

Highway maintenance

Operational policies and standards for highway and street lighting maintenance

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Section 1

Introduction

Legal obligations

Salford City Council has a statutory duty to maintain its highways as outlined in the Highways Act 1980.

In particular, Section 41 imposes a duty to maintain highways maintainable at public expense. There is no definition in the Act as to the level of maintenance required although national codes have been produced to offer some guidance. The booklet, "*Well Maintained Highways - A Code of Practice for Maintenance Management*" produced by the Roads Liaison Group, makes recommendations for surveys and inspections of the adopted highway network, except where local constraints or demands have required local solutions. These resulting local variations are presented within this document.

Section 58 of the Highways Act 1980 provides the Local Authority with a special defence if it can demonstrate that it undertakes cyclic highway safety inspections of all its maintainable highways.

Intention of the document

This document seeks to outline the Operational Policies and Standards of Salford City Council for the management of its highway network and its highway assets. It defines good practice within current budget levels, identifying frequencies for inspection as well as policy and strategy for the repair and maintenance of the adopted highway network.

Status of the Code of Practice

This Statement of Operational Policies and Standards of Salford City Council adopts the policies, procedures and standards outlined within the nationally adopted *Code of Practice for Maintenance Management - Well Maintained Highways* (July 2005) as produced by the Department of Transport. Where local variations have been introduced then these have been clearly identified with mitigation for the differences.

Review of the document

This document is subject to regular review at an operational level in accordance with the City Council's commitment to a process of continuous improvement. This document will be revised to record changes to service standards or the implementation of any newly defined service standards and policies.

Section 2

Objectives

The main purpose of highway maintenance is to maintain the adopted highway network for the safe use of pedestrians and motorists.

The *Code of Practice for Maintenance Management* identifies the types of highway inspection that should be carried out to address three key objectives of a highway maintenance strategy.

1. Network Safety - Safety Inspections / Ad-hoc inspections
2. Network Serviceability - Inspection of Utility/Licensees Works
3. Network Sustainability - Structural Condition Surveys

To ensure the identified key objectives are achieved Salford City Council intends to: -

- Carry out safety inspections, at prescribed frequencies on all carriageways, footways and interlinking footpaths that are defined as highways maintainable at public expense.
- Carry out systematic inspections and ad-hoc inspections following customer requests for service to identify works of maintenance.
- Prioritise planned, routine, reactive and emergency maintenance following these inspections in accordance with agreed criteria set out in this document.
- Carry out systematic condition surveys to monitor the structural condition of footways and carriageways over time and for local identification and prioritisation of programmed maintenance treatments and schemes.
- Carry out regular skid resistance surveys (SCRIM) on the Principal Road Network and high-use sites on the non-Principal Road network, to identify locations where improvement of the skid resistance may be necessary.
- Carry out inspections to monitor works executed in the highway by Utilities and other licensees in accordance with the New Roads & Street Works Act 1991 and its associated Codes of Practice.
- Fully investigate and respond to all claims for personal injury incurred in the highway.
- Deal with all claims in accordance with the Civil Procedure Rules.
- Undertake an inventory of all appropriate highways, formally maintained by the Housing Directorate, but now deemed to be part of the adopted highway network, as per the Gullikson ruling.
- Carry out annual safety inspections on the above highways upon completion of the inventory.

Section 3

Management systems and records

It is recognised that the standard and quality of the recorded information held is of primary importance to the effective and efficient management of the highway maintenance service, and to the defence of 3rd party tripping and vehicular accident claims against the City Council.

The following information should be held by Salford City Council in order to facilitate a maintenance management process and to form the basis of a claims defence: -

- Records of adopted highway locations (including Authority controlled housing roads.
- Records of safety inspections.
- Records of systematic inspections and ad-hoc inspections following customer requests for service.
- Records of highway condition data.
- Records of highway maintenance activity.
- Records of utility/licensees activity.
- Records of tripping accident locations.
- Records of road traffic accident data.
- Records of street lighting works.
- Records of highway asset inventory data (street furniture / CCTV / trees etc.).

