

Cabinet – 18 March 2015

Highway Maintenance Strategy 2015-18 and Highway Asset Management Plan 2015-21

Portfolio: Councillor Lee Jeavons – Environment and Transport

Service: Engineering and Transportation

Wards: All

Key decision: Yes

Forward plan: Yes

1. Summary

- 1.1 As Highway Authority the Council has a statutory duty to maintain the highway in a reasonable condition. To this end the Government publication 'Well Maintained Highways, Code of Practice for Highway Maintenance Management' (The Code) sets out the standards expected.
- 1.2 The code recommends that policies, programmes and priorities are formally adopted by the authority's Executive and published.
- 1.3 This report seeks Cabinet approval of Walsall Council's Highway Maintenance Strategy 2015-18 (the Strategy), the Highway Asset Management Plan 2015-21 and the method of highway maintenance scheme prioritisation.
- 1.4 The Strategy and Asset Management Plan are extensive in detail and are intended for the guidance of officers and, as required, set out detailed policies and procedures. Both documents are available on the Council's Committee Management Information System (CMIS) web pages and hard copies have been made available in each of the political group rooms and to independent elected members. The list of identified highway maintenance schemes and method of highway maintenance scheme prioritisation are attached as **Appendix A** and **Appendix B**.

2. Recommendations

- 2.1 That Cabinet approves Walsall Council's Draft Highway Maintenance Strategy 2015-18 and the Highway Asset Management Plan 2015-21.

- 2.2 That Cabinet notes the list of identified highway maintenance schemes contained in **Appendix A** and approves the method of scheme prioritisation presented in **Appendix B**.
- 2.3 That Cabinet delegates authority to set the subsequent programme of works following the prioritisation method approved in 2.2 and to amend the programme to accommodate varying demands over the life of the Plan to the Head of Engineering and Transportation in consultation with the Portfolio Holder.
- 2.4 That Cabinet delegate authority to the Head of Engineering and Transportation, in consultation with the Portfolio Holder to make minor amendments and editorial changes to the Strategy and Plan following consultation. This may also be necessary in light of case law, legal advice and developments, which might assist in managing the risk of litigation in relation to the statutory duty to maintain the highway.

3. Report detail

- 3.1 Walsall Council has a statutory duty to maintain around 528 miles (850km) of highway network. This network has an asset replacement value in excess of £1.4 billion, which makes it the most valuable and visible community asset owned, managed, and maintained by the authority.
- 3.2 Maintaining the condition of the road network and improving transport links are core objectives of Central Government strategy, policy, and guidance. The Council has locally adopted a significant number of the key themes and best practice identified since the release of the Government's Transport for 2010 vision, including: The Audit Commission's Going the Distance, achieving better value for money in road maintenance (2011); The Highways Maintenance Efficiency Partnership, Prevention is Better than Cure, Potholes Review (2012) and its follow up report 2013; The All Party Parliamentary Group on Highway Maintenance 'Managing a valuable asset, improving local road condition' (2013).
- 3.3 The Asphalt Industry Alliance, Annual Local Authority Road Maintenance (ALARM) Survey 2013 confirmed the view of local authority experts nationally: 'roads are running out of life from the foundations upwards; most engineers will only see a principal road resurfaced once in their career; the unclassified network is getting worse and worse...significant investment is required; the structural condition of roads is a ticking time bomb.'

The key findings of the 2013 ALARM survey in England identified:

- Frequency of road resurfacing (all classes) – 54 years
 - The average annual budget shortfall per authority - £6.2 million
 - The estimated time to clear carriageway maintenance backlog – 12 years
 - The estimated one-time catch-up cost per authority - £69 million
 - The average number of potholes filled per authority – 16,041
 - The amount paid in road user compensation claims - £23.8 million
- 3.4 The Council has proactively worked through Local Transport Plan 3 and has collaborated with neighbouring districts to develop a regional business case

identifying sustainable future maintenance investment needs. Through its previously published Highways Maintenance Strategy (2012-15) and the Highways Asset Management Plan, The Council has strived to improve the delivery of the Highways Repair and Maintenance services across the borough by using longer term strategies to develop forward works programmes around robust prioritisation and lifecycle planning methodologies.

- 3.5 The total budget for highways maintenance works delivered through Lafarge Tarmac Ltd during 2014/15 was £6.5 million, consisting of Council mainstream capital, revenue and external grant funding. Walsall's network reflects the findings of the ALARM survey and the borough is suffering from a lack of investment from Central Government. The decision to outsource the highways maintenance service back in 2009 has helped to offset the impact of under investment, but despite this efficiency gain the Council's key national and local performance indicators have continued to decline, most particularly in the case of unclassified roads and all categories of footways.
- 3.6 Public opinion on the importance of a sound highway condition is acknowledged within the National Highways and Transportation (NHT) satisfaction surveys. The public of Walsall consistently rank Highway condition as the most important transportation service but equally shows a large gap between levels of importance and satisfaction.
- 3.7 With these factors in mind it is important that the Council has robust management practices in place and that it focuses its valuable resources in the most effective way.
- 3.8 Cabinet is specifically directed to the following important points:

Highway Maintenance Strategy/Programme

- 3.9 In order to introduce more transparency as to how roads are selected for maintenance, engineers are proposing to introduce a scoring system that is driven by the factors normally considered when putting together the Highway Maintenance Programme but adopting a more objective approach.
- 3.10 These criteria are presented in **Appendix B** together with their weighting scores. All roads identified as in need of significant attention will be assessed against this matrix in order to provide a prioritised list of maintenance schemes which are ranked according to their overall score.
- 3.11 Neighbourhoods Scrutiny and Performance Panel considered this issue at their meeting of 12 February 2015, where there was also a presentation followed by discussion, and welcomed this approach as an improvement which would also lend itself to input from the community in identifying local priorities.
- 3.12 It should be noted that current budgets will not finance the resurfacing of all roads and footways in need of attention and there will inevitably be a backlog of schemes that cannot be delivered. The matrix does take account of these locations, allocating a score for delayed/deferred schemes from previous programmes.

- 3.13 It may not always be possible to undertake high priority maintenance schemes due to activities beyond the control of the Council such as utility company activities, major developments, scheduled diversions and extended periods of severe weather.
- 3.14 There will also be occasions where the prioritised programme will need to be overridden to take account of strategic, national and local events such as the Olympic Torch Relay, veterans' parades, and local and community infrastructure projects. There is an established delegation whereby the Head of Engineering and Transportation, in consultation with the Portfolio Holder, can amend the programme. It is recommended that this arrangement continues.
- 3.15 The proposed matrix incorporates the ability for the Area Partnerships to influence the ranking of schemes and further consultation with Partnership Chairs and Managers will take place in March/early April. One proposal is to give the partnerships the ability to credit up to 100 points either to a single scheme or divide the 100 points across a number of schemes identified for their areas. The delegated authority to amend the programme includes the ability to accommodate the local priorities identified through this route.
- 3.16 In putting together a programme of planned maintenance schemes it is important to ensure that it considers the reactive maintenance activities. Whilst lots of repairs can indicate that reconstruction of a road is necessary, sound localised repairs such as those being delivered through our planned inlaid patching programme, or use of the Velocity Patcher or Road Mender can extend the useful life of a road.
- 3.17 Another consideration is that certain funding streams are confined to given hierarchies of roads. For example, the Maintenance Block allocation through the Local Transport Plan has been specifically restricted to use on the classified (or strategic) road network.
- 3.18 In addition to the traditional reconstruction activities there is a clear expectation from government that councils will make the most of preventative maintenance treatments designed to economically extend the useful life of roads. These are techniques such as micro asphalt surfacing or surface dressing which are essentially products which seal surfaces to prevent water ingress. Works of this nature generate a lot of complaints as they are seen as a cheap alternative and the loose chippings given off before they settle down are particularly unpopular.
- 3.19 **Highway Asset Management Plan**
- 3.20 The value of the highway is determined annually within the asset management planning process and is declared through the Council's Whole of Government Accounts (WGA) financial reporting. The current gross replacement cost of Walsall's carriageway and footway network is £1.2 billion.
- 3.21 Deterioration of the highway is measured for this purpose using accredited survey techniques and must also form part of the WGA reporting process. The current level of damage and decline across the entire highway network has been calculated at £89 million.

3.22 Whilst it is acknowledged that this level of investment is unrealistic it is estimated that it would require an initial investment of £16.5 million to bring the condition of the carriageways alone back to an industry recognised standard of 5% deterioration.

4. Council priorities

4.1 Sound transportation infrastructure clearly assists existing businesses and will attract investment, nurture economic growth including the strength and vitality of our town centres and help create and retain employment. This has been specifically recognised by government in recent maintenance grant awards.

4.2 The condition of the highway also has a major impact on people's health and wellbeing. Safe carriageways and footways reduce the potential for accidents and associated injuries. In addition, independence for older people, the infirm and disabled is enhanced.

5. Risk management

5.1 The condition of the highway and the inspection and maintenance regimes in place affect the potential exposure of the Council to insurance and compensation claims. If the Council does not undertake its statutory maintenance functions in a reasonable manner then it can clearly be held accountable for third party loss or damage as a result.

6. Financial implications

6.1 The Council has been setting future revenue and capital budgets and this report does not repeat that information which will have been considered as part of the budget setting process.

6.2 The Council's works budgets (including revenue and mainstream capital) for planned highway maintenance in 2015/16 will be £2.5million.

6.3 Funding is also secured from external capital sources. In December 2014 government announced future Maintenance Block allocations as part of a £6billion investment in Highways. Walsall's allocation is set out below.

				Data refresh will change allocations		
	Total allocation (£) 2015/16	Total allocation (£) 2016/17	Total allocation (£) 2017/18	Indicative allocation (£) 2018/19	Indicative allocation (£) 2019/20	Indicative allocation (£) 2020/21
Walsall	2,415,000	2,214,000	2,147,000	1,943,000	1,943,000	1,943,000
Reduction compared with	0	201,000	268,000	472,000	472,000	472,000

year 1						
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- 6.4 An incentive element to the funding is to be introduced from 2016/17. Local authorities will be assessed in terms of efficiency and Asset Management which will determine what percentage of the allocation deficit they will receive (see table above).
- 6.5 In 2014/15 Walsall Council received £1.8m Maintenance Block and additional funding in the form of £188k additional local highway maintenance grant and £700k severe weather and pothole fund allocations (total = £2.68m).
- 6.6 In the new Maintenance Block allocations, government will not be reserving money for contingencies such as severe weather payments. DfT recommend that authorities make their own arrangements reserving contingency funds for circumstances such as extreme weather.
- 6.7 It is important to note that, in the absence of additional maintenance funding, severe weather payments and pothole grants, the total new allocation for Walsall is an effective reduction when compared with total budget in 2014/15 (£2.68m in 2014/15 compared with £2.4m for 2015/16). This would be compounded in future years should Walsall not be rated in the highest category when assessed as part of the incentive element in years 2-6 hence the importance of sound strategy and planning.
- 6.8 On 23 December 2014 DfT also announced details of £575m available nationally over the next 6 years for authorities to bid for through the 'Challenge Fund'. A West Midlands wide application has been developed through the West Midlands Highway Infrastructure Managers Group (HIMG) and submitted on 9 February 2015. If successful this could see up to an additional £5.7m investment in Walsall's Strategic Highway Network.
- 6.9 In the absence of any Challenge Fund allocation, total revenue, Council Mainstream Capital and Maintenance Block funding for 2015/16 will be circa £5million.

7. Legal implications

- 7.1 The Council, in its capacity as Highway Authority, has a statutory duty under Section 41 of the Highways Act 1980 to maintain highways for which it has responsibility and to keep them available and safe for the passage of the travelling public. Failure to maintain may be grounds for civil action for damages, or, in extreme cases, prosecution of the Council or individual officers of the Council. Having a highways maintenance strategy and a programme of planned maintenance works, is not in itself a defence in any such action, but their implementation in full would greatly reduce the chances of any successful civil or criminal proceedings.
- 7.2 The Code of Practice for Highway Maintenance Management, 'Well Maintained Highways', recommends that strategy documents and asset management plans are prepared in a way that demonstrates a systematic and logical approach to the delivery of highway maintenance services.

8. Property implications

- 8.1 The Strategy as detailed is incorporated within the Highways Asset Management Plan and, as such, forms an integral part of the Council's Asset Management Plan.
- 8.2 There are no direct implications on any property of the Council but, as emphasised earlier the Strategy should lead to an improved condition of the highway which minimises the risk of exposure to the Council for claims of damage to property.

9. Health and wellbeing implications

- 9.1 As indicated in paragraph 7.1 the responsibility for maintaining the highway is a statutory duty of the Council. The ability to do this impacts on health and wellbeing in two ways. The condition of the highway contributes directly to the potential risk of accidents and injury. In addition the economic wellbeing of an area and its relative employment rates have clear health impacts. A smooth and efficient highway network is a recognised essential contributor to a region's economy.

10. Staffing implications

- 10.1 None

11. Equality implications

- 11.1 The Strategy supports the Council's equal opportunities policies by providing a well managed transportation network that benefits all members of the community and improves accessibility, particularly for those with disabilities. The way the highway network is managed and maintained can have a significant bearing on improving social inclusion and this has been recognised in the Strategy and the works programme. The Strategy document is offered upon request in a number of languages, large print, Braille and audio tape.
- 11.2 The continued implementation of strategic asset management principles will bring improvements to the way in which the Council manages the highway network. Improvements to the condition and management of our roads, footways, cycle ways, public rights of way and lighting can have a positive impact on crime prevention. By maintaining a pleasant, clean and well-maintained appearance, highway users will generally feel more safe and secure and be encouraged to make better use of the network facilities available to them.
- 11.3 An Equality Impact Assessment is appended to this report at **Appendix C**. This assessment has taken feedback from consultation carried out as part of the 2015/16 budget setting process. Whilst further specific consultation will take place with those parties identified in 12.3 and 12.4 below, the benefits from a

safe and efficient highway network are universal to all of its users. There are therefore no negative effects identified on any protected characteristic.

12. Consultation

12.1 To reduce the environmental impact of the Strategy consultation exercise, only a limited number of paper copies of the document will be produced. The majority of consultation will be carried out electronically via e-mail and, through a specific Highway Maintenance Strategy web page on the Council's website. Feedback will be actively sought from Council officers, elected members and our partners and acted upon as appropriate.

12.2 The list of partner organisations invited to participate in the consultation exercise includes:

Birmingham City Council, Wolverhampton City Council, Sandwell Council, Solihull Council, Coventry City Council, Dudley Council, Police, AA and RAC, Centro, Ambulance Service, Fire Service, Freight Transport Association, Black Country Chamber of Commerce, Chief Engineers and Planning Officers Group Core (CEPOG) Support Team, WHG, WATMOS, Area Managers, Walsall Disability Forum, religious and significant minority interest groups.

12.3 Additionally, in order to achieve effective co-ordination, statutory undertakers (e.g. British Telecom, South Staffordshire Water) will all receive the works programme with a view to reducing traffic congestion whilst schemes are carried out. Residents in streets affected by highways maintenance works are informed by letter of what to expect, prior to the works taking place. The Strategy also includes a continuous consultation process and specific stakeholder consultation to measure contractor key performance indicators during and after completion of major highways maintenance schemes.

12.4 Walsall participates in the National Highway & Transportation Public Satisfaction Survey concerning Engineering and Transportation functions across the services that Walsall deliver. The majority of UK local authorities take part where a sample of local residents are asked identical questions to help find areas of best practice to gauge public opinion on highways and transportation issues within each borough. The survey is conducted by Ipsos MORI and approximately 4,500 questionnaires are mailed out to randomly chosen people within the borough. The results for 2010, 11 and 13 showed that overall satisfaction with Highway Maintenance rose from 44.5% to 47.3% to 49.1% respectively. The survey results are on the NHT web site at www.nhtsurvey.org.

Background papers

1. Cabinet 10 September 2014 - Review of Highways Repairs and Maintenance Contract & Future Delivery Options
2. Neighbourhoods Scrutiny and Performance Panel 12 February 2015 – Highways Maintenance Strategy and Asset Management Plan 2015-18

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Jamie Morris
Executive Director



9 March 2015

Councillor Jeavons
Portfolio Holder



9 March 2015

Appendix A

Street Name	District	Description of Works
Addenbrooke Street	Bloxwich	Carriageway Resurfacing
Addenbrooke Street	Bloxwich	Footway Resurfacing
Aldridge Road (A454) Mellish Rd to Longwood Ln	Aldridge	Carriageway Resurfacing
Aldridge Road Mellish Rd to Longwood Ln	Aldridge	Footway Resurfacing
Allens lane	Pelsall	Carriageway Resurfacing
Anchor Road	Aldridge	Carriageway Resurfacing
Anglesey Road	Brownhills	Footway Planned Patching
Ann Street	Willenhall	Carriageway Resurfacing
Ashbourne Road	Bloxwich	Footway Resurfacing
Aviemore Crescent	Pheasey	Carriageway Resurfacing
Bakewell Close	Bloxwich	Carriageway Resurfacing
Balls Street	Walsall	Kerb & F'way Resurfacing
Balmoral Drive	Willenhall	Carriageway Resurfacing
Bamford Close	Bloxwich	Carriageway Resurfacing
Bar Walk	Aldridge	Footway Resurfacing
Barleyfield Row	St Matthew	Footway Resurfacing
Bate Street	Walsall	Footway Planned Patching
Beddows Road	Bloxwich	Footway Resurfacing
Beddows Road	Bloxwich	Carriageway Resurfacing
Bentley Lane	Bentley	Carriageway Resurfacing
Bentley Lane	Willenhall	Carriageway Resurfacing
Bentley Lane	Willenhall	Footway Planned Patching
Bentley New Drive	Bentley	Carriageway Resurfacing
Bentley Road South	Darlaston	Footway Resurfacing
Berkley Close	Bentley	Footway Resurfacing
Berwick Grove	Pheasey	Carriageway Resurfacing
Berwick Grove	Pheasey	Footway Resurfacing
Bescot Crescent	Palfrey	Footway Resurfacing
Bescot Crescent	Palfrey	Carriageway Resurfacing
Bescot Road (A4148) Wallows Lane to Darlaston Road	Pleck	Carriageway Resurfacing
Bilston Lane	Willenhall	Carriageway Resurfacing
Bilston Lane	Willenhall	Footway Resurfacing
Bilston Road	Willenhall	Carriageway Resurfacing
Bilston Street (Rosehill)	Willenhall	Carriageway Resurfacing
Birches Rise	Willenhall	Footway Resurfacing
Birchills Street	Walsall	Carriageway Resurfacing
Birmingham Road Bell Lane Junc to Broadway	Walsall	Carriageway Planned Patching
Birmingham Road Bell Lane Junc to Broadway	Walsall	Footway Planned Patching

Bloxwich Lane (Part)	Walsall	Footway Resurfacing
Bloxwich Lane (Part)	Walsall	Carriageway Planned Patching
Bosty Lane Service Road	Aldridge	Carriageway Resurfacing
Bracken Wood	Walsall	Carriageway Resurfacing
Bradford Street	Walsall	Footway Resurfacing
Bradshaw Avenue	Darlaston	Footway Resurfacing
Brineton Street	Walsall	C'way and F'way Resurfacing
Broad Meadow	Aldridge	Footway Resurfacing
Broad Meadow (Part)	Aldridge	Carriageway Resurfacing
Broadstone Avenue	Leamore	Carriageway Resurfacing
Broadway North	Walsall	Footway Resurfacing
Brookland Road	Brownhills	Carriageway Planned Patching
Burnside Gardens	Walsall	Footway Resurfacing
Buxton Road	Bloxwich	Carriageway Resurfacing
Cairns Street	Birchills	Carriageway Resurfacing
Cairns Street	Birchills	Footway Planned Patching
Caldmore Road	Caldmore	Footway Resurfacing
Calthorpe Road	Walsall	Carriageway Resurfacing
Cannock Road	Willenhall	Footway Planned Patching
Cattermole Grove	Pheasey	Carriageway Planned Patching
Cavendish Way	Aldridge	Carriageway Resurfacing
Cemetery Road	Willenhall	Carriageway Resurfacing
Chapel Avenue	Brownhills	C'way and F'way Resurfacing
Chase Road	Brownhills	Footway Resurfacing
Chepstow Road	Bloxwich	Carriageway Planned Patching
Chepstow Road	Bloxwich	Footway Resurfacing
Chepstow Way	Bloxwich	Footway Resurfacing
Church Street	Willenhall	Carriageway Planned Patching
Church Street	Willenhall	Footway Resurfacing
Circuit Close	Willenhall	C'way and F'way Resurfacing
Clayhanger Road	Brownhills	Carriageway Resurfacing
Clayhanger Road	Brownhills	Footway Resurfacing
Clement Street	Walsall	Carriageway Resurfacing
Coalpool Lane	Coalpool	Carriageway Resurfacing
Coalpool Lane	Coalpool	Footway Resurfacing
Coltham Road	Short Heath	Carriageway Planned Patching
Commercial Road	Beechdale	C'way and F'way Resurfacing
Commonside	Pelsall	Carriageway Planned Patching
Comsey Road	Pheasey	Footway Resurfacing
Coniston Road	Streetly	Footway Resurfacing
Cope Street	Bloxwich	Carriageway Resurfacing
Cottle Close	Bentley	Footway Resurfacing
Countess Street	Palfrey	Footway Resurfacing
Crail Grove	Pheasey	Carriageway Planned Patching

Cranleigh Close	Aldridge	Carriageway Resurfacing
Crest View	Streetly	Carriageway Planned Patching
Cricket Close	Walsall	Carriageway Planned Patching
Cricket Close	Walsall	Footway Resurfacing
Croft Street	Walsall	Carriageway Resurfacing
Cromwell Close	Bentley	Footway Resurfacing
Croxstalls Place	Bloxwich	C'way and F'way Resurfacing
Croxtalls Avenue	Bloxwich	C'way and F'way Resurfacing
Daisy Bank Crescent	Walsall	Carriageway Resurfacing
Dangerfield Lane	Darlaston	Carriageway Resurfacing
Darlaston Road	Kingshill	Carriageway Resurfacing
Dartford Road	Bloxwich	Footway Resurfacing
Darwin Road	Beechdale	C'way and F'way Resurfacing
Daw End Lane	Rushall	Carriageway Resurfacing
Dovedale Avenue	Pelsall	Footway Resurfacing
Dovedale Avenue	Pelsall	Carriageway Planned Patching
Drake Road	Bloxwich	Carriageway Resurfacing
Dumblederry Lane	Aldridge	Carriageway Resurfacing
Dunbar Grove	Pheasey	Carriageway Resurfacing
Dunbar Grove	Pheasey	Footway Resurfacing
Dyson Close	Bentley	Footway Resurfacing
Elmtree Road	Streetly	Carriageway Planned Patching
Ely Road	Walsall	Footway Resurfacing
Erdington Road	Aldridge	Carriageway Resurfacing
Erdington Road Little Aston Rd to Crainleigh Close	Aldridge	Carriageway Resurfacing
Erdington Road Little Aston Rd to Crainleigh Close	Aldridge	Footway Planned Patching
Essington Road	Willenhall	Carriageway Resurfacing
Everest Road	Bentley	Footway Planned Patching
Falmouth Road	Walsall	Carriageway Resurfacing
Faraday Road	Beechdale	Kerb & F'way Resurfacing
Farmbridge Close	Willenhall	Footway Resurfacing
Farmhouse Road	Willenhall	Footway Resurfacing
Fenchurch Close	Walsall	Carriageway Resurfacing
Fibbersley and Wellington Place	Willenhall	Carriageway Resurfacing
Fisher Street	Willenhall	Footway Resurfacing
Fletcher Road	New Invent	Carriageway Resurfacing
Fleming Road Leamore Lane to Stephenson Ave	Beechdale	Carriageway Resurfacing

Floyds Lane (King George Crescent to Park Road)	Rushall	Carriageway Resurfacing
Foley Road West	Streetly	Carriageway Resurfacing
Foley Road West	Streetly	Footway Resurfacing
Foley Road West/Aldridge Road Island	Aldridge	Carriageway Resurfacing
Fordbrook Lane	High Heath	Carriageway Resurfacing
Forest Place	Coalpool	Carriageway Planned Patching
Forge Road	Pelsall	Footway Resurfacing
Foxwood Avenue	Pheasey	Carriageway Resurfacing
Foxwood Avenue	Pheasey	Footway Resurfacing
Frampton Way	Pheasey	Footway Resurfacing
Frankburn Road	Streetly	Footway Resurfacing
Frederick Street	Walsall	Carriageway Resurfacing
Freer Street	Walsall	Carriageway Resurfacing
Fryers Close	Beechdale	C'way and F'way Resurfacing
Garnet Avenue	Pheasey	Carriageway Resurfacing
Garnet Avenue	Pheasey	Footway Resurfacing
George Street	Walsall	Carriageway Resurfacing
Gilpin Crescent	Pelsall	C'way and F'way Resurfacing
Gloucester Road	Walsall	Footway Resurfacing
Goscote Lane	Coalpool	Carriageway Resurfacing
Goscote Lane	Coalpool	Footway Planned Patching
Goscote Lodge Crescent	Goscote	Carriageway Resurfacing
Gower Street	Willenhall	Carriageway Resurfacing
Grange Street	Delves	Kerb & F'way resurfacing
Grosvenor Avenue	Streetly	Footway Resurfacing
Grove Terrace	Walsall	Carriageway Resurfacing
Grove Terrace	Walsall	Footway Resurfacing
Hall Lane	Walsall Wood	Carriageway Resurfacing
Hall Street	Darlaston	Carriageway Resurfacing
Hall Street	Walsall	C'way and F'way Resurfacing
Harden Road (Beeches Road to Goscote Lane)	Leamore	Carriageway Resurfacing
Hardwick Road	Streetly	Carriageway Resurfacing
Harlech Road	Willenhall	Carriageway Resurfacing
Harley Close	Walsall Wood	Footway Resurfacing
Haskell Street	Delves	Footway Resurfacing
Hawthorne Road	Delves	Footway Resurfacing
Heather Road	Bloxwich	Carriageway Resurfacing
Heather Road	Bloxwich	Footway Resurfacing
Herberts Park Road (Part)	Darlaston	Footway Resurfacing

High Street	Bloxwich	Carriageway Resurfacing
High Street	Brownhills	Carriageway Resurfacing
High Street	Pelsall	C'way and F'way Resurfacing
Highfield Road North	Pelsall	Footway planned patch
Hildicks Crescent	Goscote	Footway Resurfacing
Hilton Close	Bloxwich	Footway Resurfacing
Holden Crescent	Coal Pool	Carriageway Resurfacing
Holford Avenue	Bescot	Footway Resurfacing
Holly Lane	Aldridge	Carriageway Planned Patching
Hospital Street	Walsall	Footway Resurfacing
Howdles Lane	Brownhills	C'way and F'way Resurfacing
Ida Road	Walsall	Carriageway Resurfacing
Ivanhoe Road	Pheasey	Carriageway Planned Patching
Ivanhoe Road	Pheasey	Footway Resurfacing
Jane Lane Close	Bentley	Footway Resurfacing
John Street	Walsall	Carriageway Resurfacing
Jubilee Close	Walsall	Carriageway Resurfacing
Kelway Avenue	Pheasey	Footway Resurfacing
Kendricks Road	Darlaston	Carriageway Resurfacing
King Street	Willenhall	Carriageway Resurfacing
Kinross Crescent	Pheasey	Carriageway Resurfacing
Knaves Castle Avenue	Brownhills	Footway Resurfacing
Knightsbridge Lane	Willenhall	Carriageway Resurfacing
Lake Avenue	Walsall	Footway Resurfacing
Lancaster Avenue	Aldrige	Carriageway Resurfacing
Lane Close	Walsall	Footway Resurfacing
Leandor Drive	Streetly	Footway Resurfacing
Leighswood Avenue (Northgate to Walsall)	Aldridge	Carriageway Resurfacing
Lichfield Road (A4124) (Norton Road to Pelsall Road)	Pelsall	Carriageway Resurfacing
Lichfield Road (Selmens Hill to Livingstone Road)	Bloxwich	Carriageway Resurfacing
Lichfield Road (o/s old squires factory)	New Invent	Footway Planned Patching
Lichfield Road B4155	Brownhills	Carriageway Resurfacing
Lichfield Road Pooles Lane to No 224	New Invention	Carriageway Resurfacing
Lime Grove	Rushall	Carriageway Resurfacing
Lindon Road	Brownhills	Footway Resurfacing
Lindrosa Road	Streetly	Carriageway Resurfacing
Linforth Drive	Streetly	Footway Resurfacing
Link Side Way	Aldridge	Footway Resurfacing
Linley Wood Road	Aldridge	Footway Resurfacing

Lister Road	Beechdale	Footway Resurfacing
Little Aston Road - Northgate Island	Aldridge	Carriageway Resurfacing
Little Hardwick Road	Streetly	Carriageway Resurfacing
Little Newport Street	Walsall	Carriageway Resurfacing
Little Newport Street	Walsall	Footway Resurfacing
Locket Close	Bentley	Footway Resurfacing
Lodge Road	Darlaston	Footway Resurfacing
Long Acre Street	Walsall	Footway Resurfacing
Long Acre Street	Walsall	Carriageway Resurfacing
Longwood Lane	Aldridge	Carriageway Resurfacing
Longwood Road	Aldridge	Carriageway Resurfacing
Longwood Road	Aldridge	Footway Planned Patching
Lord Street (Milton Street to Broadway)	Palfrey	Footway Resurfacing
Lord Street (broadway to Alexandra Road)	Palfrey	Carriageway Planned Patching
Lower Hall Lane	Walsall	Carriageway Resurfacing
M6 Junction 10 - Wolverhampton Road West	Walsall	Carriageway Planned Patching
Magness Crescent	Willenhall	C'way and F'way Resurfacing
Malkit Close	Bentley	Footway Resurfacing
Manor Road (FW One Side)	Streetly	Footway Resurfacing (One Side)
Manor Road Precinct	Walsall	Footway Resurfacing
Maple Street	Bloxwich	Carriageway Resurfacing
Maple Street	Bloxwich	Footway Resurfacing
Marlow Street	Walsall	Carriageway Resurfacing
Marlpool Drive	Pelsall	Carriageway Resurfacing
Marshland Way	Bentley	Carriageway Planned Patching
Mary Street	Birchills	Carriageway Resurfacing
Mayfield Road	Streetly	C'way and F'way Resurfacing
Meadow Street	Walsall	Carriageway Resurfacing
Miles Meadow Close	Willenhall	Footway Resurfacing
Milestone Way	Willenhall	Footway Resurfacing
Mill Road	Brownhilss	Footway Planned Patching
Mill Street	Darlaston	Footway Resurfacing
Moat Street	Willenhall	Carriageway Resurfacing
Moorland Road	Bloxwich	Carriageway Resurfacing
Mulberry Place	Bloxwich	Carriageway Resurfacing
Nest Common	Pelsall	Carriageway Planned Patching
Nevison Grove	Pheasey	Carriageway Resurfacing
Nevison Grove	Pheasey	Footway Resurfacing
Newfield Close	Walsall	Carriageway Resurfacing
Newlands Close	Willenhall	Footway Resurfacing

Newport Street	Walsall	Carriageway Resurfacing
Newport Street	Walsall	Footway Resurfacing
Noose Lane	Willenhall	Carriageway Resurfacing
Northgate Leighswood Ave to Walton Road	Aldridge	Footway Resurfacing
Northgate SR 10 - 60	Aldridge	Footway Resurfacing
Norton Rd Church Road to Hall Lane	Pelsall	Carriageway Resurfacing
Norton Road (Finger Post to Boundary)	Pelsall	Carriageway Resurfacing
Oakfield Drive	Pelsall	Footway Resurfacing
Oakmount Drive	Streetly	Footway Resurfacing
Occupation Road	Brownhills	C'way and F'way Resurfacing
Ogley Road	Brownhills	Footway Resurfacing
Old Birchills	Walsall	Carriageway Resurfacing
Old Birchills	Walsall	Kerb & F'way Resurfacing
Old Park Road	Darlaston	Carriageway Resurfacing
Overdale Drive	Willenhall	Footway Resurfacing
Oxford Street	Pleck	Footway Resurfacing
Park Farm Road	Pheasey	Carriageway Resurfacing
Park Farm Road	Pheasey	Footway Resurfacing
Parker Street	Bloxwich	Carriageway Resurfacing
Parkwood Close	Brownhills	C'way and F'way Resurfacing
Peake Road	Brownhills	Footway Resurfacing
Pelsall Road (A4124)	Brownhills	Carriageway Resurfacing
Pelsall Road	Brownhills	Footway Planned Patching
Penkridge Close	Walsall	Footway Resurfacing
Penkridge Street	Walsall	Carriageway Resurfacing
Pinewood Close	Brownhills	Footway Resurfacing
Pinfold Street A4038 (Darlaston Road to Mill St)	Darlaston	Carriageway Resurfacing
Pinfold Street Extension	Darlaston	Footway Resurfacing
Pinley Grove	Streetly	Footway Resurfacing
Pinson Road	Willenhall	Carriageway Resurfacing
Pinson Road	Willenhall	Footway Resurfacing
Pooles Lane	Short Heath	Footway Resurfacing
Poplar Avenue/Kent Rd	Bentley	C'way and F'way Resurfacing
Poplar Avenue	Delves	Carriageway Resurfacing
Poplar Avenue	Delves	Footway Resurfacing
Poplar Close	Bentley	Carriageway Resurfacing
Poplar Close	Bentley	Footway Resurfacing
Portsea Street	Leamore	Carriageway Resurfacing
Proffitt Street	Walsall	Carriageway Planned Patching
Queen Street	Darlaston	Carriageway Resurfacing

Queen Street	Darlaston	Footway Resurfacing
Queen Street	Wednesbury	C'way and F'way Resurfacing
Queens Road	Rushall	Footway Resurfacing
Quilter Close	Bentley	Footway Resurfacing
Raeburn Road	Pheasey	Carriageway Resurfacing
Raven Road	Walsall	Carriageway Resurfacing
Raven Road	Walsall	Kerb & F'way Resurfacing
Ravensdale Close	Walsall	Footway Resurfacing
Ravensdale Gardens	Walsall	Footway Resurfacing
Raymont Grove	Pheasey	Carriageway Resurfacing
Raymont Grove	Pheasey	Footway Resurfacing
Redhouse Lane	Aldridge	Carriageway Planned Patching
Redhouse Lane	Aldridge	Footway Resurfacing
Reeves Street	Bloxwich	Carriageway Resurfacing
Remington Road	Beechdale	Footway Resurfacing
Remington Road	Beechdale	Carriageway Resurfacing
Reservoir Close	Walsall	Footway Resurfacing
Ross Road	Coalpool	Carriageway Resurfacing
Rowan Road	Walsall	Footway Resurfacing
Rowthorn Close	Streetly	Footway Resurfacing
Roxburgh Grove	Pheasey	Footway Resurfacing
Russell Street	Willenhall	Carriageway Resurfacing
Russell Street	Willenhall	Footway Planned Patching
Rutland Street	Blakenall	Footway Resurfacing
Rutland Street	Bloxwich	Carriageway Resurfacing
Sally Ward Drive	Brownhills	Carriageway Planned Patching
Sandbank	Bloxwich	Carriageway Resurfacing
Sandbeds Road	Willenhall	Carriageway Resurfacing
Sanstone Road	Bloxwich	Carriageway Resurfacing
Sanstone Road	Bloxwich	Footway Resurfacing
Scarborough Road	Pleck	Carriageway Resurfacing
School Street	Shelfield	C'way and F'way Resurfacing
School Street	Willenhall	Carriageway Resurfacing
Selvey Avenue	Pheasey	Carriageway Resurfacing
Selvey Avenue	Pheasey	Footway Resurfacing
Shannon Drive	Brownhills	Footway Planned Patching
Sharesacre Street	Willenahal	Carriageway Resurfacing
Short Acre Street	Walsall	Footway Resurfacing
Short Acre Street	Walsall	Carriageway Resurfacing
Short Street	Walsall	Carriageway Resurfacing
Silver Birch Road	Streetly	Footway Resurfacing
Silver Birch Road	Streetly	Carriageway Resurfacing
Slackey Lane	Goscote	Carriageway Planned Patching
Smithy Drive	Pelsall	Carriageway Planned Patching
Sneyd Hall Road	Bloxwich	Footway Resurfacing

Sneyd Lane	Willenhall	Kerb & F'way resurfacing
Sneyd Lane Service Road (No 257 - 269)	Bloxwich	C'way and F'way Resurfacing
Southbourne Ave	Pleck	Carriageway Resurfacing
Southbourne Ave	Pleck	Footway Planned Patching
Southey Close	Willenhall	Carriageway Resurfacing
Southey Close	Willenhall	Footway Resurfacing
Spout Lane	Caldmore	Footway Resurfacing
Spout Lane	Caldmore	Carriageway Resurfacing
Spring Lane	Willenhall	Carriageway Resurfacing
Springvale Street	Willenhall	Footway Resurfacing
Sproat Avenue	Darlaston	Footway Resurfacing
St Andrews Avenue	Pelsall	Carriageway Resurfacing
St Andrews Avenue	Pelsall	Footway Resurfacing
St David Close	Pelsall	Carriageway Resurfacing
St David Close	Pelsall	Footway Resurfacing
St James Close	Pelsall	Carriageway Planned Patching
St Johns Road	Alumwell	Carriageway Resurfacing
St Johns Road	Alumwell	Footway Resurfacing
St Johns Road	Pelsall	Carriageway Resurfacing
St Johns Road	Pelsall	Footway Resurfacing
St Josephs Close	Pelsall	Carriageway Planned Patching
St Lawrence Way	Darlaston	Carriageway Resurfacing
St Marks Road	Pelsall	Footway Resurfacing
St Matthews Close	Pelsall	Carriageway Planned Patching
St Michael Street	Walsall	Footway Resurfacing
St Micheal Street	Caldmore	Carriageway Resurfacing
St Pauls Crescent	Pelsall	Carriageway Resurfacing
St Pauls Crescent	Pelsall	Footway Resurfacing
St Peters Drive	Pelsall	Footway Resurfacing
St Peters Drive	Pelsall	Carriageway Resurfacing
St Thomas Close	Coalpool	Carriageway Resurfacing
Stadium Close	Willenhall	Carriageway Resurfacing
Stafford Road	Bloxwich	Carriageway Resurfacing
Stamford Way	Aldridge	Footway Planned Patching
Stanfield Road	Pheasey	Carriageway Resurfacing
Stanfield Road	Pheasey	Footway Resurfacing
Stanley Road	Darlaston	Footway Resurfacing
Star Close	Bentley	Footway Resurfacing
Star Close	Bentley	Carriageway Resurfacing
Station Road	Aldridge	Footway Resurfacing
Station Street	Bloxwich	Carriageway Planned Patching
Station Street	Bloxwich	Footway Resurfacing
Station Street	Darlaston	Carriageway Resurfacing
Stephenson Ave (Green Lane to Reedswood)	Leamore	Carriageway Resurfacing
Stephenson Avenue	Leamore	Footway Resurfacing

Stepping Stone Close	Bentley	Footway Resurfacing
Stepping Stone Close	Bentley	Carriageway Resurfacing
Stockton Close	Walsall	Carriageway Resurfacing
Stoney Lane	Bloxwich	Carriageway Resurfacing
Stowe Street	Leamore	Carriageway Resurfacing
Stowe Street	Leamore	Footway Resurfacing
Stroud Ave (Granbourne Road to 191)	Bentley	Carriageway Resurfacing
Stroud Avenue	Willenhall	Carriageway Resurfacing
Sun Street	Palfrey	Footway Resurfacing
Sutton Road (Broadway North to Wood End Road)	Walsall	Footway Resurfacing
Sutton Road Longwood Rd to Longwood Lane	Walsall	Carriageway Resurfacing
Sutton Road (part)	Walsall	Carriageway Resurfacing
Sutton Road (part)	Walsall	Footway Resurfacing
Sutton Road (Birmingham Road to Broadway North)	Walsall	Footway Resurfacing
Sutton Road (The Crescent to Birmingham Road)	Walsall	Carriageway Resurfacing
Talbot Close	Walsall	Carriageway Resurfacing
Tasker Street	Walsall	Carriageway Resurfacing
The Green	Bloxwich	Footway Planned Patching
The Green (Bell Lane - W'pton Road)	Bloxwich	Carriageway Resurfacing
The Meadows	Aldridge	Carriageway Resurfacing
The Meadows	Aldridge	Footway Resurfacing
The Square-New Invention	Willenhall	Carriageway Planned Patching
Threshers Drive (Part)	Short Heat	Carriageway Resurfacing
Tintern Close	Streetly	Footway Resurfacing
Tintern Way	Bloxwich	Footway Resurfacing
Tong Street	Walsall	Carriageway Resurfacing
Tong Street	Walsall	Footway Resurfacing
Trees Road	Walsall	Footway Resurfacing
Twyford Close	Aldridge	Carriageway Resurfacing
Union Street	Walsall	Footway Resurfacing
Upper Hall Lane	Walsall	C'way and F'way Resurfacing
Valley View	Brownhills	Carriageway Resurfacing
Victor Street	Walsall	Footway Resurfacing
Villiers Street	Palfrey	Footway Planned Patching
Walhouse Road	Walsall	Carriageway Resurfacing
Walhouse Road	Walsall	Footway Resurfacing
Walsall Street	Darlaston	Footway Resurfacing

Walsall Wood Road	Aldridge	Footway Planned Patching
Watery Lane	Willenhall	Carriageway Resurfacing
Watery Lane	Willenhall	Footway Planned Patching
Watkins Road	Willenhall	C'way and F'way Resurfacing
Waverley Avenue	Pheasey	Carriageway Resurfacing
Well Lane (Part)	Bloxwich	Carriageway Resurfacing
Wellfield Road	Aldridge	Footway Resurfacing
West Bromwich Road	Delves	Footway Resurfacing
West Bromwich Road	Walsall	Carriageway Resurfacing
West Bromwich St Vincent St to Weston St	Palfrey	Carriageway Resurfacing
West Bromwich St (Jct Sandwell St)	Walsall	Carriageway Resurfacing
West Bromwich Street Weston St to Victor St	Palfrey	Carriageway Resurfacing
West Bromwich Street Weston St to Victor St	Palfrey	Footway Planned Patching
West Way	Shelfield	F'way Resurfacing & Kerb Patch
Western Avenue	Bentley	Footway Planned Patching
Whetstone Lane	Aldridge	Carriageway Resurfacing
Whetstone Lane	Aldridge	Footway Planned Patching
Whitehall Road	Walsall	Footway Resurfacing
Whitehouse Street	Walsall	Carriageway Resurfacing
Whitehouse Street	Walsall	Footway Resurfacing
Whitmore Street	Caldmore	Carriageway Resurfacing
Whitmore Street	Caldmore	Footway Resurfacing
Whittimere Street	Walsall	C'way & F'way Resurfacing
Williams Close	Willenhall	C'way and F'way Resurfacing
Wimperis Way	Pheasey	Carriageway Resurfacing
Wimperis Way	Pheasey	Footway Resurfacing
Windermere Drive	Streetly	Footway Resurfacing
Windmill Street	Walsall	Carriageway Resurfacing
Windmill Street	Walsall	Footway Resurfacing
Winterley Lane (Bosty Lane to Canal Bridge)	Rushall	Carriageway Resurfacing
Wolverhampton Rd West (Hotel access to B	Bentley	Carriageway Planned Patching
Wolverhampton Road (133- 171)	Walsall	Footway Resurfacing
Wolverhampton Road West (Bentley Rd Nrth	Bentley	Carriageway Planned Patching
Wolverhampton Road West (Churchill Rd to	Bentley	Carriageway Resurfacing
Wolverhampton Road West (Part)	Bentley	Carriageway Resurfacing
Wolverhampton Street	Darlaston	Carriageway Resurfacing

