Newcastle City Council

Data Management Plan

Document Information

Title	Data Management Plan
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Description	This document details how we manage the highway assets data

Document History

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1.0	Draft	TBC	P Holmes Principal Engineer	Not applicable

Document Control

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1.0	Final	TBC	Peter Gray, Head of Highways and Local Services

Contents

1. Introduction

This plan records the data held about each of the asset groups that make up the highway asset, it details where the data is stored and the systems used for data storage, it also identifies how and when this data is updated, verified and validated. Where data or system deficiencies exist these are acknowledged and a plan is included for how and when improvements will be made to the data or systems.

2. Types of Data

The types of data required in order to manage the highway asset are:

- Inventory: the number, location, size, type, age and component make up of each asset.
- Condition: measurement and rating of the condition of the asset from testing or visual inspection.
- Inspection: details of the inspection regime, inspection results and actions initiated
- Use: details of the use of assets in the form of data such as traffic counts, heavy vehicle routes, etc.
- Safety; details of accidents and incidents that occur on the asset
- Cost; details of the unit cost of common activities and the overall cost to enable cost benchmarking

3. Asset Management Data Uses

The uses that the asset data enables are:

- Monitoring of, and reporting on, the condition of the road network
- Prediction and reporting of funding needs
- Identification and prioritisation of sites and assets for maintenance works
- Monitoring and reporting of performance (performance indicators
- Assessment of the expected lives of individual assets or asset components
- Valuation of the asset and calculation of depreciation
- Public information to provide greater transparency

4. Asset Groupings

For the purpose of this plan and for all highway asset management reporting, the council has adopted the groupings used in the CIPFA Transport Asset Code as shown below.

Level 1 **Asset type**	**Level 2** **Asset group**	**Level 3** **Components that level 2 implicitly covers**
Carriageway	Area (square metre) based elements • Flexible pavements • Flexible composite pavements • Rigid concrete pavements • Rigid composite pavements	• Pavement layers • Other surface types, e.g. paved • Central reservation, roundabout, lay-by, traffic island, etc • Earthworks (embankments and cuttings, retaining walls height <1.35m) • Traffic calming • Fords and causeways
	Linear elements	• Kerbs • Line markings • Road studs • Road drainage elements (gullies, drains, etc, but not large structures) • Boundary fences and hedges • Hard strip/shoulder verges/vegetation
Footways and cycletracks (attached to the road or segregated)	• Footways • Pedestrian areas • Footpaths • Cycletracks	• Pavement layers • Other surface types, eg block paving, • unbound materials
Structures	• Bridges (span >1.5m) • Cantilever road sign • Chamber/cellar/vault • Culverts (span >0.9m) • High mast lighting columns (height >20m) • Retaining walls (height >1.35m) • Sign/signal gantries and cantilever road signs • Structural earthworks, e.g. strengthened/reinforced soils (all structures with an effective retained height of 1.5m or more) • Subway: pipe • Tunnel (enclosed length of 150m or more) • Underpass/subway: pedestrian (span of 1.5m or more)	All elements identified on the CSS inspection pro forma Smaller water-carrying structures are considered as road drainage

Level 1 **Asset type**	**Level 2** **Asset group**	**Level 3** **Components that level 2 implicitly covers**
	• Underpass: vehicular • Special structure	
Highway lighting	• Lighting columns • Lighting unit attached to wall/ wooden pole • Heritage columns • Illuminated bollards • Illuminated traffic signs	• Column and foundations • Bracket • Luminaires • Control equipment, cables • Control gear, switching, internal wiring cabling (within ownership)
Street furniture	• Transport • Highway • Streetscene/ amenity	• Traffic signs (non-illuminated) • Safety fences • Pedestrian barriers • Street name plates • Bins • Bollards • Bus shelters • Cattle grids • Gates • Seating • Verge marker posts • Weather stations
Traffic management systems	• Traffic signals • Pedestrian signals • Zebra crossings	Different types
	• In-station	Complete installation
	• Information systems • Safety cameras	• Variable message signs • Vehicle activated signs • Real time passenger information

Additionally NCC has included the assets below within their Highway Asset Management Plan.

