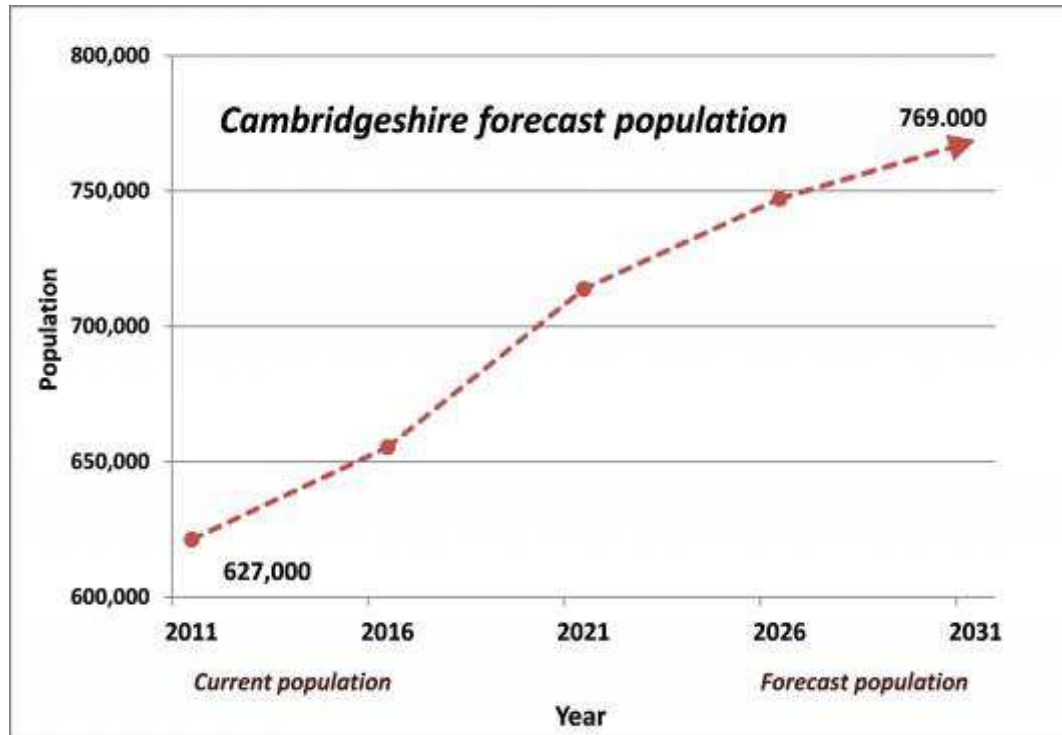


Fig 23: Cambridgeshire Population Forecasts

<http://www.cambridgeshireinsight.org.uk/population-and-demographics/population-forecasts>

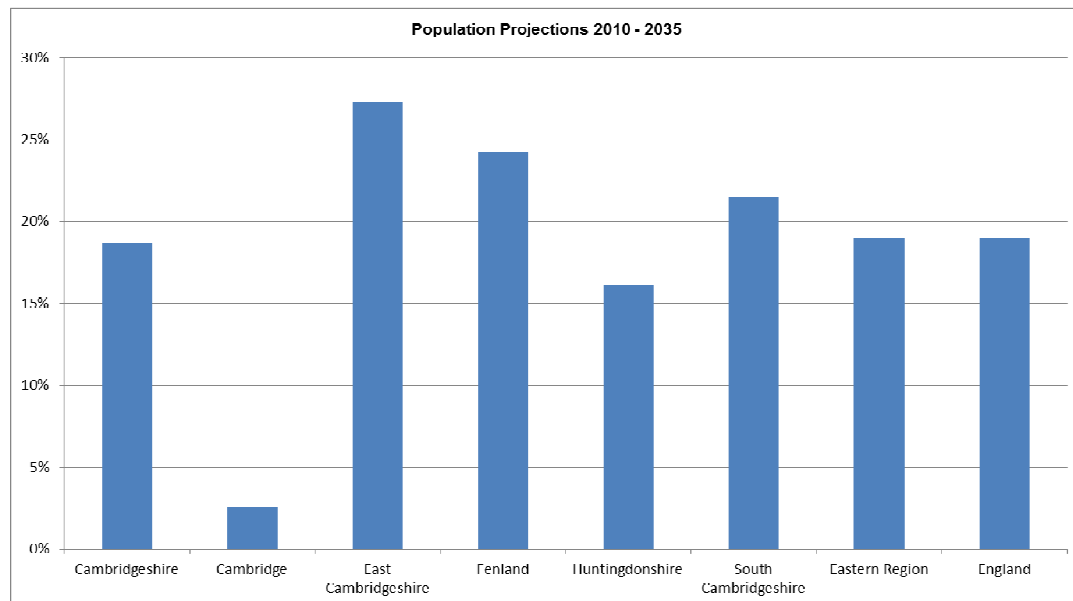


Fig 24: Population Projection comparison graphs

<http://www.ons.gov.uk/ons/publications/re-reference-tables.html?edition=tcm%3A77-335242>

* Local data supplied by Cambridgeshire CC Research Group, England and eastern figures supplied by ONS

8.7 Environmental Conditions

One of the most significant issues that impacts on the condition of Cambridgeshire's carriageway assets is that of 'drought damage'.

Fenland areas have soils which are "susceptible to cyclic shrinkage and swelling". This is exacerbated in periods of unusually high or low rainfall and this movement can aggravate cracking and subsistence along roads in affected areas. This became particularly prevalent during the summer of 2011 which was exceptionally dry and caused widespread damage to the road infrastructure around the north of the county.

- 8.8 The map below shows the areas of the county (in orange) that are at higher risk of 'drought damage'. The strategies for carriageways, along with the associated lifecycle plans, recognise the need to deal with these roads appropriately.

Class of Road	Total Network Length	Susceptible Roads by class (km)	Susceptible Roads by class (%)	% of total road class affected
A	453	112	9	25
B	554	191	15	34
C	1141	316	25	28
U	2257	631	51	28
Total	4405	1250	100	28

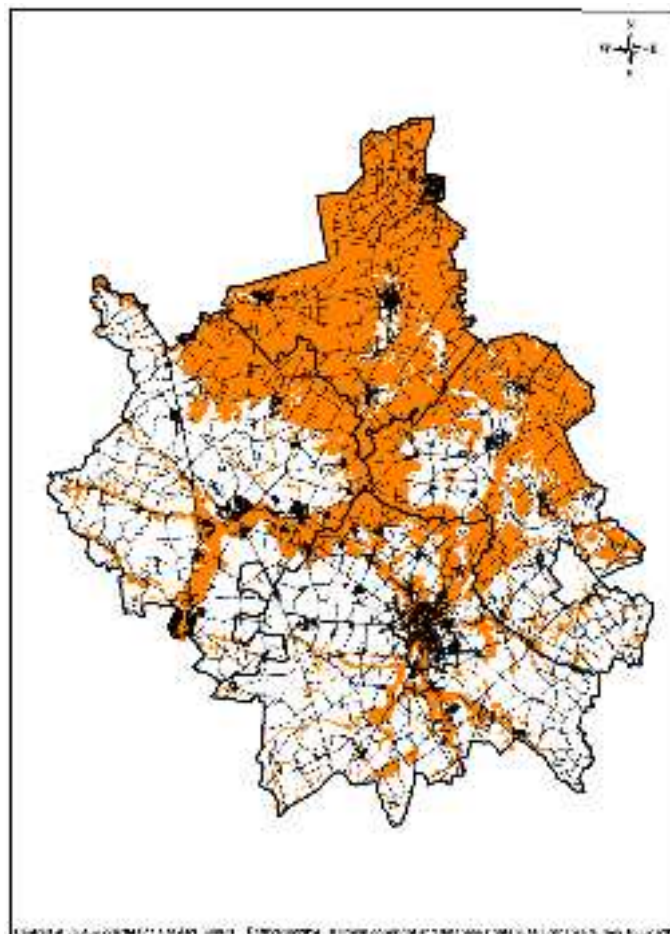


Fig 25: Drought damage (Fen soil) statistics

8.9 Severe weather events

Severe weather events involving extremely wintery or wet will cause increased damage to the highway network. This is likely to be more significant on carriageway assets, through flooding and the impact of ice/snow on the fabric of the road. It is recognised that the funding breakdowns laid out in this plan would need to be reviewed should such an event occur. Flooding events will be managed in conjunction with the Council's Floods and Water Team who manage the Council's obligations as the Lead Local Flood Authority under the Floods and Water Management Act 2010.