Wood End Road	Walsall	Carriageway Resurfacing
Woodall Street	Bloxwich	Carriageway Resurfacing
Woodlands Crescent	Pelsall	Footway Resurfacing
Woodlands Avenue	walsall	Carriageway Planned Patching
Woodside Road	Walsall	Carriageway Resurfacing
Wrexham Avenue	Bentley	Footway Planned Patching
Wyrley Close	Brownhills	Footway Resurfacing
New Road	Aldridge	Carriageway Resurfacing
Empire Close	Aldridge	Carriageway Resurfacing
Blackwood Road	Streetly	Carriageway Resurfacing
Rookery Lane	Aldridge	Carriageway Resurfacing
Maple Drive	Shelfield	Carriageway Resurfacing
Grange Crescent	Shelfield	Carriageway Resurfacing
Blay Avenue	Alumwell	Carriageway Resurfacing
Station Street	Walsall	Carriageway Resurfacing
Weston Street	Walsall	Carriageway Resurfacing
Wednesbury Road	Walsall	Carriageway Resurfacing
Daffodil Road	Walsall	Carriageway Resurfacing
Black Country New Road (A41)	Darlaston	C'way Planned Patching
High Street (A41)	Moxley	Carriageway Resurfacing
Wolverhampton Road (A4124)	Bloxwich	Carriageway Resurfacing
Pelsall Road (A4124)	Pelsall	Carriageway Resurfacing
Chester Rd (Little Aston Rd Jct) A452	Aldridge	Carriageway Resurfacing
The Keyway (A454)	Willenhall	C'way Planned Patching
Lichfield Road (A461)	Daw End	Carriageway Resurfacing
Cannock Road Rbt (A462)	Willenhall	Carriageway Resurfacing
Barr Common Road	Streetly	Carriageway Resurfacing
Bloxwich Road (B4210)	Bloxwich	Carriageway Resurfacing
Caldmore Green	Caldmore	Carriageway Resurfacing
Dudley Street	Walsall	Carriageway Resurfacing
Wolverhampton Road - Part (A454)	Walsall	Carriageway Resurfacing
Arkwright Road	Bloxwich	Footway Resurfacing
Ashley Road	Bloxwich	Footway Resurfacing
Barnes Lane (West Gate to Stubbers Green Road)	Rushall	Carriageway Planned Patching
Bentley Lane (Wayside Walk to Bloxwich Lane)	Reedwood	Footway Resurfacing
Borneo Street	St Matthews	Carriageway Resurfacing
Castle Road	Walsall Wood	Carriageway Resurfacing
Central Drive	Bloxwich	Footway Resurfacing
Coltham Road	Willenhall	Footway Planned Patching
Coppice Lane	Willenhall	Carriageway Resurfacing
Florence Street	Chuckery	Carriageway Resurfacing

Goldsmith Road	Bloxwich	Carriageway Resurfacing
Guild Avenue (Walker Road to Barracks Lane)	Blakenall	Carriageway Resurfacing
King George Crescent	Rushall	Carriageway Resurfacing
King George Crescent	Rushall	Footway Resurfacing
Launceston Road	Paddock	Carriageway Resurfacing
Leighswood Road (Brickyard Rd to Aldridge By Pass)	Aldridge	Carriageway Resurfacing
Lime Avenue	Bentley	Carriageway Resurfacing
Mill Lane	Willenhall	Carriageway Resurfacing
New Street	Shelfield	Carriageway Resurfacing
Redhouse Lane	Aldridge	Footway Resurfacing
Rookery Lane	Aldridge	Footway Planned Patching
Rowley Street (Broadway North to Holtshill Lane)	Chuckery	Carriageway Resurfacing
Rutherford Road	Bloxwich	Footway Resurfacing
Sheraton Close	Aldridge	C'way and F'way Resurfacing
Simpson Road	Bloxwich	Footway Resurfacing
Springvale Avenue	Park Hall	Footway Resurfacing
Straight Road	Willenhall	Carriageway Resurfacing
Straight Road	Willenhall	Footway Resurfacing
The Parade	Brownhills	C'way and F'way Resurfacing
Vicarage Place	Walsall	Carriageway Resurfacing
Wesley Road	Willenhall	C'way and F'way Planned Patch
Windsor Street	Palfrey	Carriageway Resurfacing
Hundred Acre Road	Streetly	Carriageway Resurfacing
Wednesbury Road (Corporation St to Bescot Crescent)	Walsall	Carriageway Resurfacing
The Green	Aldridge	Carriageway Resurfacing
Wood Street	Willenhall	Carriageway Resurfacing

Appendix B

Maintenance Assessment Category "MAC"

MAC	Description	Weighting / Value	Comments
Delayed / Deferred Scheme	Maintenance schemes that have been put on hold due to external engineering constraints, such as: statutory undertakers planned works; significant adjacent construction projects; traffic management & road safety schemes. These locations will be given greater priority once the constraining issues have been removed. Also includes locations listed in previous programmes, but not completed, so are required to be carried forward.	50	
Co-ordinated Scheme	Maintenance schemes that require programming in conjunction with: regeneration initiatives; flood management works; match or grant funded works; collaborative schemes with neighbouring highway authorities.	50	
Commercial Impact	Maintenance locations that contribute to concentrations of industrial, economic or commercial activity, including: industrial estates; retail parks; main high street areas; road safety schemes.	30	
Social Impact	Maintenance locations that contribute to significant community facilities, including: hospitals; museums/art galleries; schools/colleges; sports facilities.	30	
Local Priority	Maintenance locations that have been identified by Councillor's & MP's on behalf of local residents & businesses	75	

Area Panel Priority	Maintenance locations that have been identified as priorities by Area Panels. Area Panels can allocate points.	1-100	Subject to further consultation with Area Partnerships
Public Complaints	Maintenance locations where complaints have been received from the public: letters; e-mails; telephone complaints; petitions.	30	
Safety Inspector Priority	Maintenance locations that have been identified as priorities for planned maintenance by inspectors undertaking routine safety inspections, AND Column is updated then on an Annual Basis	100	
No. of Pothole Repairs	Maintenance locations identified through the mapping & analysis of reactive maintenance activities over 3 year period.	30	
No. of Risk & Insurance Claims	Maintenance locations identified through the mapping of third party liability claims. Current Year Only -	30	
Traffic Sensitivity / Traffic Volume	Maintenance locations subject to H.A.U.C restricted working requirements, where traffic volumes impose additional network loadings which can give rise to more rapid rates of deterioration and increased potential for third party liability claims.	20	

DfT Road Classification	DfT Road Classification: Classified Principal A Roads - major roads intended to provide large scale transport links within or between areas; Classified Non Principal B Roads - roads intended to connect different areas, and to feed traffic between A roads and smaller roads on the network; Classified unnumbered Non Principal C Roads - often linking housing estates to the rest of the network; Unclassified Roads - local roads intended for local traffic. This information is held within the Council's UKPMS system. (Only A, B, & C Roads contribute to a score)	5
Multimodal Travel Priorities	Maintenance locations contributing to key travel objectives such as; bus routes; cycleways; safer routes to school.(Changed to Walking School Bus).	5
UKPMS Ranking	Schemes that have been identified in contributing to the Council's national performance indicators	10
EPI Ranking	All locations identified for potential inclusion within the Council's forward works programme are subject to an Engineering Programme Inspection and are categorised within a 1 to 3 prioritisation ranking.	10
DfT Road Hierarchy	DfT Road Hierarchy: 1 - Motorways; 2 - Strategic Routes (Trunk/Primary A Roads); 3a Main Distributor Roads (Non Primary A Roads/heavily trafficked B Roads); 3b - Secondary Distributor Roads (B Roads/heavy trafficked C Roads); 4a -Link Roads; 4b Local Access Roads. (A, B & C Roads are scored under DfT Road Classification - This score is contributed to by Unclassified Roads only)	5
Estate Management Override Score	Maintenance schemes grouped together by location, age, deterioration type & engineering treatment. (An override score is added in this field so that all estate management scores are equal to the primary scheme on the estate)	*
Scheme Completed	Maintenance scheme negative multiplier identifying that appropriate structural maintenance work has been completed on site to reduce the location's overall score.	-1000
Proposed Year	Target maintenance year identified through the EPI for the most economically advantageous treatment time.	50

Equality Impact Assessment (EqIA) for Policies, Procedures and Services

Proposal name	Highway Maintenance Strategy 2015-18 Highway Maintenance Asset Management Plan 2015-21		
Directorate	Neighbourhoods		
Service	Engineering and Transportation		
Responsible Officer	Steve Pretty		
EqIA Author	John Roseblade		
Date proposal started	Jan 2015	Proposal commencement date (due or actual)	April 2015

1	What is the purpose of the proposal?		Yes / No	New / revision
	Policy		Yes	
	Procedure		No	
	Internal service		No	
	External Service			
	Other - give details			
2	What are the intended outcomes, reasons for change? (The business case)			
	<p>This proposal is to update and refresh the Highway Maintenance Strategy 2015-18 and the Highway Asset Management Plan 2015-21.</p> <p>These are technical documents required by approved codes of practice and set out the high level practices that Walsall Council adopts in terms of managing and maintaining the highway.</p>			
3	Who is the proposal potential likely to affect?			
	People in Walsall	Yes / No	Detail	
	All	Yes		
	Specific group/s	Yes	Disabled people	
	Council employees			
	Other	Yes	Businesses and any visitors to the borough	
4	Summarise your evidence, engagement and consultation.			
	<p>Recent budget consultation asked for opinion on potentially reducing the highway maintenance budget. This consultation incorporated:</p> <ul style="list-style-type: none"> Budget booklet survey Budget consultation focus groups Town Centre Partnership Meeting on 4 November 2014 <p>Extracted from that feed back is the following:</p>			

Overall Opinion: respondents generally **do not support** this proposal.

- Budget Booklet respondents do not support this proposal 81% (base 57)

Key issues for consideration across all consultation activity including any concerns / amendments / alternatives expressed.

- As this is a universal service, there hasn't been a service specific survey undertaken for this proposal. Hence we are relying on relatively low number of response through the budget booklet to gauge the strength of feeling for this proposal.
- There has been dialogue with the emergency services and utilities via the resilience forum who raised concerns about the risk to health and safety. Other respondents (Walsall Deaf Centre, Blind / Partially sighted hub) raised concerns that this proposal is a false economy which could lead to increased costs associated with risk and insurance claims.....

Response from Walsall Council on Proposal Ref 88

The saving for this proposal commences in 2016/17. Although the response rate was low the majority that did respond raised concerns that this proposal is a false economy which could lead to increased costs associated with risk and insurance claims. Emergency Services also raised concerns about increased potential for road traffic collisions. The council will however, continue to look carefully at how it can safely and sustainably reduce costs whilst meeting its statutory duty as a Highway Authority.

In view of these considerations Cabinet will consider this consultation feedback together with subsequent feedback to be carried out for the 2016/17 budget.

In general terms the consultation supported continued investment in Highway Maintenance. Further direct consultation on the strategy and Plan will take place with those groups identified in the report.

**5 How may the proposal affect each protected characteristic or group?
The affect may be positive, negative or neutral.**

Characteristic	Affect	Reason	Action needed Y or N
Age	Negative	Potential risk to Health & Safety younger children or older people Effective management of Highway Maintenance will increase that benefits we are able to deliver.	N
Disability	Negative	Potential risk to Health & Safety especially, people with physical impairments, visually impaired people and people with learning disabilities. Effective management of Highway Maintenance will increase that benefits we are able to deliver to assist this group.	N
Gender reassignment	Neutral	No foreseen impact	N

	Marriage and civil partnership	Neutral	No foreseen impact	N
	Pregnancy and maternity	Negative	Potential risk to Health & Safety could be at increased risk due to mobility issues. Potential benefits of a smooth and safe highway	N
	Race	Neutral	No foreseen impact	N
	Religion or belief	Neutral	No foreseen impact	N
	Sex	Neutral	No foreseen impact	N
	Sexual orientation	Neutral	No foreseen impact	N
	Other (give detail)	Users of the public highway/businesses Potential risk to Health & Safety however a safer more efficient highway network will benefit all.		N
	Further information	N/A		
6	Does your proposal link with other proposals to have a cumulative affect on particular equality groups? If yes, give details below.			(Delete one) No
7	Which justifiable action does the evidence, engagement and consultation suggest you take? (Bold which one applies)			
	A	No major change required		
	B	Adjustments needed to remove barriers or to better promote equality		
	C	Continue despite possible adverse impact		
	D	Stop and rethink your proposal		

Now complete the action and monitoring plan on the next page

Action and monitoring plan

Action Date	Action	Responsibility	Outcome Date	Outcome
April 2015	Monitor consultation feedback with those groups specifically identified in the Cabinet Report. Consider and amend report as necessary in compliance with the delegated authority set out in Cabinet recommendations.	Steve Pretty/John Roseblade	June 2015	Collate consultation response and review/amend Plan and Strategy.
2015-21	Continuously monitor for any indications of negative impacts on groups with protected characteristics	Steve Pretty/ John Roseblade	Ongoing	

Update to EqlA

Date	Detail

Highway Maintenance Strategy

2015 - 2018



Walsall Council

Walsall Council Highway Maintenance Strategy 2015-18

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Foreword

The highway network is by far the single most valuable asset maintained by Walsall Council having an estimated replacement value of £3.3 Billion. Be it walking, cycling, using public transport or accessing businesses, everybody will at some point rely on this vital asset. Having an efficient and well maintained highway network is essential to support the growth, health and prosperity of our community. Not only does it allow us to travel safely and comfortably around our neighbourhood but it supports economic development and regeneration across the Borough.

The 2015 - 2018 Highway Maintenance Strategy replaces the previous document for the period 2012 - 2015. During the previous strategy period Walsall successfully delivered £12million worth of highway maintenance schemes, more than 26 miles (42km) of carriageways were treated together with 24 miles (39km) of footways. The benefit of this investment brings about a real improvement for road users in the borough.

Walsall has also developed a Highway Asset Management Planning approach to managing the council's highway network. The 2015 -2018 Highway Maintenance Strategy should be seen as the operational element which will further embed the principles of asset management whilst forging strong links with Walsall Council's goals, objectives, policies and aspirations. Effective management of this major asset contributes greatly to 'The Walsall Plan' and our aim to provide accessible and sustainable places for business.

Now more than ever we have to make sure that our scarce resources are used as wisely as possible. The Council has embarked on a programme of smarter working which has been embraced by Engineering and Transportation Services to deliver substantial cashable savings for the Council whilst providing a better service to residents and businesses'.

Our strategy provides a reference point for those seeking detailed information on aspects of our maintenance policies and procedures, as well as being a resource for officers involved in procurement, provision or administration of the highway maintenance service. It highlights the areas where we have introduced new initiatives; revisions to policy or enhanced service provision.



Councillor Lee Jeavons
Portfolio Holder for Environment and Transport

DRAFT

1: Introduction

1.1 Executive Summary

An efficient and well maintained Highway Network is one of the most important community assets. It supports economic growth and prosperity, helps keep people safe during their travels and contributes to the sense of pride in our neighbourhoods.

This strategy is important because it has been designed to direct and inform in detail service users and those involved in service delivery about the way in which Walsall Council intends to maintain its highway network over the next three years. Particular emphasis has been placed upon service delivery improvements and how strategic intentions will be realised through the asset management process.

This strategy should be read in conjunction with, or at least reference to, several other important publications such as current legislation, Walsall's Highway Asset Management Plan (HAMP) of which it forms a part and the national code of practice which is called Well-maintained Highways – Code of Practice for Highways Maintenance Management (the Code).

Walsall's HAMP provides an integrated framework for the delivery of highway maintenance services across the borough's road network and optimises resources for the management of the highway infrastructure.

The objective of the Highway Asset Management Plan is to change how we deliver highway services in a way that makes the process more intelligence led and customer responsive. An intelligence led approach will ultimately bring greater value for money and help achieve key council goals that can be found in strategies such as our The Walsall Plan and Climate Change Strategy and Action Plan

The strategy identifies the way in which this intelligence is utilised to deliver all highway services with specific emphasis upon maintenance. In line with all other highway authorities in the UK, our aim is to provide a service that, so far as possible and within financial constraints, meets the general objectives and requirements of the national code of practice.

It is therefore essential that the strategy makes regular reference to both the HAMP and the Code.

1.2 Glossary of Terms

Terms

The following terms are used in this strategy:

Asset management

A strategic approach which 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 valuation

The calculation of the current monetary value of an authority's assets. It excludes therefore any consideration of the value to the community in terms of the economic and social benefits of providing a means for people to travel in order to work, socialise and live.

Carriageway

A way constituting or comprised in a highway over which the public have a right of way for the passage of vehicles.

Footway

Part of a highway also comprising a carriageway that is set aside for the exclusive use of pedestrians often referred to as the pavement but see below (American – sidewalk).

Footpath

A highway over which the public have a right of way on foot only, not being a footway (as in a footpath across a field).

Levels of service

A statement setting out the performance of the asset in terms customers can readily understand. Levels of service typically cover condition, availability, capacity, amenity, safety, environmental impact and social equity. 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 a service to customers and maintaining its physical integrity at an appropriate level.

Pavement

A paved surface and the layers below the paved surface of a highway or any part of a highway or any hardened surface intended for the passage of any category of traffic. Thus one can have a footway pavement or a carriageway pavement.

Risk management

The formal assessment of risks with the potential to affect delivery of the service via a process of identification, assessment, ranking and control planning.

1.3 Abbreviations

The following abbreviations are used in this strategy:

AM	Asset Management
AMP	Asset Management Plan
AV	Asset Valuation
AP	Area Partnership
CAA	Comprehensive Area Assessment
CAMP	Corporate Asset Management Plan
CEN	Community Empowerment Network
CIPFA	Chartered Institute of Public Finance and Accountancy
CIPPF	Corporate Integrated Planning & Performance Framework
CMT	Corporate Management Team
CPA	Comprehensive Performance Assessment
CRM	Customer Relations Management
CSS	County Surveyors Society
CSCS	Construction Skills Certification Scheme
CVI	Coarse Visual Inspection
DDA	Disability Discrimination Act
DfT	Department for Transport
DVI	Detailed Visual Inspection
FNS	Footway Network Survey
E.Gov	Electronic Government
GIS	Geographical Information Systems
GRC	Gross Replacement Cost
HAMP	Highway Asset Management Plan
HAUC	Highway Authorities and Utilities Committee
HIMG	Highway Infrastructure Managers Group
HMA	Highway Maintainability Audit
HMMS	Highways Maintenance Management systems
HMS	Highway Maintenance Strategy
IIMM	International Infrastructure Management Manual
KPI	Key Performance Indicators
KSI	Killed and Seriously Injured
ICT	Information Communications Technology
ITS	Intelligent Transport Systems
LoS	Level of Service
LPI	Local Performance Indicator
NI	National Indicator
NRMCS	National Road Maintenance Condition Survey
NRSWA	New Roads and Street Works Act
TAG	Local Authority Technical Advisors Group
TRL	Transport Research Laboratory
RIEP	Regional Improvement and Efficiency Partnership
SCANNER	Surface Condition Assessment of the National Network of Roads
SCRIM	Sideways-force Coefficient Routine Investigation Machine
UKPMS	United Kingdom Pavement Management System
WGA	Whole of Government Accounts

1.4 Setting the Strategy and Code in context

The Strategy recognises that the suggested recommendations within the Code are not mandatory requirements for highway authorities and that authorities may wish, in light of local circumstances to adopt policies, procedures and standards differing from those suggested in the Code.

This strategy identifies these differences and also the reasoning behind the decision for them in each case.

Figure 1 represents diagrammatically how the Code sits within the hierarchy of guidance for highways maintenance strategy and policy within the UK.

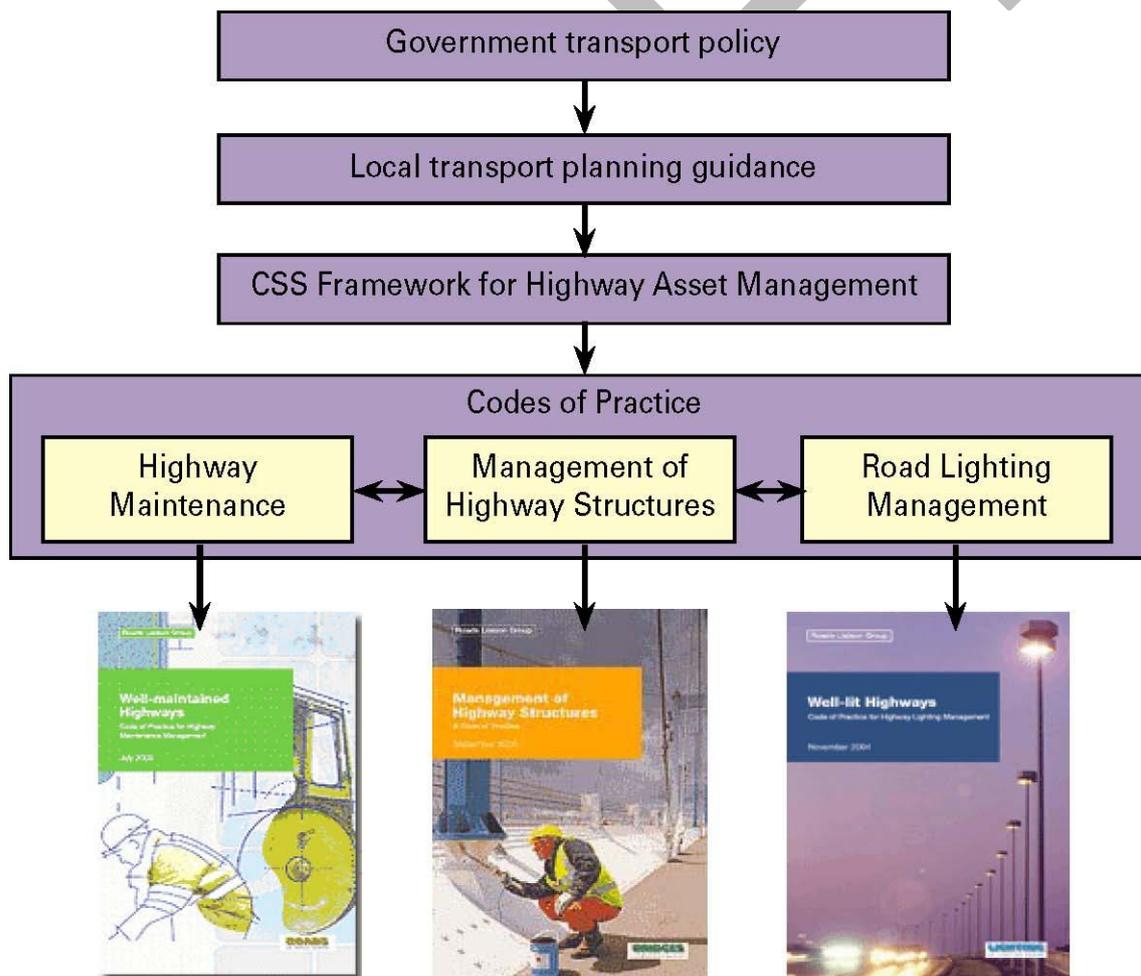
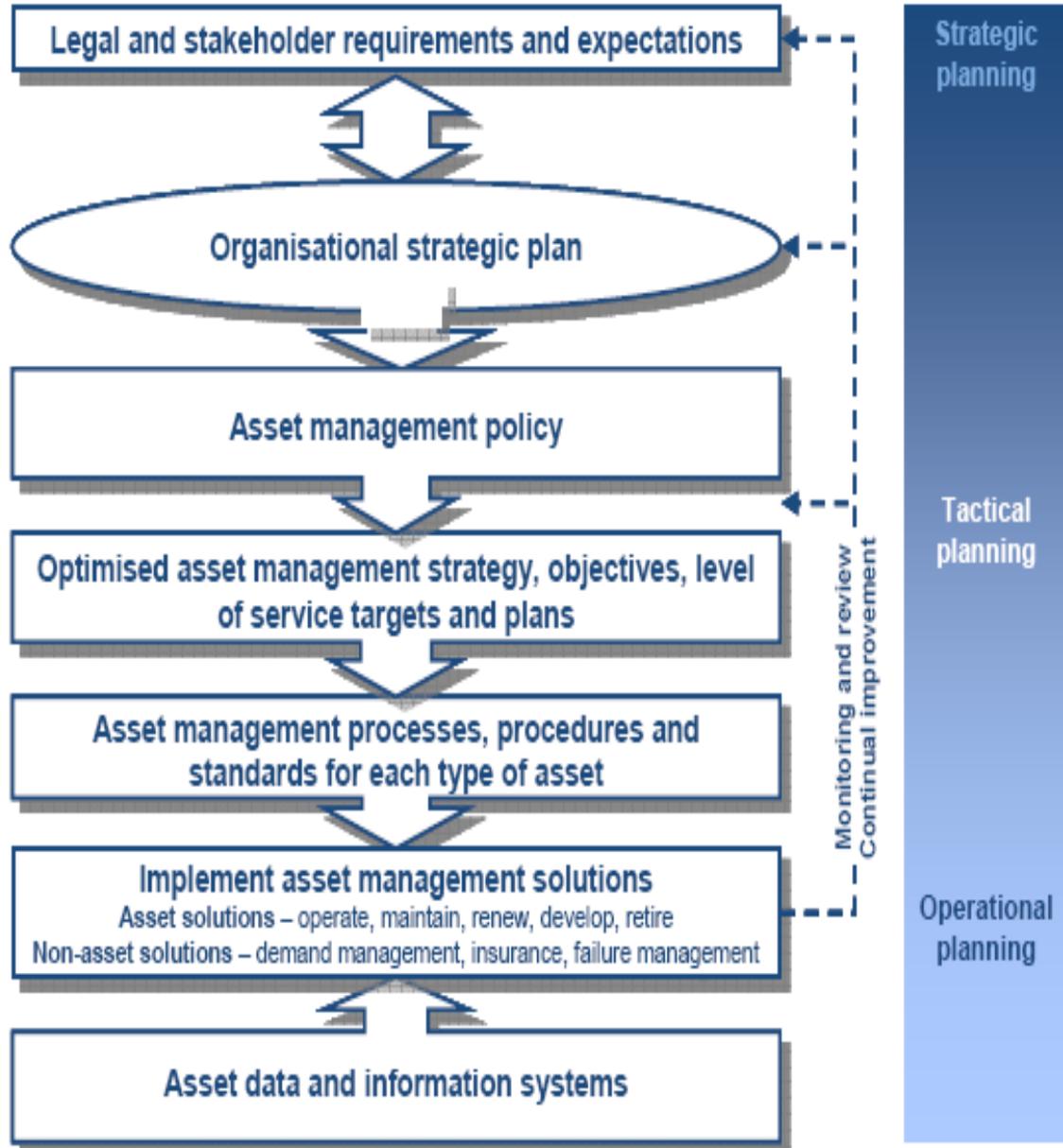


Figure 2 represents diagrammatically the entire highway asset management process (reproduced from IIMM)



1.5 Purpose of highway maintenance

The Code states that:

“The main purpose of highway maintenance is to maintain the highway network for the safe and convenient movement of people and goods. The core objectives of highway maintenance are to deliver a safe, serviceable and sustainable network, taking into account the need to contribute to the wider objectives of asset management, integrated transport, corporate policy and continuous improvement.”

The policies and strategies in this document are aimed at managing the highway network in such a way as to maximise its contribution to the Corporate Plan and deliver our priorities. They will also contribute to the requirements of the West Midlands Local Transport Plan and ensure that Walsall Council meets all statutory and legal requirements as a highway authority.

Walsall Core objectives

Network Safety

- Complying with statutory obligations
- Meeting users' needs for safety

Network Serviceability

- Ensuring availability
- Achieving integrity
- Maintaining reliability
- Enhancing condition

Network Sustainability

- Minimising cost over time
- Maximising value to the community
- Maximising environmental contribution

Customer Service

- Informing and advising customers of the services provided
- Consulting customers to inform future strategy and introduce levels of service
- Making the service accessible to all

1.6 Scope of highway maintenance

Highway maintenance is a wide ranging service which includes the following activities:

- **Reactive maintenance** responding to safety inspections, complaints or emergencies
- **Routine maintenance** providing works or services to a regular consistent schedule generally for cleaning and landscape maintenance
- **Programmed maintenance** providing larger schemes primarily resurfacing, reconditioning or reconstruction to a planned schedule
- **Regulatory maintenance** inspecting and regulating the activities of others with much of this work being undertaken by the Traffic Manager under the statutory duty for network management
- **Winter service** providing salting and clearance of snow and ice
- **Emergency Response** providing a planned emergency response for adverse weather conditions and other emergencies

1.7 Related activities

There are a number of related functions which are not specifically dealt with in detail in this strategy, but which may on occasions affect or be affected by highway maintenance activity. They also have the potential for value to be added in Walsall through joint working, co-operation and co-ordination. These functions include:

- Asset management
- Network management, including utility company activities
- Highway development control
- Street cleansing, including integrated street management
- Public transport providers
- Town centre management, including use of public space
- Maintenance of surface water drainage systems

In Walsall through regular co-ordination meetings and the positive reinforcement of collaborative and partnership working all activities on the highway are carefully planned and programmed to maximise value for money and minimise disruption to road users.

2: Customer Service

2.1 Customer categories

Our customers are our citizens, visitors or anyone using the highway network, whether for business or pleasure.

Walsall's highway service customers have been defined in the following 12 primary categories:

1. **Pedestrians**
2. **Cyclists**
3. **Motorists**
4. **Motor cyclists**
5. **Bus operators**
6. **Bus passengers**
7. **Freight vehicle drivers and freight haulage operators**
8. **Taxi drivers and users**
9. **People with disabilities**
10. **Residents and landowners with property adjoining the highway**
11. **Equestrians**
12. **Emergency services**

Highways policy caters for the particular needs of each category of user. Maintenance policy and strategy caters for all established or predicted patterns of use and does not seek to influence them.

2.2 User and community consultation

The way we consult customers, highway users, communities and providers falls into the following categories:

2.2.1 Informing

- Details of all roadworks in or affecting the borough are on our web site

- Major schemes have information signs erected on site and where appropriate public meetings are held for residents
- Officers will make personal visits where necessary to households or businesses affected
- Press releases are issued for all major works
- Local media is informed and officers provide interviews as required
- Strategy and policy is produced in clear formats both online and in print for those without computer access. These are available upon request in other languages, large print, Braille and audio tape
- Every home or business directly affected by major maintenance works is informed by letter. The letter has details of the works, any diversions and clear directions on who to contact.

2.2.2 Consultation

At the centre of our approach are the six Walsall Area Partnerships, each covering a number of electoral wards. Their purpose is to resolve the issues of most concern to communities by bringing delivery agencies, such as the police, the Council, NHS Walsall and Walsall Housing Group together with local people, to properly understand the problem and then take appropriate action.

Each area partnership has the following key objectives:

- To involve and consult with local residents, businesses and partner organisations to agree an Area Community Plan for their area, which will inform local priority planning.
- To manage and monitor their Area Community Plan and to publish achievements
- To increase local community involvement in their area and to involve local people in improving the environment in which they live, work and play.

Elected members are at the centre of Area Partnerships and act as leaders in their communities and challenge the partners to make the way they operate more effective and efficient so that we all work smarter.

2.2.3 Participation and Empowerment

- In working with Area Partnerships the partner organisations agree to tasks they will undertake and are subsequently responsible for delivering them. Local people are also involved in developing solutions and work with the support of the delivery agencies. Area Partnerships work by asking people about their issues, listening to what they say, taking action and checking that this solves the problem.
- For major improvement schemes the views of stakeholders are actively sought prior to implementation
- Road safety and traffic schemes are mainly subject to consultation by pre-paid postage questionnaire and online through the website although exhibitions are sometimes used

2.3 Service Standards

Putting the customer at the heart of what we do

Service Standards have been established as part of the consultation, risk and asset management processes.

When you contact Walsall Council, we will endeavour to ensure you receive friendly, reliable and excellent customer care. Our standards apply to everyone working for us. This includes all staff and elected members, and all services we provide or that are provided for us.

All our Service Standards can be found on our website at:

www.walsall.gov.uk/index/council_and_democracy/servicestandards.htm

Central to our Service Standards are eight Customer Care Values.

We will:

- 1.** Manage your request promptly
- 2.** Provide good quality services
- 3.** Be helpful, fair, honest, professional, courteous and consistent
- 4.** Provide the relevant information that you need
- 5.** Take ownership of your query
- 6.** Be realistic in what we say we can or can't do

7. Treat your personal information as confidential and keep it secure

8. Listen to your comments - and learn from them

Customers can contact the Council by various means including:

In person at First Stop Shop, Civic Centre, Darwall Street, Walsall WS1 1DG

First Stop Shop Opening Hours

Day	Opening hours
Monday	8.45am – 5.15pm
Tuesday	8.45am – 5.15pm
Wednesday	8.45am – 5.15pm
Thursday	8.45am – 5.15pm
Friday	8.45am – 4.45pm
Saturday	Closed
Sunday	Closed

By phone Contact Centre 01922 653344 or 01922 650000 out of office hours

Online www.walsall.gov.uk

Library information points

Libraries staff have a wealth of information at their fingertips and can assist in offering customers access to Council services.

2.4 Service pledges

Chapter 4 of the Highway Asset Management Plan describes in detail the ethos behind levels of service and the mechanisms by which they will be established.

Levels of service are systematically being reviewed as part of the asset management process around a long-term lifecycle approach to discourage short-term objectives.

Seven service pledges have been established as follows:

1. All road and footway surfaces will be kept safe and serviceable having regard to established patterns of use

We will repair or make safe any dangerous defects in the highway (for example pot-holes, broken paving) within either 1hr, 24 hr, or 5 working days of it being reported to us or of coming to our attention through our own inspections.

We will operate a nationally recognised system for assessing the condition of every road in the borough at set intervals and prioritise our major repair works according to the results.

2. Winter Service – precautionary salting and snow clearing will operate between 1 November and 31 March each year

A Winter Service Operational Plan is published and distributed each year. The Winter Service Operational Plan can be found on our website at:

http://cms.walsall.gov.uk/index/transport_and_streets/highway_maintenance/winter_service.htm

The full winter service operates from the November to March the following year. A limited response to bad weather is also available in October and April.

3. Street lighting will be provided and maintained

Any street light or illuminated traffic sign reported to our private sector partner, Amey Infrastructure Services, as not working will be back in light within five working days unless the fault is in the electricity supply.

Any dangerous defect involving a knocked-down street light, illuminated traffic sign or potentially exposed live wires, will be attended to on site within one hour of the incident being reported. It will be made safe and repair work started.

4. We will attend emergencies

If requested to do so by the emergency services, any occurrence or accident that renders the highway unusable or unsafe will be attended to on site within an hour either by ourselves or our private sector partners Lafarge Tarmac or Amey Infrastructure Services as appropriate.

5. We will manage roadworks

Walsall Council will use its powers to the full extent allowed under the New Roads and Street Works Act and Traffic Management Act to regulate, control and co-ordinate utilities' street works in order to minimise inconvenience to customers.

6. We will keep highways clean and attractive

Walsall Council aims to meet its obligations for litter removal under the Environmental Protection Act. Litter will be removed at varying intervals depending on how much and how quickly litter accumulates at particular locations.

Highway verges will be mown and trees and shrubs pruned or cut back as necessary to maintain a predetermined minimum standard. It will also ensure that growth does not unduly inconvenience or endanger road users.

Gully cleansing and street cleansing will take place at varying intervals in order to give a reasonable standard of cleanliness and ensure that storm water is drained off the highway in a reasonably short time.

7. We will respond to customer complaints and comments

Your comments, compliments and complaints are important to us. We are committed to providing the best possible service to our customers.

We will investigate all complaints. Customers will receive an acknowledgement within five working days and a full response within fifteen working days.

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3: Legal Framework

3.1 Duty of care

Most highway maintenance activity is based upon statutory powers and duties contained in legislation and precedents developed over time, as a result of claims and legal proceedings. The most important aspects of these statutory powers and duties are summarised in this chapter and developed in more detail, where appropriate, in subsequent chapters.

In recent years the issue of risk management in assessing the implications of investment decisions for asset management purposes and in determining appropriate responses to highway deficiencies has become increasingly important.

It is therefore essential that everyone involved in highway maintenance at Walsall Council, including elected members, has a clear understanding of their powers and duties, and the procedures used to manage and mitigate risk.

The Highways Act 1980 sets out Walsall's main duties as a highway authority and Section 41 imposes a specific duty to maintain highways maintainable at public expense.

Even in the absence of specific duties and powers, Walsall Council has a general duty of care to users and the community to maintain the highway in a condition fit for its purpose.

3.2 Highway definition

A highway is a way over which the public at large has the right to pass and re-pass along as many times as they wish without let or hindrance and without charge. A highway is, by definition, public.

3.3 Risk management

The management of highway maintenance, including establishing regimes for inspection, setting standards for condition, determining priorities and programmes for effective asset management, and procuring the service should all be undertaken against a clear and comprehensive understanding and assessment of the risk and consequences involved.

Walsall employs a corporate risk management process with risk assessments of all key policies, processes and operations based upon a risk register. This is included in the HAMP Chapter 7 in more detail and is referenced in subsequent chapters of this strategy.

3.4 Health and safety

The Health and Safety at Work Act 1974, together with the Construction, Design and Management Regulations 2007 set a requirement for highway, traffic and street authorities to carry out work in a safe manner and establish robust arrangements for the management of construction works.

In Walsall everyone involved in the planning, management and delivery of highway maintenance services will receive training and regular updating, as necessary, to meet the health and safety requirements of the service.

3.5 Management systems and records

The accuracy and quality of information and records are crucial to the effective management of the service and to the defence of claims against the Council for alleged failure to maintain.

3.6 Powers and duties

In addition to a general duty of care, there are a number of specific pieces of legislation which provide the basis for powers and duties relating to highway maintenance.

These include the following:

- Highways Act 1980
- Traffic Management Act 2004
- New Roads & Street Works Act 1991
- Transport Act 2000
- Road Traffic Regulation Act 1984
- Traffic Signs Regulations & General Directions 2002
- Railways and Transport Safety Act 2003
- Local Authorities (Transport Charges) Regulations 1998
- Countryside and Rights of Way Act 2000
- Environmental Protection Act 1990
- Noxious Weeds Act 1993
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- Construction (Design & Management) Regulations 2015
- Local Government Act 2003
- The Clean Neighbourhoods and Environment Act 2005
- Disability Discrimination Act 2005
- Equalities Act 2010

The most strategically significant legislation is summarised below:

Highways Act 1980

The Highways Act 1980 sets out the main duties of highway authorities in England and Wales. Section 41 imposes a duty to maintain highways maintainable at public expense, and almost all claims against the Council relating to highway functions arise from the alleged breach of this section.

The Act identifies all powers that highway authorities can exercise to undertake activities on or within the highway such as improvements, drainage, acquiring land, authorising skips, scaffolds etc.

Section 58 provides for a defence against litigation relating to alleged failure to maintain on grounds that the Council has taken such care as in all the circumstances was reasonably required to secure that the part of the highway in question was not dangerous to traffic.

Traffic Management Act 2004

The Traffic Management Act was introduced in 2004 to tackle congestion and disruption on the road network. The Act places a duty on local traffic authorities to ensure the expeditious movement of traffic on their road network and those networks of surrounding authorities. The Act gives authorities additional tools to better implement parking policies, moving traffic enforcement and the co-ordination of street works. The Act states that local traffic authorities shall make appropriate arrangements for performing their network management duty. These arrangements must include provision for the appointment of a traffic manager.

The Act introduced a number of provisions:

- Highways Agency Traffic Officers
- local authority duty for network management
- permits for work on the highway
- increased control of utility works
- increased civil enforcement of traffic offences

The most important feature of the Act is Section 16(1) which established a new duty for local traffic authorities 'to manage their road network with a view to achieving, so far as may be reasonably practicable having regard to their other obligations, policies' and the following objectives:

- securing the expeditious movement of traffic on the authority's road network
- facilitating the expeditious movement of traffic on road networks for which another authority is the traffic authority'

Section 31 of the Act specifically states that the term 'traffic' includes pedestrians, so the duty requires the authority to consider all road users.

The Traffic Management Act 2004 has also strengthened the regulatory regime with regard to works of utilities and others within the highway including permit schemes, new conditions, and fixed penalty notices. The Act changes significantly the provisions of the New Roads and Street Works Act 1991, but much of the guidance remains valid.

Maintenance and management of Public Rights of Way

Walsall Council has a duty under the Wildlife and Countryside Act 1981 and the Highways Act 1980 to maintain and keep the definitive map and statement of Public Rights of Way (PROW) and to ensure that ways are adequately signposted, maintained and free from obstruction.

The Countryside and Rights of Way Act 2000 (Section 60) introduced a new duty for authorities to prepare Rights of Way Improvement Plans. The Walsall Borough Rights of Way Improvement Plan outlines the local importance of the public rights of way network in the borough, along with opportunities for improvements. It aims to provide an action plan which outlines weaknesses or problems in the current provision and provides a robust programme of improvements to be undertaken and can be found on our website at:

http://www.walsall.gov.uk/rights_of_way_improvement_plan.pdf

4: Network Inventory & Hierarchy

4.1 Walsall's highway network

The total road length maintained by Walsall is approximately 528 miles (850km), of which 43 miles are classified principal A roads, 25 miles are classified non-principal B roads, and seven miles are classified non-principal C roads.

