Construction Works Framework

Area 4 Interim Scope

Annex 6
Information Systems

ANNEX 6

CONTENTS AMENDMENT SHEET

Amend. No.	Revision No.	Amendments	Initials	Date
0	0	Tender Issue	LP	04/05/20

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1 INFORMATION SYSTEMS

1.1 General Requirements

1.1.1 This Annex sets out the requirements in respect of Information Systems, including Systems that

- are developed, procured, provided and made available to the *Client* by the *Contractor* for the purposes of performing the information requirements under this contract,
- are developed, procured and provided by the *Contractor* relating to its own corporate business and operations of performing the information requirements under this contract,
- are provided or made available by the *Client* for use by the *Contractor* for the purposes of performing the information requirements under this contract, and
- are likely to be provided or made available by the *Client* for use by the *Contractor* for the purposes of performing the information requirements under this contract.

1.1.2 To the extent that the *Contractor* is required to create or maintain any information under this contract on a computer or otherwise in electronic format, the *Contractor* ensures that, at all times

- such a format is agreed with the *Client*;
- such information is maintained to allow fast and efficient electronic transfer of information to the *Client* or agreed third parties, without additional expenditure by the *Client* or the need for complex or expensive procedures or processes, and in any event in such format as complies with the *Client's* requirements for such transfer,
- such information is backed-up and copies are held in off-site storage in accordance with procedures agreed with the *Client* and
- it implements and complies with (and ensures that its Subcontractors implement and comply with) all procedures for information back-up and off-site storage referred to in this paragraph.

1.1.3 The *Contractor* maintains all its Information Systems so as to enable their

- segregation from any other computer or electronic storage devices, Systems, materials or information of the *Contractor* and
- transfer to the *Client* or an Incoming Supplier,

efficiently and without additional expense or delay immediately on termination or expiry of this contract.

1.2 *Contractor* Information Systems

1.2.1 The *Contractor*, at the date of award of the Framework Agreement

- has in place and provides or makes available to the *Client* appropriate Information Systems (and relevant hardware required to use such Information Systems) of the type set out in Table 1, to comply with the *Client* information requirements and the contract management information requirements,
- has in place Information Systems (electronic or otherwise) of the type set out in the non-exhaustive list in Table 2, to comply with the *Contractor* information requirements concerning its own corporate business and operations and
- has proof of compliance with the HMG Security Policy Framework (SPF) in respect of those Information Systems.

1.3 *Client* Information Systems

1.3.1 Unless otherwise agreed with the *Client*, the *Contractor* uses and interfaces with the *Client's* Current Systems (Table 3) and New Systems (Table 4) when available.

1.4 Access Requirements to Information Systems provided by the *Client*

1.4.1 Gateway access requirements

- The Business Information Gateway or its successor (the Gateway) is the interface through which
- the *Contractor* is required to access the Highways England Business IT Network and the *Client* Information Systems held within Highways England Business IT Network and
- the *Client* may access one or more of the *Contractor* Information Systems and documents.

1.4.2 Unless otherwise agreed with the *Client*, the *Contractor* connects to the Gateway, using a Virtual Private Network specified by the *Client*.

1.4.3 The *Contractor*

- applies to the *Client* for authorisation to connect to the Gateway and connects to the Gateway in a manner to be specified by the *Client*,

- procures and pays for the installation and ongoing costs of connection of any of its premises or Information Systems to the Gateway through a telecommunications network, taking into account the data volume and the number of the *Contractor* staff that it expects to use the link,
- arranges suitable support and business continuity for connection to the Gateway,
- facilitates the installation and maintenance of the Gateway by the *Client*'s Suppliers,
- employs appropriate requirements and procedures, and trains its staff to operate the Current Systems,
- attends training in connection with the implementation, and where appropriate, the *Contractor* facilitates the implementation of New Systems and any other systems required by the *Client* and
- does not alter any documents provided by the *Client* through the Gateway (which are the exclusive property of the *Client*) without the prior acceptance of the *Service Manager*.

1.4.4 The *Contractor* acknowledges that

- the network technology underlying the Gateway is subject to change from time to time and
- access through and continued membership of the Gateway depends on the *Contractor* complying with (and the *Contractor* will comply with):
  - Applicable user access requirements,
  - Her Majesty's Government Security Policy Framework and
  - other technical and security requirements set out in Annex 8.

1.4.5 The connection point to the Gateway situated at the *Contractor* premises is located in a room that is secured from theft, damage, unauthorised or malicious use to reduce risk to the connection point to the appropriate Impact Level as set out in Her Majesty's Government Security Policy Framework. The location remains fixed for the duration of the contract unless the *Contractor* requests and the *Service Manager* approves a new location.