9. Performance Management and Benchmarking

9.1 As well as setting standards for highway maintenance this plan outlines a series of baseline statistics for the Council's various assets and activities. This is key information in helping ascertain a baseline position from which future performance can be gauged to help define Value for Money (VfM) going forward.

9.2 Monthly and Annual Performance Reports

Performance reports will be produced on a monthly basis for use by operational teams focussing on local budgetary, customer service and works ordering information - that will help with ongoing performance management.

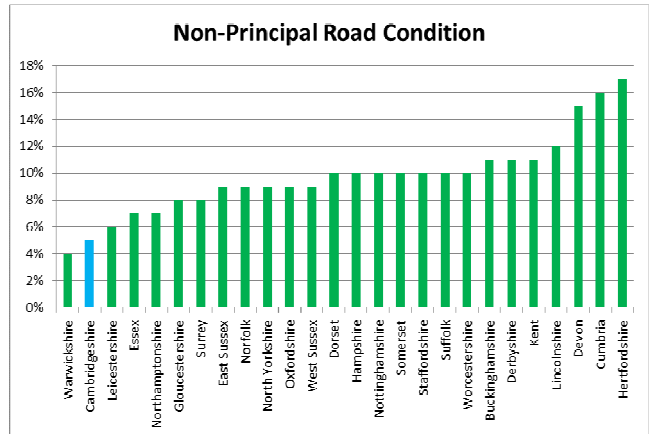
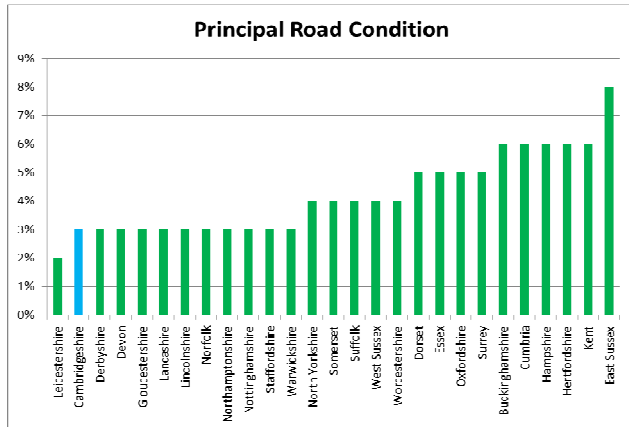
9.3 A Highway Asset Management Annual Performance Report will be produced in August every year. This report will focus on the achievement of the Service Standards set out in this Plan. It will also report on wider contextual service issues in particular customer service / satisfaction, Road Safety and Insurance Claim data. It will also assess the performance of the overall Asset Management Strategy and will make recommendations with regard to any specific changes to any of the asset group strategic options.

9.4 Benchmarking

The County Council recognises the importance of sharing information to support continuous improvement. Benchmarking allows comparisons to be made with other similar authorities - share best practice and performance information and provides a basis to develop local and national best practice.

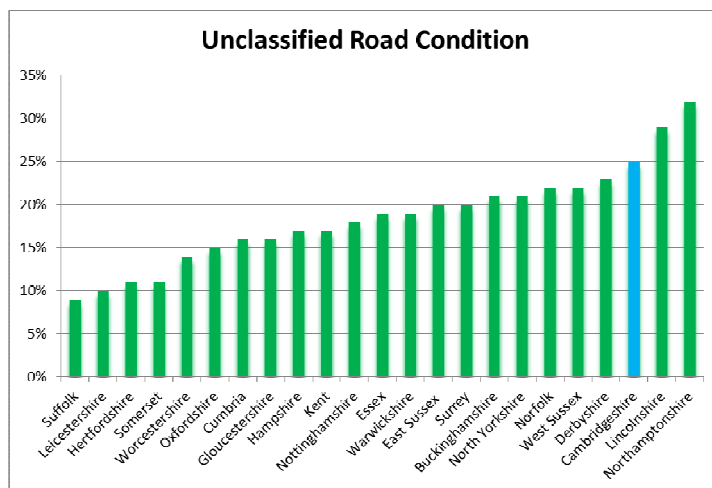
9.5 The council's involvement in benchmarking activities is under continuous review to ensure that they continue to provide the required benefits and value for money.

- NHT Customer Satisfaction survey- Fig' 11 & 12 Section 4. (to be reviewed 2015)
- DfT - Road condition comparisons against Shire authorities - Figures 26a & b.



The graphs show that Cambridgeshire's Principal (A roads/strategic routes) and Non Principal network (other classified roads) are in a good condition when compared to other shire authorities – ranked second best for both categories.

Fig 26a: Principal and Classified Non Principal Road Condition Benchmarking graphs



The condition of unclassified roads does not compare as favourably against other shire authorities, with Cambridgeshire's unclassified road network ranked third worst.

Fig 26b: Unclassified Road Condition Benchmarking graphs

10. Risk Management

10.1 Managing risk is an integral part of the management of the highways assets. All activities from identification and prioritisation of repair of defects, to the establishment of budgets have risks associated with them. This section of the plan outlines main risks and processes that relate to the delivery of the Highway Asset Management Strategy.

10.2 Corporate Risk Management policy and Procedures

The County Council's Risk Management Policy and procedures set out how the authority manages risk corporately and this approach has been applied to the way in which highway assets are managed.

10.3 The delivery of the Highway Asset Management Strategy is an overarching risk that is identified within the Infrastructure Management and Operations (IMO) Directorates Risk Register.

10.4 Risks to this Plan and the Strategy

The key areas that were considered when developing the Highway Asset Management Strategy and this Plan were:

- Need to have contingency should failure of a critical element of a large structure occur.
- The condition of unclassified roads being poorer as compared to other parts of the network and are deteriorating further
- Lack of up to date and incomplete asset register.
- Incomplete footway condition data set.

10.5 This section of the Plan identifies the other high level tactical risks that relate to the delivery of effective highway asset management, the achievement of the Highway Asset Management strategic outcomes and the associated service standards shown in Section 7.

Ref	Plan assumption	Risk	Action if Risk occurs
1.*	The plan is based on operating with reliable IT hardware, Highway Management and Pavement management systems	Failure of systems will impact on ability to identify work at the correct intervention; will prevent works ordering and the effective management of customer service requests.	Adoption of actions as outlined in CCC and Service Provider(s) Business Continuity Plan
2.	The plan assumes that the re commissioning of Highway Services post 2016 will have negligible impact on the delivery of the Asset Management Strategy outcomes	Failure to effectively commission new highway services contract in 2016 or inadequate mobilisation impacts on programme delivery.	Predictions & models will be revised and this plan updated accordingly, should significant impact occur.
3.	The Plan is based upon a non-exceptional winter.	Adverse winter weather will lead to higher levels of defects requiring reactive repair than have been planned for.	Predictions and budget disaggregation within this plan will be revised and updated in the event of abnormal winters.
4.	The Plan is based upon the assumption that no significant 'drought' events occur that impact the network	Drought events lead to higher levels of deterioration in parts of the network founded on 'fen soils' that are susceptible to cyclic shrinkage and swelling	Predictions and budget disaggregation within this plan will be revised and updated in the event of prolonged drought events.

Ref	Plan assumption	Risk	Action if Risk occurs
5.	The Plan is based on the assumption that no significant flood damage occurs on the network	Flooding will lead to higher levels of defects requiring reactive repair than have been planned for. Significant events could lead to the failure of key assets.	Predictions and budget disaggregation within this plan will be revised and updated in the event of significant flood damage.
6.	The Plan assumes available budgets as shown in section 6	External pressures may mean that funding reductions are applied to highway services	Service Standards will be revised and revised to affordable levels.
7.*	The Plan assumes that Construction inflation will remain at a similar level to the last 5 years.	Construction inflation will increase the cost of works and an adverse rise will impact on the quantity of work that needs to be delivered to meet the required service standards.	<ul style="list-style-type: none"> - Service Standards will be reviewed and revised to affordable levels. - Review of supply chain management, procurement arrangements and more sustainable practices by the Service Provider
8.	The Plan assumes that any increase in assets will be matched by sufficient additional maintenance funding being provided	Increase of new development through the growth agenda. A14 improvement scheme will result in increased assets to maintain.	<ul style="list-style-type: none"> - Commuted sums obtained where appropriate. - Budgets and predictions will be revised and this plan updated accordingly.
9.	Deterioration rates and levels of defects are based on current data which for some assets (footways) is limited	Assets deteriorate more rapidly than has been predicted resulting in insufficient levels of investment.	Levels of planned and reactive maintenance to be revised accordingly.
10.	The Plan assumes that resources will be available to implement improvement actions	Pressures on resources mean that HIAMP improvement actions cannot be supported resulting in failure to achieve required efficiencies.	Target dates for Improvement Actions will be revised and reported formally within the Annual Performance Report

Fig 27: Table of Risks

10.6 Cambridgeshire Highways Risk Register

The risks identified with an * are identified within the Cambridgeshire Highways Risk register. This register also contains a series of wider contractual / operational risks that relate to the provision of highway maintenance services by the current service provider.