Salford City Council uses Southbank Systems 'Confirm' integrated highway maintenance and management database that covers all aspects of highway service delivery. The 'Confirm' system is used to: -

- Log and manage telephone calls, letters, faxes and internet requests for service
- Maintain the National Street Gazetteer, base network and all hierarchies
- Schedule and manage routine safety inspections
- Maintain defect information
- Create works orders and manage budget/cost information
- Manage utility notices, scheduling and managing all street works inspections
- Manage and process UKPMS survey data
- Maintain asset and inventory information
- Assist with the production of national and local performance indicators
- Manage the street lighting network
- Maintain street lighting asset and inventory information
- Assist with the production of national and local performance indicators for street lighting
- Schedule and manage street lighting cyclic maintenance works
- Manage street lighting energy consumption

Section 4

Safety inspections

Inspection regime

Salford City Council has defined a hierarchy for the adopted carriageways, footways and cycle tracks, based on their strategic importance, traffic flow and other local considerations. Three highway groups have been established, and for the purpose of all highway inspections a correlation between these groups and the standard carriageway classification method from the *Code of Practice for Maintenance Management - Well Maintained Highways* (July 2005), has been maintained.

Walked safety inspections are carried out as an individually identified process. This ensures that designated inspectors focus on individual defects.

The defined operational processes seek to take into account the safety of all highway users whilst at the same time retaining an awareness of the constraints placed upon the Authority by defined and limited budgets.

Inspection frequencies

Suggested inspection frequencies are outlined within the *Code of Practice for Maintenance Management - Well Maintained Highways* (July 2005) and can either be walked or driven. Since it is considered impractical to carry out driven inspections within an urban environment all inspections within Salford are carried out on foot. Although this inspection method is considered to be more rigorous it is acknowledged that a walked inspection is more time consuming. Inspection frequencies on the classified road network have been amended accordingly.

Carriageways		
Highway Groups	CoP Hierarchy	Safety Inspection Frequency (per annum)
Classified - Principal Roads	Category 2 Strategic Routes	4
	Category 3a Main Distributors	4
Classified- Non-Principal Roads	Category 3b Secondary Distributors	4
Unclassified Roads	Category 4a Link Roads	2
	Category 4b Local Access Roads	2

Footways		
Highway Groups	CoP Hierarchy	Safety Inspection Frequency (per annum)
Classified - Principal Roads	Category 1(a) Prestige Walking Zones	12
	Category 1 Primary Walking Routes	4
	Category 2 Secondary Walking Routes	4
Classified- Non-Principal Roads	Category 1(a) Prestige Walking Zones	12
	Category 1 Primary Walking Routes	4
	Category 2 Secondary Walking Routes	4
Unclassified Roads	Category 1(a) Prestige Walking Zones	12
	Category 1 Primary Walking Routes	4
	Category 2 Secondary Walking Routes	4
	Category 3 Link Footways	2
	Category 4 Local Access Footways	2

Footways identified as high risk (outside hospitals, schools, pedestrianised shopping areas and other high risk areas) will be inspected 12 times per annum. A schedule is attached below.

Cycle tracks		
Highway Groups	CoP Hierarchy	Safety Inspection Frequency (per annum)
Classified - Principal Roads	Category A - Carriageway	4
	Category B - Footway	4
Classified- Non-Principal Roads	Category A - Carriageway	4
	Category B - Footway	4
Unclassified Roads	Category A - Carriageway	2
	Category B - Footway	2
	Category C – Off Highway	0

All safety inspections are to be recorded on hand held data capture devices. Inspections are carried out on foot, first walking down one side of the footway, inspecting the highway up to the centreline of the carriageway, and then carrying out a similar process on the opposite side of the highway. Any identified defects falling within prescribed intervention criteria are to be subject to an order to make safe and/or repair within prescribed response times. Any defects made temporarily safe within 2 or 24 hours will be subject to a permanent repair within 28 days.