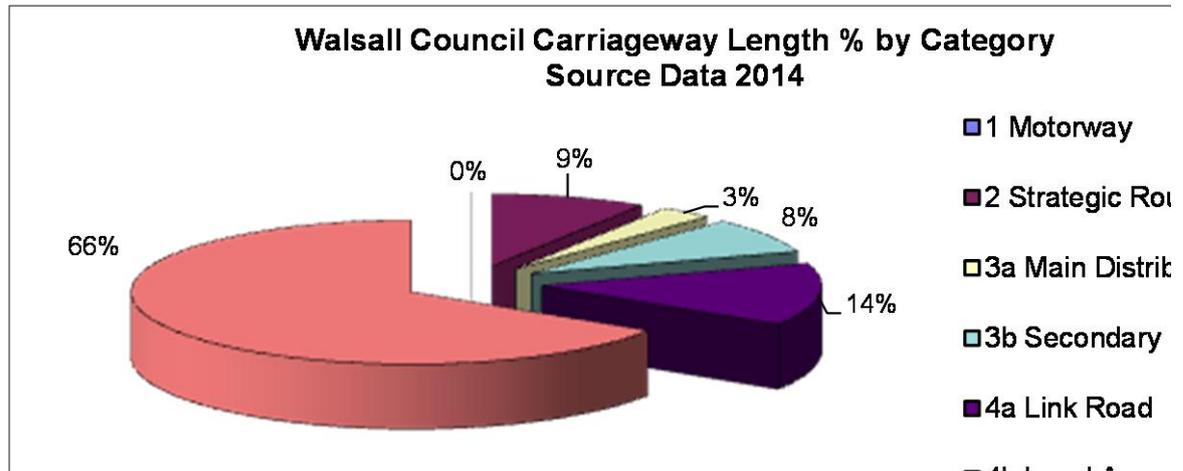


Figure 4 shows carriageway lengths by network category

The road length totals used here are based on the measured length held on the UKPMS database.

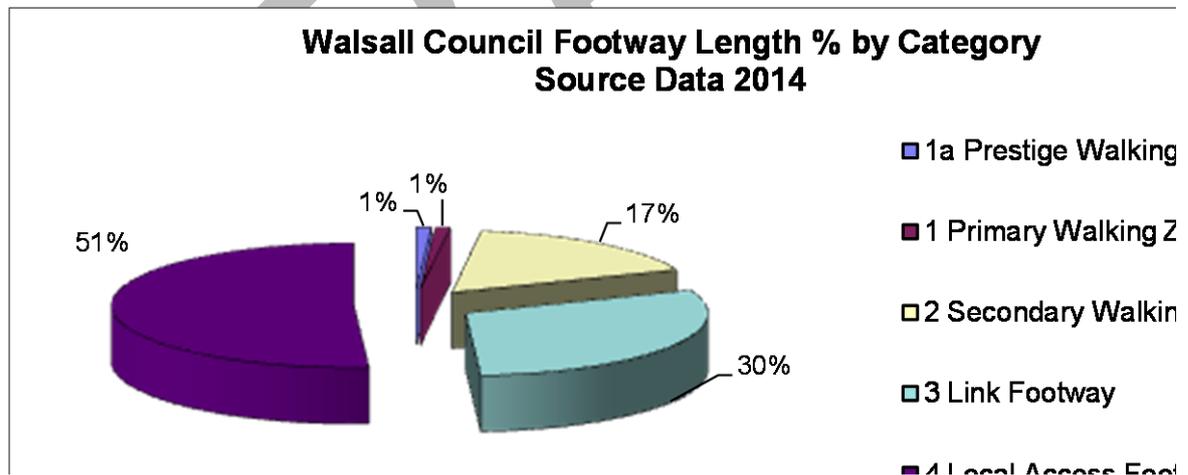


Figure 5 shows footway lengths by network category

The above footway lengths are taken from the UKPMS database and have been measured as a road length and not as an individual footway length.

4.2 Inventory data

Creating and keeping an up-to-date and accurate inventory of Walsall Council's highway network is an essential pre-requisite for Walsall's Highway Maintenance Strategy and Asset Management Plan. Walsall does not rely upon a single computerised Highways Maintenance Management System (HMMS) but has an integrated suite of specialist applications, models and databases which all form component parts of the Walsall HMMS.

Walsall's highway asset inventory is the foundation upon which its asset management processes are built. The key objective is to make high quality inventory and condition data readily available so that a consistent management approach is achieved on an informed basis to optimise resource allocation.

The ability to analyse inventory data in combination with condition data, and cross reference this with other information such as skidding resistance or accident records is crucial for targeting high risk sites. The output provides important information upon which priorities and critical decisions can be based. It is then possible to consolidate the use of more advanced asset management processes such as optimisation and risk management, which rely on the existence of comprehensive, accurate and up-to-date asset inventories.

4.3 Data review

Confirmation of the quality, reliability and completeness of existing asset data sets is essential. The level of confidence in any data has to be established before embarking on the implementation of any asset management processes. A review of current inventory practices has established the specific data held for Walsall's highway assets and the review of this data has determined:

- Where the data is recorded
- The level of detail that is captured
- The format of data capture, hard copy or electronic
- How the data is validated

The level of information recorded against each asset group has been assessed to determine that it is meaningful and has specific regard for the use and purpose of the data. Typical uses include:

- To provide information on the condition of the asset
- To enable a long term programme to be established
- To capture faults or damage in a way that can be analysed
- To report on relevant performance indicators
- To assist in the management of contractual arrangements
- To enable the value of the asset to be calculated

4.4 Asset groups

Highway asset types and category have been collectively determined from joint working between the West Midlands authorities. This has been achieved through a series of workshops guided by external consultants having extensive experience in highway asset management. There has also been reference to CSS and CIPFA guidance documents. The asset categories and their component elements are shown below.

Level 1 : ASSET TYPE	Level 2 : ASSET GROUP	UNIT OF MEASURE	Level 3 : VALUATION COMPONENTS
Carriageway	Flexible pavements Flexible composite pavements Rigid concrete pavements Rigid composite pavements	area m2	Includes for all categories: pavement construction layers other paved surfaces, central reservation, roundabout, lay-by, traffic island, earthworks, retaining walls <1.35m, traffic calming, kerbing, markings and road studs, highway drainage, boundary fences, hard strip, verges.
Footways & cycletracks (attached to the road or segregated)	Footways Pedestrian areas Footpaths Cycle tracks	area m2	Includes for all categories: construction layers and other surface types, eg block paving.
Structures	Bridges and subways (span>1.5m) Culverts (span > 0.9m) Retaining walls (height > 1.35m) Signs gantries, cantilever signs Tunnels (encl length > 150m) Structural earthworks Lighting columns (height > 20m)	deck area m2 internal surface area m2 retained area m2 span length m length m	Includes for all categories: the entire structure. Small water carrying structures are considered as highway drainage.
Highway lighting	Lighting columns (height < 20m) Wall mounted lighting units Heritage columns Illuminated bollards Illuminated traffic signs	number	The entire item including: column and foundations brackets, luminaires control gear, internal wiring, cabling within ownership.
Street furniture	Transport Highway Street scene	number	Seating, litter bins, bollards, marker posts, street nameplates, traffic signs, safety fences, Pedestrian barriers, grit bins, weather stations
Traffic management systems	Traffic signals Pedestrian signals Zebra crossings In – station Information systems Safety cameras	number number number number number number	different types different types different types complete installation variable message signs
Land	Freehold land Rights land	area - hectares	Features on land not taken into account in valuation

Table 1 Asset categories and their component elements

4.5 Current data management practices

For certain asset groups such as carriageways and street lighting the current data management processes are considered to be good. But in contrast there are categories such as subterranean highway drainage systems where limited data exists. We have prioritised these areas for the collection of asset inventory data.

There are a number of instances where good practice exists. It has to be acknowledged that a consistent data management regime does not comprehensively exist throughout the council. In such instances there are no quality standards in place for the completeness and reliability of all data sets and no formal data validation process or documented procedures exist.

The low level of confidence surrounding certain asset groups means that the use of information needs to be tempered with the knowledge that its use can bring about misleading results.

4.6 Proposed data management practices

It is generally accepted that to collect every piece of asset data is neither practical nor financially sensible. The review of Walsall's current data inventories provided a gap analysis that enabled us to target the collection of the more critical items of data. A prioritised programme of data collection is being implemented and is producing higher levels of confidence in those data sets identified as either mandatory or having a high level of importance. The data collection exercises will provide a base set of reliable asset data upon which initial need projections can be based.

To ensure that the maintenance of data is kept in manageable proportions, data managers are being assigned with responsibility for the completeness, integrity and availability of specific elements of major data sets. It is vitally important that before any inventory system is introduced, the mechanism by which it is managed and updated on a day-to-day basis is in place with fail-safe processes that will prevent such systems being neglected in the event of staff changes or departmental restructures.

The inventory management procedures for each asset group will typically include the following:

- Named data managers
- Procedures for updating the asset inventory
- Procedures for inventory verification and validation

4.7 Walsall's network hierarchy

The Code describes the hierarchy of carriageways as follows:

Roads

1 Motorway: Limited access motorway regulations apply. Routes for fast-moving long distance traffic. Fully grade separated and restrictions on use.

2 Strategic Route: Trunk 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.

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.

3b Secondary Distributor: Classified Roads (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 30mph 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.

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 widths 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 and unrestricted parking.

4b Local Access: 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.

Walsall's carriageways have been categorised in accordance with the Code descriptions and this information is held within Walsall's UKPMS database. This hierarchy is continuously and routinely updated and reviewed during condition surveys by independent highway survey consultants whilst carrying out Coarse Visual Inspections (CVIs) or Detailed Visual Inspections (DVIs).

Footways

The Code recommends five categories for footways:

- 1a Prestige Walking Zones:** Very busy areas of towns and cities with high public space and streetscene contribution.
- 1 Primary Walking Zones:** Busy urban shopping and business areas and main pedestrian routes.
- 2 Secondary Walking Routes:** Medium usage routes through local areas feeding into primary routes, local shopping centres etc.
- 3 Link Footways:** Linking local access footways through urban areas and busy rural footways.
- 4 Local Access Footways:** Footways associated with low usage, short estate roads to the main routes and cul-de-sacs.

Walsall's footways have been categorised in accordance with the Code descriptions and this information is held within Walsall's United Kingdom Pavement Management System (UKPMS) database.

Cycle routes

The Code suggests that cycle routes are categorised **A, B or C**, according to the following:

A Cycle lane forming part of the carriageway, commonly 1.5 metre wide strip adjacent to nearside kerb. Cycle gaps at road closure point with exception for cycle access.

B Cycle track, a 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 unsegregated.

C Cycle trails, leisure routes through open spaces. These may not always be the responsibility of the highway authority.

Engineering and Transportation Services' Transportation & Forward Planning Group publish a map of designated cycle routes. The current map can be found on our website at:

www.walsall.gov.uk/cycle_map.jpg

Walsall Cycling Strategy published in April 2003 can also be found on our website at:

http://cms.walsall.gov.uk/index/transport_and_streets/cycling.htm

At Walsall we have developed our own categorisation system for cycle routes based primarily on location and use which is an exception to the Code. They are shown as such on the map in the following manner:

- A National Cycle Route**
- B Cycle lane and safer route to school**
- C On Road Cycle lane**
- D Cycle route on canal towpaths**

Public Rights of Way (PROW)

During 2009 the Council surveyed its Public Rights of Way assets to create a spatially defined network that could be managed through GIS. The data collected includes section lengths and surface types together with an inventory of street furniture and features such as fences and hedgerows. This data is further backed up with condition data and photographic images. Condition can be mapped out thematically which allows officers to better target funding priorities with regard to the maintenance of surfaces, hedges, fences and street furniture.

This new system is further complemented with an electronic document management system that holds data specific to each Right of Way. The data is readily accessible via hyperlinks that are set up in GIS and has proved to be a more efficient way of storing and managing data.

The GIS system enables PROW officers to deal with enquiries promptly since both the mapping and data is readily at hand. Future plans include making some of this data available across the Council and to ultimately make it available externally via the Council's web site.

Public Rights of Way are categorised as Definitive and Non Definitive, with Definitive being specifically recorded on the Definitive Map & Statement and Non Definitive being taken from a range of other historical sources.

5.0 Inspections, Assessment & Recording

5.1 Importance of inspection, assessment and recording regime

The establishment of an effective regime of inspection, assessment and recording is a crucial component of highway maintenance. The regime, including frequency of inspection, defects to be recorded and responses should be defined following an assessment of the risks associated with the potential circumstances of the network condition.

The inspection, assessment and recording provide the basic information to address the key objectives of Walsall's highway maintenance strategy which are:

- Network safety
- Network serviceability
- Network sustainability

5.2 Categories of inspection

5.2.1 Safety inspections

Highway Safety Inspections are carried out by Walsall's own Highway Safety Inspectors and the procedures have been developed in conjunction with risk assessments including third party liability claims and conform to the Code of Practice for Highway Maintenance Management.

The purpose of safety inspections is to identify all defects that are likely to create danger or serious inconvenience to users of the network. Such defects include those that will require urgent attention as well as those where locations and sizes are such that longer periods of response would be acceptable. The risk of danger is assessed on site and the defect identified as a Category 1 or 2, with an appropriate priority response.

General safety inspections will include carriageway and footway running surfaces, kerbs and verges. They will also include footpaths, road markings, non-illuminated bollards, safety fencing, benches, planters, walls and miscellaneous items of street furniture not subject to regular condition or routine service inspections.

Walsall currently undertakes safety inspections to meet with **Table 2**, Safety Inspection Frequency, (Code of Practice for Highway Maintenance Management). Walsall currently undertakes three levels of inspection for the network, with the 6 town centre locations, strategic routes, main distributor and secondary distributor routes inspected monthly and all other locations inspected either quarterly, six monthly or annually.

The district centre area maps are included in **Figures 6 to 11** for Aldridge, Bloxwich, Brownhills, Darlaston, Walsall and Willenhall.

The Code defines defects in two categories, which correspond with those adopted in England by the Highways Agency (HA) in respect of motorways and trunk roads.

- **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

Walked Safety Inspections distinguish between these two categories and based upon a risk assessment, see **Table 3**, will determine the nature and speed of response.

Table 2 - Safety Inspection frequencies

Feature	Code Description	Code Category	Code Frequency	Walsall Description	Walsall Category	Walsall Frequency 2005	Walsall Frequency 1 June 2007 onwards
Roads	Strategic Route	2	1 month	As Code	2	Dependent upon associated footway category or if no footway then Code frequency is used	Town Centre areas as Figures 6 to 11 1 month All other 6 months
	Main Distributor	3(a)	1 month	As Code	3(a)		
	Secondary Distributor	3(b)	1 month	As Code	3(b)		
	Link Road	4(a)	3 months	As Code	4(a)		
	Local Access	4(b)	1 year	As Code	4(b)		
Footways	Prestige Area	1(a)	1 month	As Code	1(a)	1 week	Town Centre areas as Figures 6 to 11 1 month All other 6 months
	Primary Walking Route	1	1 month	As Code	1	1 month	
	Secondary Walking Route	2	3 months	As Code	2	3 months	
	Link Footway	3	6 months	As Code	3	6 months	
	Local Access Footway	4	1 year	As Code	4	1 year	

Cycle Routes	Part of carriageway	A	As for roads	National Cycle Route	1	6 months where Walsall has maintenance responsibility or as for the roads it is associated with	Town Centre areas as Figures 6 to 11 1 month All other As previous
	Remote from carriageway	B	6 months	Cycle lane and safer routes to school	2	Ad hoc as dictated by complaint or enquiry	
	Cycle Trails	C	1 year	On road cycle lane	3	As for roads associated with	
				Cycle route on canal towpaths	4	British Waterways responsibility	British Waterways responsibility

Figure 6 Aldridge District Centre



Figure 7 Bloxwich District Centre

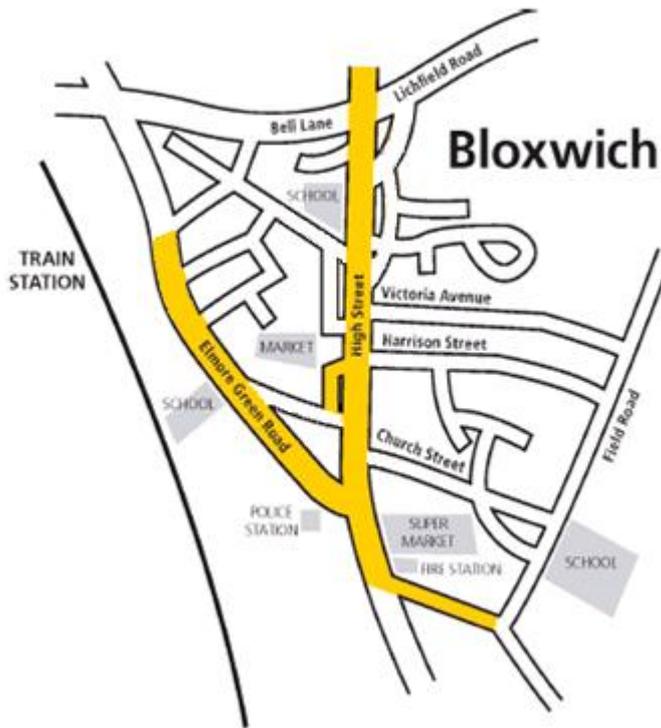


Figure 8 Brownhills District Centre



Figure 9 Darlaston District Centre



Figure 10 Walsall Town Centre



Figure 11 Willenhall District Centre



Walsall has four levels of response to defects identified based upon individual risk assessment and the category type.

The levels of response are as follows:

- **Category 1 High Risk - Within 1 hour, where there is danger to life or limb**
- **Category 1 High Risk - Within 24 hours, temporary repair within traffic sensitive areas i.e. major junctions**
- **Category 2 Medium Risk – Within 5 working days – defect criteria meets with intervention level**
- **Category 2 Low Risk – 6 month - programmed works**

Typically Category 1 high risk defects may be corrected or made safe within 1 hour or 24 hours of the inspection, if reasonably practicable. In this context, making safe may constitute displaying warning notices, coning off or fencing off to protect the public from the defect.

Where appropriate and subject to financial restraint, the target is for permanent repairs to be carried out within a 6 month period.

Whether any deficient should be dealt with as Category 1 will also depend upon:

- The depth, surface area, or other extent of the defect
- The location of the defect relative to highway features such as junctions and bends
- The location of the defect relative to the positioning of users, especially vulnerable users, such as in traffic lanes or wheel tracks
- The nature and extent of interaction with other defects
- Forecast weather conditions, especially the potential for freezing of surface water

Category 2 medium and low risk defects should, if possible and safe to do so, be repaired within planned programmes of work, with priority depending on the degree of deficiency, traffic and site characteristics. These priorities should be considered, together with access requirements, other works upon the road network, traffic levels, and the need to minimise traffic management, in compiling the programmes of work.

The Walked Safety Inspection Manual (the manual) provides detailed guidance to inspectors. The manual provides all necessary information required to undertake walked safety inspections and how to carry out associated risk assessments, the way each type of defect should be recorded, intervention levels and also recommends the typical action that should be taken in each case. Each inspector has received comprehensive training as part of their Employee Performance Appraisal programme.

Walsall's policy is that pothole depths of greater than 50mm in carriageways or 25mm in footways and cycleways are considered to require particularly careful consideration.

Exception to the Code:

The Code provides the following suggested items for inspection when carrying out safety inspections:

- Debris, spillage or contamination on running surfaces or hard shoulders
- Displaced road studs lying on running surface
- Overhead wires damaged or unstable
- Damaged and exposed electrical wiring
- Embankments and cuttings apparently unstable
- Trees with loose branches or apparently unstable
- Signs, signals or lighting damaged, defective, missing or unstable
- Road markings and studs missing, misleading or badly worn
- Signs, signals or lighting dirty or obscured
- Sight-lines obscured by trees, unauthorised signs and other obstructions

- Safety fencing, parapet fencing, handrail and other barriers missing or defective
- Abrupt level differences in the running surface
- Potholes, cracks or gaps in the running surface
- Crowning, depression and rutting in the running surface
- Edge deterioration of the running surface
- Kerbing, edging or channel defects
- Rocking or otherwise unstable footpath or cycle route surfaces
- Apparently slippery running surface
- Ironwork (gully lids, manholes etc) broken or missing
- Gullies, drains or grips blocked or defective
- Standing water, water discharging onto or overflowing across the running surface

The council is concerned over the potential for legal action brought by road users in respect of carriageway pot-holes, damaged footway surfaces, broken kerbs and the like. These deficiencies are therefore recorded as a matter of course. Some of the other defects of the type listed above are only recorded in extreme and obvious cases. The manual clearly identifies the items which are to be inspected, assessed and what intervention levels they are to be assessed against.

- i. No defects identified
- ii. Minor areas of patching required up to 1m²
- iii. Minor patching required less than 20% of the surface area
- iv. Minor patching required greater than 20% of the surface area
- v. Requires resurfacing of whole surface area

The Manual also details how the risk management process is applied to inspections and **Table 3** shows the risk matrix and response adopted by Walsall Council.

Service inspections

These mainly comprise of detailed inspections tailored to particular highway elements to ensure that they meet with the requirements for serviceability. This includes inspections for regulatory purposes including New Roads and Street Works Act 1991 (NRSWA) and are intended to maintain network availability and reliability.

Under section 72 of NRSWA the street authority is empowered to carry out investigatory works to check on whether or not an undertaker has complied with the duties placed on it in respect of reinstatement of the street.

Two distinct inspection procedures are specifically provided for in the Act:-

Sample Inspections: This will involve inspections of a structured random sample of various stages of excavation and reinstatement, and after reinstatement

Defect Inspections: A procedure for dealing with individual reinstatements which do not comply with the reinstatement specification. This will normally allow for joint inspection by the street authority and undertaker before remedial action is taken

5.2.2 Inspections relating to street lighting

We have night time patrols to detect defects and test street lighting apparatus and the like. These specialist safety inspections are covered by Walsall Council's Private Finance Initiative contract with Amey LG Ltd. Please see Chapter 9 on Public Lighting.

Table 3 Walked Safety Inspection Risk Matrix & Response

Probability ↓ → Impact	Very Low (1)	Low (2)	Medium (3)	High (4)
Negligible (1)	1	2	3	4
Low (2)	2	4	6	8
Noticeable (3)	3	6	9	12
High (4)	4	8	12	16

Category 2 Low Risk Response	Category 2 Medium Risk	Category 2 High Risk	Category 1
1-3 No immediate action	4-6 Within 6 Months	8-12 Within 24 Hours Temporary or 5 days permanent	16 Within 1 Hour

5.2.3 Inspections relating to structures

Bridge inspection frequencies: Basic bridge inspections are carried out on an approximate two year cycle although some structures require more frequent inspections depending on accessibility, construction or condition.

In addition, and where appropriate a Principal Inspection is undertaken on all major structures at six-year intervals. Additional Special Inspections are also undertaken as needed following crash damage or flooding.

Inspections are carried out by qualified technicians or engineers as appropriate. A Principal Inspection is one that requires close inspection of all parts of a structure, which often means lane closures, and the use of special access equipment.

5.2.4 Inspections relating to skidding resistance

Since 2005 Walsall, along with other West Midlands councils, uses Grip Tester to measure skidding resistance of roads. The survey is currently jointly procured for the West Midlands by Dudley Metropolitan Borough Council.

The frequency of inspection in Walsall is annually and the coverage is the principal road network (A roads) only.

The data generated is plotted geographically in conjunction with accident statistics to inform Walsall's resurfacing programme. The Skid Prioritisation System (SPS) as it has become known was developed by Walsall in partnership with the West Midlands and Marsh Associates and has received national recognition from Ordnance Survey.

5.2.5 Service inspections

These are more detailed discretionary inspections of particular highway elements to ensure they meet the requirements for serviceability usually defined in a highway authority HAMP. Walsall is currently reviewing levels of service as part of the asset management process and greater detail can be found in the HAMP at:

http://cms.walsall.gov.uk/index/transport_and_streets/highway_maintenance/highway_asset_management.htm

Chapter 4 Levels of Service provides information on Walsall Council's proposed Level of Service Framework and identifies current methods for measuring performance. When Levels of Service have been identified it is proposed that a more extensive service inspection regime will be established in due course.

The key requirements affecting the development of levels of service are:

- Legislative requirements
- Walsall Council's mission, policy and objectives
- Customer expectations
- Best practice guidelines
- Affordability
- Availability of resources

A number of service inspections are carried out by suitably qualified staff.

They come under the following categories:

a. Utilities' openings and reinstatements governed by the New Roads and Street Works Act. If the utilities were to fail to comply with the Codes of Practice relating to the Act there would be a detrimental effect to safety, serviceability and sustainability.

b. Carriageways, footways and cycle routes – carried out in response to customer queries or reports from Highway Safety Inspectors that standards of reliability, quality, comfort or ease of use of the network are not being maintained at specific locations. In severe cases consideration will be given to bringing forward major maintenance works to deal with the problem where temporary or reactive repairs are impossible or impracticable. In respect of each service inspection in this category an Engineering Programme Inspection (EPI) is completed and proposed action documented.

Exception to the Code

It is accepted that there are currently insufficient resources to deal with certain service inspections on a regular basis other than in the above two categories. Although it is possible to react to incidents or complaints with appropriate action, the Code makes recommendations for frequency and detail of service inspections for the following elements:

- i. Highway drainage systems
- ii. Embankments and cuttings
- iii. Landscaped areas and trees
- iv. Safety fencing and barriers
- v. Traffic signs and bollards
- vi. Road markings and studs – should be undertaken annually, preferably in the Autumn
- vii. Traffic signals, pedestrian and cycle crossings
- viii. Service inspections for network integrity

5.2.6 Structural condition surveys

The main purpose of these surveys is to collect data so we can effectively prioritise planned maintenance work. It is essential to build up a comprehensive picture of the condition of the asset. Priorities, timing and appropriate treatments can then be selected by using UKPMS to give optimum results in terms of maintenance costs against preservation of asset value.

Surveys are organised by the Highways Maintenance Group.

The methods employed at a network level are:

- Coarse Visual Surveys (CVIs) and Detailed Visual Inspections (DVIs) are undertaken by independent highway survey consultants on behalf of Walsall under a joint contract involving the other West Midlands councils. In all cases measurements and analysis are carried out to the national rules and parameters for UKPMS. Walsall Council's policy is to use MARCHpms (Yotta DCL) software for this purpose. This system is accredited for UKPMS systems. These surveys are also used to produce Local Indicators (LI) information.
- Skidding resistance - Skidding inspections are carried out using the Grip Tester method. The survey has been procured by Dudley MBC on behalf of Walsall and the other West Midlands councils. The survey uses a machine that provides a continuous record of resistance to skidding on wet roads. The data collected is used to produce a geographic report identifying sections of road below the required standard. The skidding resistance on carriageways is dependent on the physical features. This survey system commenced in 2005 and has been carried out annually on the principal road network. Results from Grip Tester surveys are used in combination with results from other surveys to determine remedial works on the highway. Hence, short lengths of sub standard skid resistance along an otherwise adequate road may remain untreated until that road requires significant repair/reinstatement.
- Comprehensive machine surveys – SCANNER (Surface Condition Assessment of the National Network of Roads) using specialised machinery. These surveys are also used to produce NIs for the classified network.

The coverage of condition surveys varies year on year but **Table 4** indicates the survey coverage planned for 2015.

Walsall also employs site specific or project level investigation using:

- Falling Weight Deflectometer (FWD) which is a non-destructive testing device that is used to complete structural testing for pavement rehabilitation projects, research, and pavement structure failure detection.

It is used for conventional and deep strength flexible, composite and rigid pavement structures. The FWD is a device capable of applying dynamic loads to the pavement surface, similar in magnitude and duration to that of a single heavy moving wheel load. The deflection data collected is then used to determine pavement design.

- Ground Penetrating Radar (GPR) which provides a non-intrusive and non-destructive method of surveying the construction layers of road pavements and service apparatus locations.

Table 4 Planned Condition Survey Coverage 2015

Coverage→ Survey Type↓	Principal Roads	B Roads	C Roads	Unclassified
SCANNER	50%	50%	100%	0%
FNS	Site specific	Site specific	Site specific	Site specific
DVI	Site specific	Site specific	Site specific	Site specific
CVI	0%	0%	0%	25%
GPR	Site specific	Site specific	Site specific	Site specific
Grip Tester	100%	0%	0%	0%



SCANNER Survey Vehicle

Quality and reliability of data

All surveys must be carried out in accordance with current guidance documentation, including, but not limited to, UKPMS Visual Survey Manual and the relevant sections of the Design Manual for Roads and Bridges and Transportation. Machine-based surveys must be carried out using accredited machines.

6.0 Condition Standards & Investigatory Levels

6.1 Introduction

Standards for the management of all the elements that contribute to the highway maintenance service are developed through risk assessment and take into consideration user needs in order to meet the core requirements of safety, service and sustainability. They define the nature and extent of works that should be undertaken in particular circumstances of maintenance need and the priority level assigned to each response.

It is acknowledged that limited financial resources mean that we cannot always achieve the desired level of service. Officers must therefore treat the following as guidance rather than absolute standards to be achieved in all circumstances.

As indicated in Chapter 1 each aspect of the maintenance regime in Walsall is founded on the core objects of:

Network safety

- Complying with statutory obligations
- Meeting users' needs for safety

Network serviceability

- Ensuring availability
- Achieving integrity
- Maintaining reliability
- Enhancing condition

Network sustainability

- Minimising cost over time
- Maximising value to the community
- Maximising environmental contribution

Customer service

- Informing and advising customers of the services provided
- Consulting customers to inform future strategy and introduce levels of service
- Making the service accessible to all

6.2 Types of standard or investigation level

The highway maintenance regime incorporates the following standards:

- Operational
- Management of programming and priorities
- Materials and treatments
- Management of procurement and service delivery
- Management of finance

The last four of these are developed individually in greater depth in subsequent chapters.

The Code recommends that standards are adopted for the following areas or elements:

- a) Carriageways
- b) Footways
- c) Public Rights of Way
- d) Cycle routes
- e) Highway drainage systems
- f) Embankments and cutting
- g) Landscaped areas and trees
- h) Fences and barriers
- i) Traffic signs and bollards
- j) Road markings and studs
- k) Traffic signals, pedestrian and cycle crossings
- l) Regulatory functions
- m) User and community response
- n) Co-ordination of standards

Table 5 Elements contribution to each core objective

Note: All items will contribute to customer service

Core Objective→ Inventory Item↓	Network Safety	Network Serviceability	Network Sustainability
Carriageways	Nature, extent and location of surface and edge defect and surface skidding resistance.	Nature and extent of surface defects and ride quality of the surface.	Surface noise attenuation characteristics. Nature and extent of surface defects and carriageway deflection.
Footways	Nature, extent and location of surface, kerb and edging defects.	Nature and extent of surface defects. Extent of encroachment and weed growth. The slipperiness and quality of the surface. Integrity of the network.	Convenience and ease of use. Nature, extent and location of surface defects. Extent of damage by over-running and parking.
PROWs	Nature, extent and location of surface, kerb and edging defects.	Nature and extent of surface defects. Extent of encroachment and weed growth. The slipperiness and quality of the surface. Integrity of the network.	Convenience and ease of use. Nature, extent and location of surface defects. Extent of damage by over-running and parking.
Cycle routes	Nature, extent and location of surface, kerb and edging defects.	Nature and extent of surface defects. Extent of encroachment and weed growth. The slipperiness and quality of the surface. Integrity of the network.	Convenience and ease of use. Nature, extent and location of surface defects. Extent of damage by over-running and parking.

**Table 5 Elements contribution to each core objective
 (Continued)**

Note: All items will contribute to customer service

Core Objective→ Inventory Item↓	Network Safety	Network Serviceability	Network Sustainability
Highway drainage systems	Accumulation of water on carriageways, footways and cycle routes.	Accumulation of water on carriageways, footways and cycle routes.	Polluted effluent from clearing of highway drainage should not be directed into watercourses. Authorities have a duty to prevent nuisance from adjoining landowners by flooding and are required to work with others in the wider community to minimise the risk of flooding. Inadequate drainage of the highway structure will reduce effective life and increase maintenance liability.
Embankments and cutting	Risk of loose material falling to injure users or damage facility.	Risk of damage or service interruption.	Damage or loss of habitat. Interruption or pollution of watercourse. Extent of damage and reduced life.

**Table 5 Elements contribution to each core objective
(Continued)**

Note: All items will contribute to customer service

Core Objective→ Inventory Item↓	Network Safety	Network Serviceability	Network Sustainability
Landscaped areas and trees	Obstruction to user visibility and legibility of traffic signs. Falling branches from trees. Leaf fall from trees causing slippery surfaces. Root growth affecting surface regulatory.	Potential for service interruption. Quality of user experience.	Landscape conservation. Mitigation of climate change effects. Support of habitat and biodiversity. Problems of root growth for surface, structure and highway drainage.
Fences and barriers	Integrity and location of safety fencing for vehicles and pedestrians.	Risk of livestock disrupting traffic.	Appearance and condition of traffic.
Traffic signs and bollards	Identification of risk to users. Separation of potential traffic conflicts.	Contributes to ease of use and network integrity.	Support of sustainable transport mode. Contribution to local economy. Heavy traffic routing can optimise maintenance.
Road markings and studs	Route delineation in darkness and poor weather. Potential for damage and injury if loose.	Ease of use in darkness and bad weather.	Support of sustainable transport mode. Edge delineation to reduce edge damage. Movement of wheel tracking to reduce localised damage.

**Table 5 Elements contribution to each core objective
 (Continued)**

Note: All items will contribute to customer service

Core Objective→ Inventory Item↓	Network Safety	Network Serviceability	Network Sustainability
Traffic signals, pedestrian and cycle crossings	Separation of potential traffic conflicts. Key safety contributor for vulnerable road users.	Contributes to ease of use, efficiency and network integrity.	Support for sustainable transport modes and local economy.
Regulatory functions	Risk to users and adjoining property.	Minimising and signing of obstruction.	Inconvenience to disabled people. Structural damage from parked heavy vehicles.
User and community response	Will not directly contribute to core objectives of safety, serviceability and sustainability but may indirectly have a significant effect in that complaints and enquires if reacted to promptly will ensure issues are resolved quickly. User and community satisfaction is measured at a national, network and scheme level and access to services is as accessible as possible through e-mail, in person, by phone or by letter. Consultation and engagement in the policy development process is actively encouraged.		
Co-ordination of standards	Regard is given to standards of adjoining authorities so that where practicable, delivery of consistent services is ensuring. Particular emphasis is placed upon co-ordination of winter services within the conurbation of the West Midlands.		

6.3 Investigatory levels

6.3.1 Carriageways

Carriageway condition surveys

Carriageway condition surveys are carried out in a manner that identifies defectiveness under the following headings:

Carriageway minor deterioration

The problems of potholing, fine crazing, permeable surfaces, fretting or signs of fretting, loss of chippings and fatting up of existing surfaces will normally result in the application of appropriate surface treatments to extend the life of the road.

Carriageway major deterioration

Cracking, coarse crazing, loss of aggregate, serious permeability or rutting is beyond the scope of preventative maintenance processes and can only be dealt with by using structural maintenance techniques to reconstruct the carriageway.

Loss of skid resistance

Warning levels that dictate poor skidding resistance are taken from HD28/04 (DMRB). Grip Tester surveys are carried out annually on the Principal Road Network.

Edge deterioration

This can occur in various forms and if left unattended can accelerate the onset of more serious structural problems. Various severities and suggested treatments occur.

Wheel track rutting

This can either be plastic deformation of the road surface or an indication of structural failure. Further engineering investigation is normally required.

Adverse camber

Specific solutions cannot always be provided to deal with problems of adverse camber but for general guidance, action will only be taken in severe cases where safety is being prejudiced. In these instances it may be necessary to shape and reprofile the problematic section of road.

6.3.2 Carriageway condition standards

This section describes the standards or intervention levels embedded in UKPMS or defined local intervention levels, together with the type of treatment that would be indicated following survey. It is widely acknowledged that the development of local rules and parameters for use in UKPMS is an incredibly onerous and lengthy process. Walsall has concluded that having invested in and contributed to a number of research projects with other local authorities and private sector partners for example TRL, AECOM that even developing local rule sets for deterioration modelling purposes is in the short term likely to present significant technical difficulties and therefore probably insignificant cost benefit. It is for this reason that local rule sets have not been established in Walsall and no plans are currently in place to develop any.

Carriageway minor deterioration

This comprises rutting, potholes, fine crazing, permeable surfaces, fretting, loss of chippings, occurring on up to 20% of whole area. Subject to engineering judgement the required treatment on principal roads is shown in **Table 6**.

Surface dressing on principal roads should only employ premium binders with

Table 6 Rutting Intervention Levels for Principal Roads

Rut Depth	Rural	Urban
< 10mm	Surface dress	Plane and inlay, resurface
10 -15mm	Thin surface overlay	Plane and inlay, resurface
>20mm	Overlay or plane and inlay	Plane and inlay, resurface

high quality chippings.

Carriageways with rutting greater than 20mm deep should not be surface dressed but should be investigated to determine whether the rutting is being caused by deep-seated structural failure.

For unclassified roads with minimal maintenance requirements no carriageway repair or resurfacing will take place unless the condition is considered dangerous. For other carriageways, failed patches and reinstatements and other areas of visible deterioration, which will eventually form potholes, should be considered for patching, subject to the availability of resources.

Where there is damage such as cracking, crazing, deformation and potholes exceeding 25% on B roads and 40% on C and U/C roads of the total carriageway area resurfacing will be considered.

Loss of skidding resistance

Warning levels of skidding resistance, below which investigation is required, are taken from the revised HD28/04. Grip Tester surveys are carried out annually on the principal road network. Where investigation has revealed a need for surface treatment the use of road signs is considered, this is to indicate to motorists that the road surface is slippery, road signs will only be erected where resurfacing or surface treatment cannot be carried out within 12 months.

Non-principal roads will be maintained to the highest standard possible within budget limits and thus there are no specified intervention levels.

Surface treatment should follow the recommendations above. High pressure water jetting should be considered as a low cost short-term treatment. Safepave, ULM, Stone Mastic Asphalt, Kielypave and Ralumac are examples of appropriate micro asphalt overlays.

Edge deterioration

The following may be picked up as part of a safety inspection but will be rectified as resources permit:

Edge over run 75mm or deeper that is in excess of 150mm wide and more than 3m in length on principal roads or 150mm on non-principal. Where this becomes a persistent problem on bends, consideration should be given to kerbing or localised widening.

Edge deterioration and over-running of the severity shown in **Table 7** should be treated by haunch construction or kerbing. This work will normally be funded following the submission of a scheme for assessment.

Re-kerbing will be considered if kerbs immediately adjacent to a footway where reconstruction is to be carried out fall below specified warning levels. Minor re-kerbing to isolated sections may be carried out within routine maintenance or full re-kerbing as part of carriageway schemes.

Other than loss of upstand, deterioration takes the form of broken, badly aligned, badly tilted, generally disintegrated kerbs and sunken channel blocks. Of these it is only necessary to consider intervention where loss of upstand is adjacent to footways. Other faults are dealt with as isolated instances where a danger to the public is apparent or incorporated with other works to the carriageway or footway.

Table 7 Edge Deterioration and Severity Categorisation for B & C Roads

Severity	Description	B Roads	C Roads
1	Cracking, fretting or potholing of the edge of the carriageway which needs patching but with no over running of the verge	50% length	75% length
2	Severe over-riding causing rutting to the verge with deterioration to the edge of the carriageway in the vicinity of the edge with or without over riding of the verge	35% length	50% length
3	Serious deformation or cracking carriageway in the vicinity of the edge of the carriageway with or without over-riding of the verge in a box	25% length	35% length

On principal roads investigations should be carried out under the following conditions. Lengths of urban kerbing showing upstands shown in **Table 8**.

Table 8 Investigatory Levels for Kerb Upstands on Principal Roads

Kerb Upstand	% of total length
0mm	30%
0-30mm	60%
30-70mm	100%
>70mm	No action

On non-principal roads replacement of kerbs to new upstands should only take place after assessment for funding when kerbs have broken or disintegrated or lost their upstand over a large proportion of the section under consideration.

The following tolerances are recommended for ironwork set in carriageways:

Manhole covers and boxes in the carriageway should be installed to a tolerance of +/- 5mm to the surrounding level. Gulley frames and gratings should be installed level or not exceeding 10mm lower than the surrounding carriageway. When boxes, frames and covers are found to be greater than 20mm lower than the surrounding carriageway they will be reset within the categorisation stated within this strategy.

6.4 Footway condition

Footway standards are based on values embedded in UKPMS System Intervention Levels.

Isolated repairs of category one defects will be carried out within 1 or 24 hours of being reported – any ridge or upstand in the footway greater than 20mm by reason of a pot-hole, uneven flags and the like will come under the definition of such a repair. Roadworks Management highway inspectors will exercise discretion in the case of lesser defects in high-risk areas, for instance in busy shopping streets, close to sheltered accommodation etc.

Dropped kerbs with a minimal upstand (<6mm) and tactile paving will be provided in conjunction with planned footway maintenance to help wheelchair users,

people with pushchairs and people who are blind or partially sighted. Tactile paving will also be provided at all zebra or signal controlled crossing points.

6.5 Public Rights of Way condition

Currently there are no nationally recognised condition standards for public rights of way and UKPMS does not include any defect codes or intervention levels for this part of the network. It is for this reason that Walsall created a condition survey for public rights of way which is logged and stored in GIS. The project was completed in 2009 allowing condition surveys similar in type to the recently introduced Footway Network Survey to be carried out across the Public Rights of Way network.

The entire network has been surveyed and it is intended to continue to resurvey the network at similar intervals to the unclassified road network over a four year cycle.

Informal inspections are also undertaken on a reactive basis for all definitive and adopted footpaths by public rights of way officers. There is currently no structured programme for these inspections; they tend to be undertaken when interest arises, for example, following requests for improvement or during investigation of issues. Typically, issues such as obstructions by overhanging vegetation, up-growth or boundary fences encroaching onto public rights of way, uneven surfaces and pot holes, muddy surfaces or floods and litter or fly tipping are investigated in this manner.

Walsall intends to maintain public rights of way where practicable to the same standard as footways but since many are not surfaced, then repairs must be made in suitable materials, such as crushed brick, graded stone and the like.

6.6 Cycle routes condition

Cycle routes are maintained to the same standard as Class 2 footways (busy urban areas). However, where cycle routes are created within carriageways particular standards exist:

- i) Where carriageway cycle lanes are established particular attention is needed to ensure drainage gullies, valve covers, inspection chambers etc do not pose hazards to cyclists and that the road surface is in good repair.
- ii) Carriageway cycle lanes necessitate the use of additional traffic signs and road markings, and coloured surfaces where appropriate.
- iii) Programmes of resurfacing and carriageway reconstruction will consider the needs of cyclists and help make the existing highway network 'cycle friendly', supporting both the National Cycling Strategy and the Walsall Cycle Strategy.

On a cycle lane marked out along an existing carriageway any pothole of 20mm depth or greater will be reinstated within 1 or 24 hours. Road gully gratings should be of the flat type and laid within 10mm of the road surface. Where other types of gratings exist they will be replaced during required maintenance or ancillary work.

When designing new cycle lanes, due regard to the road surface condition is taken and if the existing carriageway is poor, while the rest of the road is good, inlaying the cycleway with asphalt will be considered as part of the scheme. A check will be made on the position and condition of any ironwork within the cycle lane.