10.7 Comparative Risk

The Council approach to highway asset management is centred around implementing (and funding) a preventative approach to carriageway maintenance. In order to deliver this a 'comparative risk' approach has been applied to other key assets, namely footways, traffic signals and structures. This approach supports the process of scheme appraisal and selection by assisting with the assessment of:

- The comparative risks of providing differing levels of service, e.g. is it acceptable to fund only a minimum (Fair) level of service for a certain asset group i.e. a repair when broken (reactive) approach.
- The comparative risk of funding works on different assets, e.g. is it better to fund works on carriageways as opposed to structures?
- The comparative risk of funding improvements to the network as opposed to maintenance works, e.g. is it better to provide additional speed control facilities or to increase response time to certain defects?

10.8 The overall strategy is based upon the following general funding assumptions as predicted in 2014. Should changes to the funding available be made this will have an impact on the strategic outcomes and a review of the long term objectives would be required (see monitoring and reporting Section 9)

- **Carriageways** ↗ Funding increased: - to reflect desire to prevent on-going deterioration and increasing reactive repair needs
- **Footways/Cycleways** ↘ Funding reduced: - sufficient funding retained to improve condition of high use assets and to manage remaining footways in a similar condition to current by using an increased amount of preventative treatments
- **Structures** ↘ Funding reduced: - sufficient funding retained to fund works on priority structures. Structures that require future strengthening to be monitored in the short term to enable an extension of the strengthening programme
- **Traffic Signals** ↘ Funding reduced: - sufficient funding retained to allow works on priority junctions and crossings

10.9 Application of risk to defect interventions

The identification of Highway defects will be managed on the basis of risk to ensure the most cost effective and affordable use of funding. Any potential defect for which the defect intervention level is reached or exceeded is to be identified as a risk. This approach takes into account the type and nature of a particular defect along with its location on the network.

10.10 The intervention levels support the preventative approach that is promoted within the Highway Asset Management Strategy, which relies on the principles of 'right first time' being applied in a planned and effective way.

10.11 The reactive maintenance intervention levels are shown in Appendix I.

11. Asset Management Planning Practice

11.1 This Section outlines the key activities that are in place to help deliver the elements of this plan and in turn the overall strategy.

11.2 Forward Works Programme – The Transport Delivery Plan (TDP)

The County Council's forward works programme is the Transport Delivery Plan. From 2015/16 it will be a 3 year programme that contains all Capital maintenance and improvement schemes, thereby acting as an Implementation Plan for the LTP. Maintenance Schemes will be selected based on their condition in order to help deliver the outcomes out the Asset Management Strategy. The processes that govern how maintenance schemes are selected for the TDP are shown in Appendix IV. The TDP is approved annually by Members and is subject to confirmation of need and the available resources.

11.3 District Highways Fund

In order to help provide a more efficient and responsive local highway maintenance service, the TDP will allocate a nominal proportion of the Capital Maintenance budget that is to be managed within each geographical highways area. This funding is specifically for highway maintenance work and will be used for small scale works and importantly on sites that support the delivery of the Highway Asset Management strategic outcomes. The level of funding provided to this fund will be reviewed annually with expenditure monitored to ensure value for money.

11.4 Local Highways Initiatives

The Local Highways Improvement initiative allows local communities to apply for up to £10,000 as a contribution to a capital highways project. These may be improvement or maintenance schemes. To be eligible they will supply at least 10% of the overall cost. These projects need the support of local Parish/Town Councils and where appropriate they will need to meet (not contravene) the principles of the Asset Management Strategy and supporting policies.

11.5 Annual review of Options and Asset Investment Strategies

An important part of ongoing Asset Management is the monitoring of the performance of the strategy as outlined in Section 9.3.

11.6 Highway Services

Performance of the Highway Services(s) will be regularly monitored and reported upon in order to ensure that the contract is delivering Value for Money and is supporting the objectives of the County Councils Highway Asset Management approach.

11.7 The commissioning of future Highway Services in Cambridgeshire will be built around the principles of Asset Management and achieving the best long term outcomes for the highway network and for the people of Cambridgeshire.

12. Improvement Plan

12.1 The County Council's approach to Highway Asset management and the development of its Policy, Strategy and this Plan have been done in line with recommendations outlined within the HMEP Highway Infrastructure Asset Management Guidance document.

12.2 Improvement Actions

This Plan has been produced to be a catalyst for driving improvements and efficiencies in the way highway maintenance activities are carried out in Cambridgeshire. Whilst specific benefits are being targeted there are ongoing improvement actions that are required to help realise and optimise these benefits.

- 12.3 Some of these actions are necessary to maximise the asset management approach and may have impacts on business processes and/or the authority's culture. As such, some of these measures may take considerable time to implement before reaping the benefits. Therefore, with this in mind it is important to appreciate that Asset Management is extensively to provide 'long term wins'.

12.4 List of Improvement actions

The initial improvement actions to support the continuous improvement of the County Councils Highway Asset Management approach have been identified and these are listed in figure 28 below:

Item ref	Description	Purpose	Target Date
1.	Cycleways asset reconciliation and application of hierarchy as per Well Maintained Highways CoP	To allow effective budget disaggregation and lifecycle planning for cycleway assets	End March 2015
2.	Traffic Signals Asset Fault Management system	To maximise efficiencies of traffic signal reactive maintenance	End March 2015
3.	Operational Staff Training HIAMP and Asset Management Foundation	To ensure that HIAMP requirements are delivered effectively	End March 2015
4.	Asset Register gaps -inventory collection	To provide a complete asset register that supports future decision making	End March 2015
5.	Carriageway Construction history record updates	To support the delivery of schemes and the selection of maintenance interventions	End 2015
6.	Footway Condition surveys, complete U road coverage and development of new assessment processes	To provide full set of baseline data and to develop future process that is fit for purpose	End March 2015
7.	Improvements to Highway Fault Reporting (HFR) System	To ensure that customer reports from all sources are dealt with constantly and effectively	End 2015
8.	Update of CCC Highways Web pages	To ensure that the website clearly communicates changes deriving from the HIAMP	End March 2015
9.	Lifecycle plans for footways / cycleways, traffic signals and structures	To facilitate effective budget disaggregation, lifecycle planning and scheme selection	End 2015
10.	Develop new Budget Model for annual disaggregation of maintenance budgets	To provide a robust and transparent process for highway budget allocations	End March 2015
11	Roll out new programme of options for planned pothole repairs using innovative/ alternative techniques	To ensure that an effective suite of options is available for Local staff – no one size fits all	End March 2015
12.	Benchmarking development. Review current practices in light if HMEP developments with NHT CQC	To ensure that Benchmarking activities are cost effective and fit for purpose	End March 2015

13.	Produce Highway Maintenance Manual	To provide effective guidance material for operational; staff.	End March 2015
14.	Surface Treatment Training	To assist operational staff in the identification and selection of sites for surface treatment.	End June 2015
15.	Review current business processes in light of asset management practice to see where further improvements can be made	To ensure that wider operational processes are aligned effectively to the asset management approach.	End 2015

Fig 28: Table of Improvement Actions

13. Management of the Plan

13.1 Responsibilities

The table below (figure 29) show the key officers who have ultimate responsibility for the delivery of the HIAMP.