Response times

The Highway Inspector uses his or her judgement to identify and categorise all defects noted during a safety inspection. Visual observation combined with the application of measurable intervention criteria are utilised to identify and categorise highway defects.

Category	Response Time
1	Within 2 hours
2	Within 24 hours
3	Within 28 days

Intervention limits

Criteria relating to the nature and severity of the defect, the location of the defect within the footway or carriageway and the type of highway and its usage are all considered by the Highway Inspector to determine an appropriate course of action.

Carriageway	
Defect Type	Response Time Category
Potholes at designated pedestrian crossing points in excess of 25mm deep	3
Potholes in excess of 50mm deep	3
Ironwork with exposed vertical faces in excess of 50mm	3
Ironwork with gaps in excess of 50mm	3
Cracked or broken ironwork in danger of collapse	1
Missing ironwork	1
Rocking ironwork with a vertical movement exceeding 20mm	3
Defective highway drainage which results in standing water, over 50mm deep, restricting the carriageway width to less than two thirds of its total width.	3
Missing, damaged or defective crash barrier or parapet fencing that could pose a danger to the highway user	2

Footways and cycle tracks	
Defect Type	Response Time Category
Potholes in excess of 25mm deep	3
Rocking flags with a vertical movement exceeding 25mm	3
Kerb ridges, projections and gaps greater than 25mm	3
Missing, damaged or defective pedestrian guard rails that could pose a danger to the highway user	2
Ironwork with exposed vertical faces in excess of 25mm	3
Ironwork with gaps in excess of 25mm	3
Cracked or broken ironwork in danger of collapse	1
Missing ironwork	1
Rocking ironwork with a vertical movement exceeding 25mm	3
Standing water in excess of 25mm deep that restricts the footway width to less than 1000mm	3
Illegal obstruction reducing the footway width to less than 1000mm	3

Please note that missing or damaged ironwork may be the responsibility of a Utility Company. In these circumstances the Authority's Streetworks Co-ordinator will manage any non-action by the Utility Company following telephone and/or e-mail notification by the safety inspector.

Highway features subject to safety inspection

The defects outlined below give some indication of the types of observation made during a safety inspection. Highway defects are subject to the intervention levels and response times highlighted in this document. Repairs required via another Council Department or external agency are subject to the service standards set by that organisation.

Highways

- Bituminous Reinstatement – defective
- Bollards - PCC Flag Reinstatement
- Carriageway Markings
- Drainage – General
- Footway Concrete
- Guard Rail
- Epoxy repair to damaged kerb
- Replacement Road markings
- Carriageway HRA 100mm
- Carriageway Bitmac 300mm
- Carriageway SMA 100mm
- Footway Bitmac
- Footway Sand Carpet
- Carriageway HRA 300mm
- Carriageway SMA 300mm
- F/way T/U & Relay PCC Flags
- F/way Provide & Lay PCC Flags
- Footway T/U & Relay NS Flags
- Footway Provide & Lay NS Flags
- Footway Concrete Repairs
- Footway Flags to Concrete
- Footway Bitmac to Concrete
- Footway Flags to Bitmac
- Carriageway Bitmac 100mm
- Damaged St Furniture -Non-Electric
- Damaged St Furniture-Electric
- Street Nameplates
- Overhanging Vegetation

Environmental Services (referral)

- Dangerous Bonfire
- Weed removal – passageways
- Weed removal
- Litter/grass etc off highway
- Litter Bin Full
- Dead animal to be collected
- Leaves - request removal
- Spillage on Road/RTA
- Street Dirty/Litter
- Dog Fouling
- Graffiti Removal - Not offensive
- Graffiti Removal - Offensive
- Fly Tipping / Waste on Highway
- Trees
- Grass Verge Defects

Utility companies (referral)

