Appendix 1

Cambridgeshire County Council – Highways Asset Management system

Overview of the requirements

A Highways Asset Management solution, providing a fully integrated, end to end, mobile platform for internal use, with contractor and customer engagement.

- A SAAS solution, or hosted by vendor
- Provision of Production, Training and UAT environments
- Provision of consultancy, training and data migration to support the implementation of the chosen solution
- Provide management oversight of the Highways and Transportation service
- Be compliant with relevant legislation(s), codes of good practice and Cambridgeshire County Council's requirements
- Offer sophisticated, fully integrated Asset, Works, Financial Management and NEC Contract Management capability
- Provide mobile working capability with real-time communications for relevant activities and full integration with operational systems and Hardware
- Provide a Customer Service interface which allows customers to query the system directly

Works Management

The new application must provide an effective works management module which provides tools for:

- Budgeting
- Planning
- Costing and financial management
- Implementing
- Inspecting
- Asset data capture
- Full Audit Trail to enable defense of 3rd party claims
- Integration with Street Manger
- Management of operational activities with functionality for GIS plotting
- Contractor activities

- NEC Contract Management with capability to adapt from standard form. Including all communication requirements under NEC contract including but not limited to PMI's, EWN, CE, General Communications, Task Orders, Programme Acceptances, Defects, Delegated authority inbuilt, Analytics modules, Dashboard for communications, notifications to delegated parties, compliance checking and automatic cross referencing of contract clauses and compliance.
- Ability to request target costs
- Integrated CRM functionality
- Works ordering, that is NEC contract compliant and service information, schedules of work and full audit trail
- Ability to attach documents within the system

Inspections

The system must provide a means of creating, executing, and monitoring a programmed schedule of activities for works which are required to be carried out on a cyclic basis such as:

- Safety & Service inspections, planning and scheduling, including full audit trail
- Condition assessment surveys,
  Management of works programmes
- Inspection data must be available and updatable in real-time via mobile devices when working remotely

Street Lighting

The system must provide functionality to support for the management of Street Lighting and other illuminated assets. This must be provided as part of the highways system and be capable to interface with third-party applications.

Drainage Management System The solution should provide an effective management system that is capable of collecting all drainage assets and inspection data, including routine cleansing of gullies, catchpits, soakaways, weir kerbs, grips, cattle grids, water courses

Mapping (GIS) Interface

The system should provide the ability to link to other external data sources, including data in MapInfo / ArcMap / ArcGIS Pro mapping layers or other GIS formats.

It should enable embedded graphical, map-based interaction with assets, plus access to GIS spatial modelling and data analysis capabilities using GIS technology.

It should be able to export spatial data in any part of the system to enable external analysis within any GIS package.

Local Street Gazetteer (LSG)

The system must be able to maintain the LSG to meet GeoPlace data entry requirements and provide functionality to upload this data to the National Street Gazetteer hub. It must also facilitate the upload of Additional Street Data (ASD). This LSG must form a core part of asset recording, enabling records across all modules/services to be analysed from the same base street data. Street data should be editable at ESU-level.

The system should provide the facility to import bulk changes to the LSG data. It should also have the ability to make detailed queries of the LSG data that can be exported into an open source or Microsoft format.

Public Right of Way Information Management

The system must facilitate Public Rights of Way (PROW) information management including the ability to extract Definitive Map and Statement changes. It must have the facility to interrogate and to create and export reports on different assets, e.g. how many times complaints have been made about obstructions on a particular PROW.

The system should support Inspections, Works Ordering and Customer Enquiries.

Commons and Village Greens Information Management

Be able to record and report on Commons and Village Greens as assets.

Asset Management

The system should provide the ability to manage all asset types, efficiently in a dependable platform. It should facilitate complex functions enabling assets to be captured, stored, searched managed and inspected including the recording of digital images. All functions should be available via the chosen product's mobile solution.

Pavement Management

The system should offer Pavement Management functionality, thus enabling integration with other system functions and the use of common base data. Where such functionality is provided, it will be a requirement that it is UKPMS compliant or similar.

Mobile Device Functionality

The new system should provide the ability to streamline field operations and boost productivity by providing mobile workers with access to the most recent asset information (including third-party assets), data collection, inspections and customer management using mobile technology. The system should allow new works orders to be raised by inspectors working remotely.

Financial Interface

The system must be capable of interfacing with the corporate finance system (Unit4), so that financial transactions managed within the highways system can be reflected in the corporate finance system.

The system must be able to manage Payments and fluctuating commitments. Data on commitments must be immediately updated from the finance system.

Customer management

The system must enable the logging and management of customer enquiries, relating to the streets or assets managed. This will be interfaced with an online portal, providing direct updates on the progress of any reported issues, to the portal, via email and subscribed groups.

The system may also enable connections to MS Dynamics 365 application, to ensure a single customer database across the organisation.

Must have an online, configurable and branded customer portal enabling direct logging of enquiries, including map-based functionality, enquiry types and attachments, receiving updates via both the portal and email address (including groups or subscribed parties – multiple reports of the same issue), and managing customers expectations by directing to other resources as appropriate and links to policies. The system must be able to update existing enquiries by adding comments and referring back to the relevant officer. Updates to customers should be configurable based on the status of the customer enquiry. This information must be reflected on the Customer portal

It must be possible to search for existing enquiries using a range of data including, but not limited to Reference number, location, name of person raising the enquiry, and email address

The system must have the ability to produce separate enquiries that are intended solely for CCC internal use but not displayed on the public site

Ability to send/re-send updates to customers from the system

Functionality for customers to enter responses directly into the system

The system should be able to triage enquiries raise on the online form against intervention levels to reduce the amount of reports coming through.

Ability to mark an enquiry when it is regarding a dangerous defect. The enquiry should then be flagged up to the relevant officer/team as urgent.

It should be possible to transfer attached documents to third parties and receive documents from them.

Other System Integrations

Must be able to integrate with the contractor's system for works orders, finance systems as appropriate, Street manager, CRMs, and email/exchange services.

Must be able to automatically share documents or other records with the contractor or other 3rd parties.

Must be capable of integrating with StreetManager via an API for the new system to be able to transfer information to and from StreetManager.

Must be able to integrate with 3rd party cloud reporting solutions, eg Gaist. Integrations with 3rd party solutions must enable data matching to reduce duplication of data.

BI and Reporting Functionality

The system must be able to provide operational reports within the product, and a dedicated report warehouse enabling integration with business intelligence systems such as Power BI and Microsoft 365, and National Highways and Transportation Performance Management Framework.

Data Management / History / Archive

The system will manage data in a way that removes duplication, ensuring product and reporting accuracy.

The system must enable archiving of data as appropriate and deletion of data in accordance with the respective data retention policies and GDPR.

Statutory Requirements

The system must be compliant with the following government regulations, the following list is not exhaustive:

- TMA Compliant – Traffic Management Act 2004
- NSG compliant – National Street Gazetteer
- NRSWA compliant – New Roads and Street Works Act
- CDM – Construction, Design and Management Regulations complaint
- Contract administration must be compliant with NEC (New Engineering Contract)

System Administration

The system must be able to provide the system administrator(s) with all the facilities required to monitor and control usage of the system, including permissions and groups, plus enable configuration by others in the team to build their own bespoke reports.

IT Support, Upgrades and Maintenance

The system should be fully supported for upgrades, bug fixes and enhancements.

Support should be provided by an online portal and phone.

Ticket numbers will be provided on report of issues and supported by an SLA with timescales for the severity of the issue.