Level 1 **Asset type**	**Level 2** **Asset group**	**Level 3** **Components that level 2 implicitly covers**
Highway Green Spaces	• Grass Verges	• Topsoil, Subsoil, land drainage, Vegetation, Street Furniture,Fencing,signage, Lighting
	• Trees	• Roots, Trunk, Limbs, Branches, foliage ,seeds and fruits, Tree supports, stakes, guards, grilles, irrigation and drainage systems, root barriers / pits
	• Hedges	• Trees/ Shrubs, Topsoil, Subsoil
	• Flower beds, Shrub Beds and Rockeries	• Flowers, Shrubs, Topssoil,Subsoil, Rocks, membranes, gravel, signs (sponsorship and directional)
	• Planters	
Winter Maintenance	• Salt Storage Areas	
	• Gritters	
	• Salt Bins	

5. Data Storage

Data for each asset is held electronically on the systems shown in the table below:

Software Systems Used

	Information System Capability & Use							
		Carriageways	Footways	Structures	Street Lighting	Green Spaces	Street Furniture*	Traffic Management Systems***
1	Asset register	Symology Database	Symology Database	Bridgeman database	access database / arcview GIS	Arcview GIS	Symology Database	Total Mobile Works Management System
2	Safety Inspections	Symology Database	Symology Database	Bridgeman database / Atkins spreadsheets	access database / arcview GIS	Site Specific RAs not systematically recorded	Symology Database	Total Mobile WMS
3	Condition survey	Symology Database	Symology Database	Bridgeman database / Atkins spreadsheets	access database / arcview GIS	Ltd updates to Tree Condition since 2014 No recognised System for Grounds	Symology Database	Not currently gathered
4	Routine Reactive Maintenance	GIS, Symology	GIS, Symology	Structure File located on NCC server	access database	Envirocall Works Management System	Symology Database	Total Mobile WMS
5	Cyclic Maintenance	Hard copy drawings GIS, Symology	Hard copy drawings GIS, Symology	Structure File located on NCC server	access database	Arcview GIS Excel	Symology Database	Total Mobile WMS
6	Planned Maintenance	Hard copy drawings PHM files located on NCC server GIS, Symology	Hard copy drawings PHM files located on NCC server GIS,	Structure File located on NCC server	access database	Access Database (Arbor) Manual records Grounds	Symology Database	TS files located on NCC server Symology Database

			Symology					
7	Streetworks	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database
8	Street Gazeteer	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database	Symology Database
9	Accident Analysis***	TADU-cirtas NCCTARDIS	N/A	N/A	N/A	N/A	N/A	TADU-cirtas NCCTARDIS
10	Traffic Data (Counts)***	TADU-Trads TCP	N/A	N/A	N/A	N/A	N/A	TADU-cirtas NCCTARDIS
11	Customer Contacts	Envirocall	Envirocall	Envirocall	Envirocall	Envirocall	Envirocall	Envirocall
12	3rd Party Claims	LACS*	LACS	LACS	LACS	LACS	LACS	LACS
13	Departmental Finance	FAMIS**	FAMIS	FAMIS	FAMIS	FAMIS	FAMIS	FAMIS
14	Winter Maintenance	Hard Copy Records / GIS	Hard Copy Records / GIS	Hard Copy Records / GIS	N/A	N/A	N/A	N/A

Comment on systems used.

*LACS - Local Authority Claims handling System.

**FAMIS – Financial And Management Information System (NCC internal database)

*** Transport Data used within Highway assessment management Plan is a subset of the data stored and maintained within Newcastle and the LA7 transport data system which also includes data such as Public transport supply and demand and transport planning data and analytical tools

6. Data Management

It is essential that we know the quality of the asset data we hold and that appropriate measures are taken to maintain the data and to collect any important data that is not currently held.

