

BOROUGH OF POOLE HIGHWAY MAINTENANCE INFORMATION STRATEGY



Section 1 Introduction

The Borough's Asset Management Strategy sets out how the Council will manage the Highway Network taking into consideration whole life cost, asset condition, customer needs, local priorities, level of risk and the use of available resources.

Delivery of the strategy requires an understanding of the asset condition.

Asset information comprises information on what physical highway infrastructure assets the Council has responsibility for and includes number, location, performance and value. Effective asset management planning and decision-making relies on this information being available, appropriate, reliable and accurate.

This strategy details the asset information management approach adopted for Poole's key highway assets.

This strategy will be used to inform stakeholders of the need for asset information to make decisions for delivering the highway service and provides the basis to adopt asset information management principles to achieve an integrated asset management approach.

Strategy Statement

This Highway Asset Information strategy will allow key investment decisions to be made on highway assets and deliver the highway service in line with the Asset Management Strategy.

Objectives

The objectives of the Council's Highway Asset Information strategy are to:

- Establish the highway asset information management approach for all activities of the highway service;
- Document the highway asset information management approach;
- Enable decision making by providing relevant and current information
- Align with National Standards

A new code of practice 'Well Managed Highways' was issued in October 2016 and in accordance with its requirements inspection regimes for all asset groups are being reviewed to enable the new code to be implemented by October 2018.

Asset Information

The following types of asset information are stored within our management systems:

- Inventory – describes asset location, type, size and construction. This supports the calculation of Gross Replacement Cost;
- Performance – condition information related to aspects of performance, lifecycle planning, identifying programmes of work, and to financial requirements, such as calculation of the Depreciated Replacement Cost;
- Financial – Supports budgets, financial planning, determining value for money in delivering overall performance and prioritising maintenance activities. It includes unit rates for asset management activities and information to support WGA requirements, including calculation of the Depreciated Replacement Cost and Gross Replacement Cost.

The considerations for the need of information should be:

- How the information supports the asset management approach;
- The quality, age and coverage requirements;
- Statutory requirements;
- Cost of information collection, storage and ongoing management, including software licences and IT;
- Value of information and/or the risk of not collecting it.

Information Access

Access to the information within the information systems will be given to those responsible for each asset group to ensure appropriate management of the information. Information will be provided periodically for performance monitoring, benchmarking and on request for other asset management functions as required. When providing information, it must be dated to ensure suitability of use.

Asset Management Systems

Details of the current systems used are given below

Asset Type	Use	System	Current Provider
Carriageway	Strategic	UKPMS hosted	WDM Limited
Carriageway	Operational	RMS Hosted	WDM Limited
Structures	Strategic & Operational	AMX	AMX Solutions Limited
Footway	Strategic	ReGen hosted	Highway Surveyors
Footway	Strategic	UKPMS hosted	WDM Limited
Footway	Operational	RMS hosted	WDM Limited
Street Lighting	Strategic & Operational	Mayrise	YOTTA Limited
ITS	Strategic & Operational	Inview hosted	Siemens Limited

Statutory Requirements

Single Data List

There are four statutory data requirements reported to Department for Transport (DfT) annually. Further detail is given in each individual asset section.

Highway Inventory Data
Road Condition Data
Road Lengths Survey
Winter Salt Stock Holdings

The Whole of Government Accounts

The Government Resources and Accounts Act 2000 (GRAA) requires the Treasury to prepare "Whole of Government Accounts" (WGA) for a group of bodies that appears to the Treasury to exercise functions of a public nature or to be entirely or substantially funded from public money. As a local authority, the Council are required to report financial information under the Act. Highway infrastructure asset information forms part of the statutory return that is provided to the Treasury annually.

The Gross Replacement Cost (GRC) is the total cost of replacing either the whole of an existing highway asset or some part of it with an equivalent new asset which provides the same or improved performance as the existing. The GRC is calculated by taking the inventory amount and multiplying by the unit replacement cost.

The Depreciated Replacement Cost (DRC) is a method of valuation which provides the current cost of replacing an asset less deductions for all physical deterioration and all relevant forms of obsolescence and optimisation. The DRC represents the net current value of the asset (the GRC less depreciation). The depreciation is the cost of all the replacements/treatments needed to maintain/restore its service potential over the life cycle, spread over the estimated number of years in the cycle.

To calculate the DRC, inventory and condition information with the age of the asset and where it is within the lifecycle is required.

All asset information required for the WGA return is captured in the valuation toolkit produced by the Chartered Institute of Public Finance and Accounting (CIPFA).

Section 2 Carriageway Information

Summary of Asset

Network Hierarchy	Category	Rural kms	Urban kms	Total
1	Motorway	0	0	0
2	Strategic Route – Major A roads	23.13	0.39	23.52
3a	Main distributor – other A roads and heavily trafficked B roads	3.47	6.2	9.68
3b	Secondary Distributor – other B roads, heavily trafficked C roads and bus routes	9.87	83.74	93.61
4a	Link Road – links between main and secondary distributor roads	4.9	52.4	57.3
4b	Local Access Road – roads carrying access traffic	0	350.89	350.89

Method of Collection

The condition of the carriageway asset is assessed through scheduled visual safety inspections combined with annual machine surveys.

