Appendix 1 – Wiltshire Council's Current Highway Management Systems

Wiltshire Council currently operates several asset management systems within the Highways Department to manage its assets and perform its statutory duties. Technological developments in the software industry particularly around mobile working and asset lifecycle modelling have been evidenced through soft market testing and liaison with other local authorities. It has highlighted a need to undertake a procurement exercise for a Highway Asset Management System that will allow the authority to make full use of these advances. This will lead to improved efficiencies and even better management of the asset and budgets. The systems currently in use are the Bentley (Exor) Highway Management Database, WDM Ltd's Pavement Management System, Yotta Mayrise for Street Lighting and the My Wiltshire application. Below is a summary of the systems and their functions.

1   System: **Exor**

        Supplier: **Bentley**

Bentley Exor is currently hosted on Wiltshire Council servers and all upgrades are carried out through Wiltshire Council ICT and Bentley consultancy work at additional cost. The software and licence contract is renewed on an annual basis.

Software Modules	Description of current Functionality
Engineering Works Ordering and Management	User can create electronic works orders for all simple and complex engineering works. Works can be created for any number of contracts and can be built up using specific contract schedule of rates, instructions and geographical locations through in-built GIS capabilities. The works orders and return invoices are often sent to contractors and consultants via an electronic interface. Monthly outputs from Bentley Exor are used to update SAP but SAP does not offer the functionality described above that is essential when managing engineering works. Throughout the industry engineering specific software is used to manage the day to day works ordering process.
Street Works – Road Space Management	The Council as Street Authority has a statutory duty to co-ordinate all works in the highway, for which it has responsibility (Section 59 NRSWA) and utility companies have a statutory duty to co-operate in this process. The Council also has a duty under the Traffic Management Act 2004 (TMA) to effectively manage the road network, with a view to keeping the traffic moving. This work is managed and co-ordinated using a dedicated Street Works and Street Gazetteer module within the Bentley Exor database. Without such a system Wiltshire Council would be unable to perform its statutory duties.
Maintenance Network	Allowing complete management of adopted highway network including

Referencing	safety inspections and routes.
Management of National Street Gazetteer (NSG)	The National Street Gazetteer (NSG) contains definitive information and a unique referencing system for all streets in England and Wales and allows Local authorities to manage all street works carried out by themselves and statutory undertakers efficiently and effectively. Local Streetworks Gazetteers (LSG) are created and maintained by Local authorities under statute. All authorities upload their LSG data to the NSG hub monthly where the information is verified and made available by Geoplace to licensed users via web downloads. The LSG is managed and updated in Exor and is an integral asset for the authority in coordinating works on the highway.
Bridges and Structures Management	Provides complete inventory database of bridge assets including spatial information. Bridge inspection data is recorded against the asset allowing a forward programme of maintenance works to be designed and carried out. Reporting on the condition of the bridge asset through a Bridge Condition Index (BCI) is a requirement. Gross Replacement and Depreciated Replacements costs can be calculated as part of Whole of Government accounts.
Highway Defects & Safety Inspections	Provides dedicated GIS and GPS based inspection and asset collection software allowing highway inspectors to accurately record safety defects for repair and log inspection routes with a 'breadcrumb' trace. Safety inspections are a statutory duty and the authority is required to keep inspection records.

2   System: **Pavement Management System (PMS)**

Supplier: **WDM Ltd**

The WDM PMS is remote hosted on WDM servers as part of a managed service. All system updates and loading of survey data is carried out by WDM as part of this service. The software and licence contract runs on an annual basis.

Software Modules	Description of Functionality
UKPMS/PMS	Management of spatially referenced highway condition survey data for SCANNER, SCRIM, Deflectograph and Footway Network Condition Surveys (technical surveys are carried out by WDM Ltd and Yotta under separate contracts). Records maintenance history and material construction of all works carried out on the highway. Also enables the statutory reporting of national road condition indicators and asset valuation data complying with government introduction of account reporting methods.
Data Explorer and Scheme Manager	Enables condition data to be analysed, mapped and extracted. Highly configurable allowing the use of SQL queries to build datasets for analysis and reporting. Scheme manager allows users to generate and prioritise spatially referenced maintenance schemes based on condition data. Wiltshire Council's Skid Resistance Policy is uses this scheme generation and prioritisation functionality.

3   Software: **Yotta Mayrise Street Lighting**

          Supplier: **Yotta**

Remote hosted software for managing street lighting maintenance and asset data. The database is managed by Wiltshire Council's engineering consultants Atkins. The software and licensing contract runs on an annual basis.

Software Modules	Description of Functionality
Mayrise Street lighting	Asset database for the management of street lighting. Enables the management of daily tasks such as inspections and works ordering. Mobile capability for viewing assets and conducting inspections in the field. Asset reporting capability.

4 Software: **My Wiltshire (part of the My Council Services suite of software)**

Supplier: **Abavus**

My Wiltshire is hosted remotely by Abavus and is corporately managed software currently used by Highways, Rights of Way, Enforcement and Revenue and Benefits. It is an integral part of the new £12 million per year Highways Term Maintenance Contract with Ringway. The Council has a contract with Abavus that runs until the latter part of 2017 and the specification for re-procurement of a system will be dealt with by the Programme Office as a separate exercise with heavy involvement and consultation from the services that use it.

Software Modules	Description of Functionality
Customer Reporting	Enables members of the public and highways staff to report and photograph faults on the highway via computer or mobile device. Map based, GPS enabled, fully configurable by service users, mobile customer reporting and feedback tool. Can be integrated with any line of business application that supports this functionality.
Mobile Worker	Mobile Worker is linked to the customer Relationship Module which enables complete end-to-end management for repair of highway faults from first report to works allocation, through to completion. It is mobile, cloud based software that can be used across multiple platforms and devices allowing real-time recording and updating of information.
	The system is extremely configurable by designated service super-users, allowing full design of forms based on business processes. For example, works can be allocated to operatives manually or automatically through spatial and status driven rule-sets. Dynamic and standard risk assessment forms can be created and completed by staff ensuring safe systems of work. Currently in use by Wiltshire Highways and the term maintenance contractor (Ringway) for managing the local highways reactive and safety defect workload. Strong reporting capabilities which allows for the extraction of all database information in formats including CSV and HTML.
	Enhancements in the latest version enable visualised workforce tracking and lone working safety systems which has the potential to greatly increase the safety, efficiency and resilience of the service.