Utility Ironwork Defective

Schedule of high use footways

Primary walking routes (Cat 1)	
Liverpool Rd	Dudley Rd to Dean Rd
Liverpool Rd	Preston Ave to Fairhills Rd
Liverpool Rd	Vigarage Rd to Princes Ave
Liverpool Rd	Argosy Drive to Church St
Church St/Regent St	Trafford Rd to Gilda Brook Rd
John William St	Albert St to Church St
Church St	Vigarage Grove to Regent St
Worsley Rd	Grange Rd to New Lane
Monton Green	Parrin Lane to Highfield Rd
Monton Rd	Monton Green to Wellington Rd
Eccles Old Rd	Half Edge Lane to Lancaster Rd
Stott Lane	Eccles Old Rd to Eccles New Rd
Liverpool St	Derby Rd to Langworthy Rd
Langworthy Rd	Liverpool St to Seedley Rd
Pendleton Way/Rossall Way/Hankinson Way	Round the Precinct670
Belvedere Rd	Precinct to Cross Lane
Frederick Rd	Broad St to Broughton Rd
Blackfriars St	Chapel St to Bridge (river) Manchester Boundary
The Crescent	University Rd to Oldfield Rd
The Quays	Broadway to The Lowery Centre
Trafford Rd	A602 to Swing Bridge
Ordsall Lane	Regent Rd to Trafford Rd
Leigh Rd/Simpson Rd	Brett Rd to Booths Hall Rd
Walkden Rd	East Lancashire Rd to Park Rd
Memorial Rd	Walkden Rd to High St
Bolton Rd	High St to Ellesmere Approach
Worsley Rd	Clovelly Rd to Trevor Rd
Chorley Rd	Moorside Rd to Manchester Rd
Station Rd	Chorley Rd to Bolton Rd
Manchester Rd/Bolton Rd	Billy Lane to Swinton Hall Rd
Bolton Rd	Claremont Rd to Dronfield Rd
Broughton Rd/Cromwell Rd	Broad St Underpass to Seaford Rd
Great Cheetham St West/East	Lower Broughton Rd to Leicester Rd
Leicester Rd	Great Cheetham East to Broom Lane
Great Clowes St	Great Cheetham West to Knoll St
Seaford Rd	Cromwell Rd to Frederick Rd

Secondary walking routes (Cat 2)
Lords St
Fir St
Allotment/Prospect
Astley Rd
MacDonald Rd
Brookhouse Ave
Fox St/College Croft
Fitzwarren St
Ellor St
Longshore Drive
Broadwalk
Tynebank/Parsonage Rd
Wentworth Rd
Ash Drive
Cromwell Rd
Fitton Crescent
Wellington Rd
Swinton Hall Rd
Queensway/Rake Lane
Bank Lane
Northumberland St

Inspector training

Salford City Council is committed to continual staff development and training. All highway inspectors carrying out safety inspections have an annual appraisal to during which ongoing training needs are identified and discussed.

Each member of the inspection team attends a monthly briefing session with his/her line manager and regular moderation exercises are arranged to ensure consistent inspection standards are maintained throughout the City.

Newly appointed Safety Inspectors spend a period of time with experienced colleagues from the Inspection team before carrying out inspections alone.

All Safety Inspectors are expected to obtain a formal Inspector Modular Training and Assessment Certificate (IMTAC). Additionally all Highway Inspectors are encouraged to obtain a supervisor level accreditation as required by the New Roads and Street Works Act 1991. Inspector Modular Training and Assessment Certificate

Section 5

Ad-hoc inspections

Ad-hoc inspections are to be carried out to identify any required maintenance works following customer requests for service.

All reported defects will be inspected within 2 working days of receipt.

All ad-hoc inspections are to be recorded on a hand held data capture device. Any identified defects falling within prescribed intervention criteria are to be subject to an order to make safe and/or repair within prescribed response times. Any defects made temporarily safe within 2 or 24 hours will be subject to a permanent repair within 28 days.