Visual inspections

These are planned highways safety inspections carried out on the network by Highways Inspectors. The frequency of the inspections depends on the carriageway hierarchy as detailed below:

Road Hierarchy	Inspection frequency per year
2, 3a, 3b	12
4a	4
4b	2

These inspections identify defects that are then repaired within the timescales contained in the Highway Inspection Policy.

This information is used in the process to identify capital maintenance schemes.

Machine Surveys

These surveys are carried out by WDM Ltd as part of the South West Highways Condition Survey Collaboration.

SCANNER

This involves using a specialised survey vehicle to establish the condition of the carriageway, in relation to surface texture, profile, rutting, cracking, and edge deterioration.

This information is to calculate national condition indicators, to calculate depreciation for Whole of Government Accounts, and is also used to make informed decisions about scheme identification, priorities and possible treatments.

SCANNER surveys are conducted on the whole road network, with 100% of the A, B and C road network surveyed over two years. The whole network is surveyed in one direction each year.

The whole unclassified network is surveyed annually using a Multi Function Road Monitor which is a smaller version of a Scanner vehicle. This survey records the same information as the SCANNER survey with the exception of cracking information.

SCRIM (Skid resistance)

The SCRIM survey is undertaken using a specialised vehicle which measures skid resistance across the network.

The survey information is compared to required standards according to the specific site, which then identifies sections of highway where skid resistance should be restored or improved.

Details of how this information is used to identify sites and how they are prioritised, is set out in Poole's Skid Policy. SCRIM surveys are conducted annually, in both directions, on selected strategic, main and secondary roads.

They are assessed over a three year cycle of early, mid, and late season (known CSC methodology) collection to take into account seasonal variations in the readings.

Access to the Information

The information relating to length width and machine survey results is held in a Pavement Management system database provided and hosted by WDM. Following adoption of a section of carriageway (following a Section 38 or 278 agreement) the new sections are added to the network inventory for inclusion in future surveys where appropriate.

Survey results are uploaded on completion by WDM.

Changes to as built information are managed by Borough of Poole Staff with support from WDM as required.

Staff within the Asset Management team has access to the information but permissions to change information is restricted to key staff.

Information relating to routine highway inspection is collected on handheld devices and is then uploaded and held in the Routine Maintenance database provided by WDM. This process and system is currently under review.

Use of Information

The information is used to produce national indicators derived from Road Condition Indices (RCI) which is calculated using SCANNER information. These are as follows:

130-01 % of Principal road network where maintenance should be considered

130-02 % of Non-principal road network where maintenance should be considered

130-03 – Skidding Resistance surveys - deficient and satisfactory lengths on the Principal Road network

130-04 – Carriageway work done survey - length of carriageway treated by treatment category.

132-01 – Local authority estimate of road lengths. This is used to allocate maintenance block funding

251-01 – Local authority winter salt stock holdings

Condition information is used for lifecycle planning and to determine programmes of work for resurfacing and improvement of anti skid properties.

Length, width and condition information is used to produce costs for annual asset valuation (GRC and DRC).

Funding

The information collection and provision of the database is funded from the Capital Maintenance Block Allocation.

Section 3 Footways

At present there is limited inventory information held on Poole's footways. A programme of surveys is in progress that records length, width, construction type and condition.

The lengths surveyed are as follows

Year of Survey	Length of Footway (km)	Average Width (metres)	Length of Carriageway surveyed (km)
2015 -16	125.2	2.4	76.2
2016 -17	156.6	1.9	89.5
2017 -18	155.6	1.8	87.1

Summary of Asset

Hierarchy Category	Category Name	Description	Length Surveyed to April 2017 (km)
1A	Prestige Walking Route	None in Poole	-
1	Primary Walking Route	Busy shopping areas and main pedestrian routes e.g. High St , Ashley Rd etc	53.3
2	Secondary Walking Route and Safe Routes to School	Medium Usage through local areas and shopping centres	309.9
3	Linked Footway	Low usage estate roads and cul-de-sacs	74.2
4	Local Access Footway	Low usage estate roads and cul-de-sacs	-
5	Definitive Right of Way	Unbound Public Rights of Way	-

Method of Collection

Safety Inspections

The condition of the footway network is managed through planned safety inspections. The frequencies of these routine inspections are documented in the table below and vary according to its position in the footway hierarchy

Footway Hierarchy	Inspection frequency per year
1	12
2	4
3 and 4	2
5	1

FMS Surveys

The footway maintenance survey is carried out by accredited surveyors and is a detailed visual inspection of the footway which records length, width and construction details and materials. Defects are recorded and are categorised as red, amber, yellow or green.

Access to information

The information from the FMS survey is held in a stand alone database provided by the surveying company. The information is compatible with the PMS database and can be uploaded into it so can be used alongside carriageway condition information.