Plan element	Main Council Position(s) Responsible
HIAMP Document	- Asset Manager Strategy
HIAMP implementation and improvements	- Asset Manager Strategy - Asset Planning Manager
HIAMP document updating and reporting	- Asset Planning Manager
Finance and Valuation	- Asset Manager Strategy - Asset Planning Manager
HIAMP Data	- Asset Planning Manager
HIAMP Risk	- Head of Assets and Commissioning - Asset Manager Strategy
Delivery of Lifecycle Plan outputs (Carriageway, Footway, Traffic Signals, Structures)	- Head of Local Infrastructure and Street Management - Signals and Systems Manager - Highways Manager Local Infrastructure and Streets - Service Manager Local Projects - Network Manager
Monthly Performance Reports	- Asset Systems Manager
Annual Options and Performance Report	- Asset Manager Strategy - Asset Planning Manager
Communication Strategy	- Head of Local Infrastructure and Street Management - Head of Assets and Commissioning - Asset Manager Strategy
Highway Asset Management Policy and Strategy	- Head of Assets and Commissioning - Asset Manager Strategy

Fig 29: Responsibilities for Highway Asset Management Activities

14. Links to associated documents and references

The following documents are key components of the County Councils approach to Highway Asset Management and have direct links to this Plan

- a) **Cambridgeshire County Council's Highway Asset Management Policy.**The Highway Asset Management Policy describes the principles adopted in applying asset management and how they link to the Council's Corporate and LTP Objectives.
- b) **Cambridgeshire County Council's Highway Asset Management Strategy.**Sets out the strategy of how highway infrastructure asset management is to be delivered.
- c) **Cambridgeshire County Council's Transport Delivery Plan.**The County Councils Forward Programme of Capital Maintenance and Improvement Schemes (3 Year)
- d) **Cambridgeshire County Council's 3rd Local Transport Plan.**The Council's high level plan that contains details of the improvement and maintenance priorities for transport within Cambridgeshire
- e) **Cambridgeshire County Council's Winter Maintenance Plan.**The Winter Maintenance Plan documents how the Winter Service will be delivered and shows which parts of the network will be treated.
- f) **Cambridgeshire Highways Business Plan and Risk Register.**Used to manage and monitor the performance of the Highway Services Contract.The business plan lays out a programme of further developments for improvements to highway service delivery.
- g) **Cambridgeshire County Council's Highway Asset Management annual status & option report.**Annual report that assesses and evaluates the overall performance of the authority's approach to Highway Asset Management Strategy.
- h) **Cambridgeshire County Council's Rights of Way Improvement Plan.**A document covering the whole of Cambridgeshire, setting out how the authority intends to improve the management, provision and promotion of public rights of way in the county.
- i) **Well Maintained Highways.**National Code of Practice for Highway Maintenance and management
- j) **Cambridgeshire's Local Flood Risk Management Strategy.**Produced by the County Council as the Lead Local Flood Authority for Cambridgeshire (LLFA). Focuses on local flood risk from surface water (incl. highway surface water), groundwater and ordinary watercourses, and identifies the responsibilities for flooding within the county and enables a range of organisations to work together to improve the management of flood risk.

- k) **Cambridgeshire County Council's Traffic Monitoring Report 2013.** Annual report that publishes The results of the Traffic census and further information are published

15. Glossary

Terminology	Definition
AAC	The County Council's Assets and Commissioning Service
AC	Accumulated Consumption
ADEPT	Association of Directors of Environment, Economy, Planning and Transport (formerly County Surveyors Society -CSS)
Asset Management	A strategic approach that identifies the optimal allocation of resources for the management, operation, preservation and enhancement of the highway infrastructure to meet the needs of current and future customers
Asset Management Regime	Comprises the organisational structure and business processes, asset management planning and work planning and information management and systems that enable asset management to be effectively planned and delivered
Asset Management System	The hardware and software that supports Asset Management practices and processes.Used to store the asset data and information
Asset Valuation	The procedure used to calculate the asset value
Authority	A collective term used to refer to the asset owner
Backlog	The monetary value of work required to close the gap between the current performance provided by an asset and the required performance.Where the required performance is defined nationally and may be lower than some locally set performance targets
BCI	Bridge Condition Indices – Indicator used to assess the condition of Highway structures
BVPI	Best Value Performance Indicator
Cambridgeshire Highways	The partnership between Cambridgeshire County Council and Skanska delivering Highway Services on behalf of the county Council
Council or County Council or CCC	Cambridgeshire County Council
CHART	Computerised Highway Assessment of Ratings and Treatment
CIPFA	Chartered Institute of Public Finance and Accountancy
CNS	Coarse Network Surveys
Control	An action to minimise the negative risk

Terminology	Definition
CROW	Countryside and Rights of Way Act 2000
CVI	Coarse Visual Inspection
Data	Numbers, words, symbols, pictures, etc.without context or meaning, i.e.data in a raw format.
DCD	Data Capture Devices
Deflectograph	Machine survey that measures the deflection of a pavement, determining its structural condition
DfT	Department for Transport
DRC	Depreciated Replacement Cost
DVI	Detailed Visual Inspection
EHA	Eastern Highways Alliance
FNS	Footway Network Survey
Symology	Supplier of Cambridgeshire County Council's Computer Based Highway Management System
GAAP	Generally Accepted Accounting Practice
GIS	Geographical Information System
GPS	Global Positioning System
GRC	Gross Replacement Cost
HAMS	Highway Asset Management Strategy
HIAMP	Highway Infrastructure Asset Management Plan - A plan for managing the transport asset base over a period of time in order to deliver agreed target Levels of Service, in the most cost effective manner.
Highway Network	Collective term for publicly maintained facilities laid out for all types of user, and for the purpose of this guidance includes, but is not restricted to, roads, streets, footways, footpaths and cycle routes.
HMEP	Highway Maintenance Efficiency Programme
HMS	Highway Management System (County Council's is Symology's Insight)
HRA	Hot Rolled Asphalt
IHMC	Integrated Highway management Centre
IMO	The County Council's Infrastructure management and Operations Directorate
IWP	Integrated Forward Works Programme
KPI	Key Performance Indicator
LA	Local Authority

Terminology	Definition
LISM	The County Council's Local Infrastructure and Street Management Service
Service Standards	A statement of the performance of the asset in terms that the stakeholder can understand. They cover the condition of the asset and non-condition related demand aspirations, i.e. a representation of how the asset is performing in terms of both delivering the service to stakeholder and maintaining its physical integrity at an appropriate level. Service Standards typically cover condition, availability, accessibility, capacity, amenity, safety, environmental impact and social equity.
Lifecycle Plan	A considered strategy for managing an asset, or group of similar assets, from conception construction (planning and design) to disposal. A lifecycle plan should give due consideration to minimising costs and providing the required performance.
LTP	Local Transport Plan
Maintenance	A collective term used to describe all the activities and operations undertaken to manage and maintain highway assets, e.g. inspection, assessment, renewal, upgrade etc.
Maintenance Strategy	The overarching approach to maintenance that is aimed at delivering the overall Asset Management Strategy and associated performance targets.
Monitoring	Observation or measurement repeated periodically or continuously over time.
Need (or maintenance need)	Maintenance need required of an asset to improve its performance.
NI	National Indicators
OSGR	Ordnance Survey Grid Reference
Owner	A collective term used to refer to any owner of a highway asset, i.e. highway authorities and other owners. Also see authority.
PAS55-1 (and 2)	Publicly Available Specification 55-1 (and 2)
PMS	Pavement Management System (County Council's is WDM)
Performance	A term used to describe the service delivered as measured by a series of levels of service. It comprises of both condition and non-condition measures (i.e. safety, accessibility, etc).
Performance Measure	A generic term used to describe a measure or indicator that reflects the performance and/or condition of an asset, e.g. Best Value Performance Indicators.
PROW	Public Right of Way
RCI	Road Condition Index – used to assess road condition
Residual Risk	Remaining risk after implementation of risk treatment or control

Terminology	Definition
Reconstruction	Surfacing technique that replaces all layers of a road / footway
Resurfacing	Surfacing technique that replaces the top layer of a road / footway
Risk	Chance of something happening that will impact on objectives
Risk Assessment	The process of risk identification, risk analysis and risk evaluation
Risk Evaluation	Comparison of the risk score against the risk tolerance
Risk Identification	The process of determining what, where, when, how and why something could happen
Risk Management	The chance of something happening which will have an impact on corporate, departmental, tactical, operational or project objectives
Risk Reduction	Action taken to lessen the likelihood, negative consequence or both
ROW	Rights of Way
ROWIP	Rights of Way Improvement Plan
RTPI	Real Time Passenger Information
SCANNER	Surface Condition Assessment of the National Network of Roads
SCRIM	Sideway-force Coefficient Routine Investigation Machine
Stakeholder	An individual, group, body or organisation with a vested interest in the management of the transport network, e.g. authority/owner, public, users, community, customers, shareholders and businesses.
SUDS	Sustainable Drainage System
Surface Treatment	Preventative surfacing that prolongs the life of a road / footway. (surface dressing, slurry seals, micro asphalts, asphalt rejuvenators)
Treatment Option	A possible treatment type that can be used for the maintenance of an asset.
UKPMS	United Kingdom Pavement Management System
Value Engineering	Development of optimal solutions for prioritised maintenance needs using option appraisal, whole life costing, scheme development, and synergies with other highway schemes.
Value Management	Assessment and prioritisation of identified maintenance needs.
WGA	Whole Government Accounts
Whole Life Cost	Total cost of the asset over the term of its life including planning, design, construction, acquisition, operation, maintenance, rehabilitation and disposal.
Workbank	All outstanding routine maintenance work that currently exists on the network that is held on the HMS.