1.4.6 <u>Other access requirements</u>

- *Client* Information Systems not covered by clause 1.4.1 may be accessed through the Internet via third party hosts and using relevant software applications installed on *Contractor* systems. They are not

subject to the same security and related access requirements that apply to *Client* Information Systems accessed through the Gateway.

- The *Contractor* may request authorisation and other details regarding Internet access to such *Client* Information Systems from the *Service Manager*.
- For guidance, the right column in Table 3 and 4 indicates whether access to the *Client* Information Systems is required via the Gateway.

1.5 Access Requirements to Information Systems provided by the *Contractor*

1.5.1 The *Contractor* provides the *Client* remote access to the *Contractor* Information Systems and related documents

- Either through the Gateway or
- through another interface agreed by the *Client*.

1.5.2 Any access required by the *Client* to systems provided by the *Contractor* must be made available via the Gateway or by other remote access methods agreed by the *Service Manager*.

1.6 *Contractor* Security and User Access

1.6.1 The *Contractor* ensures that all persons who use *Client* Information Systems for or on behalf of the *Contractor* comply with the security requirements set out in Annex 8 and the Asset Data Management Manual.

1.6.2 The *Contractor* is responsible for determining any formal application and security clearance requirements to enable the *Client* to access any Information Systems provided by the *Contractor*. The *Contractor* informs the *Client* of those requirements, including timescales, not later than eight weeks before the *access date*.

1.6.3 The *Contractor* notifies the *Client's* IT Security Team and the help desk when staff with access to the *Client's* IT network, leave their employment.

1.6.4 The *Client* will suspend any accounts supplied to persons who use *Client* Information Systems for or on behalf of the *Contractor* if they are not used for a continuous period of six months.

1.6.5 The *Client* will delete any accounts supplied to persons who use *Client* Information Systems for or on behalf of the *Contractor* if they are not used for a continuous period of thirteen months.

1.6.6 The *Client* will immediately suspend any accounts supplied to persons who

use *Client* Information Systems for or on behalf of the *Contractor* if they are used by anyone other than the person for whom they were created (the "authorised user"). Accounts suspended will not be re-opened until a formal explanation for the account's misuse is provided by the *Contractor*, and in all these cases the *Client* will not be liable for any financial penalty or other expense incurred as a result of the *Contractor* failing to meet its commitments.

1.7 Software and Licences

1.7.1 The *Contractor* grants, or procures the grant of, licences required to allow the *Client* to use the Information Systems developed, procured or otherwise provided by the *Contractor* to the *Client*.

1.7.2 The *Contractor* has in place or procures its own licences required to use common software applications that it may require to be able to interface with, or to access *Client* Information Systems.

1.7.3 The *Contractor* applies to the *Client* for licences to allow the *Contractor* to use certain Information Systems provided or made available by the *Client*.

1.8 Liaison and cooperation between *Client* and *Contractor*

1.8.1 The *Client* is adopting an Information Technology Infrastructure Library best practice approach for Information Communication and Technology (ICT) services. The *Contractor* will be expected to demonstrate a formal approach to its ICT service management through the development of an ICT strategy and make its ICT strategy available to the *Client*.

Table 1: Systems provided by the *Contractor* to meet *Client* and Contract Management Information Requirements		
Information System	**Description**	**Reference / Comment**
Electronic Document and Records Management	The *Contractor* operates an Information System for the management of electronic documents and records (including e-mails) which are created and maintained on behalf of the *Client*. Documents and records are defined in Highways England's Records Policy, a copy of which can be obtained from the *Client* The *Contractor* seeks agreement through the *Client*, regarding the development and implementation of an Information System for electronically managing both the electronic and physical records which the *Contractor* creates and maintains on behalf of the *Client*. This Information System is required for the capture, retention and disposal of all electronic format documents and other records	
EnvIS Format Data System	A system to capture Environmental data and provide the export files as detailed in the relevant requirements.	DMRB Vol 10 Section 0, replaced in England with IAN 84/10

Table 2: Examples of Information Systems as provided by the *Contractor* to fulfil the requirements of the *Contractor*'s own business and effective delivery of the contract

System	Comment
Quality Management System	It is expected that the *Contractor* will implement a quality management Information System, incorporating health, safety and environmental management information, which will ensure consistency and improvement of working practices. The *Contractor* should align its quality management Information System to meet the quality requirement used by the *Client.*
Collaboration System	It is expected that the *Contractor* will exploit collaboration technologies
Change Control System	This Information System will manage changes to processes and Systems
Customer Relationship Management System (CRM)	This Information System will manage the CRM strategy to ensure long lasting relationships with the *Contractor's* customers The CRM Information System will seek to improve customer service by performing functions such as identifying what customers value the most and providing an effective mechanism to handle problems and complaints
Human Resource Management System (HRMS)	It is expected that the *Contractor* will use a HRMS to manage issues such as recruitment, skill sets, employee history and payroll
Computer Aided Facilities Management (CAFM) System	The *Contractor* uses an Information System to ensure that the *Contractor's* office estate is managed effectively and efficiently to provide *Contractor* staff with a safe, healthy and secure environment
Financial Management System (FMS)	The *Contractor* will use a FMS to produce timely in-year and year-end management and accounting information
Project Management System	System to assist in the planning and organisation of activities in order to meet the *Contractor*'s objectives