Response times

The Highway Inspector uses his or her judgement to identify and categorise all defects noted during an ad-hoc inspection. Visual observation combined with the application of measurable intervention criteria are utilised to identify and categorise highway defects.

Category	Response time
1	Within 2 hours
2	Within 24 hours
3	Within 28 days

Intervention limits

Criteria relating to the nature and severity of the defect, the location of the defect within the footway or carriageway and the type of highway and its usage are all considered by the Highway Inspector to determine an appropriate course of action.

Carriageway	
Defect Type	Response Time Category
Potholes at designated pedestrian crossing points in excess of 25mm deep	2
Potholes in excess of 50mm deep	2
Ironwork with exposed vertical faces in excess of 50mm	2
Ironwork with gaps in excess of 50mm	2
Cracked or broken ironwork in danger of collapse	1
Missing ironwork	1
Rocking ironwork with a vertical movement exceeding 20mm	2
Defective highway drainage which results in standing water, over 50mm deep, restricting the carriageway width to less than two thirds of its total width.	2
Missing, damaged or defective crash barrier or parapet fencing that could pose a danger to the highway user	2

Footways and cycle tracks	
Defect Type	Response Time Category
Potholes in excess of 25mm deep	2
Rocking flags with a vertical movement exceeding 25mm	2
Kerb ridges, projections and gaps greater than 25mm	2
Missing, damaged or defective pedestrian guard rails that could pose a danger to the highway user	2
Ironwork with exposed vertical faces in excess of 25mm	2
Ironwork with gaps in excess of 25mm	2
Cracked or broken ironwork in danger of collapse	1
Missing ironwork	1
Rocking ironwork with a vertical movement exceeding 25mm	2
Standing water in excess of 25mm deep that restricts the footway width to less than 1000mm	2
Illegal obstruction reducing the footway width to less than 1000mm	2

Please note that missing or damaged ironwork may be the responsibility of a Utility Company. In these circumstances the Authority's Streetworks Co-ordinator will manage any non-action by the Utility Company following telephone and/or e-mail notification by the safety inspector.

Section 6

Highway condition surveys

Salford City Council is committed to carrying out regular and systematic highway condition surveys to monitor the structural condition of footways and carriageways. The data produced will be used to facilitate the identification and prioritisation of programmed maintenance treatments and schemes throughout the City. A nationally accredited United Kingdom Pavement Management System (UKPMS) pavement management system will be used to analyse the data produced.

The type of highway condition surveys currently carried out by Salford City Council include:

- Coarse Visual Inspection (CVI)
- Detailed Visual Inspection (DVI)
- SCANNER (or TTS) – Machine Based Condition Survey
- Deflectograph – Machine Based Structural Condition Survey
- Sideways Force Coefficient Routine Investigation Machine (SCRIM) – Skidding Resistance Survey
- National Road Maintenance Condition Surveys (NRMCS) – Visual Condition Survey

Carriageway – inspection type / frequency			
Survey Type	Principal (A – roads)	Non- Principal (B & C – roads)	Unclassified (All other roads)
SCANNER (TTS) survey	100% of network annually	100% of network annually	-
CVI survey	-	-	20% of network annually
DVI Surveys	-	-	-
Visual Categorisation Survey	100% of network annually	100% of network annually	100% of network annually
SCRIM survey (skid resistance)	100% of network annually	-	-
NRMCS surveys	15 sites annually	5 sites annually	15 sites annually
Deflectograph Survey	-	-	-

Footway – inspection type / frequency				
Survey Type	Cat 1 Primary Walking Route	Cat 2 Secondary Walking Route	Cat 3 Link Footway	Cat 4 All Other Footways
CVI survey	-	-	-	-
DVI Surveys	50% of network annually	50% of network annually	-	-
Visual Categorisation Survey	12 times annually	12 times annually	2 times annually	2 times annually

The extent of the network surveyed may vary from year to year, but as a minimum the surveys required to produce the required Best Value Performance Indicators will be carried out in accordance with national guidelines.