Appendices

Appendix I - Reactive Maintenance intervention Levels

Appendix II – Communications Strategy

Appendix III – BCI and RCI Indices

Appendix IV – Transport Delivery Plan Flow Charts

Appendix I

Reactive Maintenance Interventionlevels

Item		Defect	Category 1 defects	Response times	Category 2 defects	Response times
Carriageway	Strategic and Main Distributor	Pothole/spalling	40mm	5 days	20mm depth (75mm across in any horizontal direction)	12 weeks
		Gap/crack	40mm	5 days	20mm depth (>20mm width)	12 weeks
		Ridge, Hump around Depression/sunken cover	40mm	5 days	20mm depth	12 weeks
		Surface Crowning	75mm high and less than 300mm wide	5 days		N/A
	Secondary Distributor	Pothole/spalling	50mm	5 days	40mm depth (75mm across in any horizontal direction)	12 weeks
		Gap/crack	50mm	5 days	40mm depth (>20mm width)	12weeks
		Ridge, Hump around Depression/sunken cover	50mm	5 days	40mm	12 weeks
		Surface Crowning	75mm high and less than 300mm wide	5 days	Do nothing	Do nothing
	All other roads	Pothole/spalling	50mm depth (75mm across in any horizontal direction)	5 days	Do nothing	Do nothing
		Gap/crack	50mmdepth (> 20mm width)	5 days	Do nothing	Do nothing
		Ridge, Hump around Depression/sunken cover	greater than 50mm	5 days	Do nothing	Do nothing
		Surface Crowning	75mm high and less than 300mm wide	5 days	Do nothing	Do nothing
Cycleway	Strategic and Main Distributor	Pothole/spalling	40mm high/deep	5 days	20mm depth (75mm across in any horizontal direction)	12 weeks
		Gap/crack	40mm high/deep	5 days	20mm (>20mm width)	12 weeks
		Ridge, Hump around Depression/sunken cover	40mm high/deep	5 days	20mm	12 weeks
	Secondary Distributor	Pothole/spalling	40mm high/deep	5 days	20mm depth (75mm across in any horizontal direction)	12 weeks
		Gap/crack	40mm high/deep	5 days	20mm (>20mm width)	12 weeks
		Ridge, Hump around Depression/sunken cover	40mm high/deep	5 days	20mm	12 weeks
	All other roads	Pothole/spalling	40mm high/deep (where metalled)	5 days	20mm depth (75mm across in any horizontal direction)	Do nothing
		Gap/crack	40mm high/deep (where metalled)	5 days	20mm (>20mm width)	Do nothing
		Ridge, Hump around Depression/sunken cover	40mm high/deep (where metalled)	5 days	20mm	Do nothing

Item		Defect	Category 1 defects	Response times	Category 2 defects	Response times
Footway	Primary walking route	Trip/pothole/sunken cover	25mm high/deep	36 hours	20mm depth (75mm across in any horizontal direction)	12 weeks
		Rocking slab/block	25mm high/deep	36 hours	20mm vertical movement	12 weeks
		Open joint	More than 25mm wide and more than 25mm deep	36 hours		12 weeks
		Depression	More than 25mm wide and more than 600mm wide in any horizontal direction	36 hours	20mm depth (100mm x 50mm horizontally)	12 weeks
	Others	Trip/pothole/sunken cover	25mm high/deep	36 hours	20mm depth (75mm across in any horizontal direction)	12 weeks
		Rocking slab/block	25mm high/deep	36 hours	20mm vertical movement	12 weeks
		Open joint	More than 25mm wide and more than 25mm deep	36 hours		12 weeks
		Depression	More than 25mm wide and more than 600mm wide in any horizontal direction	36 hours	20mm depth (100mm x 50mm horizontally)	12 weeks
Kerbs, Edging and Channels		Misaligned			50mm horizontally	28 days
		Loose/rocking			20mm vertically	28 days
		Missing	Nokerb	36 hours	Replace	28 days
Verges	Urban	Sunken area adjacent and running parallel with c/way or f/way edge	150mm depth and 5m longitudinal			14 days
	Rural	Sunken area adjacent and running parallel with c/way edge	150mm depth and 5m longitudinal			14 days
Iron works	Carriageway	Gaps within framework (other than designed by manufacturer)		2 hours	See c/w intervention levels	
		Level differences within framework	40mm	36 hours	See c/w intervention levels	
		Rocking covers			Maximum height meets c/w intervention levels	
		Cracked/broken covers			Risk assessment	12 weeks
		Worn/polished covers			Risk assessment	12 weeks
		Missing covers	Yes	2 hours	Risk assessment	14 days
	Footway/ Cycleway	Gaps within framework (other than designed by manufacturer)	Yes	2 hours	Permanent repair	28 days
		Level differences within framework	20mm high/deep	2 hours	Permanent repair	28 days
		Rocking covers			Maximum height meets f/w intervention standards	
		Cracked/broken covers	Yes	Make safe	Risk assessment	28 days
		Worn/polished covers			Risk assessment	28 days
		Missing covers	Yes	Make safe	Risk assessment	Replace 7 days
	Verge	Missing cover or damaged cover	Yes	Make safe		Replace 7 days or notify the owner

Item		Defect	Category 1 defects	Response times	Category 2 defects	Response times
Flooding		Standing water 2 hours after cessation of rainfall which inhibits the free flow of traffic	Yes if leading to network restrictions/safety concerns	2 hours	Risk assessment	28 days
		Substantial running water across carriageway/footway	Yes	Risk assess		County Council policy applies
Drainage		Blocked gully (silted above outlet)	Yes if leading to network restrictions/safety concerns	2 hours	Risk assessment	County Council policy applies
		Collapsed/blocked/settled items or systems	Yes	Immediate action	Risk assessment	County Council policy applies
Road Markings	Strategic	Faded or worn markings	Give Way, Stop lines	7 days	30% loss of effective marking	12 weeks
	Distributors	Faded or worn markings	Give Way, Stop lines	7 days	50% loss of effective marking	12 weeks
	Local & Link	Faded or worn markings	Give Way, Stop lines	7 days	70% loss of effective marking	12 weeks
Road Studs		Missing	Yes	5 days	Review based on speed limit and regulations	County Council policy applies
		Hole left in c/way	Yes		Refer to carriageway pothole criteria	County Council policy applies
		Displace item on c/w	Remove	2 hours	Risk assessment	County Council policy applies
Signs & traffic signals		Damaged/misaligned item causing a hazard	Yes	2 hours	Risk assessment	County Council policy applies
		Missing item causing a hazard	Yes	2 hours	Risk assessment	
		Signals not operating correctly/malfunctioning	Yes	2 hours	Risk assessment	County Council policy applies
		Exposed wiring	Yes	2 hours	Risk assessment	County Council policy applies
		Missing door to item	Yes	2 hours	Risk assessment	County Council policy applies
		Item missing	Yes	2 hours	Risk assessment	County Council policy applies
		Item obscured/dirty/faded	Yes	2 hours	Risk assessment	County Council policy applies
Barriers and bollards		Item damaged or misaligned causing a hazard	Yes	2 hours	Risk assessment	County Council policy

					applies
	Item missing	Yes	2 hours	Risk assessment	County Council policy applies

Item	Defect	Category 1 defects - Intervention Level	Response times	Category 2 defects - Investigatory level	Response times
Hedges and trees	Unstable tree causing danger of collapse onto highway	Yes	2 hours	Risk assessment	County Council policy applies
	Tree in poor condition where there is the likelihood of damage to persons or property	Risk assess	36 hours	Arboricultural Report	County Council policy applies
	Overhanging tree leading to loss of height clearance over carriageway, footway or cycleway			Over Carriageway	<5.1m County Council policy applies
				Over Cycleway	<2.7m County Council policy applies
				Over Footway	<2.1m County Council policy applies
Highway general	Oil/debris/mud/stones/gravel likely to cause a hazard	Yes	2 hours	Risk assessment	County Council policy applies
	Illegal signs	Causing a safety hazard	2 hours	Risk assessment	County Council policy applies
	Obstructions in the highway	Causing a safety hazard	2 hours	Risk assessment	County Council policy applies
	Obstructed sight lines	Causing a safety hazard	2 hours	Risk assessment	County Council policy applies
	Unauthorised ramps in carriageway	Causing a safety hazard	2 hours	Risk assessment	County Council policy applies
	Embankment and cuttings apparently unstable	Yes	2 hours	Risk assessment	County Council policy applies
Other dangers to the public	Anything else considered dangerous	Yes	2 hours	Risk assessment	County Council policy applies

All 2 hours make safe emergencies will be permanently repaired in 28 days or as part of the next scheme.
5 days = 5 calendar days

Appendix II

HIAMP Communications Strategy

Executive Summary

Objective – This strategy supports the creation and use of the Highways Infrastructure Asset Management Plan (HIAMP), communicating the advantages of the new approach to maintenance and improving stakeholder engagement of works undertaken with that approach.