The surface of a cycle route is crucial to its acceptability by cyclists. New surfaces should give a good ride quality, being smooth and free from bumps and depressions. Where it is possible for a paving machine and delivery lorries to gain access to a cycle route (e.g. alongside the carriageway) hot laid asphalt can be used between edging strips. Where this is not possible textured and smooth bituminous material will be used.

Dropped kerbs across a cycle route should be flush (<6mm high) with the carriageway or access particularly where cyclists will cross them obliquely.

Drainage should prevent the ponding of water or the accumulation of grit or silt on the cycle route. However, this is often impossible to achieve where a converted footway runs through a wide verge at a lower level than the carriageway with little longitudinal fall.

It is the responsibility of the adjacent landowner to trim hedges from the edge of the cycle route once each year. Where the natural hedge line is within half a metre of the edge of the carriageway a second trim will be required and this cut can be allocated from the Grounds Maintenance budget. Arrangements are made for the contractor to sweep the cycle route after these operations (this is particularly important for thorn hedges) to a maximum of two sweeps.

Headroom along cycle routes beneath signs and branches should be at least 2.7m.

6.7 Highway drainage systems condition

Highway drainage responsibilities fall into three main categories:

- Culverts under roads where there is a need to inspect for structural damage and blockages. Culverts and manholes should be inspected every two years and cleaned when required.
- Grips and ditches, which may be obstructed by the growth of vegetation or damaged by traffic and animals. Grips and Walsall Council ditches should be cleared of vegetation and dug out when required.

- Piped drainage, which includes a wide variety of conduits and filter drains, these may be susceptible to siltation or blockage. Piped drainage soakaways and associated systems should be inspected and cleared when required but at not less than 10 year intervals.

Piped drainage systems

These are checked and flushed if necessary during gully maintenance.

Gullies catchpits and interceptors

The only reason for emptying gullies is to remove detritus to ensure the continued efficient functioning of the gully and its connection. The frequency of emptying depends upon the location, the presence of dirty industries, the degree of tree cover, level of rainfall and the frequency of sweeping. Emptying of gullies is therefore arranged on a cyclical basis, dependent upon location and the subsequent danger to road users of flooding should the gully become blocked.

Piped grips

Check and flush if necessary during cyclic maintenance of gullies etc.

Safe Working Practices

All operations will comply with relevant codes of practice and HSE regulations.

Open grips

Re-cut cyclically not more frequently than once per year unless site conditions dictate a greater frequency.

Ditches

Clean out by machine not less frequently than once every five years.

Filter drains

Should be checked at five-year intervals. Flushing, replacement of filter media, porous/slotted/perforated pipe as necessary to enable the drain to perform its function.

Culverts

Nothing specific where it is not a highway structure. If maintained by Walsall Council see above.

Ancillary items

Maintenance of pumps. For example the Leamore Lane pumping chamber shall be carried out in accordance with manufacturer's recommendations.

Flooding

Where flooding occurs, causing hazardous conditions, the appropriate warning signs are placed in position as quickly as possible. The cause of the flooding is ascertained and given prompt attention, in order to restore the highway to a reasonable condition. Where it is determined that the flooding is attributable to inadequate infrastructure, given the nature of the weather conditions under which it occurred, the necessary action to permanently relieve the problem shall be the subject of a prompt report and a proposal for action. If the cause is attributable to the actions of a third party, the matter is taken up with them at the earliest opportunity.

6.8 Embankments and cuttings condition

It is recognised that where geotechnical investigations have to be undertaken and remedial works designed, it may not be possible to carry out effective permanent repairs until these are complete.

6.9 Sweeping and cleaning general

Sweeping and cleaning is carried out under the provisions of the Environmental Protection Act 1990: Code of Practice on Litter and Refuse.

Debris encountered by inspectors and other maintenance personnel in traffic lanes and on footways and which constitutes an immediate hazard shall be removed as soon as practicable.

6.10 Landscaped areas and trees condition

Expert advice from landscape managers should be sought to achieve the correct balance between safety, amenity, nature conservation and value for money. They will confirm when additional specialist advice is required. Where landscape management plans exist they should be used to inform maintenance requirements as part of route management strategies. Where environmental databases exist they should be consulted before any work is carried out.

Named species and habitats are protected under UK and EC legislation and all highway works must comply. Where designated sites lie within or adjacent to the highway boundary, the soft estate should be maintained on the advice of English Nature or local wildlife trusts.

Legislation requires that Natural England is informed where important habitats and species may be affected, such as the removal of trees used as bat roosts. This should be done well in advance of the work to allow for seasonal factors.

Grassed areas and scrub

Vegetation must not restrict visibility at junctions, access points and bends. Sight lines and minimum stopping distances must be kept clear and signs, lights, and marker posts must not be obstructed. Visibility cuts may be required in accordance with appropriate technical directives.

Overhanging vegetation must not obstruct users of the highway or personnel carrying out inspections or surveys. One or two cuts per year in the form of a swathe cut may be sufficient to maintain verges for safety but amenity and nature conservation requirements must also be considered. Edging (siding) may be required on a cyclical basis.

Standards of maintenance should reflect the surrounding landscape. Highway verges that have developed botanical interest and nature conservation value, whether by design or through the development of the existing verge over time, should be managed to conserve and enhance the nature conservation value. Weeds can cause problems if they spread prolifically and control methods may include the use of herbicides. The Control of Pesticides Regulations 1986 (as amended 1997) governs the use of pesticides and requires that persons specifying and applying pesticides hold the appropriate certification.

Walsall Council is committed to taking a proactive approach to controlling injurious weeds, which are covered by the Weeds Act 1959 amended by the Ragwort Control Act 2003, and the Countryside and Rights of Way Act 2000. Where injurious weeds on highway land are a nuisance to adjacent landowners, it is advisable to work with the adjacent landowner to ensure that weed control measures are undertaken simultaneously to avoid recontamination across the highway boundary.

Table 9 Grass cutting frequencies

Activity	Frequency
Visibility Cuts	1 or 2 cuts per year
Swathe Cuts	1 or 2 cuts per year
Grassed Areas	As advised by Landscape Manager (including weed control)
Injurious Weeds	One treatment per year or advised by LM

Horticultural maintenance is undertaken to maintain safety; to prevent obstruction of sight lines and traffic signs; to inhibit the growth of injurious weeds (in accordance with the Weeds Act 1959); to maintain a tidy appearance and to prevent encroachment onto the carriageways. In the case of trees adjoining roads to prevent them becoming a danger to road users.

Grass cutting on rural roads

This falls into two categories:

- i) Embankment and cutting slopes and verges except visibility areas should not normally be cut.
- ii) On all other roads' visibility areas and to provide a pedestrian refuge, the first swathe from the edge of the carriageway should always be kept cut. Frequency of mowing will depend on the rate of growth but will normally be twice per year. Areas of highway grass that incorporate access to ducts, drainage systems etc should be cut at least once in three years in order to maintain accessibility to these systems. Other areas of highway grass should also be cut every three years unless a positive decision is taken to allow it to vegetate.

Grass cutting on urban roads

In urban areas there is a clear highway need, as distinct from any local amenity consideration, for grass to be kept shorter than about 100mm. If grass is allowed to grow longer than this it becomes necessary to remove cuttings. Furthermore long grass can conceal debris, which can become a safety problem if left unattended. Normally between five and eight cuts a year is required to achieve these standards, although there will be a need for considerable local variation.

Siding and verge maintenance

- i. In rural areas only the minimum amount of siding should be carried out on carriageways e.g. when needed before surface dressing and renewal of edge markings, since in most cases traffic keeps the carriageway clear. Siding is not normally required in urban areas since most roads have upstanding kerbs.
- ii. On footways and cycle routes siding should be carried out as required to preserve the width of the footway.
- iii. Verge maintenance should be carried out in urban areas when found to be necessary.

Chemical Sprays

It may be necessary to use chemical sprays to eliminate weeds and control growth around posts carrying signs, along guardrails, on the edges of kerbs and

on footways. These may also be used to control the growth of grass on the strip adjoining the edge of the carriageway and on central reservations. The use should be the minimum compatible with the required results.

Where total weed killers are required for paved areas they should be used annually for effective results. Noxious weeds should be dealt with on an ad hoc basis. All weed spraying should be carried out in accordance with the Control of Pesticides Regulations 1986. Only approved pesticides may be used, these are chemicals listed in the 'Blue Book' entitled 'Pesticides Approved under the Control of Pesticides Regulation 1986 (ISBN Code 0 11 242 782 0). This book and comprehensive advice can now be viewed electronically on a separate Health and Safety Executive website dedicated to pesticides at www.pesticides.gov.uk.

Areas with noxious (injurious) weeds should have one cut to be arranged where necessary or chemical treatment as recommended by DEFRA. The weeds concerned are:

- Ragwort**
- Broad-leaved dock**
- Curled dock**
- Creeping thistle**
- Spear thistle**
- Giant Hogweed**

Hedges, trees and planted areas, wetlands and special ecological areas

Walsall Council as a highway authority is currently exempt from, but acts in the spirit of, the Hedgerow Regulations 1997, and where hedgerows are affected by our work they should be protected. Where a hedgerow or part has to be removed it should be replaced and those that would qualify as 'important' under the Regulations should be replaced as essential mitigation.

Table 10 Contacts for advice related to landscaped areas and trees

Activity	Responsible advising officer or point of contact
Pest Control	Landscape Manager (LM)
Hedges, Trees etc	As advised by LM or arboriculturalist
Wetlands	As advised by ecologist
Special ecological	As advised by ecologist

Where it is the responsibility of the highway authority, trimming of seasonal growth should be carried out once a year on rural roads. Where there are special requirements in visibility areas or across central reserves, cutting should be undertaken when required. Owners of private hedges should be requested to adopt similar standards.

Shrubberies which are the responsibility of Walsall Council should be maintained until established and thereafter pruned for visibility only or where necessary.

6.11 Fences and barriers condition

6.11.1 Safety fencing

Inspection and testing of safety barriers with respect to mounting height, surface protective treatment and structural conditions will take place if road traffic accident damage is suspected and otherwise when required.

The tensioning bolts in steel-tensioned safety fences are checked and reset to correct torque as required. Damaged sections of safety fences and barriers are treated as Category 1 defects unless damage is clearly superficial with no loss of integrity to the fence/barrier. Permanent repairs are carried out as soon as possible.

Sections of safety fence that are found to be mounted at heights outside the limits specified or for which structural integrity is not in doubt, should be treated as Category 2 defects.

6.11.2 Pedestrian guard rails

Pedestrian fences and guard rails are used primarily in urban areas at busy road junctions and sections of roads both to protect the public and to get them to use pedestrian crossings as opposed to crossing busy roads at potentially unsuitable points. If damaged they need to be made safe and permanently repaired as soon as possible.

The objective is to maintain them in a sufficiently sound structural condition to serve their function and not be dangerous to road users or pedestrians.

- i) Condition: Make safe within 24 hours and effect permanent repair as soon as possible
- ii) Painting: When required

6.11.3 Fences, walls and environmental barriers

These must be kept safe for road users. Individual complaints are investigated by Roadworks Management highway inspectors and acted upon as appropriate.

6.12 Traffic signs and bollards condition

6.12.1 Illuminated signs and bollards

As part of the Public Lighting PFI contract maintenance of electrical components is carried out by Amey LG Ltd.

- i) Optical inspection and cleaning including sign supports every two years
- ii) Lamp changing at regular intervals to coincide with internal inspections and cleaning
- iii) External cleaning at least annually or when required.
- iv) Replacement and repair when damaged. Should be made safe within one hour and permanent repairs should be made as soon as possible for important warning and regulatory signs.
- v) Painting of supports and frames when required but not exceeding 10 years interval.

6.12.2 Non-illuminated signs and bollards

- i) Cleaning of non-illuminated signs will be at least annually or when required (Amey LG Ltd.)
- ii) Replacement and repair when damaged should be attended to within 24 hours. The speed of permanent repair will depend on the degree of danger. Important warning and regulatory signs should be replaced as soon as possible
- iii) Painting of supports and frames when required but not exceeding 10 years intervals
- iv) Bollards will generally be cleaned once per year. However at certain locations in particular at traffic calming sites and roundabouts there will be a need for further cleaning during the winter months
- v) Repairs to illuminated signs to be completed within two weeks of notification by client staff
- vi) Electricity supply faults to be repaired by electricity company within 25 days unless notified as urgent
- vi) Electricity supply faults to be repaired by electricity company within 25 days unless notified as urgent
- vii) Emergency work attendance on site to make safe within one hour of notification of defect
- viii) The sign face of chevrons, Stop and Give Way signs to be replaced or repaired within seven days

6.13 Road markings and studs condition

6.13.1 Road markings

Many road markings are used to give effect to regulatory provisions and it is important that their legal status is not affected by excessive wear or damage.

All markings existing before resurfacing or surface dressing will be reviewed and replaced as soon as reasonably practicable after the completion of work, usually within one week, weather permitting. If it is not possible to restore immediately in permanent materials, temporary markings should be used at sites where their absence is likely to give rise to dangerous conditions.

Road markings on classified roads (A, B & C roads) and at known accident sites should be renewed when more than approximately 30% of their area is worn away. Lesser standards can be adopted on other routes.

The objective is to keep all traffic signs and lines legible and visible as far as possible at all times in relation to the road use and traffic speeds.

6.13.2 Road studs

Displaced road studs lying on the carriageway, or lay-bys and loose studs if judged to be a hazard shall be removed immediately if reasonably practicable.

The replacement of defective or missing studs associated with road markings shall be carried out when there is greater than 25% loss on straight or large radius curves, or greater than 10% loss on bends. Replacement shall be completed within three months of the appropriate defect threshold being exceeded or within 24 hours if the road studs are required to maintain the legality of prohibitory road markings.

Road studs, which are either missing or have become defective should be replaced individually or by a bulk change depending on the individual highway circumstances. The aim should be for a minimum 90% of the studs to be reflective prior to the winter period.

Studs are mandatory for double white line systems.

The Council's Road Safety Team is currently reviewing its specific tactical policies in relation to a number of areas. The current incentive is to avoid the installation of studs and remove them from a road scene wherever possible. This is because they are notoriously difficult to maintain. In addition the Council has undertaken trials with different lining systems such as "weatherline" which purports to be more reflective and harder wearing. This has been laid on the Black Country Route, Beacon Road, The Keyway and Norton Road. Its performance will be reviewed over the next few years.

6.14 Traffic signals, pedestrian and cycle crossings condition

Bulk changes of lamps in signals and push-button units shall be carried out as required. Lamps in regulatory signs associated with traffic signals shall be changed at intervals appropriate to the type of lamp and mode of operation of the sign.

Whilst most signals are now microchip controlled where there are electro-mechanical parts of controllers they will be adjusted or replaced at intervals of one year or in accordance with manufacturers' instructions if shorter.

Signal lenses, regulatory signs shall be cleaned at intervals of one year.

Defects in operation of traffic signals shall be treated as Category 1.

Permanent repairs of Category 2 defects in traffic signals shall be carried out within six weeks. The objective is to keep the signals in correct operation at all times.

Standards for pedestrian crossings are the same as traffic signals except for the flashing mechanism, which should be replaced immediately failure is notified.

This work is currently undertaken by our signals maintenance contractor.

6.15 Regulatory functions

This is primarily covered by introduction of the statutory duties in the Traffic Management Act 2004 which will include the following:

- Highway Register
- Management of utilities - NRSWA (HAUC) codes are enforced
- Public Rights of Way
- Construction of vehicular crossings
- Encroachment onto verge
- Large stones placed on verges
- Temporary short term closures

6.16 User and community response

Customer service is covered in-depth in Chapter 2.

It should be noted that standards for user and community response can indirectly contribute to both safety and serviceability by ensuring that service requests and complaints are dealt with promptly and result in direct service action.

Standards are considered at three levels:

- Satisfaction with arrangements for engagement in the policy development process
- Satisfaction with the delivery of the highway maintenance service
- Our response to user and community contact by phone, mail and e-mail

6.17 Co-ordination of standards

Consistency and co-ordination of standards is applied wherever practicable by regular contact with neighbouring authorities through ad hoc and regular meetings of West Midlands Highway Alliance, Strategic Transport Officers Group, HIMG, HAUC and the like.

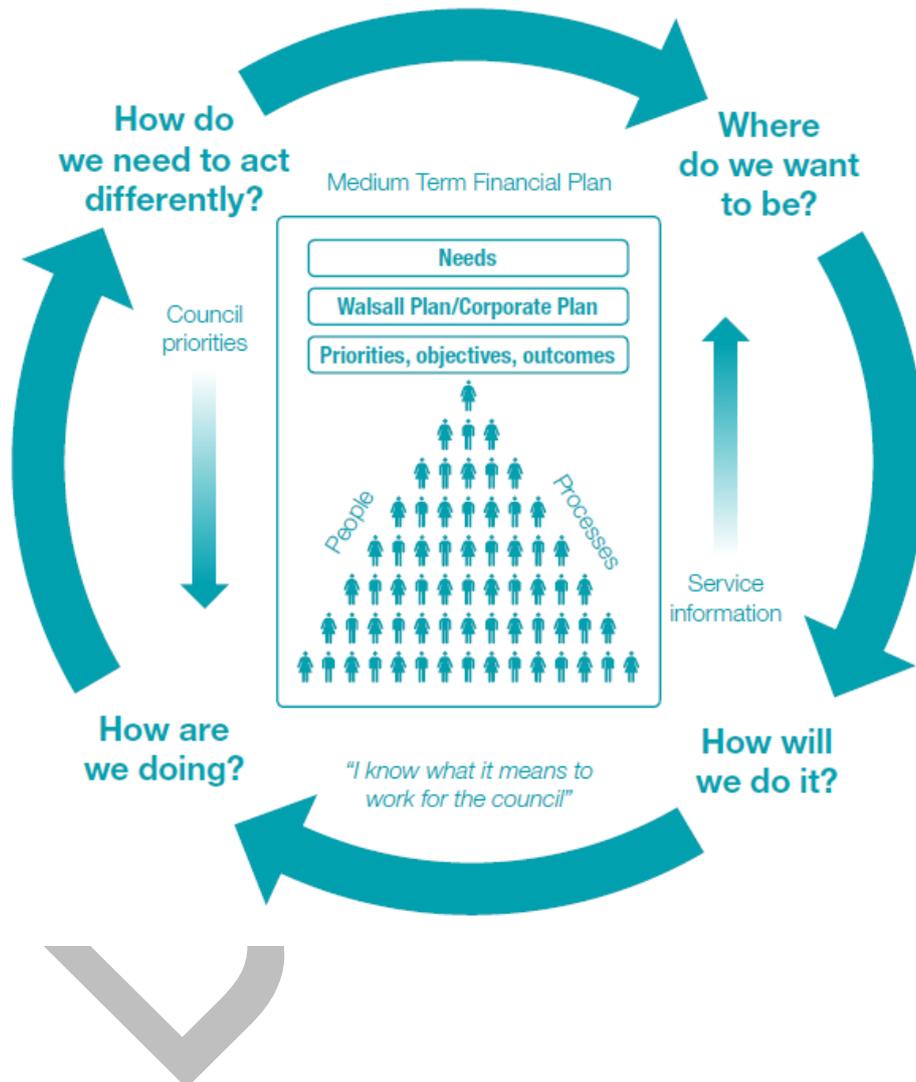
6.18 Condition standards for street lighting and structures

Street lighting condition standards are embedded in the PFI contract.

7.0 Performance Management

7.1 Introduction to Performance Management in Walsall

Walsall Council measures its performance to establish how well we are doing and to identify opportunities for improvement. The strategy and structures in place for managing performance are detailed in the Walsall Performance Framework (WPF), which is summarised in the diagram below:



Our Corporate Performance Management Team works closely with services to instigate and help facilitate delivery of the WPF so that all performance framework elements are in place and working well in order to secure improved outcomes for residents.

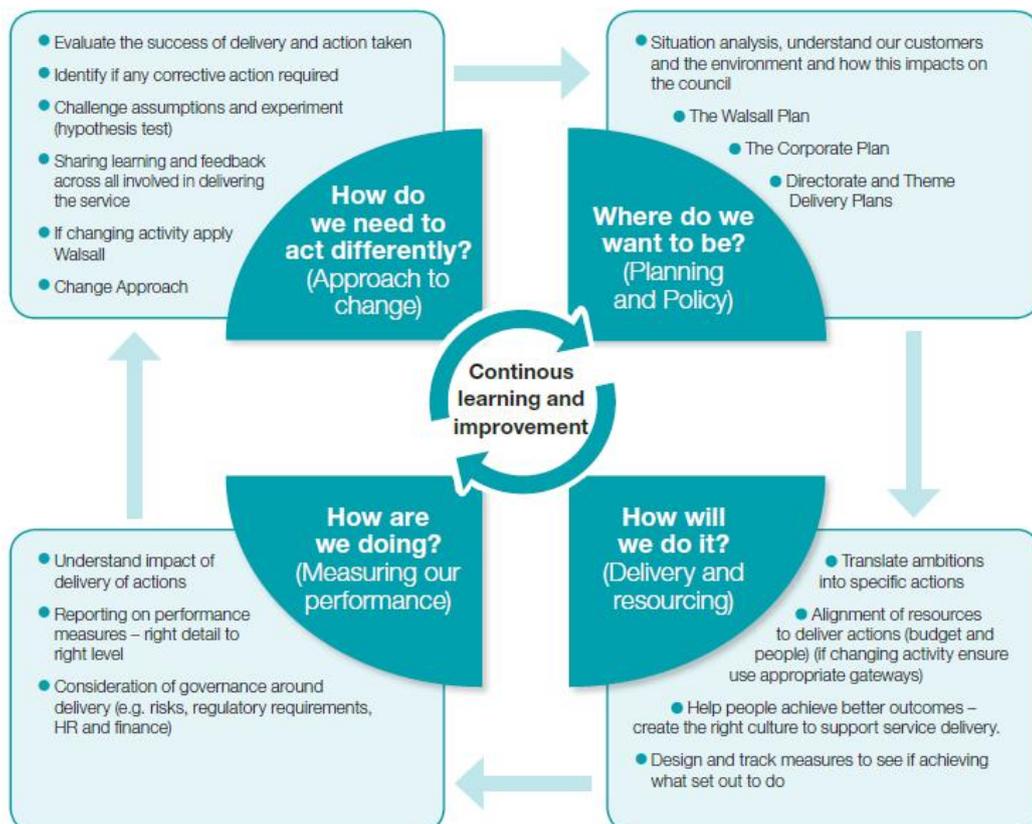
The starting point for delivering good services is ensuring a clear understanding of our borough, its communities and the challenges that need to be faced. Hence the starting point is the 'The Walsall Plan' which sets out the broad objectives and vision for Walsall in a manner that is intelligence led. Robust channels of communication and information sharing are established within each directorate

ensuring that all aspects of performance management and improvement are intrinsic to the council's culture and its everyday activity.

The Council's Cabinet is responsible for the majority of decisions on council services. Each cabinet member has political responsibility for a portfolio of services. The Council also has scrutiny and performance panels charged with overseeing the work of the directorate.

Walsall's performance framework is covered in some detail in other areas of the HAMP and sets out how the various planning processes interlink and demonstrates how services and resources are managed. It sets out the minimum "must do" within which the council will operate and is underpinned by functional frameworks such as the HAMP that provide further guidance and protocols. A key aspect of this framework represents the way in which overall strategy is determined and objectives and resources are allocated and translated into detailed targets and actions.

This framework is intended to ensure performance management and service improvement is embedded within the Walsall Council culture. The council's approach to improvement is based on a continual improvement and learning loop as illustrated below:



7.2 Performance Monitoring

Walsall's highway maintenance services use key business processes and customer intelligence to monitor the performance of its service. It especially reflects the focus on delivering better outcomes against key priorities for local residents.

7.2.1 Freedom to Lead

The Government has dismantled a number of its previous statutory frameworks for assessing and inspecting councils in favour of a new 'freedom to lead' approach to local government sector self-regulation and improvement. The principles of which include the need to only inspect services where necessary, otherwise to encourage self assessment and peer challenge, and notably to encourage community empowerment through transparent performance information and making councils more accountable to their local communities rather than central government.

The government has reduced the number of central targets on councils, and has hence limited to a Single Data List (SDL) the need to provide information to central government. This reflects the Government's transparency, decentralisation and localism agendas. The main objectives of the SDL are:

- To be a clear, definitive list of data that Government needs from local authorities
- To help reduce data burdens on local authorities
- To be open for scrutiny, challenge and regular review

Furthermore, the Government states that the list will:

- Help government reduce the number of datasets required by first cataloguing them
- Facilitate transparency by making it easier for the public to access data about their areas.

See link to view the SDL list:

<http://www.communities.gov.uk/localgovernment/decentralisation/tacklingburdens/singledatalist/>

The SDL contains two data collections relating to road conditions they are;

Road condition data, consisting of;

- Principal roads where maintenance should be considered (see guidance below)
- Non-principal classified roads where maintenance should be considered (guidance below)

- Skidding resistance surveys
- Carriageway work done survey

Road Lengths Survey

- Local authority estimate of road lengths

see link for further details;

<http://www2.dft.gov.uk/pgr/statistics/datatablespublications/roads/road-lengths/index.html>

The Skid resistance survey and the Carriageway work done survey are newly created performance measures. Walsall is currently working towards the creation of data sets relating to skidding resistance and carriageway works done alongside, the Local Authority estimate of road lengths survey, through its UKPMS and GIS computer software packages.

7.3 Principal Roads where maintenance should be considered

This measures the proportion of principal roads where structural maintenance should be considered. This is a significant indicator of the state of the highways asset.

Definition

NI 168 is an updated version of the former best value performance indicator BVPI 223; previously BVPI 96. The indicator measures the percentage of the local authority's A-road network where maintenance should be considered.

The performance indicator is derived from a survey of the surface condition of the authority's classified carriageway network, using survey vehicles that are accredited as conforming to the SCANNER (Surface Condition Assessment for the National Network of Roads) specification and processing software that is accredited as conforming to the UKPMS (UK Pavement Management System) standards.

Results are reported for either (a) 100% of the network surveyed in one direction; or (b) 50% of the network surveyed in both directions. Roads not surveyed in the previous year must be surveyed in the current year.

All road surface types should be included and surveys should physically cover the required network lengths; grossed-up figures from shorter surveys are not permitted.

Formula

The indicator is the length of carriageway identified as having a condition index greater than or equal to 100, as a percentage of the total length surveyed.

$$(x/y) \times 100$$

where

x = length of carriageway surveyed identified as having a condition indicator greater than or equal to 100;

y = total length of principal roads surveyed.

Results are calculated automatically by the UKPMS software.

RCI 130-01 Good performance

Good performance is typified by a low percentage. A reduction in levels represents improvement. The condition of Walsall's Classified Principal A road network has remained relatively stable since 2010 at between 7% and 8%.

7.4 Non-principal classified roads where maintenance should be considered

This measures the proportion of B and C-class roads where structural maintenance should be considered. This is a significant indicator of the state of the highways asset.

Definition

RCI 130-02 is an updated version of the former best value performance indicator NI 169, BVPI 224a and previously BVPI 97a. The indicator measures the percentage of the local authority's B-road and C-road network where maintenance should be considered.

The performance indicator is derived from a survey of the surface condition of the highway authority's classified carriageway network, using survey vehicles that are accredited as conforming to the SCANNER (Surface Condition Assessment for the National Network of Roads) specification and processing software that is accredited as conforming to the UKPMS (UK Pavement Management System) standards.

Results reported annually are a combination of (a) 100% of the B-class network surveyed in both directions; and (b) 100% of the C-class network surveyed in one direction. For any given length of road, data from either the current financial year or the previous financial year should be used.

Authorities should aim to cover the required network lengths; where it is not physically possible to survey all parts of the network, grossed up figures from

shorter surveys (at least 90% of the total B-road requirement and 80% of the C-road requirement) is permitted.

Formula

The indicator is the length of classified non-principal carriageway identified as having a condition indicator greater than or equal to 100, as a percentage of the total length surveyed.

$$(x/y) \times 100$$

where

x = length of non-principal classified carriageway surveyed identified as having a condition indicator greater than or equal to 100;

y = total length of non-principal classified roads surveyed.

Results are calculated automatically by the UKPMS software.

RCI 130-02 Good performance

Good performance is typified by a low percentage. A reduction in levels represents improvement.

The condition of Walsall's Classified Non Principal Road Network has remained relatively stable since 2010/11 at an average of 5%.

7.5 Complaints monitoring

We monitor customer complaints through robust mechanisms which includes the Council's Tell Us System, Mayrise database and a directorate Correspondence Tracking System (CTS). This information is utilised in the programming and prioritisation of highways works and forms an integral part of Walsall's nationally recognised Analytic Hierarchy Process (AHP). Details of AHP can be found in Chapter 8 Programming & Priorities.

7.6 Equalities monitoring

An integral part of all performance management in Walsall is the monitoring of equalities. We have undertaken Equalities Impact Assessments (EIA) within various Teams as part of our equalities responsibilities. We regularly access customer intelligence to see if particular equalities issues are presented and we take this into account in our decision making.

7.7 Local Performance Indicators (LPIs)

In addition to monitoring the key strategic measures, Walsall monitors four Local Performance Indicators (LPIs) which relate to the highways maintenance service as follows:

LPI 1: The use of **Third Party damage claims** has been established to measure the effectiveness of risk control in highway maintenance. By recording and monitoring and thematically mapping the number of third party claims for damages arising from alleged defects in the highway each year. It is considered to be a crude yet effective measure of how well we are repairing pot holes etc before accidents occur. The national trend for such claims is moving sharply upwards. However, a long-term view should be taken on such an indicator, as there will be random and seasonal variations.

LPI 2: The percentage of programmed schemes subject to maintainability audit. For 2014-15 this was 100%.

LPI 224b: Percentage of the unclassified road network where structural maintenance should be considered.

Walsall has continued to collect the data required to calculate the previous Best Value Performance Indicator BVPI 224b - The condition of Unclassified roads. Whilst this was discontinued as a national indicator with the introduction of National Indicator Set (NIS) in 2008 it is still reported at West Midlands level as part of the Local Transport Plan. LPI 224b gives an indication of the proportion of unclassified roads that may require structural maintenance.

Definition

Based on a visual survey of a proportion of the unclassified road network (minimum 25% per year) using either a UKPMS Coarse Visual Inspection Survey (CVI) or a more detailed equivalent visual inspection survey (DVI). Visual surveys must be carried out in accordance with the UKPMS Visual Survey Manual, Version 1.0. Detailed Visual Inspection (DVI) surveys may also be used, if carried out in accordance with the current UKPMS Rules and Parameters. Concrete or part-covered roads should be included in the visual survey for LPI 224b.

Where CVI and DVI results are combined, CVI data must not be mixed with unconverted DVI data. If DVI surveys are to be used as the basis for the survey, they should be converted to a 'CVI-equivalent' survey using Version 2.0 or later of the UKPMS HMDIF Conversion Software, and processed as a CVI survey.

Formula

Data is processed in accordance with a fully accredited UKPMS system, configured using UKPMS Rules and Parameters, using variable length processing.

Good performance

Good performance is typified by a low percentage. A reduction in levels represents improvement.

Since 2010/11 BVPI 224b has ranged between 15% and 24%. It should be noted that this indicator is no longer recorded as a performance measure at national level.

LPI 187: Percentage of the category 1, 1a and 2 footway network where structural maintenance should be considered

Walsall has continued to collect the data required to calculate the previous BVPI 187 Condition of High Amenity Footways. Whilst this was discontinued as a national indicator with the introduction of NIS in 2008 it was still reported at West Midlands level as part of the Local Transport Plan.

Definition

Footway categories are defined in the Code. This indicator was based on the collection and analysis of Detailed Visual Inspection (DVI) measurements. It was designed to provide the percentage length of the footway network with a Footway Condition Index greater than a defined threshold value of 20.0.

It was based on a 50 per cent survey of Category 1, 1a and 2 footways each year, so that the complete Category 1, 1a and 2 network was covered every two years. Highway Authorities were required to identify those UKPMS sections with Category 1, 1a or 2 footways, and select one half, randomly, by number rather than section length (i.e. if there are 200 sections, select 100). The remaining half of the sections were then included in the following year.

Formula

Walsall measured the percentage length of the footway Category 1, 1a and 2 network with a Footway Condition Index greater than or equal to a threshold value of 20.0, calculated using the Variable Length Merge method set out within UKPMS through the Rules and Parameters.

These rules cover different footway types and the defects associated with the type of footway (e.g. bituminous, flags) on different footway categories (hierarchies).

Good performance

Good performance is typified by a low percentage. A reduction in levels represents improvement.

Since 2010/11 BVPI 187 has fluctuated somewhat, but has average out at approximately 25% over the period.

7.8 Contract Key Performance Indicators

Through the Highway Repair and Maintenance Contract between Walsall and Lafarge Tarmac we have established an initial framework of Key Performance Indicators (KPIs) against which Lafarge Tarmac's performance is to be measured. These are used to monitor Lafarge Tarmac's performance in relation to specific issues.

The contract KPIs are regularly reviewed and changed to reflect the needs of the service.

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Table 11 Examples of KPI Definitions, Measurement, Targets

KPI No.	KPI	Target	Apr-14	May-14	Jun-14	Jul-14	Aug-14
SA1	% 1 hour responses	90.0	100	82.8	100	100	100
SE1	% 24 hour responses	90.0	100	87.1	100	100	100
SU1	% Planned works incorporating recycled materials	90.0	100	100	100	100	100
SA2	% Winter Maintenance calls completed within 4 hours	TBC	100	100	100	100	100
SE2	% of 5 day orders completed on time	90.0	83.3	100	100	100	100

Alternative Proposals for Performance Management

Lafarge Tarmac have been encouraged to put forward proposals which they consider could contribute to improvement in economy, efficiency and effectiveness having due regard to the service to be provided and the KPIs set out in the framework. It is hoped that this will prove to be an area for continuous improvement during the contract period.

7.9 Highways Maintenance Customer Feedback Survey Exercises.

The council continues to place great emphasis on listening to its customers. Walsall fully welcomes customer feedback for all planned and reactive maintenance schemes in partnership with Lafarge Tarmac.

The planned maintenance process pays particular regard to public perception relating to six key areas:

- **Provision of information**
- **Quality of workmanship**
- **Minimising disruption**
- **Lafarge Tarmac workforce and staff onsite**
- **Walsall Council staff**
- **Overall satisfaction**

Our current procedures on site were developed following a sustained program of operational analysis surveys which ran from 2008 for a two year period until 2010. This exercise focused on six mandatory quality question areas

supplemented with some additional voluntary questions in relation to equal opportunities to help monitor the effectiveness of policy and services. These responses were collected and recorded so that we could test the response of different sectors of our community. The final section of these questionnaires allowed customers to make their own personal comments about services received, which have contributed to our current project management processes employed for scheme delivery.

The 2008 surveys were limited to a total of 1,500 survey questionnaires delivered to residents where works were being carried out prior to commencement. Results showed from the 1,500 questionnaires issued, 186 were returned. This indicated a return rate of 12.4%. We were understandably proud of the fact that of those who returned questionnaires that 97.85% were either very satisfied or satisfied overall with the completed works.

A joint customer satisfaction survey has been developed with Lafarge Tarmac for use at future areas of work and will continue to be modified and applied where appropriate. A further extensive period of monitoring will be undertaken when resources permit.

7.10 Annual National Highways and Transport Network Public Satisfaction Survey

In 2009 Walsall voluntarily joined the annual National Highways and Transport network public satisfaction survey. The scheme is a standardised survey in which residents of around 78 local authorities across the UK are asked identical questions to help find areas of best practice.

More than 4,000 randomly selected Walsall residents are sent questionnaires annually. The survey is independently organized by IPSOS MORI and results are published on the internet at <http://nhtsurvey.econtrack.co.uk>.

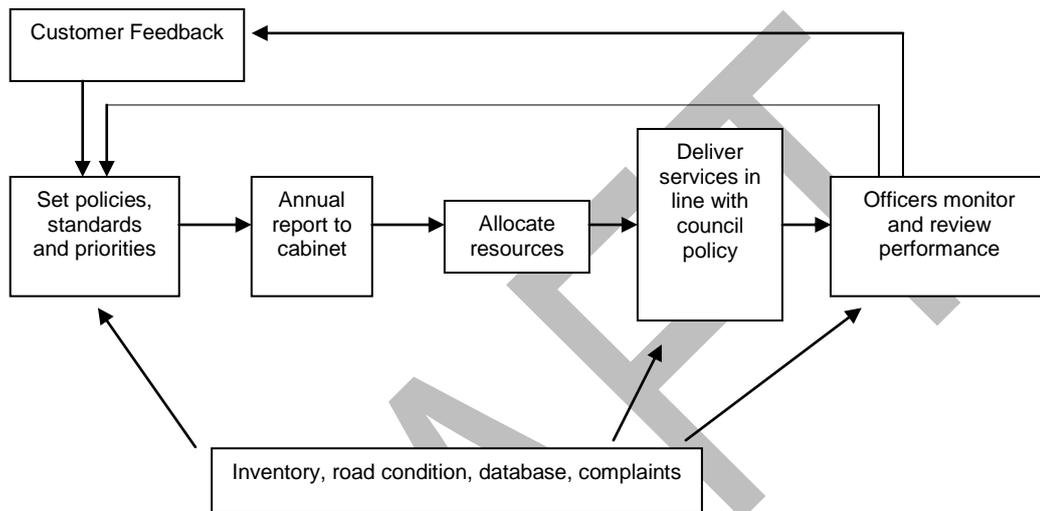
The feedback we receive is used to benchmark against other authorities and seek best practice elsewhere so that we can continuously improve the services we provide.

The results for 2010, 2011 and 2013 showed that overall satisfaction with highway maintenance rose from 44.5% to 47.3% to 49.1 % respectively. The survey results are on the NHT web site at www.nhtsurvey.org.

7.11 Monitoring Review and Reporting

Performance information gathered against service delivery is a key component of Walsall's HAMP, it assists with monitoring and measuring the effectiveness of resource allocation and aids budget setting and decision making. The process will be subject to annual review in the light of performance data and user feedback.

Figure 13: The review and reporting process



8.0 Programming & Priorities

8.1 Introduction

Developing and implementing effective systems for programming and prioritising highway maintenance activity is a key requirement for the delivery of a user focused highway service.

Priorities can be allocated at three different levels:

Strategic level

- between corporate priorities and objectives
- between service areas of the authority

Transport level

- between Local Transport Plan objectives and targets
- between National Indicators and targets
- between maintenance, network management and other local transport services;

Maintenance level

- between the core objectives (customer service, safety, serviceability and sustainability)
- between maintenance service type
- between maintenance service category

This strategy focuses on maintenance level programmes and priorities as the strategic level and transport level are outside the remit of this document.

Priorities and annual programmes of work are established to determine those locations that are likely to give the best economic return for the investment in any appropriate maintenance treatment.

8.2 Data Inputs

Data from the following sources is used to determine maintenance programmes.

8.2.1 Condition Surveys

Principal road network

Walsall will undertake the following condition surveys:

- SCANNER
- Grip Tester

- DVI

And has useful historic data including

- SCANNER
- DVI
- CVI
- Ground Radar
- Cores/Construction data including as built drawings

Non principal road network

Walsall will undertake the following condition surveys:

- DVI

And has useful historic data including

- CVI
- DVI
- Ground Radar
- Cores/Construction data including as built drawings

8.2.2 Complaints history and walked safety inspections

Complaints history held within the Council's Tell Us System, Myrise database and a directorate correspondence tracking system in addition to locations identified by highways inspectors are used to identify locations and target further Engineering Programme Inspections (EPIs). Any defects found directly feed into works programme considerations.

8.2.3 Third party insurance claims

Claims are plotted geographically on an annual basis to identify any patterns or hot spots. Any clusters of claims are investigated to ascertain if a response is required to mitigate/address the causes for the claims.

8.2.4 Enquiries and complaints from elected members, Area Partnerships and stakeholders

Enquiries are always assessed, the results are then fed into the overall needs of the network. EPIs also take place if complaints or petitions are received relating to specific locations and priorities may be re-assessed in light of new information.

8.3 Type of response

Priorities and, where possible, programmes are established in respect of each of the following:

- Reactive maintenance – attending to Category 1 and some higher level Category 2 defects and other safety matters arising from inspections and user information;
- Routine maintenance – (like mowing or gully emptying) – providing defined standards of serviceability, including attending some lower level Category 2 defects;
- Programmed maintenance – providing co-ordinated programmed sustainable schemes and projects to meet the serviceability requirements of the network;
- Regulation – regulating occupation, interference or obstruction of the network (mostly refers to NRSWA function, but also skip permits);
- Winter service – providing defined standards of salting and clearance of ice and snow;
- Weather and other emergencies – planning for emergency response.

8.3.1 Priorities for reactive maintenance

Reactive maintenance involves rectifying Category 1 and higher level Category 2 defects and other matters requiring urgent attention. These arise either from inspections or user requests in accordance with the specified standards of response. Although all such matters will by definition have a degree of urgency, some may have potentially even more serious consequences and priorities will usually be determined exclusively on the basis of risk assessment.

The only other consideration is whether to:

- Sign and make safe
- Provide initial temporary repair
- Provide permanent repair

The option selected, together with relevant follow up, will largely be determined by operational practicalities and also whether the site is already part of a programme for more comprehensive treatment, in which case a temporary repair may be an appropriate course of action.

8.3.2 Priorities for routine maintenance

Routine maintenance provides defined standards of network serviceability, maximises availability, reliability, integrity and quality. The priorities and programmes will be determined largely, but not exclusively, from the outcome of EPIs together with items from safety inspections not requiring urgent attention and user requests.

Priorities and frequencies for routine maintenance operations are determined by local consultation, risk control, safety and serviceability considerations.

8.3.3 Priorities for programmed maintenance

Preliminary priorities for highway structural maintenance are initially established using the output of technical and economic prioritisation processing from MARCHpms. The preferred model will have the objective of minimising cost over time.

Initial highway structural maintenance priorities, obtained automatically from data processing, are reviewed and adjusted where necessary to take account of any planned programme of works by the utilities, more detailed technical information and local circumstances, and defined modified economic priorities. Modified economic priorities are developed into individual schemes based upon maximising added value to the wider transport and corporate objectives of the authority, together with relevant technical considerations.

The developed structural maintenance schemes are assembled into programmes of work in co-ordination with other highway maintenance and improvement programmes and integrated transport schemes on related parts of the network. This maximises added value to the network and minimises disruption to users and the community.

All programmed highway maintenance work should realise its potential to add community value at minimum cost, for example incorporating dropped kerbs to assist disabled people and modifying unclear signing or road markings.

Programmes for major highway structural maintenance are reviewed annually for all classes of road, and priorities may be amended depending on specific circumstances. For example some roads may deteriorate at an accelerated rate due to weather conditions or abnormal wear.