Table 3: Current Systems provided by the *Client* to meet the contract management information requirements

Current Information System	Description	Reference / Comment	Access Via Gateway (Y/N)
Highways Agency Traffic Information System (HATRIS)	Stores historical traffic flow and journey time/speed data collected on the motorway and all-purpose trunk road network. HATRIS currently contains two distinct databases: • TRADS (Traffic Flow Database System). This contains hourly count data from inductive loops at approximately 1000 locations across the *Client's* network JTDB (Journey Time Database). This contains average speeds and total flow for each 15 minute period throughout the year for each junction to junction link on the *Client's* core network. Journey speed data is currently taken from four sources - MIDAS, NTCC and TrafficMaster ANPR cameras, and ITIS GPS vehicles		N
Accident Incident Reporting System (AIRSweb)	The AIRSweb incident reporting Information System, allowing the completion of a single incident report online, which can be submitted to several organisations		N
Highways Agency Pavement Management System (HAPMS)	HAPMS is a set of IT systems that hold the following data sets: • Approved network master data set • pavement inventory master data set • pavement construction master data set • pavement condition master data set • inventory master data set • traffic data • accident data HAPMS also provides the following business capabilities: • Analysis and reporting of data both in map-based and textual formats • integrated tools for the whole life cost optimisation, of proposed pavement maintenance schemes	*Client* Requirements Access for information purposes only	Y

Table 3: Current Systems provided by the *Client* to meet the contract management information requirements

Current Information System	Description	Reference / Comment	Access Via Gateway (Y/N)
Structures Management Information System (SMIS)	SMIS provides operational support to structures management throughout the lifecycle of the structure	BD 62 *Client* Requirements Access for information purposes only	Y
Highways Agency Geotechnical Data Management System (HAGDMS)	Internet hosted and GIS based geotechnical inventory.	*Client* Requirements Access for information purposes only	N
Highways Agency Drainage Data Management System (HADDMS)	Shares the facilities developed for HAGDMS and exists on the same platform. This provides integrated geotechnical/drainage information.	*Client* Requirements Access for information purposes only	N
WebDAS	Database of departures from the *Client*'s requirements and aspects not covered by requirements, including SHW specification departures.	CHE Memorandum 157/05 DMRB Vol1	Y
Highways Agency Traffic Management System (HATMS)	Motorway control and communications Information System.	Access for information purposes only	N

Table 3: Current Systems provided by the *Client* to meet the contract management information requirements			
Current Information System	Description	Reference / Comment	Access Via Gateway (Y/N)
Technology Performance Management Services (TPMS)	TPMS is a set of IT systems to support the maintenance and management tasks for control and communications equipment. Currently provides the following functionality: • Technology Fault Management. • Technology Planned Maintenance recording. • Technology Asset Status recording (including for instance results of electrical testing). • Recording of asbestos risk in Technology equipment. • Recording the connection of Technology equipment via unmetered power supplies for payment for energy used by Technology. • Calculation of performance statistics on Technology equipment. Provision of data on Supplier performance to allow effective Performance Management.	More information at https://www.hatpms.com/ Access for information purposes only	N
Highways Agency Logging Environment (HALOGEN)	HALOGEN is the central source for Highways Agency Traffic Management Systems (HATMS) logged data. It records setting, state change and fault information for signals, signs and emergency roadside telephones on England's motorway network.	More information at http://www.highways.gov.uk/specialist-information/halogen-online/ Access for information purposes only	N
Planned Engineering Works (PEW) System	System for the notification of planned engineering works that impact on the operational availability or functionality of HA Traffic Management Systems (HATMS) or require access to RCC Equipment/Control Rooms.	https://ha-pew.org.uk/PEW/	N
National Faults Database (NFDB)	Database for manual entry of faults and issues relating to Highways Agency Traffic Management Systems (HATMS) and other operational systems.	www.nfdb.co.uk/	N

Table 3: Current Systems provided by the *Client* to meet the contract management information requirements