Audience – This strategy aims to provide information for use by ETE staff, the Communications Team and Members.

Strategy – to provide a clear framework and key messages to ensure consistent, co-ordinated and considered communication of highway maintenance activities..

Background and Vision

The HIAMP intends to maximise the life of highway assets by adopting a longer term approach in the selection of schemes requiring maintenance interventions. Communication of this shift in approach, as well as the way that work is carried out under it needs to be appropriate to Local Government communication objectives, in particular fitting within the aims of the ETE Community Engagement Strategy.

Elements of HIAMP

HIAMP communications can be split into two elements, which should be considered together to create a full life strategy, ensuring a consistency and clarity of message.

- **Development** – As the HIAMP evolves, members will be kept informed of the benefits and implications of the changed approach and a press release will be issued if appropriate. A clear, key message will be developed to ensure a consistent response to any queries.
- **Implementation** – The HIAMP is a major part of the public and member interactions with highway services. It is important to maintain a clear and consistent approach to the way HIAMP activities are communicated, making the best use of officer time and using a digital by design approach.

Activities delivered under the HIAMP can be split into three categories for the purposes of communications – planned, cyclic and reactive. Planned activities include improvement schemes, planned maintenance works and other projects that have developed ahead of time. Cyclic activities are the regular works that take place cyclically. These include surface dressing, grass cutting, gully cleansing, weed treatments and gritting. Reactive activities present the most common form of public interaction – reported potholes and other highway faults.

Planned activities should all be included in the Transport Delivery Plan (TDP). A project is under way to create an interactive, publically accessible map that shows all TDP projects, along with improvements to the TDP document itself. Ensuring that this project is completed and kept up to date should be included as part of the HIAMP project.

Cyclic activities have already developed a communications plan that aligns with this strategy. Key stakeholders receive copies of planned schedules and a press release is arranged before the start of a work programme. For surface dressing, which has a higher profile due to traffic disruption, affected streets are published by web and social media, with daily updates being directed through @cambs_traffic twitter feed held by IHMC and picked up by corporate Twitter and Facebook channels when appropriate. Full details can be found in Appendix B.

Reactive activities represent the majority of public interactions with the HIAMP. Communication in this area has been poor historically and represents an opportunity for significant improvements without a long term increase in officer time.

There is a desire to drive fault reports that generate reactive maintenance activity through the online Highway Fault Reporting system (HFR), but this tool needs further development to provide an appropriate level of communication to the public (see Section 12 of the HIAMP)

Member involvement

The involvement of members will be either at a local member level or through spokespersons or the relevant committee as appropriate. Whilst selection of highway maintenance work will be driven predominantly by condition criteria, the role of local members to challenge is vital to ensuring that local priorities are incorporated into delivery plans.

Highway Fault Reporting Tool (HFR)

As a central part of communicating HIAMP work, investment in the HFR should centre on the following outcomes

- A 'one stop shop' for all highway issues, directing the public to alternative routes (such as district councils, Highway Agency) when the issue is not a County Council matter.
- Automated, standard emails to manage customer expectations at key stages of work
 - Expected time for an inspection to take place when the fault is reported
 - Advice on timetable and process of repairs if the inspection results in a repair
 - An explanation of why a fault will not be repaired
- User friendly interface with customer focussed language

Investment in the HFR will take the approach of reviewing the entire process from report to repair, concentrating on the best way to acquire necessary information at each stage, rather than working back from the existing set up.

Integrated Communications

Highway activities are delivered through the MID, TiPF, LISM and AAC teams and ensuring a consistent programme of communications throughout these teams should be considered a long term aim.

Improved liaison between corporate communication, Community Engagement within MID/TiPF and LISM staff should be considered an area for development within ETE.

Objectives and principles

Communications should be in line with the ETE Community Engagement Strategy, with particular focus on the following elements:

- Communicate through a variety of channels, including social media
- Be clear about the level of influence stakeholders have
- Be open and make information available
- Use consistent messages
- Manage expectations
- Be digital by design, making use of corporate social media resources and Shape Your Place

In addition, communications should

- use Plain English (see guide here <http://www.plainenglish.co.uk/free-guides.html>)
- be tailored to their target audience or medium
- direct to further resources when appropriate
- be proactive about keeping the public informed about how ‘their’ money is being spent

Tone

Communications should align with the County Council’s ethos of community engagement, providing a consistent, friendly approach. In addition to the use of plain English, authoritative, demanding or absolute language should only be used when absolutely necessary.

For example, “The road will be closed while repairs are undertaken. Details will be signed on site” would be better written as “We will need to close the road while we make repairs and signs will be put up to let you know when this is going to happen.”

Proactive communication

It is important that communication becomes pro, rather than reactive. By making sure we inform the public of planned work and publicising completed work, the profile of HIAMP activities is raised.

On successful completion of a project / activity, consideration should be made as whether this should be promoted outwardly through an appropriate media outlet. (Website. Press release etc)

These communications should be issued by the officer involved in the works, channelled to local members, through Shape Your Place and to corporate communications for use in social media.

If works required a road closure, IHMC should be informed when the road is reopened.

Risks

Resources – with HIAMP changes affecting an extremely wide range of activities, it is vital that any communication plan is consistently achievable with the resources available.

Raised expectations – the direction proposed by this strategy increases the amount of information given to the public about work being undertaken on Cambridgeshire's highways. It is important to ensure that this does not create an appetite for further communication that would place an unreasonable burden on services.

Data integrity – with a drive towards digital by design and the use of online mapping to demonstrate planned and potentially cyclic activities, it is vital that digital records are kept in one place and that is the source referred to by all parties. Officer use of individual or offline records is likely to result in misinformation for the public.

Key Messages for customers

Benefits of the HIAMP / an Asset Management approach (savings and improvements, maintenance decisions using intelligence)

- Facing
- challenging financial constraints
- Use of
- detailed information/investigation/technical data
- Performi
- ng maintenance to make best use of funds
- Keep
- *whole* network in best condition possible.
- Savings
- and quality

Fault reporting (timescales, quality, process)

- On
- Report
- Thank
- you for reporting online
- Fault has
- gone to inspector's workload
- Will be
- inspected within a specified number of days
- You will
- be contacted when fault has been inspected to let you know the outcome.
- Track
- your fault online at any time using reference
- After
- inspection

- The fault you reported has been inspected and is a Emergency/urgent/non-urgent/ does not require repair
- The fault will be made safe/repared within given response time /monitored for further deterioration
- You may notice marks on the road surrounding the fault, although no repair has taken place.To make best use of public money, repairs are undertaken in batches to save costs.A temporary repair may have been made to prevent further damage and the full repair will take place within (specified number of) weeks.
- Thank you for alerting us to this fault.

- Digital by Design (advantages of online reporting, TDP map).
- Reportin g by email/phone goes to contact centre, who then pass onto relevant person, who enters into system
- HFR goes straight into system
- Inspector s can pick up/be alerted on mobile devices
- Track your fault
- Can email you when the fault has been looked at
- Report on a map
- See whether someone else has already reported

Story of a pothole

- Narrative process of pothole being reported and fixed
- Highlight inspector mobile access
- Highlight mark up/temp fill etc.
- Static resource for web – video/ information leaflet.