Section 7

Skid resistance (SCRIM) surveys

Salford City Council is committed to carrying out regular skid resistance surveys on the Principal Road Network and high risk sites on the non-Principal Road network to identify locations where improvement of the skid resistance may be necessary following further detailed site investigations.

A separate detailed Skid Resistance Policy document complements this document.

Section 8

Utilities works

Central Government grant statutory powers to Utility Companies such as gas, water, electricity and telecommunications providers, to place apparatus in publicly maintained highways in accordance with the New Roads and Street Works Act 1991 (*NRSWA 91*) and its associated Codes of Practice.

Utilities can place, inspect, maintain, adjust, repair and renew their apparatus in any publicly maintained highway provided they serve advance notice (*S54 & S55*) to the Authority detailing when and how long they will be excavating, and a subsequent notice confirming completion. The purpose of the notice is to allow the Authority the opportunity to co-ordinate proposed works with other works, of any description, proposed to be executed in the street. The Utilities are also obliged to undertake the works in compliance with the Code of Practice for Safety at Street Works and to maintain their re-instatement for a minimum period of two years after issuing a completion notice (*S70*).

Once notice has been served correctly the Authority has no power to stop the works unless it is not being carried out safely, with due care and attention to public and operative safety, or if the works are causing unacceptable disruption to traffic flows. If this is the case we can direct the timing of the works so they are undertaken at certain times of the day, but we cannot refuse works to be undertaken at all.

Local Authority inspection regime

In accordance with prescribed legislation, the local authority is entitled to inspect a 30% annual sample of utility works to ensure compliance with all relevant codes of practice at three stages of the works. The utility is required to repair any defects identified at these three stages (*S75*)

Category A – During the execution of the works

Category B – Up to 6 months after completion of the works

Category C – Nearing 2 years after completion of the works

Utility Companies failing to carry out their works in an agreed and reasonably timely manner may be subject to fines levied under Section 74 of *NRSWA 91*. This fine can be served on Utility Companies who unreasonably occupy a public highway for prolonged periods of time (*S74*).

Utilities have a duty to maintain their installed apparatus for 'whole of life' and any identified defects must be repaired by the Utility Company to ensure the public highway is safe for its intended use (*S81*).

More information and contact details for utilities working in the city, can be found at www.salford.gov.uk/utilityworks

Section 9

Gully emptying

Highway drainage is an integral part of the highway infrastructure. Generally, a highway drainage system will consist of gullies that are usually located at the edge of the road by the kerb and a pipe connecting the gully pot to the main drainage system.

There are no nationally set criteria as to the frequency that gullies should be cleansed. However, it is the intention of Salford City Council that all gullies on the Classified Principal Road Network (A Roads) and the Classified Non-Principal Road Network (B and C Roads) are cleansed twice per year. All other gullies on the Unclassified adopted highways network are to be cleansed once per year.

Although every effort is made to cleanse all gullies on adopted highway network at the prescribed frequencies using a gully emptying machine, parked cars, damaged gully grates and frames and other access difficulties may prevent this. Under these circumstances alternative arrangements will be made.

Section 10

Culverted watercourses trash screen maintenance

Where a watercourse passes under an adopted highway a trash screen is usually provided to prevent debris from entering and blocking the culverted section. The accumulation of debris on these screens requires regular clearing to ensure free flow of the watercourse.

The culverts are routinely inspected on a five yearly cycle, but there are no nationally set criteria as to the frequency that trash screens need to be cleansed. However, Salford City Council ensures that all trash screens are cleansed either weekly or twice monthly depending upon location and risk.

The city of Salford also provides a reactive service to deal with incidents relating to trash screens as they arise.

Section 11

Winter gritting and snow clearing

Salford City Council's aim is to provide a winter weather maintenance service, which as far as possible allows the safe movement of traffic on trunk, principal, classified and certain district roads in the City of Salford, and keeps to a minimum delays and accidents caused by adverse winter weather. Top priority will be given to the Principal Road network.