Use of Information

Condition information is used to determine programmes of work for improvements

Length, width and condition information is used to produce costs for annual asset valuation (GRC and DRC).

Funding

The information collection and provision of the database is funded from the Capital Maintenance Block Allocation.

Section 4 Structures

Summary of Asset

Type of Structure	Number
Bridge or culvert with span greater than 1.5m	37
Bridge or culvert with span less than 1.5m	9
Retaining Wall	20
Subway	26
Footbridge	10
Sign Gantry	7

The inventory details held are comprehensive and there is a high level of confidence in the accuracy and coverage of the information.

The bulk of the inventory information does not change from year to year, but additional structures are added due to new works or amendments being made when new information is received.

Condition information is updated following a general or principal inspection

Method of Collection

Visual Inspections

Type	Description	Frequency
General Inspection	Visual examination of accessible parts using ladder or dry suit if necessary.	All stock 2 yearly (subject to review in line with Code of Practice)
Principal Inspection	Visual examination. Access to within arms reach of all parts using specialist equipment if necessary.	6 yearly for larger structures unless extended by risk assessment (subject to review in line with Code of Practice) New structures before entering onto asset register
Risk Inspection	Monitoring of known defects at more frequent intervals	As required
Reactive Inspection	As required after reports of damage	As required

Each element of the structure is inspected and is given a condition rating.

The BCI combines these ratings to calculate an overall performance indicator for the structure. They range from 0 to 100.

Access to Information

All bridge and structures inventory information is recorded in a Bridge Management Database provided by AMX which enables information to be retrieved for reporting purposes and updated in response to changes in the asset.

Access is restricted to suitably trained staff in the Asset Management Team.

Use of Information

DfT Single data list. The number and types of structure are reported. This information is used to allocate maintenance block funding

The condition information is used to calculate the Bridge Condition Indicator.

Condition information is used to determine programmes of work for improvements.

Dimensional information together with details of road carried and crossed and current condition is used to produce costs for annual asset valuation using the CIPFA Structure Toolkit.

Funding

General inspections and provision of the database is funded from the Bridge Maintenance Revenue allocation

Principal Inspections are funded from the Capital Maintenance Block Allocation.

Section 5 Street Lighting

Summary of the Asset

Type of column	Number of columns					Total
	< 20 years old	> 20 but < 25	> 25 but < 30	> 30 years old	> 40 years old	
Aluminium	137	0	0	7	0	144
Concrete	7492	58	192	1,570	0	9312
Non Galv. Steel	1466	327	712	1080	0	3585
Galvanised Steel	3,713	619	238	90	0	4660
Stainless Steel	12	0	0	0	0	12
Cast Iron	67	0	77	73	0	217
Wall mounted	88	9	20	34	0	151
OVERALL	12,975	1,004	1,239	2,854	0	18,079

The inventory details held are comprehensive and there is a high level of confidence in the accuracy and coverage of the information. Over the last three years a significant number of lanterns and columns have been replaced and details of these works have been recorded on the asset database. The Council's maintenance contractor is responsible for updating the records held when inspections or maintenance is carried out to a column or lantern.

Method of Collection

Records are updated as planned or reactive works are carried out.

Routine maintenance visits are recorded on the inventory system and on a card stored inside the column.

Electrical inspections are undertaken on a rolling programme and details are recorded on the inventory by the Council's contractor.

Access to Information

Inventory and condition information is held in a database provided and hosted by Yotta.

Staff within the Asset Management team have access to the information. The Council maintenance contractor also has access to the information to update details as works are carried out.

Use of Information

DfT Single data list. The number of columns is reported. This information is used to allocate maintenance block funding.

The condition and age information is used to prioritise and programme column and lantern replacements.

Inventory and condition information is used to produce costs for annual asset valuation (GRC and DRC).

Funding

The costs of inspections and provision of the database is funded from the Street Lighting Maintenance revenue budget allocation.

Section 6 Traffic Control and ITS Systems

Summary of the Asset

Number of Signal Controlled Junctions	59
Number of Toucan Crossing	21
Number of Pelican Crossings	66
Number of Signal controllers	146
Number VMS Signs	15

The inventory details held are comprehensive and there is a high level of confidence in the accuracy and coverage of the information. The Council's maintenance contractor is responsible for updating the records held when inspections or maintenance is carried out to signal installation.

Method of Collection

Records are updated as planned or reactive works are carried out.

Routine maintenance visits are recorded on the inventory system by the Council's contractor.

Access to Information

Inventory and condition information is held in a database provided and hosted by Siemens.

Staff within the Asset Management team have access to the information. The Council's maintenance contractor also has access to the information to update details as works are carried out.

Use of Information

The condition and age information is used to prioritise and programme asset replacements.

Inventory and condition information is used to produce costs for annual asset valuation.

Funding

The costs of inspections and provision of the database is funded from the Traffic Signals Maintenance revenue budget allocation.

Effective from date	January 2018
Review date	January 2020
Review frequency	Two yearly