Stakeholder analysis

Matrix of influence and interest

	Interest	
	Low	High

Influence	Low	Town and Parish councils	General public Contact centre District Councillors
	High	Department for Transport	Members ETE/LISM management Cambridgeshire Highways

Actively Engage	Keep informed	Keep satisfied	Occasional contact
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Communications tools

Engagement	Target	Tool	Regularity/details	Responsibility
Actively Engage	General public	Press releases	Key seasonal milestones, large consultations and notable changes to policy	Corporate Comms
		Highways Fault Reporting Tool	Every report made resulting in standard emails to customer.	Asset Systems Manager /LISM officers
		Social Media	Seasonal, end of projects etc. regular positive messages and engagement	LISM officers
	Contact Centre/District Councillors	Direct Email	Start of seasonal works, relevant projects, changes to policy etc	LISM Officers
Keep informed	Members ETE/LISM Management Cambridgeshire Highways	Face to Face meetings	As required to discuss development and future changes	Asset Manager Strategy / Head of LISM/AAC
Keep satisfied	Town and Parish Councils	LHO liaison	Daily/weekly as appropriate to establish new patterns of work	LHOs
Occasional contact	DfT	Web	Monthly statistics	Asset Systems Manager
		Direct report	As required for additional funding	AAC/LISM management

Branding

No additional branding is required for the HIAMP. All communications should adhere to the County Council's normal branding requirements.

Recommended communication plans

Development - Press release of key development message at time of final plan reaching committee and after approval. Corporate communications should lead on this, making use of the key messages developed as a result of this strategy.

Planned activities

All planned HIAMP activities should be included in the TDP. It is recommended that the TDP is outputted into an interactive map available to the public online. This map should at least show the upcoming works for the next 12 months.

An accompanying downloadable TDP should be written for public consumption, with complex tables and figures confined to appendices. Press release and social media should announce updates to the TDP.

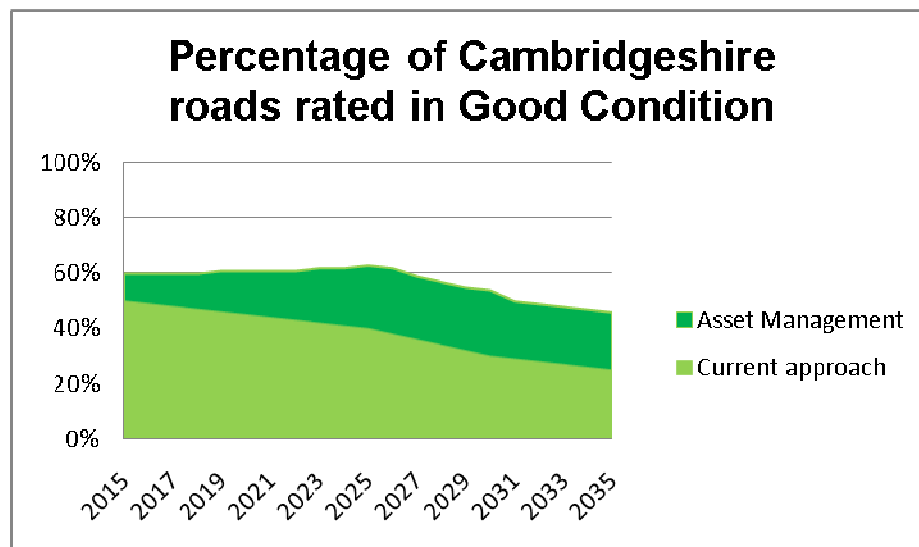
Cyclic activities

Cyclic work should follow the recently created plan in appendix B.

Reactive activities

Investment into the HFR as previously outlined. Once developed, significant effort should be placed into promoting the HFR as the best way to report faults and progress should be monitored. Contact centre and LHO should lead on identifying issues and areas for improvement, with AAC taking ownership of consideration and development where appropriate.

Appendix A – HIAMP Development graph



Appendix B – Cyclic communication plan

Workstreams

-

Maintenance

Green

- Dressing Surface
- Maintenance Winter
- loading Gullies/F

Levels of communication

- County
Countywi
- de information
- releases (“That time of year again”, facts, promotion) Press
- – sent to all Council levels and areas Generic
- Parish /
- Town Drawn
- from works programme Targeted
- to individual parishes Specific
- information sent to specific Cllrs
- Street Letter
- drop to residents On street
- signage Works
- process leaflet (from contractor) to residents
- Road
- user IHMC
- daily tweet of roads affected by works

Set up

Establish distribution lists (groups that need contacting e.g. emergency services etc.) for each work stream with business support. BS should then manage the lists to keep them up to date (changes to councillors, staff etc), but NM remain responsible for asking for groups to be added/removed.

‘Green’ Maintenance (grass cutting, tree works, weed spraying)

Start of programme

- Create works program with locations and intended dates. Append the following statement and save to pdf. “The programme shown here is for guidance only and should not be published as definite. Work can be affected by a number of factors including weather conditions and the date or duration of works is subject to change without notice.”

- Send pdf to business support for distribution to affected County, District and parish cllrs, LHOs etc (as per agreed distribution list).
- Contact corporate comms to arrange a positive press message about the programme – “With recent rainfall and the approaching summer, the County Council is springing into action to keep highway verges trim and trees under control...”

Daily during programme

If any works are likely to cause a delay, ensure that notification is sent to ihmc@cambridgeshire.gov.uk for twitter

Winter Maintenance

Start of programme

- Make sure the gritting maps (interactive and pdf) online are up to date for the season.
- Contact corporate comms to arrange positive press message about winter maintenance – “The County Council’s fleet of gritters stands ready to keep Cambridgeshire moving if cold weather draws in...” ensure that this release mentions the ability to check routes online and the work of winter volunteers.

Daily

- If gritting takes place, email ihmc@cambridgeshire.gov.uk to keep them informed. Make sure this includes requests for winter volunteers.

Gullies/Flooding

Start of programme

- Create works program with locations and intended dates. Append the following statement and save to pdf. “The programme shown here is for guidance only and should not be published as definite. Work can be affected by a number of factors including weather conditions and the date or duration of works is subject to change without notice.”
- Send pdf to business support for distribution to affected County, District and parish Cllrs, LHOs etc (as per agreed distribution list).
- Contact corporate comms to arrange a positive press message about the programme – “The heavy rainfall in recent seasons underlines the important work of ensuring that our roads drain properly...”

Daily

- Send updates on any flooding to ihmc@cambridgeshire.gov.uk (in line with normal flood procedure)

Surface Dressing

Start of programme

- Create works program with locations and intended dates. Append the following statement and save to pdf. "The programme shown here is for guidance only and should not be published as definite. Work can be affected by a number of factors including weather conditions and the date or duration of works is subject to change without notice."
- Send pdf to business support for distribution to affected County, District and parish cllrs, LHOs etc (as per agreed distribution list).
- Contact corporate comms to arrange a positive press message about the programme – "The County Council is about to begin its annual programme of surface dressing..."
- List of streets to be affected by the programme and the rough duration of the programme uploaded to the County Council's website (comms to promote through twitter)
- Divide programme into roads per parish and publish to appropriate shapeyourplace areas – e.g. "As part of our annual repair programme in July and August this year, we will be resurfacing the High Street and Dolphin Lane. This will require temporarily closing the roads while works are undertaken and there will be delays/diversions will be necessary. Homes adjacent to the works will receive a leaflet with further details and signs will be posted on site 7-14 days before works begin. Daily updates on the resurfacing programme will be posted on twitter @cambs_traffic"

Before each site begins work

- Ensure contractor has installed signs within 7 days of work beginning (revised best estimate at the time), with most accurate date possible
- Letter drop to residents within 7 days of planned start

Daily

- Send information for the day's work (roads affected, delays etc) to ihmc@cambridgeshire.gov.uk for publishing to twitter
- Ensure contractor has sent work process leaflets to relevant house