Current Information System	Description	Reference / Comment	Access Via Gateway (Y/N)
Electronic Service Delivery for Abnormal Loads (ESDAL)	Allows hauliers to notify abnormal load movements on line to the relevant road and structure owners as well as the police. Each notification and route is stored on ESDAL to enable structure owners to assess the proposed route using automated route appraisal software. Online collaboration with the haulier is also provided. Structure data in ESDAL is automatically updated from SMIS at regular intervals and there is a facility to allow structure owners to manage their structures interactively through the web site, adding or amending attributes such as weight or height constraints. There is an additional facility to allow constraints such as road works to be added to the road network. These can be post-dated if necessary. ESDAL caters for all notices received pursuant to Schedule 9 [Service] of the Road Vehicles (Authorisation of Special Types) General Order 2003 and documentary evidence of advice given to operators and indemnities received from operators.	Access for information purposes only	N
Noise Assessment and Insulation System (NAIS)	GIS based tool for predicting noise impacts on the environment surrounding the trunk road network		N
Motorway Access Pass Provision Application (MAPPA)	System to manage applications for motorway passes		N
HA Supply Chain Portal	An internet collaboration site for the *Client* and its partners		N
System for Managing (SfM)	The *Client's* finance and accounting Information System which supports major business transaction processing requirements including the various IT components that comprise Stock Management System (SMS)	MCH2538 details the interaction between the *Contractor* and the *Client* in relation to SMS activities.	Y
Highways Agency Management Information System (HAMIS)	Portal Information System providing access to HAGIS	Access for information purposes only	Y

Table 3: Current Systems provided by the *Client* to meet the contract management information requirements			
Current Information System	Description	Reference / Comment	Access Via Gateway (Y/N)
HAGIS	Stores information using the latest digital mapping, which allows users to view geographical data for a specific area of the UK by zooming in and out and using the built in GIS tools	Access for information purposes only	Y
Highways Agency Environmental Information System (HA)EnvIS	EnvIS consists of specific environmental data supplied by *Contractor*'*s*, the HA and other bodies which is collated and displayed in a read only format in the Highways Agency Geographical Information System (HAGIS). This data is used to assist in managing the environment, within and surrounding the trunk road network, and in the review and reporting of the environmental performance of both *Contractors* and the *Client*.	DMRB Vol 10 Section 0 Replaced in England with IAN 84/10 Access for information purposes only	Y
Energy Procurement Strategy (EPS) inventory data	An ACCESS database containing details of lighting units on the road network and is used to determine energy consumption provided by the various energy suppliers.		N
Integrated Asset Management Information System (IAM IS)	*Client's* Routine and Planned Maintenance System. Includes limited number of licences for field-orientated GIS tool to be used at the discretion of the *Contractor*.	*Client* Requirements IAM IS Service Access Requirements Document (SARD) IAM IS Code of Connection (CoCo)	N
Lean Tracker System	A system used to capture and track lean benefits.	Annex 18	N
Collaborative Management Toolkit (CMT)	Methodology and tool used to measure and report on *Contractor* 's performance. Relates to the CWF contract type. The CMT allows for the production of the Motivating Success Toolkit scores.	The CMT has its own Performance Management Manual, setting out the background of the CMT, timelines for reporting and roles and responsibilities.	N

Table 4: New Systems to be used by the *Contractor* when available			
New Information System	**Description**	**Reference / Comment**	**Access Via Gateway (Y/N)**
Integrated Asset Management Information System (IAM IS)	During the Contract Period it is intended that the IAM IS will replace the following Highways England's data management systems: • Network Occupancy and EToN (SRW) • Pavement and Approved Network Model (HAPMS) • Structures (SMIS) • Geotechnical (HAGDMS) • Drainage (HADMS) The *Contractor* must be prepared, with reasonable notification, for an immediate or phased switch over to the future systems being delivered through IAM IS from legacy systems. The *Contractor* must be prepared for possible parallel running of some legacy *Client* systems, and the IAM IS.	IAM IS Service Access Requirements Document (SARD) IAM IS Code of Connection (CoCo) AMOR NOMS – NRSWA 1991 as amended by TMA NOMS – Technical Specification for EToN Structures – BD62	N
Performance Management Information System	The Client may introduce a Performance Management Information System (PMIS) or other system for recording or reporting against the requirements of this Annex. When/if provided, the Contractor provides performance data directly into PMIS	Scope Annex 17	Y
Financial System	The *Client's* new finance and accounting Information System which supports major business transaction processing requirements.	Will replace the *Client*'s System for Managing (SfM)	Y

Table 4: New Systems to be used by the *Contractor* when available			
New Information System	**Description**	**Reference / Comment**	**Access Via Gateway (Y/N)**
CEMAR – (Contract Event Management Analytics and Reporting)	CEMAR is a cloud based NEC contract management system. It is a collaborative tool that requires the two parties Highways England (Employer) and Contractors to manage contract events through the system as required by good practice NEC contract management. System features include the following: • Contract event management through registers e.g. Early Warnings, Compensation Events, Project Manager Instructions and more. • Application for payments / Invoices • Technical Queries and Defect management • General Communications • Multiple in built reports and charts and graphs proving reports and dashboards across one or multiple contracts to allow effective management of contracts through outputs on communication behaviour, cost, quality, risk and time.		N