Walsall considers that with an uncertainty of annual budget allocations, it would be unreliable and potentially misleading to publish detailed long term programmes of work. However, within its asset management practices Walsall acknowledges the importance of developing deterioration models and life cycle plans and through a bespoke multi criteria prioritisation tool an estimated £30 Million of schemes will compete for the annual programme based upon a range of unique drivers.

When preparing the planned highway maintenance programme, consultation is undertaken with utility companies, adjoining authorities, other agencies, public transport operators and the local community.

Walsall Council also has to consider the priorities of those providing funding. For example, grant funding can sometimes specifically determine where, how and on what class of road the funding can be used.

8.4 Engineering Programme Inspection (EPI)

An EPI is the means by which the Highways Maintenance Group assesses and inspects sites for consideration for future highways maintenance programmes.

Each site is inspected and a number of digital photographs are taken. An inspection form is completed and the data is recorded spatially on GIS with hyperlinks to the completed EPI form. If dangerous defects are observed then these will be forwarded immediately to the Highway Safety Inspector to arrange for priority repair/attention.

Recommendations for future treatments and provisional programmes are entered on the form. Inspectors also include suggestions for further investigation if appropriate. A suggested year of treatment is recorded which enables data analysis to be carried out on a network level through the use of GIS.

The GIS system enables data relating to cost, treatment, timing etc to be recorded in a manner that can be readily accessed when dealing with enquiries.

There are however very good reasons why an EPI is only a guide and the reasons below are usually why schemes sometimes don't get carried out when we would like or indeed when they are most needed:

- a) Finance – both amount in total and amount available for each treatment type
- b) Statutory undertakers clearances
- c) Traffic management and available network capacity
- d) Variable rate of deterioration of other roads
- e) Weather dependent windows of opportunity which can be missed, for example for preventative treatments

8.5 Highways Maintenance Works Programmes

Highways Maintenance Works Programmes are developed taking on board the issues discussed in this document. The programme is available as a separate document on the Council's web site. The areas identified are indicatively based upon information available during the previous financial year. The exact scheme details may therefore be subject to variation in terms of treatment employed and final cost.

It should be remembered that priorities over the forthcoming years may vary due to issues such as the availability of resources, differing rates of deterioration, lack of network access etc. It may also be necessary to introduce schemes not initially identified. In order to accommodate this, the Head of Engineering and Transportation shall, at the beginning of each year, agree the priorities for that year with the Portfolio Holder for Environment and Transport.

In terms of preventative maintenance it is inappropriate to plan in excess of one year in advance due to the reasons given above. The programme therefore only identifies the first year's preventative maintenance objectives.

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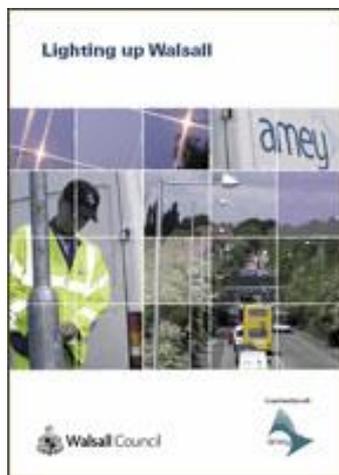
9.0 Public Lighting

9.1 Private Finance Initiative

The Council is working in partnership with Walsall Public Lighting who sub contract to Amey LG Ltd to maintain the street lighting assets in the borough. Starting from April 2002 the Private Finance Initiative (PFI) contract is scheduled to last for 26 years. The council monitors the project to ensure that the service is delivered as set out in the contract.

The street lighting strategy can be viewed on our website at:

http://cms.walsall.gov.uk/index/transport_and_streets/highway_maintenance/street_lighting.htm



9.2 What does the street lighting PFI service provide for the public?

The service provides:

- Removal of the ageing stock
- Improving road safety
- Reduction of fear of crime
- Regular maintenance of the street lighting
- Periodic lamp change and cleaning

All the street lighting columns are numbered and display a free phone number to report when the street lights are not working or in the event of an emergency.

9.3 What can I expect from the service?

We will ensure that:

- All the street lights are maintained as necessary
- The street lights are cleaned on a regular basis
- Regular electrical and structural inspections are carried out on all the street lights
- Faults that are reported are attended to as quickly as possible to provide little disruption to the service.
- Fly posting and graffiti are removed within 24 hours of the receipt of information.

As part of the agreement Amey LG Ltd also undertake all works orders for traffic sign and illuminated apparatus maintenance on Walsall's highway network. This work is collaboratively managed with the PFI and the Highway Repair and Maintenance Contract works carried out by Lafarge Tarmac.

9.4 Invest to Save Initiative

As part of national trials it has been identified that there is potential economic benefit in investing in low energy technology. An annual budget of £250,000 has been identified for the provision of LED lighting which have been shown to use less electricity, have a longer lifespan and require less maintenance. This project was initiated in 2012/13.

10.0 Bridges & Highway Structures

10.1 Information about Walsall's bridges and other highway structures

Walsall Council is responsible for 180 road bridges, foot bridges and culverts, of which 92 were included in the assessment and strengthening programme, with the remainder having been reconstructed within the last 15 years.

In accordance with the Highways Act 1980 and recommendations set out in the Design Manual for Roads & Bridges Walsall undertakes principal bridge inspections every six years and general inspections every two years, reactive inspections are carried out following reports of distress or damage.

There are also 61 bridges in the ownership of Network Rail, British Rail Property Board and British Waterways, all of which must satisfy the requirements of the Transport Act 2000.

The current forward works programme is based largely upon the findings from its structural inspections, but has also been influenced in recent years by the elevated national emphasis for the Primary Route Network and reduced levels of capital funding.

Walsall's programme for assessment which was completed in 2001/2002 included those bridges in the ownership of the Statutory Transport Undertakers, and of the eight bridges which now require strengthening all but one are in the ownership of the Statutory Transport Undertakers, mainly Network Rail.

11.0 Winter Service

11.1 Winter Service Operational Plan

A Winter Service Operational Plan is revised before the start of each winter season and published separately.

Walsall's Winter Service Operational Plan can be found on our website at:

http://cms.walsall.gov.uk/index/transport_and_streets/highway_maintenance/winter_service.htm

The Winter Service Operational Plan is reviewed and updated each year and requires cabinet approval each Autumn.

11.2 Summary of Walsall's Winter Service

Winter service is snow and ice clearance, or the precautionary spreading of salt on highways to prevent ice from forming. As a caring council we wish to reduce the impact bad weather has on residents and users of the borough's highways by achieving the following aims:

- Minimise the loss of life and injury to highway users, including pedestrians, and preventing damage to vehicles and other property.
- Keep the highway free from obstruction and thereby avoid unnecessary hinderance to travel.

11.2.1 Grit boxes

Grit boxes are filled up prior to the winter period. They are continually filled as/when needed.

All the boxes are located where we have steep gradients or difficult junctions within the borough. The locations are agreed annually by cabinet as are the gritting routes. The boxes are for the sole use of local residents in that particular street. The grit can be used on the highway or pavement (not on private drives).

11.3 What can I expect from winter service?

The full winter service operates from 1 November to 31 March the following year. A limited response to bad weather is also available in October and April.

The total length of roads in the borough is approximately 528 miles (850km) of which 218 miles (351km) are salted; this is equivalent to 41% of the roads in the borough.

Footways and minor roads are not routinely treated, but snow and ice removal is undertaken if possible where normal council duties are prevented, such as road repairs or grounds maintenance.

11.4 How does it work?

We receive weather forecasts from an external service provider, which uses data from road sensors throughout the West Midlands. The decision to spread salt on roads depends on a number of factors, not just air temperature. We follow the procedure recommended in the Code of Practice for Maintenance Management – Well-maintained Highways.

11.5 What do you expect from me?

- Remember rules 203-206 in the Highway Code about driving in icy and snowy weather; they help to ensure your safety and that of other road users and pedestrians
- Please ensure that your vehicle is serviced for the winter with enough anti-freeze, tyres with the right depth of tread, and effective windscreen wipers and washers
- In bad weather listen to local traffic and weather reports before your journey, and then consider if your journey is essential
- In poor conditions keep your speed down, use dipped headlights, look out for vulnerable road users such as pedestrians and cyclists and leave plenty of room in front of you – up to ten times the normal distance may be required if you have to stop
- Be aware that a road may not be treated along its whole length and that treatment does not guarantee that the road is free of ice and snow

12.0 Emergency Planning

12.1 Emergency Planning Information

It is expected that the response to major emergencies on the highway will initially be co-ordinated by the emergency services.

For attendance at road traffic accidents, spillages, localised flooding, water main bursts, etc an emergency response is provided by Lafarge Tarmac as part of the Highways Repairs and Maintenance Contract on 01922 650000.

In the event of damage to illuminated street furniture, Amey Infrastructure Services our PFI partner provide an emergency response service – contact number 0800 3891732.

24 hour, 365 day services in both cases.

For major emergencies, the response will be co-ordinated as per Walsall Council Emergency Plan which can be found on our website by the link below.

http://cms.walsall.gov.uk/index/policing_and_public_safety/emergencyplanning.htm

13.0 Sustainable Highway Maintenance

13.1 Sustainable Highway Maintenance

Chapter 10 of Walsall's HAMP Recycling and sustainability provides significant detail about The Walsall Plan, existing practices and our recycling and sustainability options appraisal.

We have also carried out a Climate Change Risk Assessment and Action Plan for key highway assets which form part of Walsall Council's Climate Change Strategy and Action Plan 2010-2014 which can be viewed on our website on the link below:

http://cms.walsall.gov.uk/index/environment/climatechange/cc_strategy_and_action_plan_2010-2014.htm

This chapter of the strategy therefore focuses on areas not covered elsewhere in the HAMP in relation to materials, treatments and maintenance design.

13.2 Materials and Treatment

All materials and treatments are selected and specified with reference to the Design Manual for Roads and Bridges and the relevant British or European Standards. However materials and treatments employed should also take into account the requirement to ensure that schemes are sustainable and are designed with maintenance in mind.

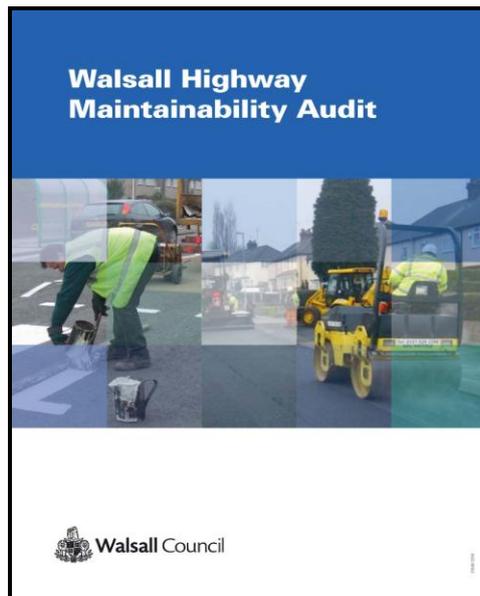
To ensure that there is a level of consistency and that these requirements are met Walsall has introduced a Highway Maintainability Audit as recommended by the Code.

13.3 Walsall's Highway Maintainability Audit (WHMA)

The Walsall Highway Maintainability Audit (WHMA) ensures our commitment to carefully consider the future maintenance and sustainability of any changes made to the highway network.

The WHMA can be viewed on our website on the following link:

www.walsall.gov.uk/highways_audit.pdf



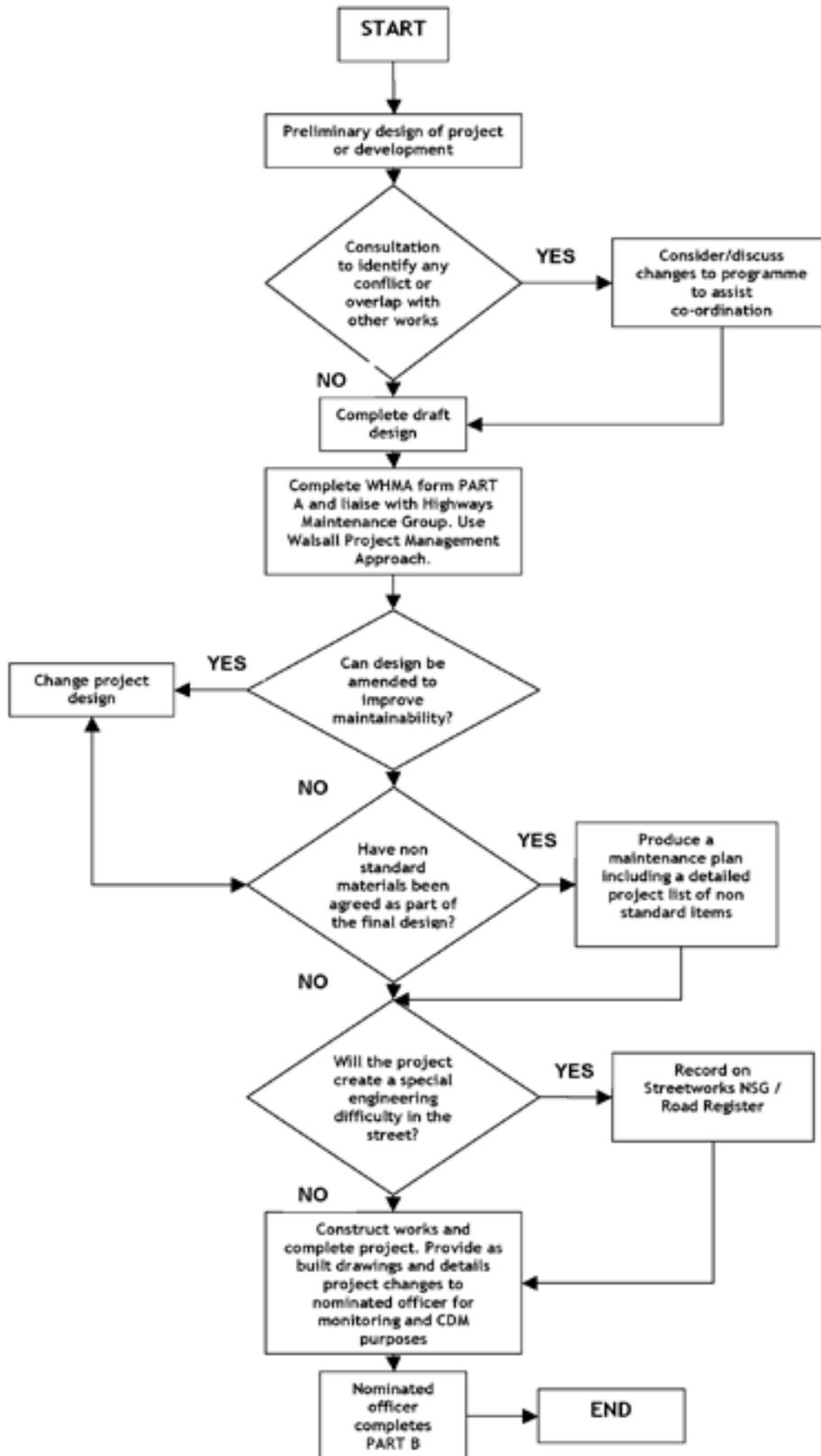
The purpose of the WHMA is to co-ordinate the design of all proposed highway materials and to ensure as far as reasonably practicable that future maintenance implications are considered at the earliest stage of any highway project. It is essential that the designer's freedom for innovation is protected. It is hoped that the WHMA will provide the opportunity for all parties to contribute their experience and expertise. **Figure 12** shows a flowchart of the process.

Main Objectives

To encourage designers and officers to;

- Select materials which are durable and functional.
- Select materials that are from a sustainable, ethical source which can be easily matched, replaced and maintained.
- Work closely together.
- Reduce street furniture and unnecessary clutter.
- Improve/maintain safety of the travelling public.

Figure 12 Designing with maintenance in mind and monitoring flowchart



Key deliverables

The WHMA will be monitored over time to establish whether it has been successful.

It is hoped that the key deliverables will be;

- Reduced remedial works (and therefore congestion).
- Less routine maintenance and better knowledge for future planned maintenance operations.
- Better surfaces to walk, cycle and drive on.
- Reduced waiting times for repairs which are sometimes due to suppliers' delivery times. By identifying items of this nature it is possible to either carry stock items or use alternative materials and products.

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14.0 Procurement and Service Delivery

14.1 Introduction

Following an extensive options appraisal carried out by Walsall and leading procurement consultants Knowles (now known as Hill International) the number of term maintenance contracts service level agreements has reduced from 13 to 6, which are:

- Public Lighting PFI Project Contract (Amey Infrastructure Services)
- Highways Repair and Maintenance Contract (Lafarge Tarmac)
- Grounds Maintenance SLA (Street Pride)
- Street Cleansing SLA (Street Pride)
- Waste Management SLA (Street Pride)
- Refuse Collection and Associated Service SLA (Street Pride)

Their report recommended that fundamental rather than incremental change was desirable to improve service delivery and efficiency. Based on this outcome, the short term proposal was to enter into a partnership with an external service provider for a four-year period with an option to extend for a further four years via an extension for two plus another two years. The longer term recommendation from the report was to explore the benefits of a Highways Maintenance PFI arrangement.

Since the Public Lighting PFI is covered in some detail in Chapter 9 this chapter will focus on the fundamental changes to service provision which have resulted from the Highways Repair and Maintenance Contract.

14.2 Highways Repair and Maintenance Contract

14.2.1 Contract Terms

The Highways Repair and Maintenance Contract (HRMC) between Walsall and Lafarge Tarmac commenced on 1 May 2009 and was initially for 4 years until March 2013, a 2 year extension from 2013 to 2015 has been implemented together with a further extension from 2015 to 2017.

HRMC is an NEC (New Engineering Contract) Version 3 Term Service Contract.

The contract was awarded following competitive tender and based on an evaluation based upon a scoring criteria of 40% for cost elements and 60% for quality elements. This ensured that the priority was the quality of the service provided.

14.2.2 Contract Scope

HRMC covers 15 service areas as follows:

1. Structural repair of footways and carriageways
2. Minor highway improvements
3. Reactive highway repairs
4. Highway drainage works
5. Cleaning of highway drains and gullies
6. Public rights of way
7. Road markings
8. Traffic signs (in collaboration with Amey Infrastructure Services)
9. Pedestrian direction signs
10. Street nameplates
11. Winter Service
12. Domestic vehicular crossings
13. Design work
14. Anti-skid surfaces
15. 24 hour emergency call out provision

14.3 Fundamental change

The implementation of HRMCS has seen the outsourcing of the former Highways Street Pride 'in house' service to the private sector.

46 employees have transferred from Walsall Council to Lafarge Tarmac under TUPE.

A new depot has been provided at Apex Road, Brownhills. The contract builds on what was an existing and successful six-year relationship between Lafarge Tarmac and Walsall Council.

14.4 Improving Services

14.4.1 Reactive maintenance – pothole repairs

Through a LEAN review process considerable work has been undertaken in collaboration with Lafarge Tarmac to improve and streamline this aspect of the contract. Leading up to this work it was estimated that 84% of pothole repairs required a return visit. By examining working practices and the type and nature of materials being used we now ensure that permanent pothole repairs are (excepting emergency situations) undertaken reducing the return rate to zero. Experiments have been ongoing in the delivery of larger scale patching works where the number and proximity of potholes/damage makes it economically viable to repair one large area rather than lots of smaller ones.

In addition work has been ongoing in policy changes involving the response time to non-emergency potholes. Moving from 24 hours to five working days will give us opportunity to plan the work strategically and increase value from our contractors.

14.4.2 Cashable and non-cashable savings

The Lean review mentioned previously identified cashable and non-cashable savings of circa £400K together with continuous improvement in service delivery and better standards of workmanship.

14.4.3 Asset inventory collection

A gully cleansing vehicle equipped with spatial data capture equipment allows performance to be managed more efficiently whilst collecting inventory data about Walsall's highway drainage systems.

The position and condition of gullies is mapped on a GIS and routinely updated each time a gully receives attention.

The process is seen as a significant cost saving and a sustainable way of managing this area of the highway asset inventory.

15.0 Financial Management

15.1 Introduction

The council operates a policy-led budget approach, the purpose of which is to challenge existing funding, service provision and strategic resource allocation to enable decisions on realignment of budgets to drive improvement, reflect changing policy, and identify possible savings and income opportunities. This approach is intended to identify the low(er) priority areas in the council's budget, and support decisions to stop investing in those services. This will provide a basis for realigning funding to higher priority/new areas and/or to employ resources in a different way.

There is a regular, established process for renewal and redirection of the council's resources. This enables the council to demonstrate best value in the allocation of its resources, whilst also being an intrinsic element of:

- the achievement of the council's vision
- the service planning process
- medium term financial planning

The allocation of capital resources is also tied to the achievement of the council's priorities and there is an increasing emphasis not only on analysing the revenue implications of capital investment, but also on ensuring what the most appropriate source of funding i.e. capital or revenue, should be and assessing the implications for the medium to longer term financial planning framework.

15.2 Highways Capital Resources 2015-18

The estimate of capital expenditure for highways maintenance services is detailed in **Table 12**.

Table 12 Highways Maintenance Capital Resources

CAPITAL BUDGET HEADING	2015/16	2016/17	2017/18
Council Capital	£1,900,000	£1,900,000	£1,900,000
DfT Maintenance Block (not including bridge maintenance)	£2,015,000	£1,882,000	£1,825,000
TOTAL EXPENDITURE BUDGET	£3,915,000	£3,782,000	£3,725,000

15.3 Highways Revenue Resources 2015-18

The estimate of revenue expenditure for highways maintenance services is detailed in **Table 13**. These estimates were derived from the budget approach highlighted above.

Table 13 Highways Maintenance Revenue Resources

REVENUE			
BUDGET HEADING	2015/16	2016/17	2017/18
PLANNED MAINTENANCE			
Traffic Signs Maintenance	£146,000	£146,000	£146,000
Condition Surveys	£84,500	£84,500	£84,500
Road Marking	£70,400	£70,400	£70,400
Structural Highways Maintenance	£441,000	£441,000	£441,000
De-trunking	£111,700	£111,700	£111,700
TOTAL PLANNED	£853,600	£853,600	£853,600
REACTIVE MAINTENANCE			
Reactive Highways Maintenance	£964,400	£964,400	£964,400
Highway Drainage	£141,700	£141,700	£141,700
Winter Service	£310,000	£310,000	£310,000
Street nameplates	£20,600	£20,600	£20,600
Safety Fencing	£20,600	£20,600	£20,600
Streams and Brooks	£31,400	£31,400	£31,400
Preliminaries	£1,023,000	£1,023,000	£1,023,000
TOTAL REACTIVE	£2,511,700	£2,511,700	£2,511,700
TOTAL EXPENDITURE BUDGET	£3,365,300	£3,365,300	£3,365,300
Note that figures do not include income or receivable or recharges and are works budgets only. (Future years figures may also vary due to identified savings)			

Highway Asset Management Plan

2015 - 2021



Walsall Council

Version 3.0 published April 2015

Walsall Council Highway Asset Management Plan

Volume 1: The plan

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Foreword

If you live, work, or simply pass through Walsall, you will probably use the single most valuable asset to the community which Walsall Council is responsible for - the highway network. Whether on foot, cycling, using public or personal transport we all need the highway network in order to get around.

The way it is maintained and managed has a direct impact on the borough's residents, businesses and visitors. We all depend upon a good reliable service from our road network to sustain our economic and transportation needs. A network that is in good condition both encourages and supports economic growth throughout the borough.

The HAMP and its accompanying appendices link clearly to the council's overall vision for the borough of Walsall to the year 2021 and provides the foundation for delivering a well-maintained and managed highway infrastructure. Our shared partnership vision for Walsall, as set out in the Sustainable Communities Strategy (SCS), is for 'Walsall to be a great place to live, work and invest', notably including the commitment that 'People can get around easily and safely'.

The Corporate Plan states that, with fewer resources available we will concentrate on protecting the most vulnerable and reducing inequalities through the following priorities for the Council:

- Support with Cost of Living
- Creating Jobs and helping people get new skills
- Improving Educational Attainment
- Helping local high streets and communities
- Promoting health and well-being
- Helping create more affordable housing

These priorities provide a focus for our Highway Asset Management Plan and help drive the decision making process when it comes to maintaining Walsall's highway network.



"Walsall's Highway Asset Management Plan is a key driver for the delivery of efficient and sustainable highway services, it supports a smarter and more flexible working approach that acknowledges the increasing austerity measures imposed on local government resources. It is a long term strategy that optimises Council resources for the management of Walsall's highway network."

Councillor Lee Jeavons
Portfolio Holder for Environment and Transport

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1: Introduction

1.0 Introduction

1.1 Executive summary

Walsall's Highway Asset Management Plan (HAMP) provides an integrated framework for the delivery of highway maintenance services across the borough's road network and optimises resources for the management of the highway infrastructure.

The purpose of the Highway Asset Management Planning is to influence how we deliver highway services in a way that makes the process more intelligence led and customer responsive. An intelligence led approach will ultimately bring greater value for money and help achieve key council goals that can be found in strategies such as our Sustainable Community Strategy and Climate Change Strategy and Action Plan

The principles of asset management are based around reliable knowledge of the asset, it involves having a comprehensive asset inventory, knowing the condition of the asset, and knowing its lifecycle, how long it will last. Equipped with reliable data, engineers are better able to predict the annual level of investment required to deliver a predetermined level of service in the most cost effective manner.

The benefits of adopting an asset management approach provides officers and politicians with informed levels of decision making, in accordance with the principles set out in the HMEP Highway Infrastructure Guidance Document (May 2013). The plan sets out the management arrangements required to ensure that levels of service are optimised and ensures that the highway asset is managed wherever practical to meet the expectations of the highway user, whilst carrying out the council's statutory duties as the Highway Authority.



1.2 Glossary of Terms

Terms

The following terms are used in this plan:

Asset management

A strategic approach which 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 valuation

The calculation of the current monetary value of an authority's assets. It excludes therefore any consideration of the value to the community in terms of the economic and social benefits of providing a means for people to travel in order to work, socialise and live.

Levels of service

A statement setting out the performance of the asset in terms customers can readily understand. Levels of service typically cover condition, availability, capacity, amenity, safety, environmental impact and social equity. 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 a service to customers and maintaining its physical integrity at an appropriate level.

Risk management

The formal assessment of risks with the potential to affect delivery of the service via a process of identification, assessment, ranking and control planning.

Gross replacement cost

The total admissible cost of replacing the existing highway asset to a modern equivalent standard, taking into account up-to-date technology and materials.

Deterioration

The change in physical condition of an asset resulting from use or ageing.

Depreciation

The consumption of economic benefits embodied in an asset over its service life arising from use, ageing, deterioration, damage or obsolescence.

Depreciated replacement cost

The current value of the asset, normally calculated as the gross replacement cost minus accumulated depreciation and impairment.

Service options

Options available for an asset or groups of asset in terms of alternative levels of service.

1.3 Abbreviations

The following abbreviations are used in this plan:

AM	Asset Management
AMP	Asset Management Plan
AIS	Asset Information Strategy
AV	Asset Valuation
CAA	Comprehensive Area Assessment
CAMP	Corporate Asset Management Plan
CEN	Community Empowerment Network
CIPFA	Chartered Institute of Public Finance and Accountancy
CIPPF	Corporate Integrated Planning & Performance Framework
CMT	Corporate Management Team
CPA	Comprehensive Performance Assessment
CRM	Customer Relations Management
CSS	County Surveyors Society
CVI	Course Visual Inspection
DDA	Disability Discrimination Act
DfT	Department for Transport
DRC	Depreciated Replacement Cost
DVI	Detailed Visual Inspection
E.Gov	Electronic Government
FNS	Footway Network Survey
GAAP	Generally Accepted Accounting Principles
GIS	Geographical Information Systems
GRC	Gross Replacement Cost
HAMFIG	Highways Asset Management Financial Information Group
HMA	Highway Maintainability Audit
HMEP	Highway Maintenance Efficiency Programme
HMMS	Highways Maintenance Management Systems
HAMP	Highway Asset Management Plan
HMS	Highway Maintenance Strategy
KLOE	Key Lines of Enquiry
ICT	Information Computer Technology
ITS	Intelligent Transport Systems
LoS	Level of Service
LPI	Local Performance Indicator
LTP	Local Transport Plan
NI	National Indicator
NRMCS	National Road Maintenance Condition Survey
RAB	Resource Accounting and Budgeting
TAG	Local Authority Technical Advisors Group
SCANNER	Surface Condition Assessment of the National Network of Roads
SCRIM	Sideways-force Coefficient Routine Investigation Machine
SMT	Service Measurement Tool
UKPMS	United Kingdom Pavement Management System
WGA	Whole of Government Accounts

1.4 Walsall's highway network

Walsall is one of seven boroughs in the West Midlands and by population it is the largest metropolitan area outside Greater London, covering around 10,360 hectares or 40 square miles, with a population in excess of 250,000.

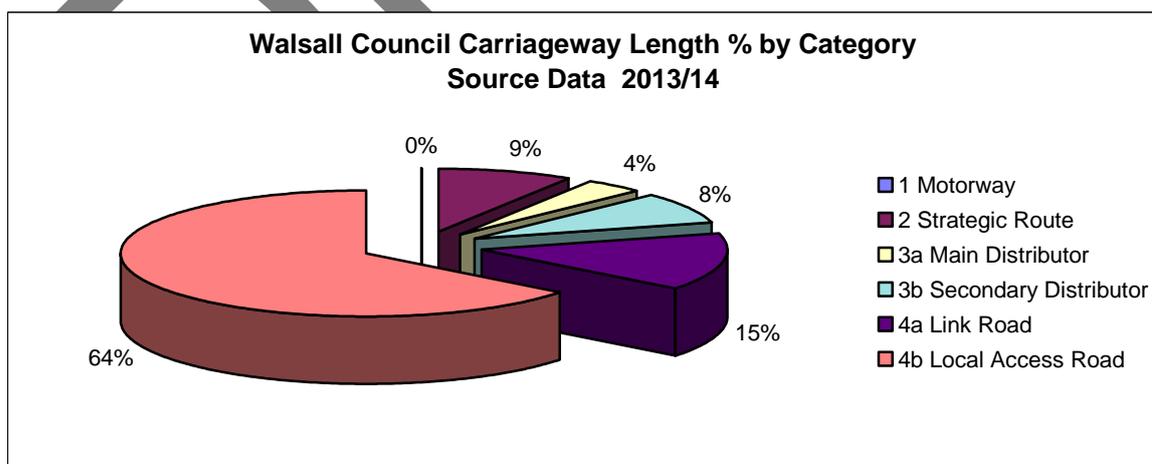
Along with its nearest metropolitan neighbours, Wolverhampton, Dudley and Sandwell, much of Walsall is part of the historic Black Country, with strong links to its industrial heritage. It is a diverse borough, predominantly urban to the West and quite rural in the East.

Walsall retains a high level of national and international accessibility because of its central location. It has excellent road, rail and air links, and its highway infrastructure forms the key network connections, which makes it the borough's most valuable asset by far. It is essential this asset is protected and maintained for the well-being of the community and for the economy.

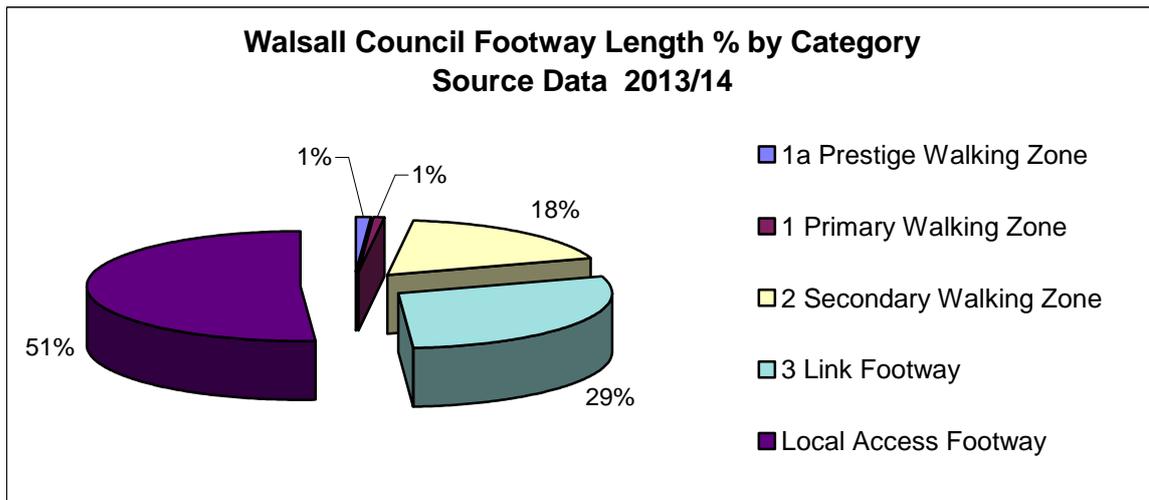
For the period 2013 - 2014 Walsall's National Indicators demonstrate a generally stable and steady state in the condition of its classified road network when compared with official data from previous years.

The council has a statutory duty to maintain its highway network in a safe condition with the exception of the M6 and the A5 Trunk Road, which are maintained by the Highways Agency on behalf of the Department for Transport.

The total road length maintained by Walsall is approximately 525 linear miles, of which 43 linear miles are classified principal A roads, 25 linear miles are classified non-principal B roads, and 7 linear miles are classified non-principal C roads.



The road categories used here are analysed around the measured length held on the UKPMS database.



The above footway categories are taken from the UKPMS database and have been analysed around road length and not as individual footway lengths.

Although carriageways and footways form the most substantive part of Walsall's highway infrastructure, the Highway Asset Management Plan is developed around 12 key asset groups, which are:

1. Carriageways
2. Footways, footpaths and public rights of way
3. Structures
4. Street lighting
5. Street Furniture
6. Traffic signals and traffic management systems
7. Land
8. Traffic calming
9. Road markings and road signs
10. Highway drainage systems
11. Cycleways and cyclepaths
12. Safety fences and pedestrian barriers

1.5 Purpose of highway asset management

Asset management means different things to different people. For the purposes of this document the following definition has been adopted from the County Surveyors Society framework document for highway asset management.

“Asset management is 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.”

Walsall has a typical highway network comprising of road pavements, footways, streetlights, cycleways, earthworks, signs, drains, road markings, traffic signals, street furniture, structures and verges. The principles of asset management should be applied equally to the management of all components of the asset.

Walsall’s Highway Asset Management Plan (HAMP) is driven by a number of key themes that include:

Strategic approach	A systematic process that takes a long-term view.
Whole lifecycle	The whole life and lifecycle of an asset is considered.
Optimisation	Maximising benefits by balancing competing demands.
Resource allocation	Allocation of resources based on assessed needs.
Customer focus	Explicit consideration of customer expectation.

Creating and keeping an accurate up-to-date inventory of Walsall Council’s highway assets is an essential component of Walsall’s HAMP. To assist in this process Walsall has an integrated suite of specialist computer applications, models and databases which all form part of the Walsall Highways Maintenance Management System (HMMS).

Asset management represents more than an integration of these existing management systems and data. The HAMP is designed to identify and target improvements which will enable Walsall Council to build on existing practices and procedures to form a continuous improvement framework. In turn this will help the council meet its strategic goals in the most effective manner having regard to statutory requirements, customer expectations and funding limitations.



1.6 Synopsis of Walsall's Highway Asset Management Plan

The HAMP is contained in two volumes. Volume 1 comprises of the main asset management plan and Volume 2 contains the appendices detailing the asset management information. A brief summary of each volume follows.

Volume 1: The plan

1. Introduction

Sets out the rationale for the HAMP and provides an overview of the highways asset together with a glossary of abbreviations and terms. It explains the key objectives and gives an overview of highway asset management processes and lays out the structure of the HAMP.

2. Asset inventory

A reliable asset inventory containing information about each asset group is the foundation of the asset management plan. The inventory includes information relating to quantity, type, location and condition. It is vital that the inventory is properly maintained and kept up-to-date if the data contained in it is to be relied upon.

3. Business processes

Identifies key business processes that affect asset management outcomes and outlines proposed improvements to them. It introduces the processes by which the HAMP will seek to establish funding options and optimise levels of service.

4. Levels of service and service options

Defines the levels of service for each asset with targets ranging from statutory, minimum, or do nothing scenarios, to current, desirable or improved levels of service. It also outlines how the options available for dealing with the ongoing and future demands placed on the network are identified and evaluated.

5. Lifecycle plans

Contains lifecycle plans for each asset group and outlines how individual assets are managed having regard for levels of acceptable deterioration and appropriate timescales for maintenance intervention.

6. Financial management and valuation

Financial expenditure for recent years is appraised against each asset group and where possible trends are identified to inform the optimum allocation of funds against identified needs. Also included is the summary information for the asset valuation together with financial details of the Gross Replacement Cost (GRC) of assets.

7. Risk management

Describes the risks associated with the management and ownership of the highway asset and the processes that are used to control and manage these risks.

8. Forward works programme

Provides a summary of the forward works programme for each asset group and the processes by which these programmes are formulated. The means of determining future resource requirements is based on the manner in which the asset group is allowed to depreciate and this is normally defined through two categories.

The first category is known as the conventional method, where straight line depreciation of the asset is acceptable to a point where replacement is necessary, applying to such assets as highway lighting and street furniture. The second category is known as component accounting, whereby a level of annual expenditure is required to maintain the asset to a specified level of service, this applies to assets such as carriageways and footways.

9. Performance monitoring

Demonstrates how Walsall Council monitors its performance relative to each asset group by using commonly recognised performance measures where appropriate, such as the National Indicator Set (NIS) or Local Performance Indicators (LPI's). Following the introduction of the local government White Paper 'Strong and Prosperous Communities' continued emphasis is placed on the perceptions of local people and businesses in monitoring performance for duties which requires emphasis on citizen involved participation.

10. Recycling and sustainability

There is an increasing demand and expectation for local government to develop and apply sustainable construction and maintenance practices. Walsall's HAMP aims to encourage the use of recycled materials and the re-use of existing materials when carrying out maintenance activities. The use of secondary aggregates will help reduce the demand on finite natural resources and reduce our reliance upon waste being taken to landfill.

11. Improvement actions

Puts forward proposals for improvement actions together with a programme containing timescales and estimates for any associated costs that may be necessary to implement such improvements.

Volume 2: Appendices

Volume 2 of the HAMP its 'appendices', is a collection of supporting data that provides more detailed highway asset management information. It exists mainly in the form of a series of data sets which include inventories, documented procedures and recorded maintenance activities.

The appendices are routinely updated and are intended to be used as a compilation of working data specifically assembled and designed for operational asset management purposes and to assist with infrastructure management and associated policy, planning and decision making activities.

Although the appendices are predominantly based around the higher value asset groups such as carriageways and footways, it will be developed where appropriate to include other asset categories over time. However, some data relating to certain asset groups is contained in bespoke systems that can only be accessed, managed and updated by the service areas to which they relate.

The HAMP Appendices provides data in support of the following:

Contents

- A. Asset inventory data.**
- B. Lifecycle planning & service options.**
- C. Forward works programmes & works history.**
- D. Skid resistance management.**
- E. Financial summaries & valuations.**
- F. Safety inspections & liability.**
- G. Performance monitoring.**
- H. Climate change.**
- I. Condition Summaries.**

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2.0 Asset inventory

2.0 Asset inventory

2.1 Inventory data

Creating and keeping an up-to-date and accurate inventory of Walsall Council's highway network is an essential component for Walsall's highway maintenance strategy and asset management plan. Walsall does not rely upon a single computerised Highways Maintenance Management System (HMMS) but has an integrated suite of specialist applications, models and databases which all form component parts of the Walsall HMMS.

Walsall's highway asset inventory is the foundation upon which its asset management processes are built. The key objective is to make high quality inventory and condition data readily available so that a consistent management approach is achieved on an informed basis to optimise resource allocation.

The ability to analyse inventory data in combination with condition data, and cross reference this with other information such as skidding resistance or accident records is crucial for targeting high risk sites. The output provides important information upon which priorities and critical decisions can be based. It is then possible to consolidate the use of more advanced asset management processes such as optimisation and risk management, which rely on the existence of comprehensive, accurate and up-to-date asset inventories.

2.2 Data review

Confirmation of the quality, reliability and completeness of existing asset data sets is essential. The level of confidence in any data has to be established before embarking on the implementation of any asset management processes. A review of current inventory practices has established the specific data held for Walsall's highway assets and the review of this data has determined:

- Where the data is recorded
- The level of detail that is captured
- The format of data capture, hard copy or electronic
- How the data is validated

The level of information recorded against each asset group has been assessed to determine that it is meaningful and has specific regard for the use and purpose of the data. Typical uses include:

- To provide information on the condition of the asset
- To enable a long term programme to be established
- To capture faults or damage in a way that can be analysed
- To report on National Indicators and local indicators
- To assist in the management of contractual arrangements
- To enable the value of the asset to be calculated

2.3 Asset groups

Highway asset type and categories were collectively determined through joint working between West Midland authorities. This was achieved through a series of workshops guided by external consultants having extensive experience in highway asset management. Reference was also given to CSS and CIPFA guidance documents. The asset categories and their component elements are shown below.

Level 1 : ASSET TYPE	Level 2 : ASSET GROUP	UNIT OF MEASURE	Level 3 : VALUATION COMPONENTS
Carriageway	Flexible pavements Flexible composite pavements Rigid concrete pavements Rigid composite pavements	area m2	Includes for all categories: pavement construction layers other paved surfaces, central reservation, roundabout, lay-by, traffic island, earthworks, retaining walls <1.35m, traffic calming, kerbing, markings and road studs, highway drainage, boundary fences, hard strip, verges.
Footways & cycletracks (attached to the road or segregated)	Footways Pedestrian areas Footpaths Cycle tracks	area m2	Includes for all categories: construction layers and other surface types, eg block paving.
Structures	Bridges and subways (span>1.5m) Culverts (span > 0.9m) Retaining walls (height > 1.35m) Signs gantries, cantilever signs Tunnels (encl length > 150m) Structural earthworks Lighting columns (height > 20m)	deck area m2 internal surface area m2 retained area m2 span length m length m length m	Includes for all categories: the entire structure. Small water carrying structures are considered as highway drainage.
Highway lighting	Lighting columns (height < 20m) Wall mounted lighting unit's Heritage columns Illuminated bollards Illuminated traffic signs	number	The entire item including: column and foundations brackets, luminaires control gear, internal wiring, cabling within ownership.
Street furniture	Transport Highway Street scene	number	Seating, litter bins, bollards, marker posts, street nameplates, traffic signs, safety fences, Pedestrian barriers, grit bins, weather stations
Traffic management systems	Traffic signals Pedestrian signals Zebra crossings In – station Information systems Safety cameras	number number number number number number	different types different types different types complete installation variable message signs
Land	Freehold land Rights land	area - hectares	Features on land not taken into account in valuation

Asset categories and their component elements

2.4 Current data management practices

For certain asset groups such as carriageways and street lighting the current data management processes are considered to be good. But in contrast there are categories such as highway drainage where limited data still exists and there is little evidence to suggest that reliable inventory records have ever been kept. We have prioritised these areas for the collection of asset inventory data.