6.1 Roles and Responsibilities

The responsibility for the management of the data relating to each asset group has been allocated as follows:

Asset Group	**Person Responsible for Asset Data**
Carriageways	Principal Engineer (Highway Maintenance)
Footways, Footpaths & Cycleways	Principal Engineer (Highway Maintenance)
Drainage Infrastructure Gully Emptying Records	Principal Engineer (Flood Management) Operations Manager (Localised Services)
Street Lighting	Tay Valley Lighting / SSE (PFI Contract) Contract Monitoring Officer (NCC)
Non-illuminated signs	Principal Engineer (Highway Maintenance)
Structures	Principal Engineer (Highway Structures)
Traffic Signals	Traffic Signal Manager
Traffic Counts	Transport Analysis (Transport Development)
Accident Data	Transport Analysis (Transport Development)
Street Furniture	Principal Engineer (Highway Maintenance)
Green Spaces	Operations Manager (Localised Services)
Winter Maintenance	Operations Manager (Localised Services)

It is the responsibility of the person in the role shown above to ensure that data relating to the asset group for which they are responsible is updated, verified, validated and reviewed as shown in the following sections and that any actions required to improve data are reported to Principal Engineer (Highway Asset Management).

Overall responsibility for highway asset data quality lies with Principal Engineer (Highway Maintenance) or someone appointed specifically to undertake the role.

6.2 Updating

Asset data should be updated following changes to the asset as shown below:

Inventory Updating Timing	
Type	**Timing**
New Assets – Council Built	Within 6 months of completion
New Assets - Adoption	Within 6 months of adoption
Maintenance Works e.g. resurfacing, replacement etc.	Annually
Removals / Disposals / Stopping Up	Within 6 months of confirmation of completion

6.3 Data Verification

Any new or updated asset data that has been captured shall be verified prior to entering it into the appropriate software/database.

7. Data Assessment & Improvement

7.1 Annual Data Review

A review of data is undertaken annually and asset information is updated as required with all improvements will be identified in the Improvement Action Plan in the Annual Status and Options Report (ASOR).

Details of amounts of works undertaken and their associated costs will be reported annually in the ASOR.

All street lighting data held by the PFI contractor will be reviewed to ensure that it is up to date annually.

Asset Data Improvement Register		
Data Requirement	**Data Improvement Action**	**Date**
Carriageway Data		
Date of Last Surface Treatment - 80% held	Record details of all works undertaken within the Symology system annually	Ongoing
Type of Surface Treatment - 80% held	Record details of all works undertaken within the Symology system annually Differentiate between different bituminous surface types	Ongoing
Date of last resurfacing - 90% held	Record details of all works undertaken within the Symology system annually	Ongoing
Footway Data		
Footway drainage information	Review and update footway drainage information within the Symology system annually.	Annually
Structures Data		
Dimensions / specifications of structures and components are only 80% complete	Record from now within Bridgeman database	Ongoing
Expected Service Life of components is not recorded	Record from now on structure file	Ongoing
Date of Construction / Installation of structures and components is not recorded	Record from now within structure file and Bridgeman database	Ongoing
Manufacturer of components is not recorded	Record from now within structure file	Ongoing
Traffic Signals		

Asset Data Improvement Register		
Data Requirement	**Data Improvement Action**	**Date**
Update asset register	Determine condition data and transfer to appropriate system.	January 2017
Street Furniture		
Update asset register	Record from now on within the Symology system	Ongoing
Green Spaces		
Green Space Asset register Condition of Trees with influence on the Highway Single point of capture for routine and responsive works completed	Update survey of land maintained - ownership status, size, condition, gradients and content (street furniture etc) Frequency and method of recording TBC Recording System required – hard copy or WMS encompassing risk assessments	TBC TBC TBC TBC
Traffic Counts - Accidents		
External data	External Data Managed and Maintained by TADU- Gateshead new systems being Procured for Manual Counts – Web Access Available direct or via the NCC TARDIS/TCP	Ongoing
Winter Maintenance		
Data in relation to the gritting routes undertaken, apparatus and materials used are recorded only in Hard Copy Records.	Undertake an exercise to gather together the hard copy data and input it into the Symology system.	April 2016
	Investigate information held and determine any additional improvements required	June 2016

Asset Data Improvement Register		
Data Requirement	**Data Improvement Action**	**Date**
Bus Shelters		
Full asset information not established	Undertake an exercise to establish full asset information with the view to developing a policy	April 2016