Appendix III

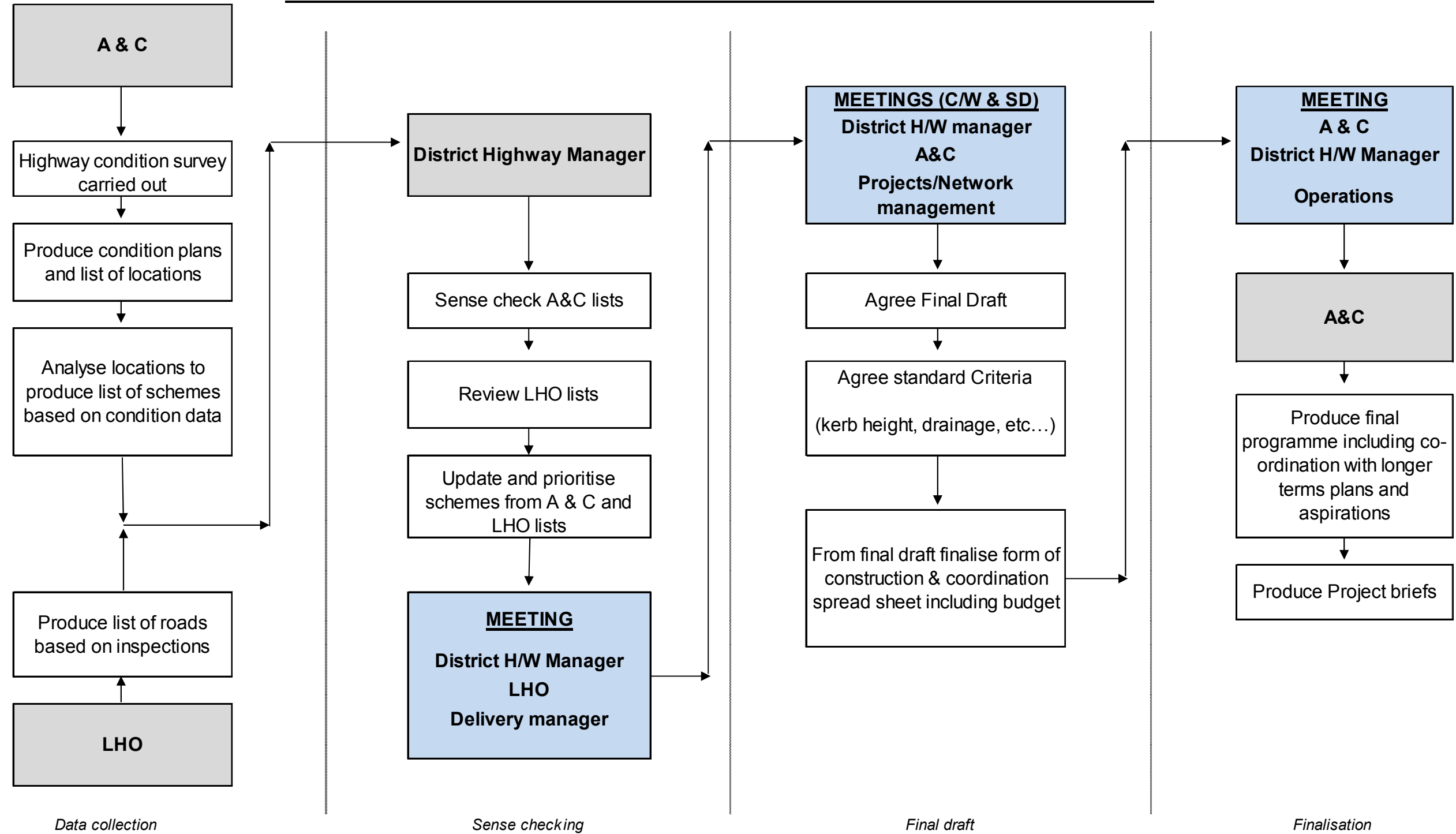
Road Condition Index - RCI

RCIScore Range	RCI Road Condition Description	RCI Road Condition Description
Between 0 & 40 Green	Good Condition	Minor defects and/or deterioration
Between 40 & 80 Amber 2	Plan investigation soon	Moderate defects and/or deterioration present)
Between 80 & 100 Amber 1	Plan investigation soon	Significant defects and/or deterioration present)
100 + Red	Plan maintenance soon	Major defects and/or deterioration

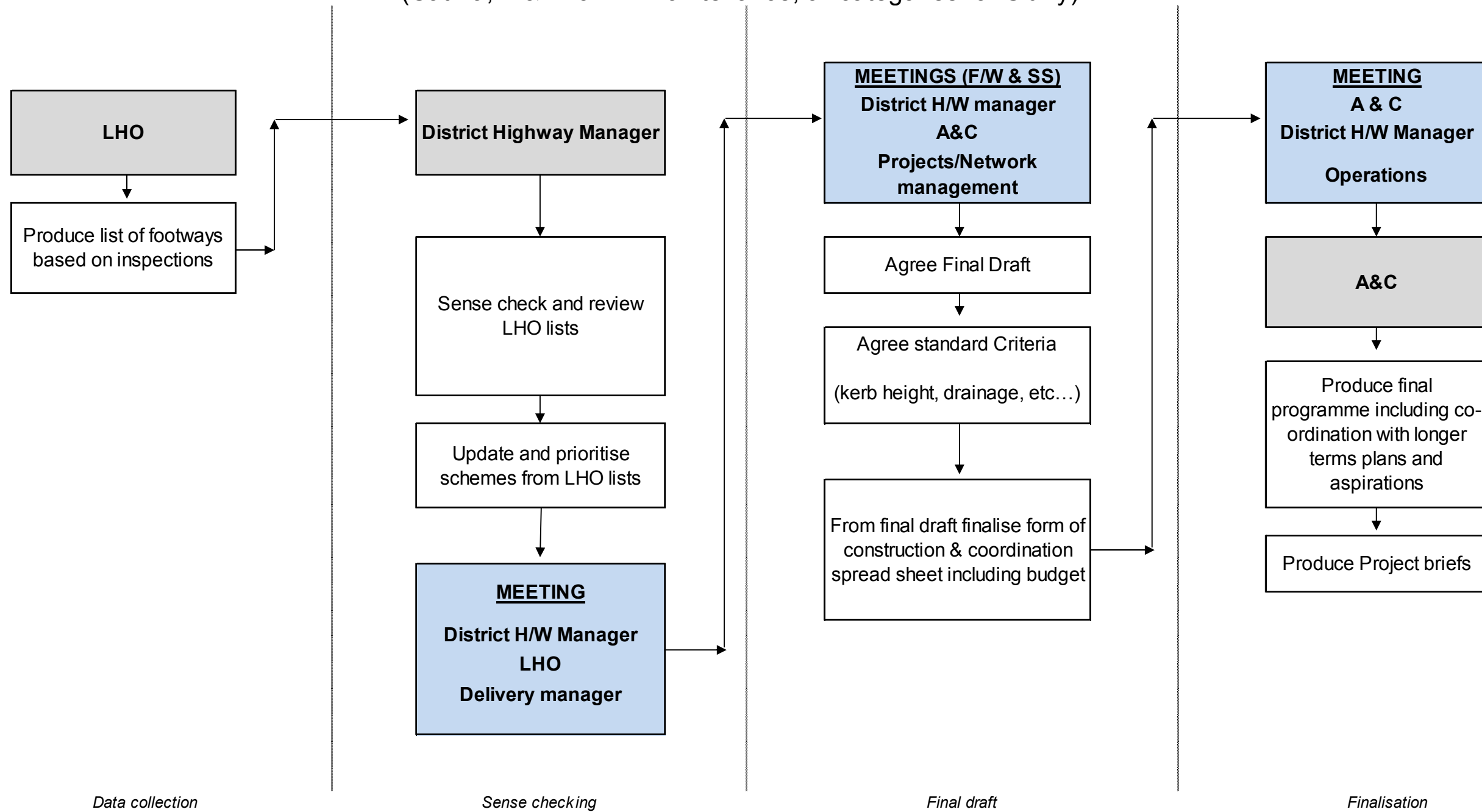
Bridge Condition Index - BCI

BSCI Range	Bridge Stock Condition based on BSCLav	Bridge Stock Condition based on BSCLcrit
100–95 Very Good	Bridge stock is in a very good condition.	Very few critical load bearing elements may be in a moderate to severe condition. Represents very low risk to public safety.
94–85 Good	Bridge stock is in a good condition	A few critical load bearing elements may be in a severe condition. Represents a low risk to public safety.
84–65 Fair	Bridge stock is in a fair condition	Wide variability of conditions for critical load bearing elements, some may be in a severe condition. Some bridges may represent a moderate risk to public safety unless mitigation measures are put in place.
64–40 Poor	Bridge stock is in a poor condition	A significant number of critical load bearing elements may be in a severe condition. Some bridges may represent a significant risk to public safety unless mitigation measures are put in place.
39–0 Very Poor	Bridge stock is in a very poor condition.	Many critical load bearing elements may be unserviceable or in a dangerous condition. Some bridges may represent a high risk to public safety unless mitigation measures are put in place.

Appendix IV

CARRIAGEWAY RESURFACING/RECYCLING AND SURFACE TREATMENT

FOOTWAY/CYCLEWAY RESURFACING & SLURRY SEALING
 (Cat 1a, 1 & 2 for f/w maintenance; all categories for Slurry)



DRAINAGE