From the 1st October to the 30th April Salford's gritting teams are available 24 hours per day, 7 days per week to carry out machine gritting.

The met office carries out specialised winter weather forecasting during this period in order to assist Salford's technical staff in determining what action is required to keep the highway network safe.

When frost, ice or snow is forecast, Salford's gritting teams ensure that priority highways are treated. The council is responsible for maintaining 760km of roads within Salford.

During periods of ice and snow priority is given to main roads and bus routes, which accounts for approximately 20% of the network.

The motorway network within Salford remains the responsibility of the highways agency and their nominated agents.

A separate and more detailed document outlining the 'Winter Weather Emergency Plan for Highways', and identifying the defined gritting routes within Salford, has been produced to complement this booklet.

Section 12

Street lighting

Legal obligations

Although there is no statutory duty on a highway authority to provide street lighting, responsibility for the installation and operation of street lighting systems on the highway was passed to Local Authorities via the Local Government Act 1966.

Although Salford City Council does not have a duty to provide lighting, it has a duty of care to maintain its lighting stock in a safe condition and to ensure that the equipment is fit for purpose.

The authority has legal obligations to maintain the electrical infrastructure in accordance with The Electricity at Work Regulations 1989 and the Health and Safety At Work Act 1974. A system for recording underground electrical apparatus as required by the New Road and Street Works Act 1991 and the Electricity Safety, Quality and Continuity Regulations 2002 is to be developed within the asset inventory.

Intention of the document

This document seeks to outline the Operational Policies and Standards of Salford City Council for the management of its street lighting network and its street lighting assets. It defines good practice within current budget levels, identifying frequencies for cyclic maintenance and inspection as well as policy and strategy for the repair and maintenance of the lighting network.

Status of the Code of Practice

This Statement of Operational Policies and Standards of Salford City Council adopts the policies, procedures and standards outlined in the document "Well Lit Highways" 2002 as produced by the UK Lighting Board.

Review of the document

This document is subject to regular review at an operational level in accordance with the City Council's commitment to a process of continuous improvement.

Service objectives

The street lighting section provides highway lighting with the aim of providing a safe and secure environment.

Asset maintenance

'Asset maintenance' describes the planned preventative maintenance and reactive fault maintenance activities undertaken to maintain the Council's Illuminated Street Furniture.

'Asset maintenance' is divided into the following sub activities

(a) Reactive maintenance

(b) Cyclic maintenance safety inspections and Bulk Lamp Replacements

Reactive maintenance deals with the identification and rectification of faulty Illuminated Street Furniture.

Night-time safety inspections are carried on a 10-day cycle from October to March and on a 20-day cycle from April to September to identify lighting outages and other defects on the lighting network.

The results of these inspections are recorded and relayed back to the Council on the day following for repair.

Electricity supply failures can result from defects within: -

(a) Electricity Company Networks

When the Electricity Company (Distribution Network Operator's) supply fails the Street lighting section will raise an official to the Distribution Network Operator for repair.

These faults are repaired by the Distribution Network Operator at no cost to the Council. The use of these supplies is of benefit to the Council so whenever new / replacement installations are commissioned Distribution Network Operators supplies are utilised wherever possible.

(b) Private Cable Networks

The minority of the Councils street lighting assets are currently inter-connected through the Councils own private cable network, which is fed from mains electricity supply provided by the Distribution Network Operator. It is the Council's responsibility to repair faults arising on this private cable network.

The city council operates a 24-hour emergency attendance service to respond to all dangerous occurrences involving electrical equipment on the highway. The City Council will replace all items of illuminated street furniture severely damaged by road traffic accidents and vandalism and seek to recover the cost from the responsible party.