There are a number of instances where good practice occurs. It has to be acknowledged that a consistent data management regime does not comprehensively exist throughout the council. In such instances there are no quality standards in place for the completeness and reliability of data and no formal data validation process or documented procedures exist.

The low level of confidence surrounding certain asset groups means that the use of information needs to be tempered with the knowledge that its use can bring about misleading results. The ability to undertake better analysis of needs and consequently plan works in a more proactive manner is currently constrained by the inconsistent quality and completeness of asset data.

2.5 Proposed data management practices

It is generally accepted that to collect every piece of asset data is neither practical nor financially sensible. The review of Walsall's current data inventories provided a gap analysis that enabled us to target the collection of the more critical items of data. A prioritised programme of data collection is being implemented and is producing higher levels of confidence in those data sets identified as either mandatory or having a high level of importance. The data collection exercises will provide a base set of reliable asset data upon which initial need projections can be based.

To ensure that the maintenance of data is kept in manageable proportions, data managers are being assigned with responsibility for the completeness, integrity and availability of specific elements of major data sets. It is vitally important that before any inventory system is introduced, the mechanism by which it is managed and updated on a day-to-day basis is in place with fail-safe processes that will prevent such systems being neglected in the event of staff changes or departmental restructures.

The inventory management procedures for each asset group will typically include the following:

- Named data managers
- Procedures for updating the asset inventory
- Procedures for inventory verification and validation

2.6 Asset inventory project implementation & progress

Public Rights of Way Network

A centralised GIS platform for the management of Walsall's PRow network has been established, document storage systems have been created, asset inventories are compiled and condition survey regimes have now been set in place

Cycleway Network

A centralised GIS platform for the management of Walsall's cycleway network has been established, document storage systems have been created, asset inventories are compiled and condition survey regimes have now been set in place

Classified Road Network Condition Survey.

Supported by Centro grant allocations and in collaboration with 6 other West Midlands authorities, Walsall Council engaged independent survey consultants during 2013/14 to carry out a strategic review of its classified road network condition. The development of a regional business case to be presented to the DfT regarding future funding requirements remains an ongoing exercise. This work was carried out in addition to the routine annual SCANNER surveys.

Bridge Structures Database

Walsall's structures inventory is managed through a bespoke Bridge Management system (BMX) which is primarily used to monitor bridge condition, there is currently a backlog of both data inputting and co-ordinated bridge inspections. Engineers are continuously gathering inventory and condition data that will bring the BMX database up to date, which will additionally include other highway structures such as retaining walls. It is anticipated that the exercise will be completed during the 2015/16 financial year.

Road Markings Inventory

A comprehensive database and GIS system is used for the management of markings in connection with Traffic Regulation Orders, however no inventory exists for markings not associated with TRO's. Walsall Council has purchased borough wide high resolution aerial pictometry that resides within its corporate GIS system; this facilitates the analysis and recording of all road markings throughout the highway asset. In addition to the current data, the system holds historical aerial pictometry for the years 1999, 2004 and 2006.

Highway Drainage Inventory

Limited data exists regarding highway drainage. A phased programme targeting gully locations and spatially recording them on GIS is being implemented using the Kaarbon Tech gully mapping system. Once the gully data is gathered, this will be compared with Severn Trent Records to identify sections of unknown highway drainage. These works are progressing under the umbrella of Walsall's Flood and Water Management Plan to meet flood alleviation obligations contained in the Flood and Water Management Act.

Linear and Point Data Inventory

Gaps exist in current databases with regard to a broad spectrum of highway asset inventory categories, including: Road safety barriers; safety fencing & guardrails; retaining walls; sign gantries cantilever signs; street furniture; traffic signs; high friction surfacing; bollards etc.

Streets List – Section 36 Highways Act 1980

The Council's 'Streets List' (definitive road register) is contained in a catalogue of historic ledgers dating back many decades. A new layer was created in GIS displaying the full extent of adopted streets throughout the borough and holding detailed information that is specific to each individual street. Significant progress has been made in the development of this electronic version of the Streets List and it is anticipated that this work will continue during 2015/16. Although the system is still under development, access to it will be made more readily available to certain departments within the Authority and this is continuing to help bring about measurable efficiency savings by significantly speeding up the delivery of services. Future plans are to make the system available to the wider public through the Council's web site.

Signage de-illumination and high friction surfacing inventory

During 2013/14 the council collected GIS mapping inventory for road illuminated signage across the borough, with the intention of carrying out a review of current and future illumination requirements. A similar exercise is currently underway to locate and map out high friction carriageway surfacing locations throughout the borough, with a view to identifying budget requirements and forward planned maintenance regimes in accordance with lifecycle methodologies.

2.7 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 2-1 There is insufficient data recorded against some asset groups*
- Issue 2-2 Where data exists it sometimes cannot be relied upon*
- Issue 2-3 Data management and validation procedures do not always exist*

The proposed improvement actions are:

Improvement actions:

- Action 2-1 Develop and implement a data collection strategy and action plan*
- Action 2-2 Implement data management procedures*
- Action 2-3 Identify specific data needs and collect missing data*

3.0 Business processes

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3.0 Business processes

3.1 Introduction

Business processes shape and direct key decision making to determine the effective allocation of resources for all asset groups. Guidance for managers comes in the form of established corporate systems for financial approval and financial management. The council's Finance and Contract Rules govern the way that the Highway Authority manages its business. These internal mechanisms are routinely checked and monitored in a structured manner by the council's own financial and internal audit officers.

Many of the maintenance procedures, which have evolved over time, offer historical evidence to support the notion that good practices are being achieved. The adoption of a HAMP enhances our service delivery by focusing on the following business procedure issues:

- How customer demands are determined
- How funding need is assessed
- How funding is distributed over time
- How effectiveness of spend is assessed
- How elected members are advised
- How levels of service are determined

3.2 How customer demands are determined

Walsall Council's corporate stance embraces customer expectations by informing, consulting and encouraging both public participation and public empowerment.

Highway users and local communities are informed and advised about highway works through a variety of channels, such as the internet, press releases and media articles, a range of leaflets and strategy and policy documents. These are made available online and in print at public buildings, by letter, or even personal visits for those households or businesses affected by the various programmes of works.

Walsall has implemented a model for engaging communities and improving the responsiveness of public services, this is delivered through a neighbourhood management approach with improved borough-wide mechanisms. Six Area Partnerships replaced the previous nine Local Neighbourhood Partnerships, each is headed up by a dedicated Neighbourhood Manager who is responsible for implementing the new neighbourhood model at local level across the partnership.

Systems for registering and tracking complaints and various customer feedback questionnaires are intermittently employed to gauge customer needs and expectations, along with suitable project completion evaluation measures.

Local community empowerment through choice in service delivery is not easily achieved, but in accordance with the spirit expressed within the local government White Paper Strong and Prosperous Communities, increased emphasis on local decision making has become even more important, particularly in light of the funding cuts implemented since the government's 2010 spending review.

We know through feedback that the highways asset as a universal service is a key satisfaction driver and its condition matters significantly to the community. Wherever practical and economically viable, communities are given the opportunity to influence the aesthetics and choice of materials used within local schemes. Back in 2011 in the case of public realm improvement works at Slaney Road, residents were extensively consulted with regard to retention of existing highway trees and provision of on street parking. In this case study example, advice was sought by the scheme designers on how the choice of materials met with the council's highway maintainability guidelines. This scheme demonstrated how designers and planners can take on board the views of local residents and how the choices for construction materials can be guided through the councils Highway Maintainability Audit.

Walsall is one of around 78 local councils across England and Wales that take part intermittently in a national survey carried out by Ipsos MORI to gauge public perception of the delivery of local services. The survey examines a range of issues that cover different aspects of roads and transport services across the borough. The results of the survey are still available in the public domain and can be accessed directly from the NHT network performance database found on the National Highways and Transportation website www.nhtsurvey.org

3.3 How funding need is assessed

Currently, funding need is often established through historical precedent. For some asset groups inventory information is somewhat limited and condition information is sometimes not sufficient enough to maximise effective decision making. This can result in programmes that are disproportionately driven by worst first principles to the detriment of best value principles.

Changes to the highways asset brought about by the adoption of new assets, increased traffic volumes, major developments and government legislation have not been uniformly matched with year-on-year funding increases for Walsall's revenue and capital budgets, or indeed its shared LTP settlements, therefore other funding streams such as Private Finance Initiatives (PFI) and Prudential Borrowing Requirements have, as a consequence, been implemented.

Walsall's budget setting process annually offers a corporate platform to consider funding needs issues. It is intended that the HAMP will further encourage this process by placing greater focus upon need rather than historical precedent. It is essential therefore that measurement procedures demonstrate the council's maintenance spending is not only improving asset performance, but is also satisfying asset demand.

3.4 How funding is distributed over time

Details of Walsall's current funding distribution are given in section 6.0 financial summary, but in general Walsall like most other unitary authorities, funds the maintenance of its highways assets through a combination of capital and revenue budgets.

The majority of capital allocations are generally made by central government through the Local Transport Plan (LTP), which takes into account such factors as road length, classification, traffic figures, and condition through National Indicators (NI's) and national road maintenance condition surveys.

Revenue allocations are generally funded through a combination of local council tax, business rates, fee generations, and central Government revenue support and other grants.

In recent years, Walsall has taken advantage of supplementing these core funding streams with additional sources such as the Public Lighting PFI, Prudential Borrowing, Emergency Capital Funding, New Deal for Communities Funding (NDF), Heritage Lottery Funding (HLF), Area Based Grants (ABG), Local Area Agreements (LAA) and Section 278 Agreements (Highways Act).



3.5 How effectiveness of spend is assessed

Some highway asset groups have national performance indicators attached to them, others are monitored against local targets in order to allow the effectiveness of current funding levels to be assessed. The key performance measures for the main asset groups are illustrated below, including Local Indicators, which can also measure perceptions about the state of the highway and how safe and secure people feel whilst using it.

Asset Group	Performance Measure	Inventory	Description
Carriageways	Data Topic 130-01 Data Topic 130-02 Local PI 224b	MARCHpms	Condition Indicators for carriageway condition on Classified Principal, Classified Non Principal & Unclassified roads
Footways	Local PI 187	MARCHpms	Condition Indicators for category 1, 1a & 2 footways
Street lighting & illuminated signs	Local PI 215a	Amey INFOR	The average number of days taken to repair faults under the control of the local authority
Traffic signals	Local PI 165 Local PI EL4	UTC Inventories	Pedestrian crossing facilities for disabled % of urgent traffic signal faults received in normal working hours attended to within 1 hour
Drainage	Highway flood incidents	Mayrise	Response times set out in highway maintenance contract

The key performance measures for the main asset groups.

Measuring performance against established targets including value for money indicators, LTP delivery measures and 'Tell Us' complaints are fundamental in establishing and identifying any performance gaps for desired service levels and for developing budget models that will allocate funding on a fair and equitable basis.

3.6 How elected members are advised

Walsall's annual budget setting process is the primary means of decision making in relation to determining and implementing changes to funding processes. Elected members are the focal point of the process following extensive consultation externally and internally. Information is provided through Performance and Scrutiny committees, cabinet and council. Individual portfolio holders or affected ward councillors are also routinely updated on scheme

implementation issues during the project planning stages and presentations to members take place when appropriate. There are also regular member briefings with portfolio holders.

Detailed 'Portfolio Plans' exist for each of the Council's Portfolio Holders, these are written on a medium term basis and outline the portfolio vision for the future, together with any high level objectives. The plans provide an overview of service provision and contain details of future options for business change. Statistical information is provided and gives a summarised profile of financial and staffing resources. The plan also reports performance levels against pre determined targets and focuses on customer consultation and feedback.

3.7 How levels of service are determined

Defining levels of service is a central element of Walsall's HAMP and offers the capability for a range of service options to be explored against clearly defined standards for each of the asset groups under consideration.

Levels of service are assessed against a number of key requirements or drivers, including legislation, stakeholder needs, corporate objectives and the relevant national codes of practice or operational guidelines.

Walsall's business processes are designed overall to provide us with an integrated planning framework for delivering best value and continuous service improvement, implemented through a strong emphasis on consultation to ensure that the communities' key desirables are met within the visions and priorities of the council. The council's budget setting process is a key component in providing the required financial backing to support and achieve desired service levels.

Highways asset management planning processes are becoming increasingly led by national guidance. The Highways Maintenance Efficiency Programme (HMEP) has continued to evolve as a key driver for good practice through their published guidance documents and a comprehensive series of road shows and seminars.

Walsall Council intends to fully embed HMEP guidance within its asset management practices to develop its Business Processes into the future, with specific emphasis being given towards the use of HMEP's innovative series of planning toolkits, including: Carriageway lifecycles; footway lifecycles; ancillary lifecycles; lean systems; collaborative alliances; shared services; culture to deliver, amongst the many others available for promoting good practice.

It is anticipated that these tools will become increasingly important as the nationally accepted framework for advising its elected members and service planners alike in undertaking their business process and service level decision making activities.

3.8 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 3-1 Funding allocation is sometimes based on asset inventory data but rarely based on the condition of the asset.*
- Issue 3-2 Budgets are not currently developed around lifecycle planning and long term funding need.*
- Issue 3.3 HMEP Planning Toolkits are not yet developed across the available range of their good practice guidance*

The proposed improvement actions are:

Improvement actions:

- Action 3-1 Long term funding strategies need to be developed around asset inventory data and lifecycle planning*
- Action 3-2 Forward works programmes need to be optimised through the establishment of lifecycle plan treatments where appropriate.*
- Action 3-3 Develop HMEP Toolkits and incorporate them as an integral part of the HAMP appendices.*

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4.0 Levels of service

4.0 Levels of service

4.1 Understanding levels of service

Levels of service describe the quality of the service provided by the asset for the benefit of the customer. These are composite indicators that represent the social, economic and environmental goals of the community. Levels of service are therefore the manner by which Walsall Council, as highway authority, engages with the customer. They are about reflecting the customers' interests in terms that can be measured and evaluated.

The connection between customer expectations and what it is possible to deliver in practice needs to be understood and communicated to stakeholders, thus enabling users to become empowered in the process. However, it is important that everyone involved in the process is aware that decisions, which impact on service delivery, should be robust and align with the overall policies and objectives of the council.

Levels of service ultimately determine availability, capacity, amenity, safety, environmental impact and social equity. They cover both the condition of the asset and non-condition related demand aspirations, in other words they are a representation of how the asset is performing in terms of both delivering a service to customers while maintaining the asset's physical integrity at an appropriate level.

4.2 Process for developing levels of service

The first step in the process is to establish a clear set of service levels ranging from an excellent service to a statutory do minimum service. At present no national framework exists although guidance contained in the CSS framework and the Code of Practice for Highway Maintenance Management and subsequent HMEP guidance give indications of desirable service standards.

Levels of service are the means by which a highway authority attempts to meet customer expectations, statutory obligations and corporate goals in delivering highway services. Levels of service need to consider the preservation and physical integrity of the asset and also meet the demands of safety, availability and accessibility.

The key requirements affecting the development of levels of service are:

- Legislative requirements
- Walsall Council's mission, policy and objectives
- Customer expectations
- Best practice guidelines
- Affordability
- Availability of resources

4.2.1 Legislative requirements

It is a requirement that levels of service comply with the legal obligations and statutory duties incumbent on the highway authority. Additionally, the adoption of recognised codes of practice will provide the necessary guidance to align service delivery with national best practice.

It is essential that minimum levels of service are sufficient to meet the statutory requirements set out in the following Acts and any other such Acts in connection with the delivery of the service.

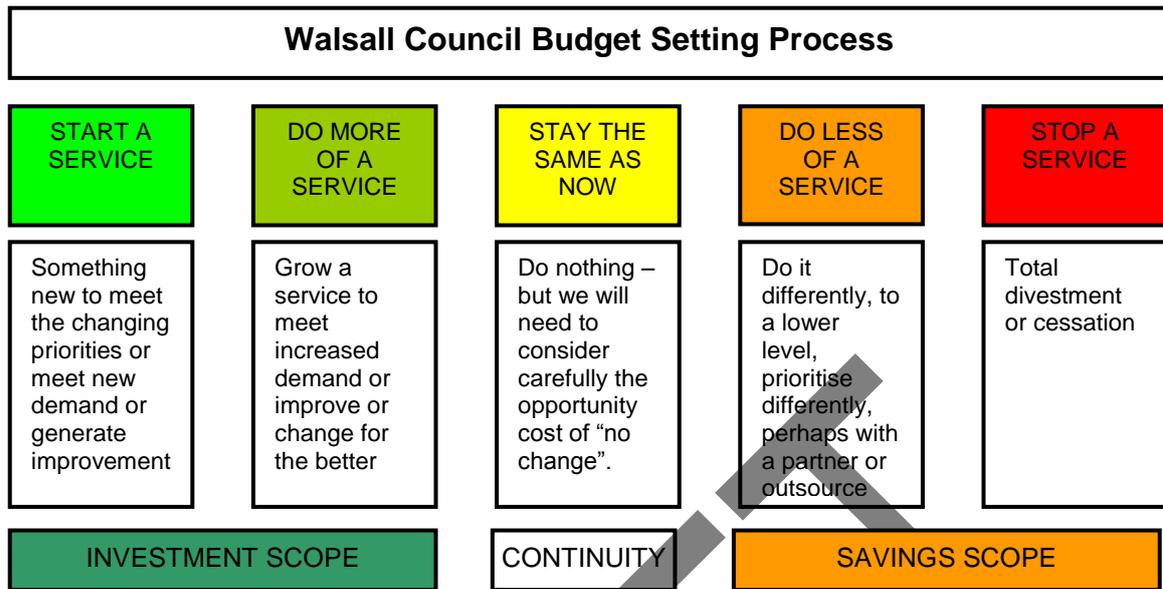
- Highways Act 1980
- Traffic Management Act 2004
- New Roads & Street Works Act 1991
- Road Traffic Reduction Act 1997
- Transport Act 2000
- Road Traffic Regulation Act 1984
- Traffic Signs Regulations & General Directions 2002
- Railways and Transport Safety Act 2003
- Local Authorities (Transport Charges) Regulations 1998
- Countryside and Rights of Way Act 2000
- Environmental Protection Act 1990
- Noxious Weeds Act 1993
- Health and Safety at Work Act 1974
- Management of Health and Safety at Work Regulations 1999
- Construction (Design & Management) Regulations 2007
- Local Government Act 2003
- Disability Discrimination Act 2005

4.2.2 Walsall Council's mission, policy and objectives

Walsall Council sets out its policies and corporate objectives in definitive volumes such as the Local Transport Plan, Highway Maintenance Strategy, Public Rights of Way Improvement Plan and Sustainable Community Strategy.

Levels of service are not only determined in a way that takes on board local objectives, there is also an acknowledgment of the wider national targets set out in Department for Transportation publications such as 'The Future of Transport – a network for 2030' and other such documents.

Walsall Council's budget planning process is designed to enable strategic choices and decisions to be made in an informed manner, so that the council can manage its budgets and services with due regard for prudence, stability, investment and efficiency.



Walsall Council budget setting process decision-making matrix

4.2.3 Customer expectations

The expectations of all road users, the community and local businesses need to be recognised as a factor in the service level decision making process. When setting levels of service it is important to realise that key stakeholders can have a significant influence on performance measurement and service perception.

Through the provision of better information, we will in turn enable consultation with customers on a level that incorporates not only issues of preference, in terms of what is important to them and how satisfied they are, but also about what they would be prepared to pay more for, or trade off as a sacrifice in order to fund a higher level of service elsewhere.

4.2.4 Best practice guidelines

A number of best practice guidelines exist that directly influence levels of service. While these best practice guidelines are not always statutory requirements, they represent a description of accepted good practice. This can be particularly important in ensuring that assets are protected against public liability claims.

The most significant best practice guidance documents relevant to this plan are:

- Code of Practice for Highway Maintenance Management.
- Code of Practice for Road Lighting Management.
- Management of Highway Structures (Code of Practice)

Walsall Council's HAMP notes where these codes have been applied and in those instances where they are not, it will attempt to identify the rationale and justification behind the decision for the departure from guidance. This same approach is adopted throughout the plan for any other specific standards or guidance notes.

4.2.5 Affordability

The service options attempt to identify, the most economically efficient way of delivering an acceptable level of service over the long term. Pressures on council funding and increasing demands on the highway network may mean it is not always possible to secure the required funding to deliver the optimum solution. This is one of the reasons for exploring service level options in the asset management plan. Another reason is that decision makers will have access to data allowing them to make informed decisions governing service delivery and be aware of the consequence of their decision-making. This is particularly useful in a situation of competing demands for funding.

In reality budgets often dictate what can realistically be achieved, so affordability must be recognised and acknowledged when setting deliverable levels of service

4.2.6 Availability of resources

In pursuit of procurement efficiencies Walsall Council commissioned an options appraisal to determine the most robust and efficient framework through which to maintain the highway asset and deliver highway services. Following this appraisal Walsall entered into a long term contract with Tarmac National Contracting for the provision of all highway maintenance services, through economies of scale the council's objective was to bring about greater efficiency gains and cost savings.

4.3 Existing levels of service

A review of existing levels of service is an essential element to the development of the asset management plan to establish the standard and cost of service provision for each of the asset categories, including any mechanisms that record or report current levels of service. The HAMP provides information on Walsall Council's proposed Level of Service Framework and identifies current methods for measuring performance.

The review of current service provision will identify gaps where information on performance is lacking. In the absence of relevant performance data, any anecdotal sources that exist will be tested to verify that assumed levels of service are actually being achieved and identify those areas lacking performance data or measurement systems and the Improvement Action Plan identifies how and when these information gaps will be plugged.

4.4 Service options

An asset management approach offers existing and projected data to support the decision making process. In practical terms this provides the necessary information to make informed choices regarding the identification and assessment of service needs.

Once the requirements driving an asset group's service level have been determined it is necessary to develop service options around these requirements, and evaluate them. This process should clearly identify the service options applicable to the particular asset group and state the basis upon which the preferred option has been selected.

Service delivery can be influenced by a number of demands. These come mainly from legislation, best practice guidelines, health and safety requirements, corporate goals, political influences, customer expectations and financial constraints. Additionally, service options will vary between the competing demands and importance of each asset group. As a starting point, initial service provision will be established around current practices, which will be developed through Walsall's HAMP by a process of continued monitoring and improvement.

Working collaboratively with the West Midlands District Maintenance Engineers Group, Walsall has adopted the following set of generic service levels:

- **Statutory Minimum** Meeting statutory or legislative requirements and notes for guidance only.
- **Existing** The impact on the asset if current funding levels are maintained.
- **Steady State** To arrest deterioration of the asset and maintain current condition, performance and value.
- **Requested Service** Based on customer expectations and/or political aspirations.
- **Optimum Service:** An optimum level of service based on an economic lifecycle planning process.
- **Attainable Service** Re-interprets the Optimum Service option in light of available recourses and represents the best return for available funding.

Ultimately, the chosen option will result from a combination of cost, benefit and risk. Historically, of these three elements, cost has been the most readily communicated and understood. Understanding cost is however an incomplete picture, therefore it is necessary to evaluate service level options against an agreed set of criteria to make the most of levels of service. Walsall's HAMP summarises the important outputs associated with each level of service in a format that can be more readily interpreted by those involved in the decision making process.

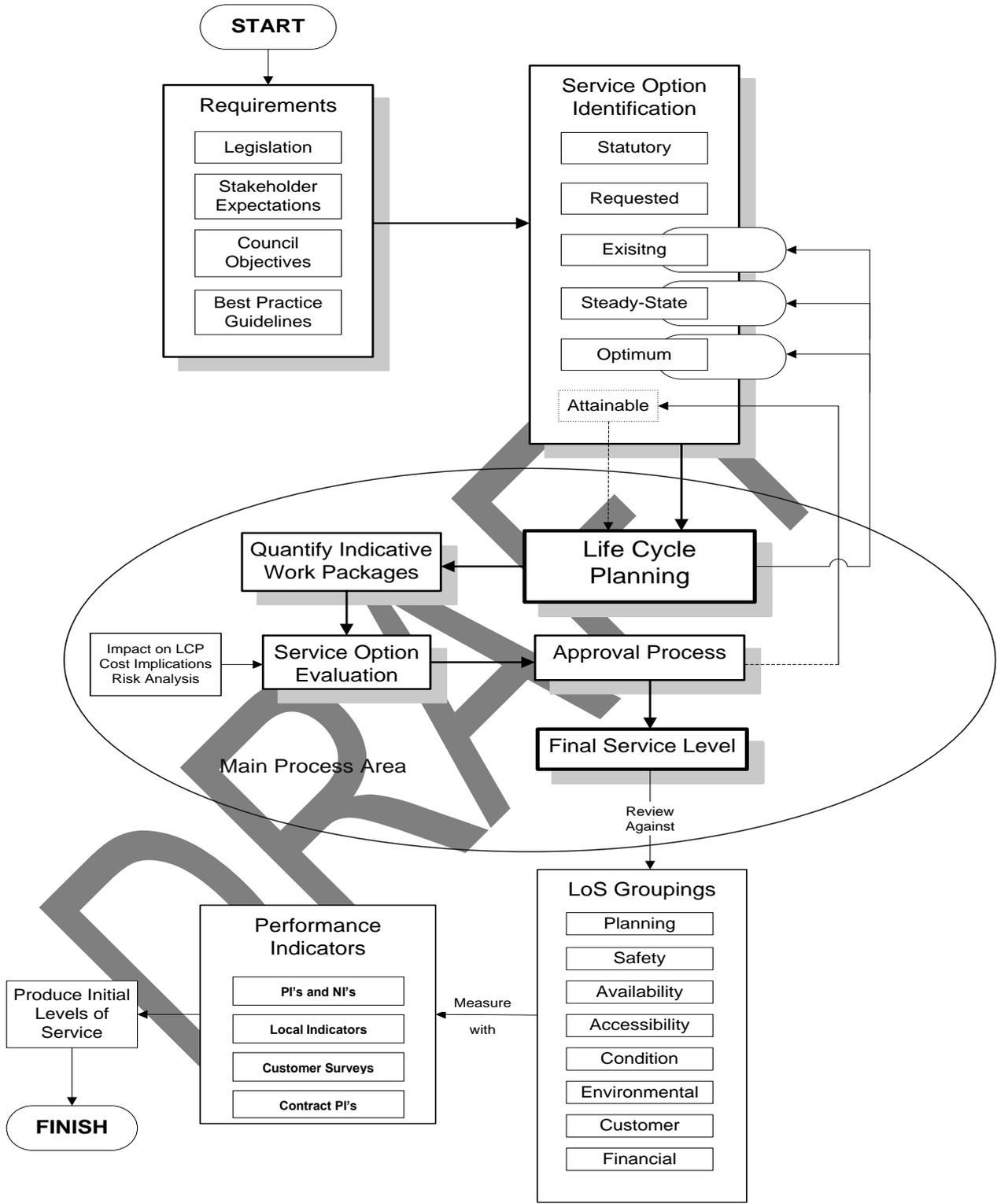
Depending on the asset category, the options evaluation criteria will typically include:

- Programmes and planning
- Safety implications and requirements
- Availability of service or asset
- Accessibility to service or asset
- Condition of the asset
- Environmental impact of providing and maintaining the asset
- Customer service, expectations and perceptions
- Risk and benefits
- Finance
- Performance targets

When each service option has been formally approved and becomes operational the asset management process will monitor, review and report on progress and performance. Whenever possible, levels of service need to be measurable and realistic with performance targets that can be set out and measured using appropriate indicators. It should be noted that a number of asset groups come under additional scrutiny through the council's corporate performance management process where they are monitored against formal performance measures, including:

- Single Data List (SDL)
- Local Performance Indicators (LPI's)
- Recording of Response Times
- Customer Complaints Monitoring
- Condition Surveys

A flow chart on the following page illustrates the key processes in developing levels of service.



Levels of Service Flow Chart

4.5 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 4-1 Levels of service are not formally evaluated, which may lead to comparative needs not being properly assessed.*
- Issue 4-2 Existing levels of service have evolved through historic precedent and in some cases are aimed at improving Performance Indicators rather than taking a long-term lifecycle approach.*

The proposed improvement actions are:

Improvement actions:

- Action 4-1 Develop asset management procedures for the evaluation and creation of a range of service options for each asset group.*
- Action 4-2 Develop levels of service around a long-term lifecycle approach and discourage short-term objectives.*

5.0 Lifecycle planning

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5.0 Lifecycle planning

5.1 Introduction

The first objective of lifecycle planning is to identify, define and document the nature and extent of relative rates of decay for all individual asset groups, from their 'as new' condition, through to their 'disposal or replacement' conditions. Combining this with inventory data allows us to predict the level of investment needed to maintain assets in a condition that delivers the desired level of service.

The adoption of lifecycle planning is a step change that brings about greater focus on long term planning and programming and is one of the key components of Walsall's HAMP. By knowing the current condition of the asset, and assessing its future performance through the application of agreed risk and investment scenarios, there is increased capability to develop more effective strategies and achieve specified levels of service throughout the life of the asset.

5.2 The Lifecycle planning process

In the past, knowledge of an asset's lifecycle has generally existed in undocumented formats or in the minds, experience and judgement of key officers involved in the mainstream maintenance processes. There is a real risk that the information gathered by those individuals who have witnessed 'asset passage from creation to disposal', could be lost through staff turn around or retirements.

The introduction of lifecycle plans will involve capturing this institutional knowledge to produce records and systems that will be available for future reference ensuring consistency of service delivery.

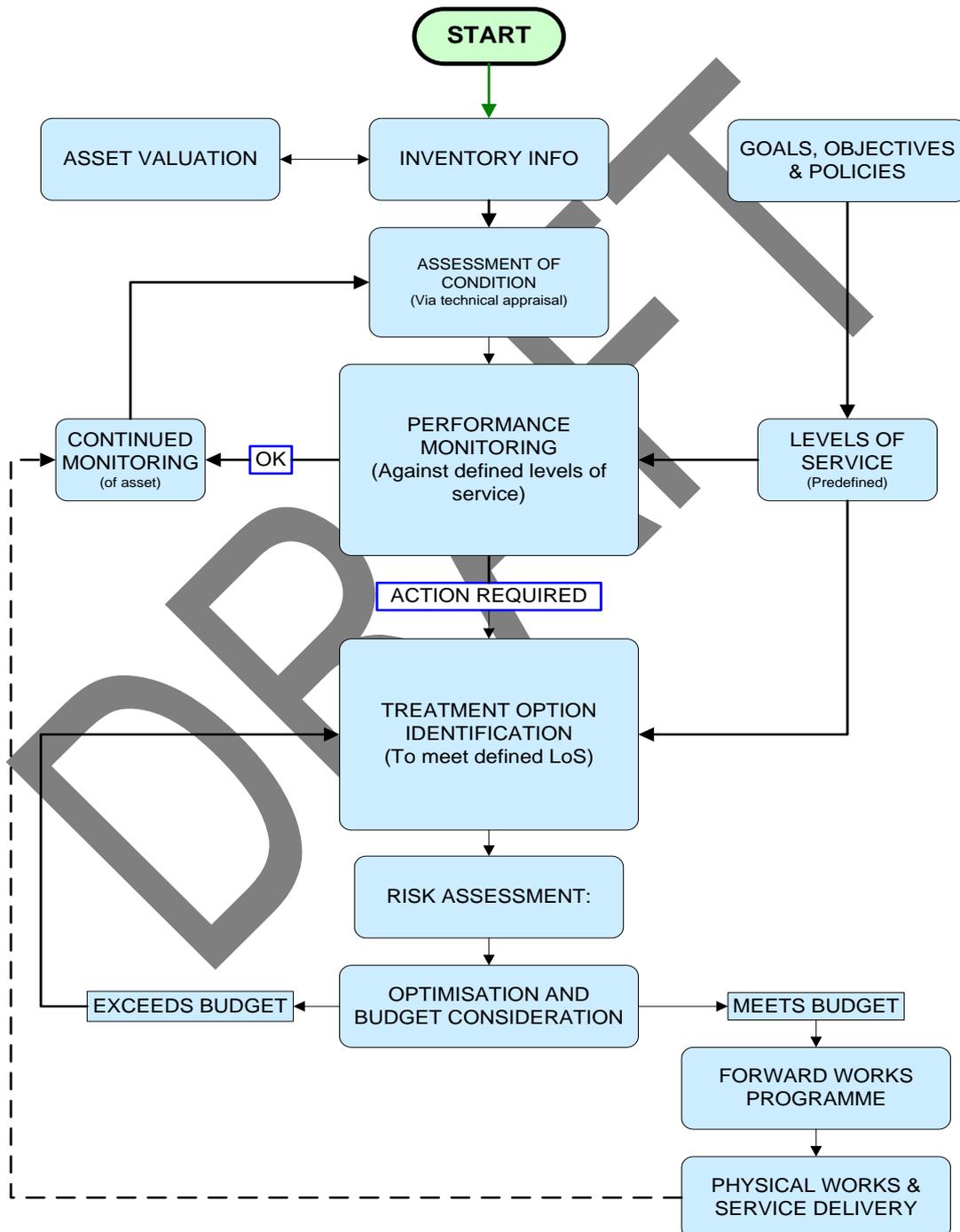
The lifecycle planning process is driven by the future requirements for each asset group which in turn needs to be accurately defined and calculated. The following key areas are considered and explored as part of the process:

- **Asset item inventory**
Information defining the type and distribution of asset items, along with mechanisms for routinely updating inventories, identifying data gaps and reconciling discrepancies.
- **Goals and objectives**
The statutory, legislative, best practice and corporate drivers for the provision of services for each asset group.
- **Condition**
Information regarding the current condition of each asset group and the survey strategies and regimes set in place, for recording and measuring change in relation to this condition and where appropriate, statements and standards that define what the desired condition of the asset should be.

- **Stakeholder demand**
Acknowledge stakeholders' reasonable expectations and monitor these against established benchmarks, which measure capacity, reliability, serviceability and environmental considerations. This process assists with setting levels of service and influences lifecycle planning.
- **Performance gaps**
Based upon an appraisal of current performance of an asset against required performance. Gaps are identified in terms of shortfall, and the investment involved in closing these gaps must also be taken into account where applicable.
- **Options appraisal**
Considers the maintenance regimes for each asset group and current levels of funding allocated to the same. Identifying strategy, cost effectiveness and reviewing the merits of alternative maintenance treatments, including cyclic, reactive, routine and programmed options in relation to varying levels of service.
- **Budget optimisation**
Reviews current budget distribution between assets and the processes in place for assessing competing demands against available budgets.
- **Forward works' programmes**
How current works' programmes maintaining the asset are composed, with asset management practices being developed to promote integrated programmes of work of sufficient duration to allow optimum scheduling of future works across all of the asset groups.
- **Works procurement**
Appraisal of existing mechanisms by which works are procured for the maintenance of each asset group, including the contractual arrangements in place for commissioning works, and the alternatives available for delivering new systems of working and technologies.
- **Performance management**
Walsall Council's aim is to build on the performance objectives defined in Section 9 Performance Monitoring, to develop trends in performance that can be appraised over a number of years to form a key driver in decision making for service delivery across the asset groups.

The detailed compilation of lifecycle plans will serve to target areas that need improvement in the management and processing of important data for maintenance purposes. It provides a framework for managers to critically appraise the quantity, quality and accuracy of asset data.

The following flow chart diagrammatically represents the steps involved in the lifecycle planning process.



Asset lifecycle options have been considered in accordance with the generic categories initially identified by the County Surveyors Society (Framework for Asset Management) in the following table:

Asset Lifecycle Options	
Creation and acquisition	Highway assets either already exist, or are created and acquired largely as a result of development/improvement, or the creation of increased capacity by new build schemes.
Routine maintenance	Involves carrying out maintenance to maintain the asset in a serviceable condition. Routine maintenance regimes are principally based on historical practice. Walsall's HAMP brings about needs-based practices around condition measurement, standards reviews, and effectiveness assessments of routine maintenance activities.
Renewal or replacement maintenance	Involves renewal or replacement of the whole asset or elements of it, to return the asset to its 'as new' capacity and condition. Renewals and replacement are the major treatments available when routine maintenance alone cannot sustain the asset. The identification and timing of renewals/replacement is a fundamental element of lifecycle planning, and the HAMP will provide data to support the selection of the optimum time for carrying out specific treatments. Key areas of focus involve: How are potential renewals identified? How are renewals/replacements evaluated? How is the link between routine maintenance and renewals evaluated? How are the expected lives of treatments evaluated and checked?
Upgrading (improve the assets' original standard)	Most often considered in relation to future needs.
Disposal (decommission or closure of assets)	Considers under what circumstances assets would be disposed of and what the processes for disposal will involve.

The treatment options for the highways asset are also considered within the context of the County Surveyors Society's generic framework:

Treatment Options Examples			
	Road pavement	Structures	Street lighting
Short life treatments	Pot hole filling, patching	Masonry pointing, painting, concrete repairs	Failed unit replacements
Medium life treatments	Surface dressing, slurries, micro asphalts	Replace joints, bearings, waterproofing	Bulk luminare changes, tin topping
Long life treatments	Resurfacing, reconstruction	Rebuild structure	Column replacement

Walsall's HAMP encourages the adoption of lifecycle planning across all asset groups along with documentation of how each phase of the asset's life is managed from creation to disposal. Part of the process is to recognise how the current level of investment in routine maintenance compares with the levels of renewal that are required, and how historic construction techniques can impact upon the future demands for maintenance expenditure.

The lifecycle planning process involves the identification of options and becomes more meaningful when it evolves to deliver lifecycle evaluations carried out in a rigorous and repeatable manner that help identify potential performance gaps and deliver process optimisation in the longer term

5.3 Lifecycle synopsis

The HAMP will ultimately maintain and manage Lifecycle Plans for the following highway asset groups:

- Carriageways
- Footways, footpaths and public rights of way
- Structures
- Street lighting
- Street Furniture
- Traffic signals and traffic management systems
- Land
- Traffic calming
- Road markings and road signs
- Highway drainage systems
- Cycleways and cyclepaths
- Safety fences and pedestrian barriers

It is not practical in this document to define in detail the lifecycle of every highway asset group. Available information for asset lifecycles will be developed within the appendices to the HAMP.

However, to provide an insight, the following sections illustrate lifecycle planning in response to the two most common types of asset deterioration described in the Guidance Document for Highway Infrastructure Valuation Published by the Roads Liaison Group

Carriageways have been featured in section 5.3.1 where deterioration and impairment is assessed under the 'component accounting' methodology, this philosophy is applicable to assets that have an indefinite life and is suitable for such assets as carriageways, footways, drainage etc.

Section 5.3.2 considers non-illuminated signs and bollards. Such assets have a finite serviceable life and are assessed under the 'Conventional Method', which assumes straight-line depreciation over the life of the asset. This method is recommended for assets such as streetlights, street furniture, traffic signals etc.

5.3.1 Carriageway lifecycle synopsis

Asset lifecycle stages – creation to disposal

Creation/acquisition

Capital investment in schemes that create new carriageways are most frequently funded through the LTP or other government grants which form part of the council's broader transport strategies. These schemes are generally designed to ease congestion, improve road safety or offer integrated transport solutions.

Developer-funded schemes provide new carriageways to serve the needs of housing, commercial and industrial developments. These schemes are delivered through Section 38 or 278 Agreements (Highways Act 1980) or Section 106 Agreements (Town & Country Planning Act 1990).

Regeneration schemes are another source that impact on the overall size of the asset. These schemes tend to be delivered from a variety of grant funded sources and private development.

In recent years the de-trunking of roads maintained by the Highways Agency has taken place. Routes such as the A452 Chester Road became the responsibility of Walsall Council and the new lengths of carriageway have been included in the asset inventory as a result of this transfer.

The Large Scale Voluntary Transfer (LSVT) of public housing stock to private management organisations such as Walsall Housing Group (WHG), had an impact on the physical size of the network, particularly as a consequence of retained housing land.

Upgrading schemes

Specific schemes may arise from time to time, which effectively upgrade a section of carriageway. Although the number of such schemes is relatively small, those that do so are generally aimed at increasing the width and capacity of the carriageway, in order to reduce congestion or improve access.

Renewal/replacement

Renewal of the serviceable life of a carriageway is achieved by treating the road surface with various preventative maintenance techniques or by replacing the surface course.

When the road pavement has reached the end of its serviceable life, significant investment is required to replace the bound layers and restore the carriageway's structural integrity.

Walsall Council operates long term forward works programmes for highway maintenance to prolong or renew the serviceable life span of the carriageway asset.

Disposal

Carriageway is normally disposed of through legal stopping up or closure orders. This generally occurs when existing roads fall within the influence of regeneration projects. In proportion to the whole of the network, such disposals are relatively small in length and have little overall impact on the size and extent of the asset.



Physical parameters of the asset

Walsall is responsible for a highway network comprising around 870km of carriageway, based on network data held in the Councils UKPMS database including adjustments for dual carriageway lengths.

Complaints are held on ORACLE CRM, work records are held on MAYRISE, Statutory Undertakers activity is recorded on MAYRISE and highway works history is recorded on MapInfo.

The scale of Walsall's carriageway asset and its overall Gross Replacement Cost has been calculated in accordance with the draft CIPFA Transport Infrastructure Assets code and is illustrated in the following table, inclusive of inflation and West Midlands regional adjustment factors:

Road classification	Carriageway length km (Including Dual Carriageways)
A roads	96.7
B roads	41
C roads	11.3
Unclassified roads	728.8
Total GRC value £1,029,940,000	

How carriageway condition is established

A measure of the condition of Walsall's carriageways is determined by means of UKPMS surveys, from which National Indicators (NI's) and Local Performance Indicators (LPI's) are then calculated. In accordance with reporting guidelines the aim of Walsall's carriageway surveys is to provide consistent and reliable data to assist pre-determined highways maintenance planning and identify appropriate intervention treatments. Currently Walsall uses three types of carriageway condition survey. These are driven Coarse Visual Inspections (CVI), machine-based Surface Condition Assessment of the National Network of Roads (SCANNER) surveys, and machine-based Griptester surveys.

The specific NI's and LPI's that currently identify condition of carriageways are:

Data Topic 130-01 Condition of Classified Principal A Roads – Using SCANNER machine surveys.

Data Topic 130-02 Condition of Classified Non Principal B and C Roads – Using SCANNER machine surveys.

LPI 224b Condition of Unclassified Roads – Using walked CVI Surveys.

Carriageway lifecycle planning manages levels of deterioration in accordance with recommendations contained in the Highways Maintenance Code of Practice, thereby meeting statutory and regulatory requirements while acknowledging specific user and community needs wherever these are identified.

Carriageway condition surveys are used to identify defectiveness under the following headings:

Carriageway minor deterioration: The problems of potholing, fine crazing, permeable surfaces, fretting or signs of fretting, loss of chippings and fatting up of existing surfaces will normally result in the application of appropriate surface treatments to extend the life of the road.

Carriageway major deterioration: Cracking, coarse crazing, loss of aggregate, serious permeability or rutting is beyond the scope of preventative maintenance processes which can only be dealt with by using structural maintenance techniques to reconstruct the carriageway.

Loss of skid resistance: Warning levels that dictate poor skidding resistance are taken from HD28/04 (DMRB). Griptester surveys are carried out annually on the Principal Road Network and where investigation has revealed the need for a surface treatment, the use of retexturing, ULM, Stone Mastic or micro asphalt surfacing is considered.

Edge deterioration: This can occur in various forms and if left unattended can accelerate the onset of more serious structural problems. Various severities and suggested treatments occur. Where edge deterioration is detected, patching, haunch construction or kerbing works will be considered.

Wheel track rutting: This can either be plastic deformation of the road surface or an indication of structural failure. Further engineering investigation is normally required. Generally, resurfacing or structural maintenance techniques will be required to resolve defects of this nature.

Adverse camber: Specific solutions cannot always be provided to deal with problems of adverse camber but for general guidance, action will only be taken in severe cases where safety is being prejudiced. In these instances it may be necessary to shape and reprofile the problematic section of road.

Carriageway lifecycle planning

There is no national design guide or recognised standard which can be directly employed to establish a lifecycle for carriageways that have been in existence for many years prior to the introduction of modern construction techniques. Instead, the carriageway lifecycle is determined around a series of assumptions based on appropriate intervention treatments, frequencies, and costs, which provide a methodological base for the lifecycle calculations.

The model employed within Walsall's HAMP currently assumes a 30 to 40 year lifespan for most carriageways in accordance with DMRB 26/06, which suggests that an average design life of between 20 to 40 years will be suitable for maintenance purposes.

The key intervention treatments for carriageway deterioration have been defined as follows:

- Surface dressing treatments and thin overlays
- Carriageway resurfacing
- Full carriageway reconstruction

For valuation purposes the unit rates for carriageway reconstruction have been based upon actual costs taken from a number of schemes and different styles of contract recently used by the council.

The lifecycle planning process makes use of highway works history, as built drawings, core logs and institutional knowledge to determine average construction depths for bound material across various categories of the road network. These factors along with traffic flow data are subsequently applied to the pavement design principles contained in the Design Manual for Roads and Bridges to provide assumptions on the life expectancy of Walsall's carriageways.

The "theoretical optimum" timing for treatment interventions by carriageway classification used in the lifecycle analysis are in accordance with preliminary analysis obtained via local works history records:

Classified A, B and C roads

Replace Surface & Binder Layer at 20th year life.

Replace Surface, Binder & Part of Base Layer at 40th year life.

(Summarised as Resurface x 1, Reconstruct x 1)

Unclassified roads

Surface Treatments (S/D, Micro Asphalt) at 25th & 35th years of life.

Replace Surface & Binder Layer at 50th year of life.

(Summarised as Preventative x 2, Resurface x 1)

It is hoped that this simplified starting point for lifecycle planning will be further developed and refined over time through regional collaboration with neighbouring West Midland Authorities and the adopted use of HMEP lifecycle planning toolkits which have recently made available to support highways Asset Management modelling practices.

5.3.2 Non-illuminated signs and bollards lifecycle synopsis

Asset lifecycle stages – creation to disposal

Creation/Acquisition

There are essentially three modes of acquisition:

- Walsall Council schemes.
- Privately funded destination schemes.
- Private developments.

Signs and bollards are placed within the highway predominantly as a consequence of:

- Accident investigation and prevention works.
- Traffic Regulation Orders (TRO's), parking related issues.
- Information signing schemes.
- On going development in the maintenance of the highway network.
- Replacement of illuminated signs/bollards with non lit apparatus.
- New highway schemes.
- Private developments and regeneration schemes.

Upgrading

Upgrading to modern up-to-date standards is normal practice whenever signs and bollards are renewed or replaced. Existing signage is also reviewed during major maintenance schemes or integrated transport schemes and is checked for compliance with the Traffic Signs Manual and Traffic Signs Regulations and General Directions 2002.

Renewal/Replacement

The replacement of signs as a consequence of damage and destruction is carried out in compliance with the Traffic Signs Regulations and General Directions 2002. The condition of any sign or signpost is considered whenever attention is drawn to them, so as to ensure that any works required are optimised to deliver maximum life. Renewals may also be necessary as a consequence of the revocation of traffic sign regulations.



Disposal

Disposal of redundant signage is a routine function during road improvement schemes or major highway maintenance activity. Additionally, there is a national drive to reduce road sign clutter. More information can be found from the following web sites;

- English Heritage 'Save Our Streets'
<http://www.english-heritage.org.uk/caring/save-our-streets>
- English Heritage 'Streets For All: West Midlands'
<http://www.english-heritage.org.uk/publications/streets-for-all-west-midlands>

Walsall Council's lifecycle planning process takes into account the views expressed in The Campaign for the Protection of Rural England (CPRE), by actively looking for ways of reducing and rationalising sign numbers while ensuring that regulations are met and safety is not compromised.

Physical parameters of the asset

Signs and bollards are placed on the highway to direct, instruct and advise highway users. There are a wide variety of sign types, shapes, sizes and materials, which are prescribed in the Traffic Signs Regulations and General Directions 2002 and the Traffic Signs Manual.

Destination and direction signs are sited in accordance with national signing strategies and can vary considerably in terms of size and type.

Road signs perform an important role in road safety, often playing a central part in road safety improvement initiatives. There is often limited or restricted space available to position signs and achieve adequate vehicle safety clearances while maintaining width for pedestrian movement in compliance with the DDA. Care is also needed in positioning to ensure overhanging roadside foliage will not obscure signs.

Existing road signs are of a varied age and are vulnerable to vandalism and vehicle strikes over time, so a significant number may need to be replaced before they reach the end of their natural life. However, in general terms, modern sign posts have a life expectancy of around 15 to 20 years and highly reflective sign faces up to approximately 20 years before degradation becomes significant.

Reflective bollards by their very nature and positioning, have a limited life expectancy, institutional knowledge suggests this is likely to be around 10 to 15 years at most.

How non-illuminated signs and bollard condition is established

Walsall Council does not currently maintain an inventory or hold condition data for non-illuminated signs and bollards. Instead, condition is noted when they are inspected by an engineer, through safety inspections or as a direct result of damage and destruction reports. Those assets requiring treatment are prioritised for repair or replacement depending upon the severity of the defect and the location.

An assessment is needed to determine the importance of collecting and maintaining a complete inventory of signs and bollards on the highway and the practical use of having such an inventory. Lifecycle planning is difficult to apply without robust asset records, however a hierarchical approach with planned maintenance programmes based around sign type and road class remains to be considered.

The priority for condition assessment revolves primarily around safety, with the main emphasis focusing on:

- Identification of risk to highway users
- Avoidance of potential traffic conflicts
- Keeping signs legible, visible and effective in relation to road use and speeds.

There is currently no forward planning involved for the maintenance or replacement of non-illuminated signs and bollards. The life of the asset and its overall vulnerability has a tendency to be the main driver behind repair or replacement.

The decision making process for repairing existing road signage takes into account:

- Matters affecting the legality of important warning and regulatory signs.
- Damage, deterioration, or vandalism to signs and bollards leaving either the sign or the situation to which it applies in a dangerous condition.
- Vegetation, which may have the potential to obscure the road sign.
- Graffiti, which is offensive or has potential to obscure warning, advisory or direction signs.

There is no national measure of condition in place for non-illuminated signs and bollards, so it is not currently possible to benchmark the overall condition of this asset. Damage to signs does however ensure replacement to the latest standards, but reality suggests there are a significant number of signs of considerable age or beyond their desirable service life.

Non-illuminated road sign and bollard lifecycle planning

The lifecycle maintenance activities associated with non-illuminated signs and bollards are in the table below:

Activity Type	Activity	Service Standard	Code of Practice
Preventative	Cleaning	When required or ideally annually	
	Weed growth	Treat chevron blocks on roundabouts routinely for weed growth or repaired within 7 days when missing	
	Fittings	When required (condition reported when cleaning)	Tightened and adjusted upon service inspections
	Painting signs supports and frames	When required (condition reported when cleaned) but ideally not exceeding a 10 year interval	
Condition Monitoring	Safety inspections	In accordance with carriageway and footway hierarchy	
		In accordance with carriageway standards	Include Stop and Give Way signs within safety inspection for road
	Degradation retro reflectivity, deterioration legibility	With safety inspections	Ideally two year daylight and repeated at night – bollards cleaned annually
	Route integrity		Every 3 to 5 years review signage regime
Reactive	Repairs to damage	Speed of repair dependant on danger imminence	
	Isolated new signs or upgrades	Following approval by engineer	

5.4 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 5-1* *Inventory data does not exist for every asset group*
- Issue 5-2* *Where data exists it sometimes cannot be fully relied upon*
- Issue 5-3* *Data management and validation procedures do not always exist*
- Issue 5-4* *Information regarding asset lifecycles is sometimes based on Institutional knowledge.*
- Issue 5-5* *Forward works programmes do not exist for all asset groups.*

The proposed improvement actions are:

Improvement actions:

- Action 5-1* *Identify data gaps and collect missing inventory data.*
- Action 5-2* *Develop and implement data management procedures and systems.*
- Action 5-3* *Develop documented lifecycle plans for all asset groups.*
- Action 5-4* *Develop programmed maintenance practices.*
- Action 5-5* *Develop forward work programmes for all asset groups where appropriate.*

6.0 Financial management and valuation

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6.0 Financial management and valuation

6.1 Introduction

This section highlights the financial processes involved in adopting an asset management approach for the maintenance of Walsall's highway network. It provides data on historic expenditure and forecasts long-term financial requirements based upon programmes contained in the appendices to the plan.

Asset valuation can be described as the calculation of the current monetary value of the highway asset. This value is reported in the council's Consolidated Balance Sheet annually and is one of the key components supporting Whole of Government Accounts (WGA) and public sector financial management. The current monetary value is evaluated as the Depreciated Replacement Cost (DRC) of the highway asset, where:

DRC = Gross Replacement Cost – Accumulated Depreciation & Impairment

(Whereby Accumulated depreciation & impairment is equal to the annual depreciation x number of years of lifecycle consumed so far)

The Gross Replacement Cost represents the cost of replacing an existing asset with a Modern Equivalent Asset. Accumulated Asset Consumption results from an assets serviceable use, ageing, deterioration, damage or a fall in its level of service.

Placing a monetary value on highway assets helps to highlight their importance and hence the need to maintain them. Monitoring how the asset value is changing with time can indicate if costs are being unduly passed to future generations, and can provide substantive reasoning for investment in the preservation of the asset.

6.2 Funding sources

Capital allocations are received from central Government through the West Midlands Local Transport Plan, which takes into account road length, classification, traffic figures and road condition data derived from highway condition surveys and NI's.

Revenue allocations are generally funded from a combination of local council tax, business rates, central government revenue support and other grants.

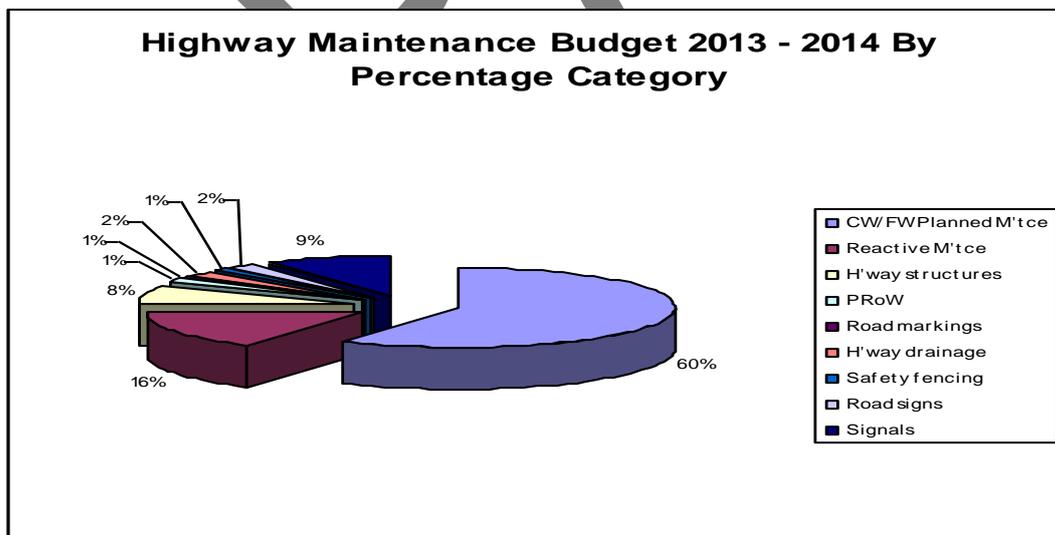
The council is working in partnership with Amey Highways through a PFI (Private Finance Initiative) to upgrade and maintain the borough's street lighting stock over a 26-year period which started in April 2002. The council's Lighting PFI Manager monitors the project to ascertain that the service is delivered as set out in the contract.

Prudential borrowing has previously been utilised to invest an additional £6million in key corridors and gateways to enhance the condition of the network and improve access to the town centre. Prudential borrowing continues to feature as a funding option in Walsall’s investment programme.

Walsall applies an informed and structured methodology in its budget setting process. This is a policy-led approach, the purpose of which is to challenge existing funding, service provision and resource allocation. The aim is to enable decisions on the realignment of budgets to drive improvement, reflect changes in policy, and identify possible savings and income opportunities. The HAMP is able to provide the budget setting process with structured and evidenced data that demonstrates both the short term and long term impact of changes to funding and resource allocation.

Back in 2007, Walsall engaged private sector procurement consultants to undertake an options appraisal focusing on the delivery of highway services. Their report recommended that fundamental rather than incremental change was desirable to improve service delivery and efficiency. Based on this outcome, the short term proposal was to enter into a partnership with an external service provider for a four-year period with an option to extend for a further four years. The longer term recommendation from the report was to explore the benefits of a PFI arrangement, but recent government spending cuts now make this path increasingly less likely.

For the financial period 2013 – 2014 the budget allocation for highway maintenance funding has been proportioned as illustrated below.



Summary of budget allocation for year 2013 - 2014 (Excluding Lighting PFI)

6.3 Historical expenditure

The table below provides data on the level of historic expenditure invested in the highway network over previous years. The figures are based on raw data and care should be exercised if the figures are to be used for analytical purposes. The figures quoted have not been adjusted to account for the effects of inflation, efficiency savings, aggregates levy, environmental taxes or any increased cost as a result of Health & Safety legislation. Figures include capital and revenue expenditure and grant allocated funding streams.

Historical Allocation of Funding						
	2010-2011	2011-2012	2012-2013	2013-2014	2014-2015	2015-2016
Carriageway/Footway Planned Maintenance	£4,764,000	£3,836,400	£3,915,200	£4,268,300	£4,097,200	£4,352,600
Reactive maintenance and street furniture	£696,700	£1,368,900	£1,115,000	£1,101,000	£985,000	£985,000
Highway structures	£66,200	£734,700	£714,200	£595,900	£570,200	£570,200
Public Rights of Ways (PROW)	£31,300	£31,300	£31,400	£31,800	£33,500	£33,500
Road markings	£80,000	£80,000	£81,100	£73,200	£70,400	£70,400
Highway drainage systems	£350,000	£350,000	£129,900	£151,400	£187,300	£169,300
Safety fencing	£50,000	£50,000	£30,700	£20,000	£20,600	£20,600
Street lighting and road sign illumination	PFI	PFI	PFI	PFI	PFI	PFI
Road signs	£203,600	£202,000	£162,000	£162,000	£162,000	£146,000
Traffic signals and pedestrian crossings	£677,600	£719,400	£660,000	£673,300	£670,000	£640,300

6.4 Predicting funding needs

The introduction of Whole of Government Accounts means that local authorities must generate in-depth information on the condition and rate of deterioration of their highway assets. From this data, current and future valuations can be estimated. Previously, it was sufficient to estimate the projected maintenance expenditure needed to keep the highway asset operational. However the limitation of this approach is its vulnerability to annual budget cuts and shortfalls', ultimately leading to a backlog in the maintenance of highway assets.

Walsall's HAMP tackles these issues by introducing a strategic long term approach that involves infrastructure management processes driven by levels of service and lifecycle planning, and positively discourages the use of funding to achieve short term objectives.

Some service levels and service options are set out in the appendices to the plan and they identify, in each case, the most economic and efficient way of delivering an acceptable level of service over the long term. Pressures on council funding and increasing demands on the highway network may mean it is not always possible to secure the required funding to deliver the optimum solution. However, the HAMP provides mechanisms through which the impact of funding variations can be demonstrated to decision makers. There is a clear correlation between the degree to which highway assets deteriorate and the level of maintenance, or level of investment they receive.

Some lifecycle plans are contained in the appendices to the HAMP and they are one of the key mechanisms used in establishing funding needs. Lifecycle planning appraises various maintenance regimes that can be applied to each specific asset group, they identify cost effectiveness and review the merits of alternative maintenance treatments, including cyclic, reactive, routine and programmed options in relation to varying levels of service.

6.5 Valuation of assets

The principles, basis and rules for valuation contained in this chapter comply with recognised accounting standards and provide a true and fair current value of the highway asset. They follow the established accounting principles of reliability, comparability and reflect good engineering practice to support the best investment choices for maintenance and renewal. Particular guidance has been sourced from the following documents.

International Accounting Standards Board (Standards).

RLG: Guidance Document for Highway Infrastructure Asset Valuation.

CIPFA Code of Practice on transport infrastructure assets.

HMEP: Highway Infrastructure Asset Management Guidance Document.

Gross Replacement Cost of Highway Asset (GRC)

It should be noted that the availability and reliability of data for each asset category is a governing factor in the accuracy of the following valuations. Varying levels of confidence exist for both inventory data and condition data associated with each asset; this confidence level is ranked and recorded in the GRC table below.

The objective of calculating Gross Replacement Cost (GRC) is to provide a realistic estimate of the current replacement cost of an asset using a standardised procedure. The replacement asset should have a potential performance broadly similar to the existing asset and take into account up to date technology and materials contained in a modern equivalent asset, this applies to all assets except those classified as a heritage asset.

Gross Replacement Cost of Highway Asset (GRC)

Gross Replacement Cost of Highway Assets (2014)			
Asset Category	Quantity	Gross Replacement Cost £	Confidence
Carriageways (Including Dual Carriageways)	878 Km	£ 1,029,940,000	Med
Footways & cycle tracks	1284 Km	£245,146,000	Med
Highway structures	175 No.	£ 129,771,000	Med
Lighting	25,718 Points	£42,134,000	Med
Traffic management	542 Units	£20,123,000	Med
Street furniture	Sample Data	£17,392,000	Low
Total		£1,484,506,000	

Depreciated Replacement Cost of Highway Asset (DRC)

Depreciated Replacement Cost of Highway Assets (2014)			
Asset Category	Quantity	Depreciated Replacement Cost £	Confidence
Carriageways (Including Dual Carriageways)	878 Km	£963,394,000	Med
Footways & cycle tracks	1284 Km	£221,940,000	Med
Highway Structures	175 No.	£123,484,000	Med
Lighting	25,718 Points	£22,042,000	Med
Traffic management	542 Units	£14,800,000	Med
Street furniture	Sample Data	£13,044,000	Low
Total		£1,358,704,000	

Depreciated Replacement Cost is defined as “the cost of replacing an existing tangible fixed asset with an identical or substantially similar new asset having a similar production or service capacity, from which appropriate deductions are made to reflect the value attributable to the remaining portion of the total useful economic life of the asset and the residual value at the end of the asset’s useful life”.

In the first year of highway asset valuation, local highway authorities were required to establish an initial Depreciated Replacement Cost (Net Book Value). Under International Accounting Standards each asset should be split into different components where appropriate and valued on this basis. This will in subsequent years form a base year of reference for calculating annual adjustments to the asset value, thereby accounting for the current year, or ‘in-year’, depreciation and impairment. In accordance with HAMFIG, CSS and TAG guidance, annual adjustments are conducted over a five-year period, after which time the Depreciated Replacement Cost is recalculated.

Depreciation of an asset is defined as the systematic consumption of an asset’s economic benefits over its service life arising from its use, ageing, deterioration or obsolescence. There are a number of different methods to evaluate depreciation but within the CIPFA Transport Infrastructure Assets Code there are two methods recommended depending on the asset.

The straight line method is used to depreciate individual assets or components over their life with an equal charge. This is calculated by taking the asset value and dividing over the life of the asset. This method is recommended within the CIPFA Transport Infrastructure Assets Code for assets such as highway lighting, street furniture, traffic signals etc.

The 'Sum of Usage' method is recommended to be used where the pattern of usage of an asset is clearly not equal each year. This method bases the depreciation charge on a measure of its expected usage in that year. The assets that are recommended to be depreciated are roads, segregated footpaths, cycle routes etc. Further details of the calculation for this measure of depreciation can be found in the following section 'Depreciated Charge of Highway Assets'.

All asset categories are assessed by one of these two methods to form an integrated part of the highway network meeting the requirements set out in International Accounting Standards and the CIPFA Transport Infrastructure Assets Code. Under this approach the amount of expenditure required to maintain the level of service at steady state should be equal to the Depreciation Charge. What this means is that if the highway authority actually spends this amount there will be no change in the Depreciated Replacement Cost or Net Book Value.

Depreciated Charge of Highway Assets

The depreciated charge is calculated on an annual basis and is the level of funding required to maintain the current level of service. To support the depreciation requirements under the 'Sum of Usage' model the asset management plan aims to identify work volumes and associated funding for each asset category and clearly distinguish between:

1. The level of funding required to **maintain** the current level of service
2. The level of funding required to **improve** the current level of service to meet specified targets in the HAMP

The above distinction is required because the in-year depreciation charge under 'sum of usage' is calculated as the estimated annual expenditure required to **maintain** the current level of service as assessed through performance measures.

Because work volumes and the phasing of works to improve the highway infrastructure may not be targeted to a specific year, the HAMP annual funding requirements (AFR), or annual depreciation charge, should therefore be calculated over the five-year term of the asset management plan:

$$\text{Depreciation Charge (AFR)} = \frac{\text{Total HAMP funding required over 5 years}}{\text{HAMP time period (5 years)}}$$

The severity of recent austerity measures imposed by Central Government upon Local Authority budgets makes longer term spending predictions and the identification of future service standards somewhat difficult to predict. The Asset Management Plan will utilise the recently published Highway Maintenance Efficiency Programme 'lifecycle toolkits' to support predictions for future funding requirements.

Asset Preservation Measures and Valuation Report

The following three measures are the means by which the preservation of assets are measured over time:

- **Accumulated Asset Consumption (AAC)** – measures the proportion of the gross asset value that has been consumed to date.
- **In-year Asset Consumption (IAC)** – measures the proportion of the asset value consumed during the annual accounting period.
- **In-year Asset Renewal (IAR)** – measures the proportion of the asset value restored or renewed during the annual accounting period.

Where accumulated asset consumption (AAC) is evaluated as:

$$\text{AAC} = \left(1 - \frac{\text{DRC}}{\text{GRC}} \right) \times 100 \quad \text{expressed as a \%}$$

Accumulated Asset Consumption of Highway Assets for period (2014)			
Asset Category	Quantity	AAC %	Confidence
Carriageways (Including Dual Carriageways)	878 Km	6.5%	Med
Footways & cycle tracks	1284 Km	9.5%	Med
Highway structures	175 No.	4.9%	Med
Lighting	25,718 Points	47.7%	Med
Traffic management	542 Units	26.5%	Med
Street furniture	Sample Data	25%	Low

It is recommended that these three measures are calculated annually and are included in the asset Valuation Report, this being a stand alone prime document that presents the results of the valuation with supporting information. The Valuation Report acts as a supporting document to the highway infrastructure asset values reported in the council's annual balance Sheet.

6.6 Issues identified and improvement actions

The following key issues have been identified:

Issues:

Issue 6-1 Current practices do not in all cases identify long term funding needs.

Issue 6-2 There is no formalised process for the allocation of funding between competing highway asset needs.

The proposed improvement actions are:

Improvement actions:

Action 6-1 Long-term funding needs to be identified through lifecycle planning and forward works programmes.

7.0 Risk Management

7.0 Risk management

7.1 Introduction

Walsall Council has well established risk management processes across all of its services including its highway infrastructure. These processes continually evolve and are subject to regular review to reflect customer requirements and the changing nature of the council's organisation.

The concept of risk management is central to Walsall's Corporate Governance framework, which is fully committed to embedding risk management principles within service delivery.

The significance of risk management practices has been sharpened in response to what has become an increasingly litigious society, where significant sums have been paid out by authorities for public liability claims, and the frequency of corporate manslaughter cases have become more common.

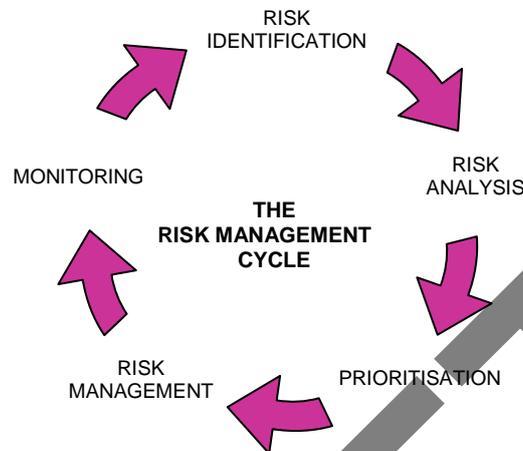
Walsall Council's commitment to corporate governance through risk management requires the maintenance of a robust system of internal control. The Accounts and Audit Regulations 2006 require the council to have in place arrangements for the management of risk. Regulation 4(1) states *"the relevant body shall be responsible for ensuring that the body has a sound system of internal control which facilitates the effective exercise of the bodies functions and which includes arrangements for the management of risk"* placing direct responsibility with all directors for risk management and maintaining sound systems of internal control within their area of service delivery.

Regulation 4(2) states *"the relevant body shall conduct a review at least once a year of the effectiveness of its systems of internal control and shall include a statement on the internal control with any financial statements the body is required to publish"* and requires the directors to make an annual governance statement on risk management and internal control which is embraced in a single statement made by the leader of the council, the chief executive and the Chief Finance Officer (CFO) as an integral part of the annual statement of accounts.

Risk management is therefore not simply a compliance issue, but rather a way of viewing our operations with a significant impact on long-term viability. It is critical to success and is a focal point for senior management and members. It helps the council to demonstrate openness, integrity and accountability in all of its dealings.

7.2 The risk management process

The diagram below identifies the risk management cycle.



Risk management within the asset management context involves an assessment of comparative risks to assist both options appraisal and options selection, by considering:

- The risks associated in providing different levels of service.
- The risks associated with variation of funding levels.
- The comparative risk of distributing varying funding levels between different asset groups.

As the above diagram shows, the risk management process concentrates overwhelmingly on four main risk issues:

- Recognising and quantifying risk.
- Assessing the nature of risk.
- Managing and controlling risk.
- Reviewing, monitoring and reporting risk.

Walsall's HAMP builds upon these principles to enable more appropriate targeting of resources, projects to be managed more effectively, and the council's overall exposure to risk to be minimised.

The risk management process is part of the council's broader mainstream objective to bring together in one place the key components of its activities inside an integrated framework, as evidenced through key policy statements such as: corporate plans, capital strategies, business processes, financial and performance monitoring reports, and the budget setting process. Also included are the identifiable risks associated with climate change, these are managed through risk assessments carried out in accordance with the council's Climate Change Strategy and Action Plan, the risk assessments for highway assets are recorded in the appendices to the HAMP.

The safety of the highway network is managed under a risk based regime where the frequency and type of safety inspection is determined by the asset type. It is important that reasonable care is taken, based on proper assessment of risk, to ensure that appropriate maintenance steps are taken, while at the same time ensuring that public money is used efficiently. Routine and scheduled safety inspections are carried out to detect dangerous defects, any necessary reactive work is based upon the likelihood and impact that the defect may have.

Any defects detected through routine inspections are repaired according to risk based protocols aimed at making individual assets safe or improving their serviceability. While the inspections themselves are routine, the repairs are sometimes of a reactive nature, meaning that they occur in response to an unpredictable trigger and are not pre scheduled.

The evaluation of each defect is based upon the risk they pose. Defects are then categorised and prioritised for repair according to appropriate guidance as contained in published Codes of Practice such as 'Well Maintained Highways' and 'Management of Highway Structures'.

An effective regime of inspection, assessment and recording is a crucial component of highway maintenance. The characteristics of the regime, including frequency of inspection, assessment of the relative risks, items to be recorded and nature of response are set out in the Council's policies and maintenance strategies.

Highway structures are subject to a regime that detects any defects which may cause an unacceptable safety or serviceability risk, or a serious maintenance requirement to be detected in good time. The regime consists of a combination of Acceptance, Routine Surveillance, General and Principal Inspections of the whole structure and more detailed Safety and Special Inspections, as necessary, concentrating on known or suspected areas of deterioration or inadequacy.

Walsall's highway inspection, assessment and recording regimes address the core objectives of highway maintenance, namely

- Network safety
- Network serviceability
- Network sustainability

Highway inspections generally fall into the following three categories:

Condition Surveys

Condition surveys are intended to identify deficiencies in the condition of the highways asset at a network level, including its long term performance and serviceability. They also support requirements relating to statutory performance measurement and asset valuation.

Service Inspections

The scale and scope of these inspections are determined by the requirements of the particular highway asset. The category includes Engineering Programme Inspections and inspections for regulatory purposes such as NRSWA which are intended to maintain network availability and reliability.

Safety Inspections

Routine Safety Inspections are carried out across the network in order to identify defects that are likely to create danger or serious inconvenience to users of the highway. The risk of danger is assessed on site, and in the case of highway defects they are identified as mainly Category 1 or 2 severity and are dealt with under the appropriate priority response.

The frequency of highway Safety Inspections relate to usage, network hierarchy, speed limits and urban/rural characteristics, whilst giving account to the likelihood of defects and the risk that they might pose if left undetected, and the staff resources available for implementing safety inspection regimes. Inspection frequencies are based around the guidance provided in the RLG Well-maintained highways COP for maintenance management. Where carriageway and footway hierarchies are different, the authority aims to inspect in accordance with the requirements of the highest category.

Highway Safety Inspection Frequency (2014)			
Feature	Description	Category	Frequency
Roads	Strategic Route	2	Monthly
	Main Distributor	3(a)	Monthly
	Secondary Distributor	3(b)	Monthly
	Link Road	4(a)	3 Monthly
	Local Access	4(b)	12 Monthly
Footways	Prestige Area	1(a)	Monthly
	Primary Walking Route Including Town Centres	1	Monthly
	Secondary Walking Route	2	3 Monthly
	Link Footway	3	6 Monthly
	Local Access Footway	4	12 Monthly
Cycle route	Part of Carriageway	A	As per Road Cat or 6 months where Walsall holds the maintenance responsibility
	Remote from Carriageway	B	Ad hoc dictated by complaint/enquiry
	Cycle Trails	C	As per Road Cat

7.2.1 Risk identification

Risk itself is essentially the threat that an event, action or happening can adversely affect the organisation's ability to achieve its required objectives or successfully execute its strategies.

Risk occurs in a variety of ways, but the most typical categories that need to be considered within the asset management framework are:

Categories of risk

Risk	Definition	Examples
Political	Associated with the failure to deliver either local or central government policy or meet the local administration's manifest commitment	<ul style="list-style-type: none"> • New political arrangements • Political personalities • Political make-up • Member support / approval • Electorate dissatisfaction • Impact of election changes.
Economic	Affecting the ability of the council to meet its financial commitments. These include internal budgetary pressures, the failure to purchase adequate insurance cover, external macro level economic changes or the consequences of proposed investment decisions	<ul style="list-style-type: none"> • Cost of living • Changes in interest rates and/or inflation • Poverty indicators
Social	Relating to the effects of change in demographic, residential or socio-economic trends based on the council's ability to meet its objectives	<ul style="list-style-type: none"> • Staff levels from available workforce • Ageing population • Health statistics
Technological	Associated with the capacity of the council to deal with the pace/scale of technological change, or its ability to use technology to address changing demands. This may also include the consequences of internal technological failures and the impact on the council's ability to deliver its objectives	<ul style="list-style-type: none"> • E-Gov. agenda • ICT infrastructure • Staff/client needs • Security standards • Using new or existing technology • Lack of, or failure of, technology • Disaster recovery • Hacking or corruption of data • Breach of security • Staff knowledge, skills and ability

Legislative	Associated with current or potential changes in National or European law	<ul style="list-style-type: none"> • Government policy • Legislation, internal policies and regulations, grant funding conditions etc • Data Protection, Freedom of Information, Race Equality and Diversity, Disability Discrimination, Human Rights, Employment Law, TUPE, Health & Safety • Potential for legal challenges, Judicial reviews
Environmental	Relating to the environmental consequences of progressing the council's strategic objectives	<ul style="list-style-type: none"> • Recycling, green issues, energy efficiency, • Land use, noise, contamination, pollution; • Climate change • Impact of planning or transportation policies
Professional/ Managerial	Associated with the particular nature of each profession, internal protocols and managerial abilities	<ul style="list-style-type: none"> • Staff restructure, key personalities, internal capacity, • Lack of management support. • Loss of key staff, recruitment and retention issues • Internal management arrangements and protocols, poor communication • Capacity issues – enough, training issues, availability, sickness absence etc • Emergency preparedness / Business continuity
Financial	Associated with financial planning and control	<ul style="list-style-type: none"> • Budget overspends, level of council tax, level of reserves, inadequate insurance cover, system procedure weaknesses • Budgetary pressures, loss of/reduction in income, cost of living, interest rates, inflation etc • Financial management arrangements, investment decisions • Affordability models and financial checks • External funding issues incl. loss of (or reduction in) funding • System / procedure weaknesses that could lead to fraud.
Legal	Related to possible breaches of legislation	<ul style="list-style-type: none"> • Client brings legal challenge

	Related to fire, security, accident prevention and health and safety, physically carrying out works on site	<ul style="list-style-type: none"> • Offices in poor state of repair, use of equipment, data protection • Management and control of resources and projects including land, property, equipment, information, plant/labour. • Health & safety or business continuity issues • Abuse of intellectual property
Partnership/ Contractual	Associated with failure of contractors and partnership arrangements to deliver services or products to the specification and in a cost effective manner	<ul style="list-style-type: none"> • Partnership agencies do not have common goals, new initiatives or projects, change programmes. • Partnership agreements / arrangements / relationships • Project management arrangements • Project failure – failure to deliver on time, to budget or specification • Change programmes, new ways of working, new policies/procedures
Competitive	Affecting the competitiveness of the service (in terms of cost or quality) and/or its ability to deliver best value	<ul style="list-style-type: none"> • Fail to win quality accreditation, position in league tables • Ability to deliver services within allocated budgets
Customer/ Citizen	Associated with failure to meet the current and changing needs and expectations of customers and citizens	<ul style="list-style-type: none"> • Managing expectations, extent of consultation • Demographic change • Impact on customer of service or project failure • Consultation and communication • Current and changing needs and expectations of customers, crime and disorder • Consumer protection, H & S. • Effects on physical and mental health and sense of social wellbeing • Loss of independence and need for social care support
Force Majeure	Unforeseeable or exceptional circumstances that preclude the council from performing its obligations.	<ul style="list-style-type: none"> • Flooding • Fire • Earthquake • Sabotage • Epidemics • Industrial strike action • War

<p>Fraud and Corruption</p>	<p>Internal Fraud External Fraud</p> <p>Credit Card/Debit Card Fraud</p> <p>Purchasing Fraud</p> <p>Corruption/Collusion</p> <p>“Ghost” Employees</p> <p>Data stolen</p> <p>Data Corrupted</p> <p>Hacking/Virus</p> <p>Unlicensed Software</p> <p>False Accounting</p>	<ul style="list-style-type: none"> • Accounting fraud, expenses etc. • Fictitious housing benefits claims etc. • Goods and services are purchased/paid for using stolen cards; An employee uses a client’s card/card details fraudulently; Card details recorded digitally and used to create cloned cards. • Central purchasing staff that have a choice of suppliers receive inducements of cash or gifts to place an order with a particular supplier. This may not represent best value for the authority; Paying for goods that are never delivered; Ordering goods that the authority does not require; Purchasing an excessive volume/quantity. • Relating to the award of contracts, allocation of services, accommodation etc; Fictitious invoices paid; Tender price rigging. • “Ghost”/fictitious employees on the authority’s payroll. • Some or all of the authority’s data is stolen and the authority permanently deprived of it. This would occur if data files were copied and then erased. • The authority’s systems or data is corrupted; A disgruntled employee corrupts the system or database. • A hacker gains access to a system/systems and obtains information and/or amends records/transactions etc; Virus attack disabling systems and destroying computer hardware, software and information. • Unlicensed software is loaded; this could be from the Internet, by users, or IT. • The authority’s annual accounts are purposely falsified; Accounting standards purposely breached/ignored/misinterpreted.
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Climate Change	<p>Relating to the council's Climate Change Strategy and Action Plan.</p> <p>Climate refers to the average weather experienced over a long period. This includes temperature, wind and rainfall patterns.</p> <p>One of the natural processes that affects the earth's climate is the Greenhouse Effect. The Greenhouse Effect is where naturally occurring gases such as carbon dioxide (CO₂), methane and nitrous oxide absorb infrared radiation from the sun and trap it as heat in the atmosphere.</p> <p>Whilst the Greenhouse Effect is natural, humans are emitting 'greenhouse gases' such as CO₂ at much higher rates than has occurred for tens of thousands of years. These higher levels of greenhouse gases are absorbing more infrared radiation from the sun, trapping more heat and as a result, affecting temperatures and weather patterns experienced on Earth.</p> <p>This impact on temperature and weather patterns is what we refer to as Climate Change.</p> <p>A report on the impact of</p>	<ul style="list-style-type: none"> • Heavy rain and severe flooding experienced in the West Midlands in June-July 2007 highlighted the impact that extreme weather events have on households, communities and business. There are significant financial implications related to insurance and the future acceptance of climate change related claims against policies. For example, the annual financial cost of flooding could increase by almost 15 times by the 2080s if certain predictions are correct. • Higher temperatures in summer will increase demand for water; reducing water availability and drying out soils. Dry soils will increase the risk of building subsidence. • Buildings overheating, especially in urban areas, will pose health risks at home and reduce workplace productivity.
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<p>climate change on the West Midlands suggest that with average temperatures set to increase by between 1.5 and 4.5 per cent, the region will benefit from more opportunities to live outdoor lifestyles. Tourism and use of outdoor recreational facilities may increase. Identified at a stakeholder workshop in 2003, key climate related issues for the region include water management, agriculture, energy, land use and the built environment and transport.</p> <p>There are also employment opportunities and new business opportunities in the expanding environmental goods and services sectors as a result of climate change and widespread adoption of energy saving measures.</p> <p>Emergency planners and support services need to be prepared for climate change related events and the health, safety and financial implications they have on the council and local people. The council needs to be aware of the opportunities climate change presents to corporate services and the local community, and provide mechanisms to enable these opportunities to be acted upon.</p>	<ul style="list-style-type: none"> • Higher winter temperatures will reduce the need for winter heating and lower winter energy bills at home and work, but higher summer temperatures will increase demand for energy for cooling, leading to higher summer fuel bills. • Plant sensitivity to higher temperatures/wetter winters and changes to planting and growing seasons will require adjustments to the management of parks, roadside green spaces and gardens.
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All such risks are most frequently identified through a combination of existing monitoring mechanisms, historical data, institutional knowledge, works records, or the application of service related engineering standards, specifications and codes of practice.

Those risks seen as so called ‘acts of god’ or the totally unforeseen are difficult to predict. However, there are processes in place to address these, such as business continuity plans, emergency plans and risk assessments such as those in connection with climate change.

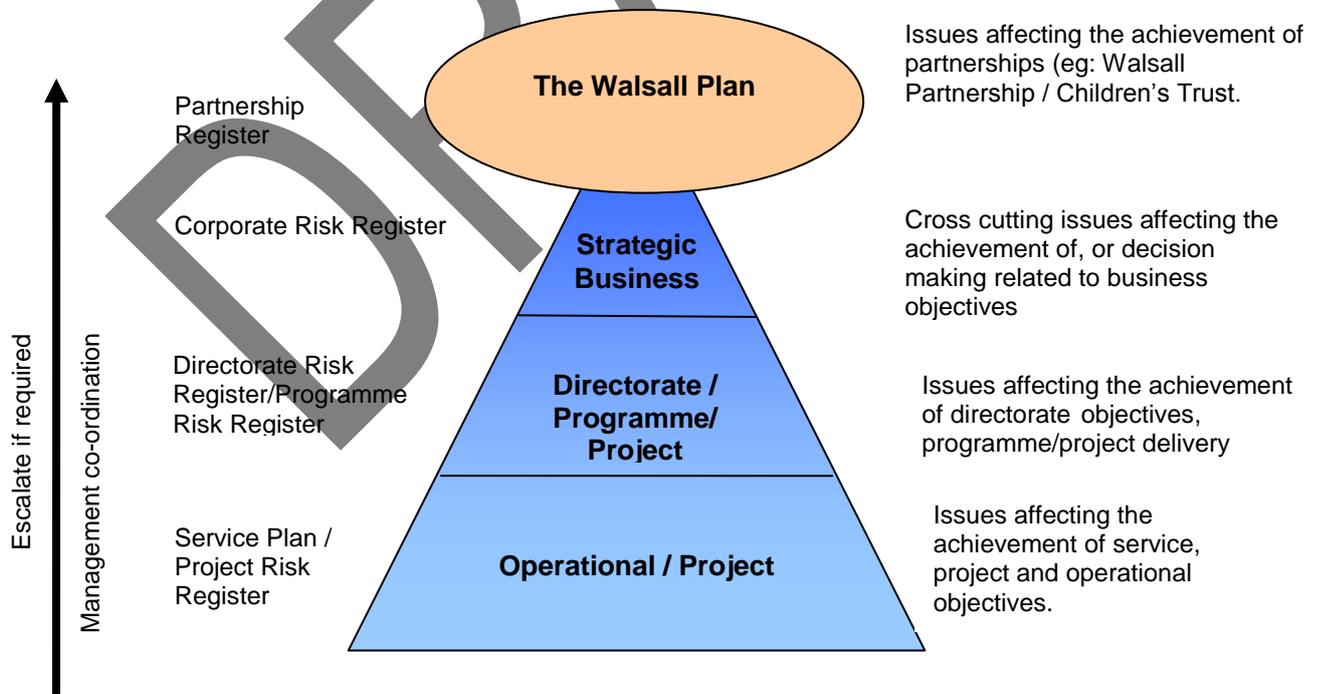
7.2.2 Assessing risk likelihood and impact

Following the identification of risk, an assessment of the likelihood of impact needs to be carried out. Consistency of approach is essential to give a balanced view of the risk involved when making choices about levels of service and service options.