Current service standards (subject to review)

Performance indicator	Standard
LPI 24 Percentage of street lights working as planned	99.0%
BVPI 215a Average response time to complete a street lighting repair	6 days
BVPI 215b Average response time for a DNO (Distribution Network Operator) to repair loss of supplies and defective fuse units	17 days
Attendance at Electrical Emergencies	2 hours

Cyclic maintenance safety inspections and bulk lamp replacement

Some of the benefits of a planned bulk lamp replacement regime are as follows:

- Maintaining high standards of light output.
- Minimising the more expensive costs associated with random lamp failures.
- Localising maintenance work in pre-planned areas.
- Preventing the expensive replacement of control gear failure caused by burning the lamp to destruction.
- Coinciding electrical six year testing of the installation.
- Keeping energy usage to a minimum. (As a lamp ages beyond three years the energy increases but the light output falls).
- In at least 90% of cases, the failure is indeed only the lamp.

The following safety measures are carried out in conjunction with bulk lamp replacements: External cleaning of all lighting units and photoelectric cells, visual electrical inspection and the repair and rectification of minor faults.

Coarse Visual inspections of the structural condition of lighting columns are also carried out on a planned basis to coincide with bulk lamp replacement, as recommended by the Institute of Lighting Engineers document. TR22 Lighting columns and signposts: planned inspection regime (2002)

The structural inspection of all lighting columns is a key activity. Many street lighting columns are past their expected design life of 30 years and are thus continuing to deteriorate.

The structural condition of the columns are "risk" ranked and are categorised as follows: 1 – good condition 2 – fair condition 3 – poor condition and 4 – requires urgent replacement. This approach allows the 'worst condition' assets to be identified. However this method of inspection is purely subjective and can only be applied to concrete lighting columns. In addition the data collection is paper based and is inefficient to manage.

As part of the ongoing development of the asset management system it is envisaged that a computerised risk management regime will be introduced to identify structural defects on both steel and concrete columns.

To comply with the Electricity at Work Regulations Act 1989 (EAWR) a regular testing and inspection programme must be adhered to and test and inspection records must be maintained for each Illuminated Street Furniture asset. Electrical testing is carried out on a six yearly rolling programme in accordance with EAWR and British Standard 7671 – I.E.E. Wiring regulations.

Cyclic maintenance safety inspections and bulk lamp replacement regimes	
Bulk lamp replacement lighting columns Including structural inspections	3 years
Interim safety inspections and cleaning of luminaires	18 months
Electrical test and inspection	6 years
Illuminated bollards Bulk lamp replacement	1 year
Illuminated bollards safety inspections and cleaning	1 year
Illuminated subways and underpasses Bulk lamp replacement	1 year
Illuminated traffic signs	3 years
High Mast lighting safety inspections	3 years

Asset inventory

Salford City Council uses Southbank Systems 'Confirm' integrated highway maintenance and management database that covers all aspects of the street lighting service. The 'Confirm' system is used to: -

- Log and manage telephone calls, letters, and faxes
- Maintain defect information
- Create works orders and manage budget/cost information
- Manage the street lighting network
- Maintain street lighting asset and inventory information
- Assist with the production of national and local performance indicators for street lighting
- Schedule and manage street lighting cyclic maintenance works
- Manage street lighting energy consumption

Areas for development

- Risk management
- Whole life costing
- Cable network information
- Real time data collection
- Planned programme of lighting replacements

Energy details

Energy is supplied via a competitively won contract. Both this tender process and a continuing research into more energy efficient equipment ensure best value in terms of energy consumption. It is also Policy to consider the potential provision of both green and renewable energy for street lighting and illuminated signs within the city.

The current energy supply contract provides for 100% "green" energy.

Although dependent upon the type of energy supplied the climate change levy per KWh coupled with a small annual growth in the number of units results in increased energy costs over time.

Section 13

Legislation

Highways Act 1980

Section 41

Duty to maintain highways at public expense

Section 58

Special defence in action against a highway authority for damages for non-repair of a highway

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Section 54

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