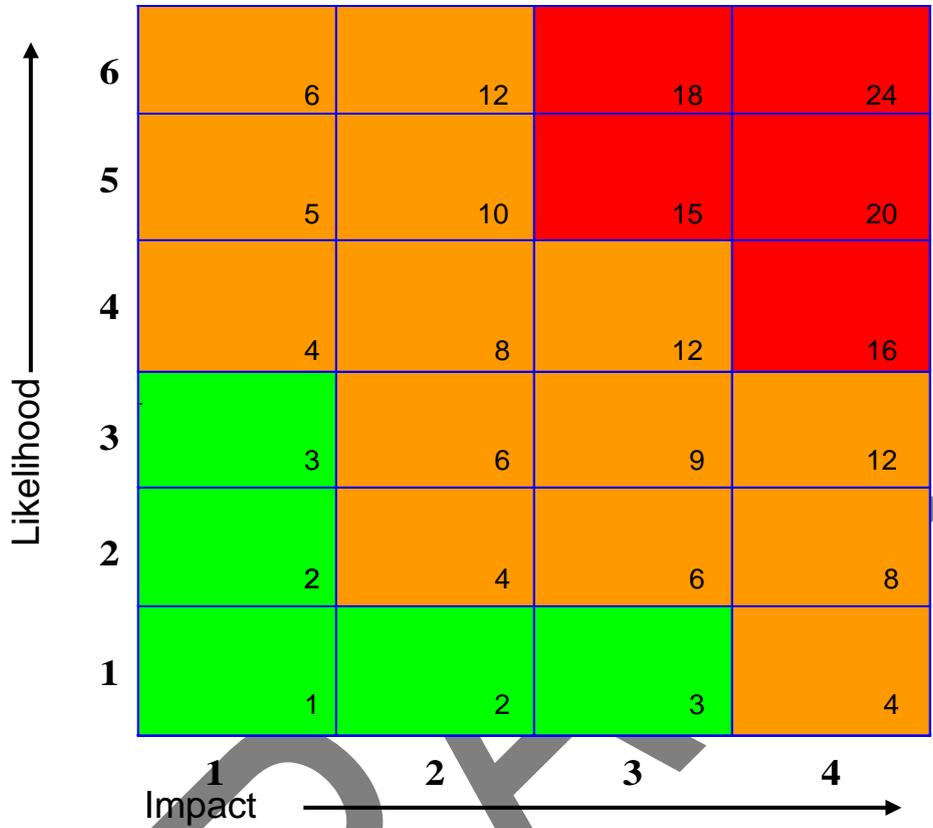
The description, definition and the overall consequential assessment of risk is assessed throughout the council using the council's adopted corporate methodology, as detailed in steps 1 to 5 of the authority's own risk management guidelines. A copy of the risk register and the completed risk management action plan is maintained by the corporate risk and insurance manager, this defines the type of risk, the team, service area and directorate that each risk assessment relates to.

Walsall Council's performance board applies appropriate levels of control against its project portfolios by nominating individual project managers and project champions to ensure that clear focus is maintained with regard to its key deliverables and that risk management procedures are implemented.

The examples below illustrate how risk management is embedded throughout the council:



Strategic risk profile Organisation name: Walsall Council



Likelihood:

6 = very high 5 = high 4 = significant
 3 = low 2 = very low 1 = almost impossible

Impact:

4 = catastrophic (affects all objectives) 3 = critical (affects most objectives)
 2 = marginal (affects some objectives) 1 = negligible (little effect to objectives)

By using the appropriate scoring matrices, the likelihood and impact of risk is determined and the results from both areas are multiplied together to produce an overall score value for each risk item being considered.

Once the scale of risk is assessed, the council has robust procedures set in place to monitor, review and control risk by means of its Risk Management Action Plan, the mechanics of which are highlighted within the example below:

Risk Management Action Plan (example)

Management Action Plan (MAP)

Risk Group: Neighbourhood		Date plan produced: April 2009	
Likelihood	6		
	5		
	4	X	
	3		
	2		
	1		
		1	2
		3	4
		<i>Impact</i>	

Risk Owner: Keith Stone		Lead Officer: Steve Pretty		Last Updated: _____	Last Reviewed: _____
Risk Number	Current Risk Score	Target Risk Score	Achieved By:	Description	
18	12	9	Jan10	Project not delivered on time	

Action/controls already in place	Adequacy of action/control to address risk	Required management action/control	Responsibility for action		Critical success factors & KPIs	Review frequency	Key dates
Project management methodology	Adequate	Framework for the development and management of project	JR	RP	Project to use approved methodology	Monthly	Framework in place by August 2007
Project management training provided to all key staff	Adequate for those trained but further training required	Further training sessions to be organised and to be updated to take on board feedback from participants	PH	GC, LT	Project managers to be trained Project to use agreed methodology	Monthly	June 2007
Strategy group launched to improve control of expenditure Regular meetings to take place	Adequate	Fundamental review of project management to be undertaken. Data to be gathered to determine improvements in performance following SG interventions.	JRR	HI	Delivery of project on time/on budget. Prompt implementation of action plan	Bi-monthly (minimum)	Ongoing
Project risk awareness training to be provided for key staff	Adequate – further training sessions organised	Project managers that attend Walsall Project Approach training are also required to attend risk awareness training	RP	LT	All projects follow corporate risk management processes Projects are delivered on time and to budget or potential deadline failures are identified early	Quarterly	Ongoing

7.2.3 Risk management compliance

To demonstrate compliance with this strategy the following documentation is made available for audit by both internal and external auditors:

- Corporate Risk Management Strategy.
- Related policy statements and council procedures.
- Business continuity/contingency/emergency plans – including tests and reviews.
- Internal Audit reports.
- Risk Management Action Plans and Risk Registers.
- Contract/programme/project proposal review and sign-off.
- Corporate Risk Register.
- Directorate Risk Register.
- Service Risk Register.
- Programme/project/risk assessments and registers.
- Partnership risk registers/assessments/initiation documents.
- Contractual/contract risk assessments/registers.
- Reports/minutes: council, cabinet, CMT, audit committee, performance boards/management team meetings.
- Risk management training arrangements.
- Strategic policies, plans, financial plans, performance management and project/programme management plans and reports.
- Governance arrangements and plans for significant partnerships including risk management.
- Procedure notes and manuals for business critical systems.
- Business continuity plans including tests and reviews.

The Council's Engineering and Transportation Service Plan contains sections dedicated to risk analysis, Risk Management Action Planning and it also holds a Risk Register. The Service Plan is informed by our own professional knowledge, emerging best practice and findings from inspections and corporate health checks. It also includes the actions to respond to the Key Lines of Enquiries (KLOE). This Service Plan provides assurance to Audit Committee, Cabinet, CMT and other stakeholders that processes continue to be developed and streamlined to meet organisational needs.

The council also regulates its risk management activities in accordance with the following key milestones.

Milestone	Frequency
Engineering Management Team monitors agreed corporate actions and assesses additions/deletions to corporate risk register.	Quarterly
Directorate key risks reviewed and new significant risks or opportunities fed into the corporate risk register on a quarterly basis. Directorate key risks informed by directorate, service and business change programme/project risk registers.	Quarterly
Directorates, divisions, services and business change programme/projects to clearly identify existing risk controls and the degree to which they are consistently applied. Evidence of the application of controls to be maintained and cross-referenced onto the action plans.	Quarterly or as required by the action plan or project plan
Directorates, divisions, services and projects to evaluate existing controls for the degree of mitigation the controls provide and if further control is desirable.	Quarterly or as required by the action plan or project plan
Directors assure Chief Executive regarding internal control, including the management of key risks, within their area of service delivery.	Quarterly
Directors to ensure that risk identification is intrinsically linked to service plan objectives.	Performance boards
Directors to include performance on managing risks within performance monitoring of service plans and of senior officers' performance contracts/plans and EPAs.	As per EPA guidelines
Include risk management in staff induction/refresher training where this has not yet been incorporated.	Ongoing
Review claims management information with directorates.	Quarterly
Incorporate elements of the business continuity plans where appropriate, e.g. service continuity arrangements.	Annually
Introduce directorate risk champions and develop directorate risk profiles, where these do not already exist.	Quarterly
Develop service unit/business unit risk profiles where these do not already exist.	As and when required
Develop programme/project risk profiles, as appropriate, where these do not already exist.	At programme project initiation and through lifecycle
Monitor, update and review the HAMP to include recommendations and actions arising from various inspection outcomes, changes in legislation etc.	Annually

Milestone	Frequency
Core risk champions group (CRCG) will provide strategic leadership of risk management and meet to discuss processes and best practice in line with the business change agenda.	Quarterly following CMT
Audit Committee to review CRR, approve and endorse strategy and select risks for scrutiny	Quarterly following CMT and annually (CRMS)
Cabinet receive report on risk management activity Approve and endorse strategy	Annually
Council receive report on risk management activity Approve and endorse strategy	Annually

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7.3 Issues identified and improvement actions

The following key issues have been identified:

Issues:

Issue 7-1 Some asset groups do not have formalised mechanisms in place to establish risks for the asset or the service it provides.

Issue 7-2 Risk assessments are not comprehensively used within the evaluation of maintenance options.

The proposed improvement actions are:

Improvement actions:

Action 7-1 Develop formalised risk assessments for all asset groups where appropriate

Action 7-2 Develop formalised risk evaluation mechanisms for maintenance option appraisals

8.0 Forward works' planning

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8.0 Forward work planning

8.1 Introduction

Fully integrated long-term Forward Works' Programmes (FWPs) are not currently prepared by the council for all asset groups that make up the highways asset.

The current method of working is that individual asset group managers develop programmes locally, sometimes compiled upon worst first principles. But for the majority of asset groups, priorities and annual programmes of work are established by determining those locations that are most likely to give the best economic return of investment for any given maintenance treatment.

Carriageway and footway maintenance schemes, for example, are determined from information contained in the council's pavement management system, which is based on CVI, DVI, SCANNER, Griptest and Footway Network Survey data, supplemented by core log construction profiles and ground penetrating radar information.

Complaints history through Mayrise, Oracle/CRM, walked safety inspections, Engineering Programme Inspections, and third party insurance claims together with national performance indicators also contribute to the 'TAR' prioritisation process.

By implementing asset management the council will ensure that all programming of work is carried out in accordance with whole life costing principles, by encouraging greater integration between different areas of work and Service Directorates. This may in future bring the opportunity to develop longer term programmes.

8.2 Current and future practices

Current practices rely upon asset group managers to independently assess their maintenance requirements and develop bids for funding applications against short-term needs.

This practice will be replaced by processes that identify long-term needs within a framework of budget optimisation that considers more fully the adoption of alternative service levels within the varying lifecycles for each asset group.

Current and proposed future practices do not offer the ability to predict precisely where and when projects will happen. This is because too many variables impact in an unpredictable manner to allow this to happen, such as differential rates of deterioration, statutory undertakers' works, road space availability, contractors' resources, and weather conditions.

It is however, practical and desirable, to predict the scale and type of treatment for projects likely to be carried out in future years on a network wide basis, and the adoption of the HAMP will bring together programmes across the asset, that are based upon the confidence levels detailed in the table below:

Years	Subjective description	Treatment or project definition level
1	Projects will be implemented within the financial year	Actual treatment based around measured works
2 to 3	Firm recommendation	Specific treatment against named locations
4 to 5	Reasonable assessment	Treatment type
6 to 10	An assessment made around long-term funding need	Generic treatment

8.3 Reviewing existing work programmes

Currently, the review of each forward works' programme occurs at individual asset group manager level, and there is no formalised process at present to review and integrate forward works programmes to maximise the potential for combining projects and budgets so that they are delivered in a more effective manner, and reduce as far as practicable the disruption that results from uncoordinated works programmes.

The adoption of the highways asset management plan will provide a formalised structure within which forward works' programmes can be more closely reviewed and integrated.

8.4 Existing work programmes summary

Those existing work programmes for highway assets that currently benefit from lifecycle plans, are independently produced, updated, and developed by individual asset group managers as detailed in the following summary:

8.4.1 Carriageways and footways

The Highways Maintenance Strategy document contains Walsall's highway maintenance programme which is reviewed on an annual basis.

For all classes of road, prioritisation of carriageway and footway maintenance schemes are initially established using the technical and economic prioritisation data provided by the council's pavement management system MARCHpms.

This is backed up with information gathered from service and safety inspections, and analysis from complaints records, members' enquiries, e-government enquiries, and public liability claims records.

Engineering Programme Inspections then determine the type and extent of intervention treatments, and identifies the appropriate time scale for the works required.

Once established, the provisional forward works programme is submitted to cabinet for approval.

8.4.2 Highway drainage

Gully cleansing will take place at varying intervals in order to give a reasonable standard of cleanliness and ensure that storm water is drained off the highway in a reasonable short time.

An enhanced service standard will be provided for Walsall town centre which will act similar to 'The Gold Standard'.

The reason for emptying gullies is to remove detritus to ensure the continued efficient functioning of the gully and its connection. The frequency of emptying depends upon the location, the presence of dirty industries, the degree of tree cover, levels of rainfall and the frequency of sweeping. Emptying of gullies is therefore arranged on a cyclical basis, dependent upon the location and the subsequent danger to road users of flooding should the gully become blocked.

Piped grips are flushed if necessary during cyclical maintenance of gullies etc, open grips are re-cut cyclically not more frequently than once per year and ditches are cleaned out by machine not less frequently than every five years.

Filter drains should be checked at five year intervals, with flushing, replacement of filter media, porous/slotted/perforated pipe undertaken as necessary to enable the drain to perform its function.

Major works are carried out on a needs basis, the HAMP will help to reduce reliance on more costly reactive work by encouraging stronger mechanisms to gather better inventory data on the location and condition of highway drainage assets with the aim of facilitating more programmed works.

8.4.3 Bridges and other highway structures

Walsall Council is responsible for 144 road bridges, underpasses, culverts and 36 footbridges, of which 92 were included in the assessment and strengthening programme, with the remainder having been reconstructed within the last fifteen years.

In accordance with the Highways Act 1980 and recommendations set out in the Design Manual for Roads & Bridges Walsall undertakes principal bridge inspections every six years and general inspections every two years, reactive inspections are carried out following reports of distress or damage.

There are also 61 bridges in the ownership of Network Rail, British Rail Property Board and British Waterways, all of which must satisfy the requirements of the Transport Act 2000.

The current forward works' programme is based largely upon the findings from its structural inspections, but has also been influenced in recent years by the elevated national emphasis for the Primary Route Network and reduced levels of capital funding.

Walsall's programme for assessment which was completed in 2001/2002 included those bridges in the ownership of the Statutory Transport Undertakers, and of the 10 bridges which now require strengthening all but one are in the ownership of the Statutory Transport Undertakers, mainly Network Rail.

8.4.4 Street lighting and illuminated signs

Street lighting services in Walsall were out-sourced in 2002 under a partnership contract with Amey Infrastructure Services in a Private Finance Initiative (PFI).

The Government supported Walsall with special funding in the sum of £18.6 million to upgrade, standardise and maintain street lighting and illuminated signs in the borough over a period of 26 years. This enabled the council to increase its proportion of the road network that meets the requirements of BS5489/EN13201 from 30% in 2002 to 100% by 2004.

The implementation of the PFI has brought about a large scale renewal of the lighting asset following the completion of the Core Investment Programme (CIP), so the current forward works programme is focussed more fully upon the regular repair and upkeep of the street lighting stock and illuminated signs, by means of cyclical and frequency based maintenance procedures.

8.4.5 Non-illuminated signs

Currently, major maintenance work is carried out through an annual programme. Cleaning is carried out annually or as required by Amey Infrastructure Services, with replacements and repairs being undertaken on a reactive basis.

Bollards are generally cleaned once per year, although certain locations such as traffic calming sites and roundabouts receive additional visits during the winter months. Repairs to sign faces, chevrons, stop and give ways signs, and other signage are carried out on a reactive basis when required and within seven days.

8.4.6 Traffic signals and pedestrian crossings

Walsall undertakes bulk changes of lamps in signals and in push button units on an as-needed basis. Lamps in regulatory or Variable Message Signs (VMS) associated with traffic signals are changed at intervals appropriate to the type of lamp and mode of operation of the sign.

Electro mechanical parts of controllers are adjusted or replaced at one year intervals or in accordance with manufacturers' component instruction frequencies. Signal lenses, regulatory signs and VMS are cleaned on a frequency basis not exceeding one year.

Defects in the operation of traffic signals are treated in accordance with category 1 of the council's reactive maintenance procedures, with category 2 repairs being carried out on a reactive basis within six weeks of notification of defect.

Standards for pedestrian crossings are the same as for traffic signals, except for the flashing mechanisms, which are replaced immediately once failure is notified.



8.5 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 8-1 There is currently no single long-term forward works' programme for all works on the network*
- Issue 8-2 Generally, a 'worst first' prioritisation is used which does not necessarily result in best value in the longer term*
- Issue 8-3 There is no formal procedure for the production of a long term plans beyond three years*
- Issue 8-4 Programmes of work are not always explicitly linked to the achievement of specified levels of service*
- Issue 8-5 It is not always clear who is responsible for long-term planning, preparation and presentation of bids and allocation of resources*
- Issue 8-6 Current predictions of need are influenced too much by historical practices, which can constrain the objective identification of need*

The proposed improvement actions are:

Improvement actions:

- Action 8-1 Develop an integrated forward works' programme to include all planned work for the network for a period up to 10 years*
- Action 8-2 Use the forward works' programme to enable formal appraisal of whole life costing options of different asset groups*
- Action 8-3 Develop and document procedures for the production of the Forward Works' Programme*
- Action 8-4 Within the developed procedure allocate responsibility for the key tasks*
- Action 8-5 Develop a Forward Works' Programme to explicitly require reporting of needs- based upon defined levels of service*
- Action 8-6 Develop an integrated Forward Works' Programme procedure to detail the information requirements for every asset group and every stream of improvement work*

9.0 Performance monitoring

9.0 Performance monitoring

9.1 Introduction

Robust and comprehensive performance monitoring and management is recognised as being essential in delivering services and corporate excellence. Its purpose is to raise and maintain at a high level the performance of individuals, services and the authority as a whole to ensure good quality and cost effective services are delivered to residents and other key stakeholders.

Performance management is an integral part of the council's business operations and is inextricably linked to other strategic and service objectives.

The Corporate Integrated Planning and Performance Framework (CIPPF) sets out how the council's planning processes interlink, and demonstrates how resources and services are managed. It identifies the minimum 'must do' within which the council should operate and is underpinned by functional frameworks that provide performance guidance and protocols such as service planning and EPA procedures.

Walsall's CIPPF management mechanisms link with its HAMP by integrating the council's: Sustainable Community Strategy; Corporate Plan; Directorate Plan; Service and Team Plans; Local Neighbourhood Plans into one cohesive and measurable framework.

Actual performance monitoring against individual asset groups is achieved through a combination of Performance Indicators, comparisons and targets, this forms an essential element of the CIPPF, complying with the core concepts of continuous improvement. There is a fundamental requirement for all authorities to secure continuous improvement in the way they exercise their functions, having due regard to a combination of economy, efficiency and effectiveness.

Under the Code of Audit Practice 2010 for Local Government Practice, the Audit Commission defines these key terms as:

- Economy** Acquiring human and material resources of the appropriate quality and quantity at the lowest price.
- Efficiency** Producing the maximum output for any given set of resource inputs for the required quantity and quality of service provided.
- Effectiveness** Having the organisation to meet the customers' requirements and having a programme or activity to achieve its established goals or intended aims.

To demonstrate continuous improvement, performance is periodically assessed, and where practical like many other highway authorities Walsall uses a variety of well-recognised means to evaluate and quantify performance levels:

Performance Indicators The measure of performance in exercising a function.

Performance Standards The minimum acceptable level of performance in the exercise of a function measured by reference to a performance indicator for that function. Failure to meet this standard is seen as failing the test of best value for that function.

Performance Target The level of performance in the exercise of a function expected to be achieved over a minimum one year period measured by reference to the performance indicator for that function.

Performance can be measured in many ways, but the focus of best value is accepted as the benchmark of placing greatest emphasis upon:

Input	Resources (human, material, financial)
Process	Methodology and procedure of committing resource
Output	The result (often numerical) of applying resource input
Outcome	The impact upon the community (the best way of measuring performance)

9.2 Key performance measures

A number of asset groups that fall under the scope of Walsall's HAMP are monitored through the council's corporate performance management process against formal performance measures, these include:

- Single Data List (SDL)
- Local Performance Indicators (LPI's)
- Recording of response times
- Customer Access/Complaints Monitoring Procedures
- Contract Performance Measures

9.2.1 National Indicators

As defined by the Department for Transport and the Audit Commission there are effectively four levels of performance indicator, known generally as the family of performance indicators:

- Corporate Health Indicators – set by central government to give a view of the organisational, financial, managerial and demographic integrity of the authority.
- Nationally - set Service Delivery Indicators – set by government to give a view of service delivery covering strategic objectives, service delivery outcomes, cost/efficiency, quality and fair access.
- Other Indicators – set by government departments to cover areas missed by previous indicators.
- Local Indicators – developed by individual authorities to reflect local priorities and provide management information.

9.2.2 Local Performance Indicators

Local Performance Indicators are relevant to the highways asset in relation to contract performance, they are generally used to measure the performance of the contractor in delivering projects to time and cost or, client and stakeholder satisfaction.

Walsall Council has used this form of measure in relation to its partnership working under the Public Lighting PFI, and its Prudential Road Maintenance Framework, focussing on:

- Reliability of programming, estimating and forecasting
- Management and improvement of client relationships
- Management of communications influencing stakeholder expectations
- Health, welfare and development of workforces
- Safety of the public
- Creativity and innovation
- Impact on the environment
- Defects
- Getting things right first time
- Predictability of cost
- Predictability of time

In relation to the most significant national highway related indicators, Walsall undertakes programmed condition surveys on its main asset groups, namely footways and carriageways, this is in accordance with guidance set out by the Audit Commission or locally determined:

Data Set 130-01	Condition of Classified Principal roads
Data Set 130-02	Condition of Classified Non-Principal roads
Data Set 130-03	Skidding resistance surveys
Data Set 130-04	Carriageway work completed
LPI 224b	Condition of Unclassified roads
LPI 187	Condition of category 1, 1a and 2 footways

Survey data for these indicators is collected through Coarse Visual Inspections (CVI), Detailed Visual Inspections (DVI), Surface Condition Assessment of the National Network of Roads (SCANNER) & Grip Tester machine surveys. The data is processed through the councils MARCHpms software which is its accredited United Kingdom Pavement Management System (UKPMS).

National road maintenance condition data is reported annually to the DfT, along with Griptester Surveys across the Principal Road Network to measure road surface friction coefficient levels.



9.2.3 Recording of response times

This group of indicators generally measure performance in relation to operational response times for reactive maintenance functions such as category 1 and category 2 highway defects or damage repairs to electrically fed apparatus. Performance is measured against clearly defined response targets which are set out more fully in the council's Highways Maintenance Strategy document.

9.2.4 Customer access and complaint monitoring

Performance evaluation must take into account the perception and aspirations of stakeholders, and include the measures set in place by the council to bring about good communication between those who manage the asset and those who use the asset.

Walsall's Customer Access Strategy "Making it easier to access local services" identified how Walsall work's with citizens, partners, local organisations and community groups to provide citizens with choice in the way council services are delivered to them. It demonstrated how we provide a citizen centric approach to service delivery ensuring residents can access the council at a time and in a way that suits them best. The council supports its channels of access by providing and consulting on the benefits of a variety of technologies such as:

- Contact centres
- Customer relationship management (CRM)
- Web facilities and intranet/extranet
- Email/Twitter
- Text messaging (SMS)
- Electronic procurement and payment of services,
- Video conferencing and telecare facilities
- Geographical information systems (GIS)

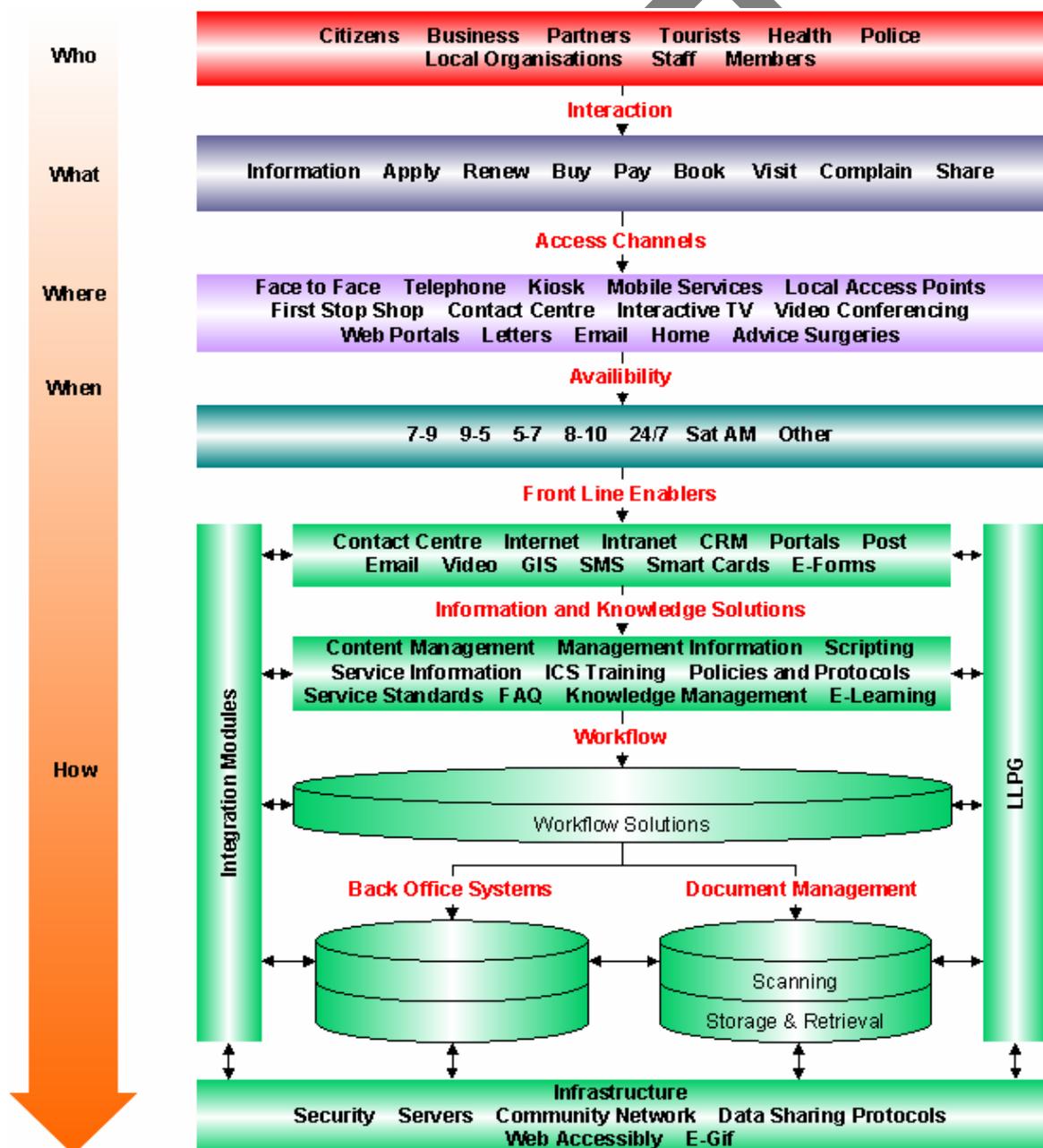
In offering a citizen-centric service the council provided a refurbished first stop shop as part of its putting the citizen first project, and has adopted both Call Centre Association (CCA), and Community Portal Principles (CPP).

Robust mechanisms exist to monitor perceived poor performance, the council's 'Tell Us' system provides an online interface for customer and stakeholder enquiries, it offers a direct forum through which complaints can be made regarding staff or performance in the delivery and management of services.

To gauge public perception, individual initiatives such as customer feedback leaflets are distributed whenever the council undertakes major carriageway and footway maintenance schemes. This has proved to be a valuable exercise that provides us with a measure of customer perception and allows us to respond and improve service delivery accordingly.

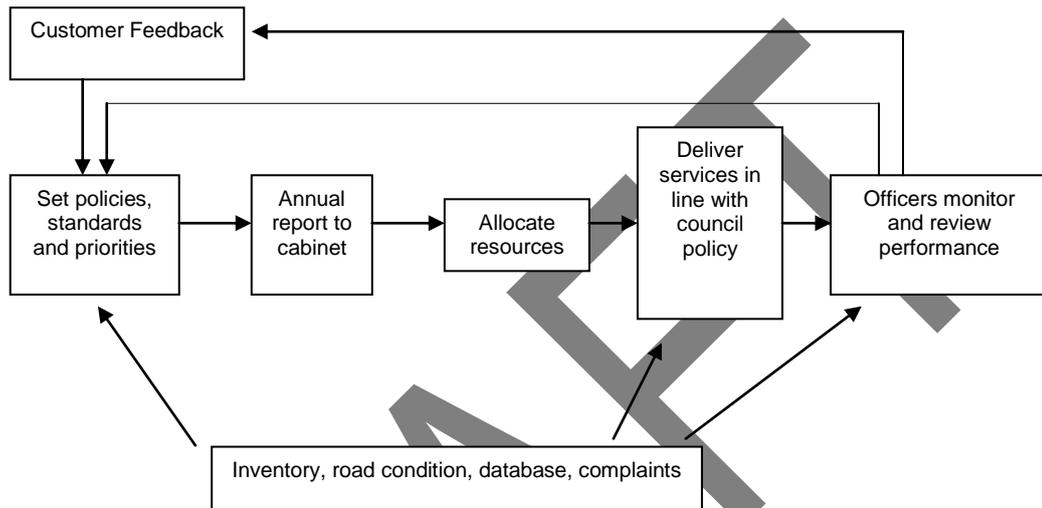
Large capital projects such as the Town Centre Transport Package involve a highly coordinated approach to customer engagement at key stages during the delivery of the project. Prior to work starting on site there are public meetings backed up with advertising campaigns that include local newspapers, information boards and the Internet. During the construction phase there are several stakeholder forums and focus groups that are used to disseminate information to both the public and commercial concerns; this is supported with letter drops, leaflets and advertising campaigns, with important traffic management bulletins being aired on local radio.

How Walsall's Seamless Access to Services works:



9.3 Performance monitoring, review and reporting cycle

Performance information gathered against service delivery is a key component of Walsall's HAMP, it assists with monitoring and measuring the effectiveness of resource allocation and aids budget setting and decision making. The process will be subject to annual review in the light of performance data and user feedback:



9.4 Issues identified and improvement actions

The following key issues have been identified:

Issues:

Issue 9-1 Progression from BVPI's to NI's to Single Data List indicators with associated definitional changes have made the comparison of longer term year-on-year trends difficult.

The proposed improvement actions are:

Improvement actions:

Action 9-1 Review current National and Local Performance Indicators to ensure we track a key set of Performance Indicators

10.0 Recycling and sustainability

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10.0 Recycling and sustainability

10.1 Overview

Walsall Council's Highway Asset Management Plan provides a commitment to both environmental and quality issues. Wherever possible, current and future practices will take account of the following priority areas:

- Sustainability in the consumption and production of resources.
- The effects of climate change and energy efficiency.
- Natural resource protection and environmental impact.
- Sustainable and maintainable community objectives.

Our Sustainable Community Strategy promotes better use of our existing roads and supports investment in the road network. The strategy sets out an ambitious twelve year plan which prioritises accessible and sustainable places for business.

In striving for a sustainable highway network Walsall Council sets out the requirement for standards of quality in respect of materials, treatments and processes in order to meet core network objectives, secure best value and achieve continuous improvement.

Walsall's HAMP takes account of the framework and guiding principles outlined within the UK Government Strategy for Sustainable Development published back In March 2005 'Securing the Future' in its context of 'Rethinking Construction' which is recognised as one of the industries principal drivers within the 'change' agenda.

In July 2007 the Institution of Civil Engineers (ICE) also released its-'Sustainable Development Strategy & Action Plan for Civil Engineering', which set out the broader actions associated with sustainability objectives.

In 2007 the Highways Agency released its first Sustainable Development Action Plan. The plan recognised that the majority of environmental impact associated with the highway infrastructure was generally caused by the vehicles travelling across the highway network. However, there was also recognition that there are a range of significant actions available to all highway authorities as organisations or construction clients in their own right. These actions must explicitly include developing policies to review specifications and standards in the light of sustainability issues.

The guidance documents highlighted the simple fact that is fundamentally important that those involved with maintaining the highways asset give consideration to those issues which affect the environment, such as noise pollution, light pollution, waste management and the recycling of highway construction materials when designing, planning and undertaking major maintenance schemes or individual asset replacements.

Environmental obligations dictate the need to focus in detail on how the council and its policies and initiatives might more effectively target and promote sustainability issues, with a view to bringing about improvements in relation to:

- Noise reduction measures.
- Materials utilisation options.
- Protection of virgin aggregates policies.
- Reducing carbon footprints.
- Waste management and recycling options.
- Pollution control measures.
- Energy efficiency and the implementation of alternative technologies.
- Nature conservation and biodiversity options.
- Reduced environmental intrusion initiatives.

The HAMP is consistent with the council's broader local and national policy commitments and will seek to bring about innovation and joint working in relation to the key issues of energy, waste and recycling.

Some asset groups will of course lend themselves more freely to improvements brought about by changes in processes or technology, others may require substantive investment or redesign at network wide levels before potential benefits can be exploited.

With regard to some of the higher value asset groups such as carriageways and footways, the need for sustainability has a financial impact, which is a direct consequence of the introduction of the Aggregates Tax Legislation (2010).

The aim of this tax was to reduce the demand for virgin aggregates, and encourage the use of recycled materials to address the environmental costs associated with quarrying such as noise, dust, visual intrusion and haulage. The tax applies to sand, gravel, and crushed rock.

10.2 Levels of sustainability within existing practices

Walsall Council is making significant in-roads with regard to the development of sustainable maintenance practices:

Through the council's Street Lighting PFI project in partnership with Amey Infrastructure Services, the percentage of the road network that meets modern European standards was increased to 100%, which means that the borough benefits from a modern energy efficient system of street lighting, with upward light pollution or sky glow reduced to minimum levels. This achievement was recognised and praised within the Environment inspection carried out by the Audit Commission back in September 2004.

Walsall's Local Development Framework (LDF) is the statutory planning framework for the Borough. It consists of a portfolio of planning policy documents, introduced under the Planning and Compulsory Purchase Act 2004, these plans included the Black Country Core Strategy which set the framework for development in Walsall up to 2026, including use of natural resources such as minerals, and the development of waste management infrastructure. This may include targets or requirement for on-site management of waste and for use of recycled products/alternatives to primary aggregates.

Carriageway and footway planned maintenance programmes adopt the guidance provided within a report published by Transport Research Laboratory (TRL) – Recycling in Transport Infrastructure by routinely appraising its use of materials, treatments and processes for environmental contribution in order to develop good practice.

Recycling techniques are used whenever these can be justified in value-for-money terms, with appropriate cost benefit calculation being applied wherever additional costs might incur. Maintainability audit assessment frameworks are then applied to ensure that sustainability is being achieved



Contracts and procurement policies encourage the purchasing of sustainable materials and services in order to utilise products manufactured from recycled materials. All permissible arisings from cold planning activities are taken to store for re-use as either Type 2 sub-base or capping layer.

Specialist trials have been carried out including bituminous recycling using foamed bitumen emulsions with road stone recycling, cement bound recycling, or the use of thin proprietary surfacing techniques and retexturing. Use of glass, rubber, bottom ash and other arisings from waste management have also been used. Low Energy Asphalt materials still require some longer term evaluation to confirm more robustly their full benefit's and durability, Walsall Council remains committed to working with its private sector suppliers and regional partners to bring about material innovations that generate reductions in its carbon footprint into the future.

In considering sustainability, Walsall Council signed up to the Nottingham Declaration on Climate Change back in November 2006. Combating climate change is acknowledged as a major issue for us all, which could have increasingly far reaching effects on people, places, the economy and the environment. The authority made a commitment to tackle the causes and effects of a changing climate through the Walsall Council Climate Change Strategy and Action Plan for the period 2010 – 2014. The Action Plan included an assessment of risk for highway assets and the impact this can have on the delivery of highway services. The risk assessments are conducted on an annual basis and are recorded in the appendices to the Highway Asset Management Plan.



10.3 Recycling and sustainability options appraisal

Walsall Council's HAMP positively encourages the adoption of structured and formalised decision making for managers of individual asset categories, based around robust information that quantifies the sustainable environmental benefits brought about by new technical processes, scientific developments, or greener ways of working.

HAMP – sustainability and recycling options		
Sustainability issue	Sustainability focus	Sustainability action
Maximising the environmental contribution of works	Consider methods, materials, treatment and the processes used.	To be reviewed and routinely appraised in the context of their overall environmental contribution
Application of technical standards within works	Consider existing practices in relation to revised performance standards and codes of practice	Review all asset groups in response to revised guidelines
Balancing standards against sustainability	Develop appropriate risk assessment procedures	Appraise the scope for relaxation from key standards, where this might create significant benefits in relation to sustainability issues
Consistency with character	Consider scheme material and treatment choices in relation to the existing environmental character	Review within the design phase and in the context of Highway Maintainability Audit procedures
Nature conservation and biodiversity	Consider all living environments	Raise awareness and seek where required specialist advice on how verges, landscaped or planted areas can be more sustainably managed
Depots and material storage facilities	Consider how these are provided and managed in relation to the environment	Review the actions that might be taken to mitigate visual intrusion or other forms of pollution
Reducing negative environmental impact	Consider design strategies	Review guidance
Waste management	Consider material and treatment selection, especially volumes of material requiring disposal	Recognise landfill tax influences and European legislation requirements
Recycling	Consider the use of items created from recycled materials, the recycling of secondary aggregates or the use of materials arising from waste management origins. Consider also in-situ recycling techniques	Review suppliers, technical procedures and codes of practice, calculate cost benefit models within a sustainability context. Monitor the guidance provided by organisations such as WRAP

10.4 Issues identified and improvement actions

The following key issues have been identified:

Issues:

- Issue 10-1 Long-term trialling of new/alternative methods is un-established*
- Issue 10-2 Economic cost of sustainable methods is un-established*

The proposed improvement actions are:

Improvement actions:

- Action 10-1 Monitor TRL and other significant project evaluation reviews*
- Action 10-2 Establish cost options within lifecycle planning processes*

11.0 Improvement action plan

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11.0 Improvement action plan

11.1 Introduction

In preparing Volume one of the HAMP, a number of key issues and corresponding improvement actions have been identified, details of which can be found at the end of each chapter. These key issues will be used to drive a review of current practices, gathering information that will help identify and implement a range of improvement actions aimed at creating long-term solutions.

The main aims of introducing such improvement actions will be to:

- Introduce formalised procedures to support asset management.
- Improve the collection and management of inventory data and records.
- Capture and record institutional knowledge.
- Establish long term forward planning and programming
- Appraise levels of service from reliable sources of information that relate to risk, cost and performance.



11.2 Improvement actions

The process of evaluating improvement actions is likely to identify a number of quick wins. These are best defined as actions that require little change to existing processes, require minimal resource and have low associated cost. Service delivery founded on historical working methods and procedures can sometimes overlook such quick wins. Once identified, these improvement actions are likely to be implemented in the short term.

The identification and prioritisation of improvement measures will generally be evaluated using the following main drivers:

Risk

Do current levels of service expose the council to unacceptable risk, either now or in the foreseeable future?

Cost

Is expenditure justifiable in relation to the anticipated or expected measurable improvements?

Timescale

Do we need to implement improvement actions early in order to reduce risk? Does the particular improvement action depend upon preceding actions or events taking place?

The collective evaluation of risk, cost and timescale category provides officers and politicians with the means to prioritise and target support for specific improvement actions. The analysis of cost and time, within the HAMP, will identify where early savings and improvements in service delivery can be achieved within existing budgets.

The authorities response to the Governments austerity measures has inevitably resulted in overall reductions in staff resources and funding available throughout the organisation. The councils ability to further develop its processes using asset management principles has undoubtedly been diminished as a consequence of these measures, and progress into the future could well be slowed against some of the targets identified within the plan.

The following table is a consolidated list of improvement actions that take into account the issues that have been raised during the preparation of the HAMP.

HAMP Improvement Action Plan		
Improvement action description	Priority ranking	Target date
1. Undertake a gap analysis to identify where asset inventory data does not exist or is unreliable.	High	Completed
2. Develop formalised risk assessments for individual asset groups and develop risk evaluation mechanisms for the maintenance options that are available.	High	Ongoing
3. Develop and implement systems for the collection and management of data, providing it is economically viable and practical to do so.	High	Ongoing
4. Carry out an initial valuation of the highway asset and produce a valuation report in accordance with recognised accounting principles.	High	Completed
5. Develop and document procedures that will assist with the development of forward works programmes for each asset group, and identify where responsibility lies for key tasks.	Medium	Ongoing
6. Develop forward works' programmes based upon predetermined levels of service in a way that explicitly reports funding and resource requirements.	Medium	Ongoing
7. Develop an integrated forward works' programme that includes all planned work across the network for a period, where practical, of up to 10 years.	Medium	Ongoing
8. Use forward works' programmes and works' history to assist with the appraisal of whole life costing options for each asset group.	Medium	Ongoing
9. Develop and document lifecycle plans for each asset group.	Medium	Ongoing
10. Develop long term funding strategies around inventory data, forward works' programmes and lifecycle planning, with a choice of service level options for each asset group.	Medium	Ongoing
11. Develop levels of service around a long-term lifecycle approach and discourage short term objectives.	Medium	Ongoing
12. Explore past expenditure to enable a comparison between forecasted spending and historical expenditure.	Medium	Completed
13. Regularly review national and local performance indicators to check that up to date performance monitoring techniques are being used.	High	Annually
14. Monitor TRL and other significant project evaluation reviews for recycling and sustainability initiatives.	High	Ongoing
15. Explore and establish the viability of costs for recycling within lifecycle planning.	Medium	Ongoing

Competing demand for staff time and fluctuations in financial resources mean that setting firm target dates for the implementation of improvement actions across all asset groups is not practical.

Where mechanisms for improvement are clear and identifiable it has been possible to determine within Walsall's HAMP the timescales for implementation of specific improvement actions. However, for some asset groups it has been more appropriate to give the improvement action itself an overall priority ranking based around the relative importance and consequential risk of that improvement action not being implemented.

This ranking framework actively secures the fastest possible returns available to the council by pursuing reduced risk and efficiency saving objectives.

