

Scope

Framework Agreement and Lot Description:

Crown Commercial Service RM1089 Traffic Management
Technology 2 (TMT2)

Lot 12 Traffic Management Professional Services

Contract reference:

TMTii 31

services:

Connected and Autonomous Vehicle Pilots
Implementation Partner (CAV-PIP)

Contract duration:

2 years with 2 optional 1 year extensions (2+1+1)

1 Introduction and background

1.1 Description of the services

Summary

- 1.1.1 This Scope describes the *services* that are required to be supplied to support the *Employer* in the delivery of its CAV programme.
- 1.1.2 This contract is for provision of a flexible resource pool of skilled and experienced experts for each of the functional areas outlined below:
- a. ITS-G5, hybrid communications and other telecommunications standards used in the provision of CAV and C-ITS services;
 - b. Cyber security and PKI standards;
 - c. In-vehicle systems, CAV and C-ITS services (specifically the Amsterdam Group Day One Services);
 - d. Traffic data management; and
 - e. CAV and C-ITS business models (e.g. value chain mapping for the mobile applications industry, automotive industry, ITS industry, telecoms industry etc.).
- 1.1.3 As instructed by the *Employer*, the *Consultant* undertakes Task Orders in relation to each of the projects below:
- a. A2/M2 Connected Corridor and the UK aspect of InterCor (including Tasks for TfL, KCC and DfT, which shall be commissioned through the *Employer*);
 - b. UK CITE;
 - c. Freight Platooning;
 - d. Interurban CAV test bed;
 - e. Other implementation and/or transition support services for CAV and C-ITS business change projects.

services

- 1.1.4 As applicable to the Task Order the *Consultant*:
- a. provides impact assessment services;
 - b. provides witness testing, supports and facilitates TESTFESTs, and provides other testing services;
 - c. provides human factors services;
 - d. provides behavioral insights services;
 - e. provides training needs analysis and training services;
 - f. provides training to the *Employer* or Others as instructed by the *Employer*;
 - g. provides project management, project controls and governance support services;
 - h. provides implementation, deployment and/or transition support services for CAV and C-ITS business change projects;
 - i. provides technical and commercial benchmarking, due diligence and validation services;
 - j. provides business analysis and requirements gathering services;

- k. provides options analysis services;
- l. provides solution design and enterprise architecture services;
- m. provides architectural support services;
- n. provides root cause analysis and long term Problem Management (as defined in [ITIL](#)) services in relation to CAV and C-ITS;
- o. provides CAV and C-ITS usage monitoring and analysis services;
- p. produces and maintains the *Employer's* TMC operating procedures relating to CAV and C-ITS;
- q. produces and maintains technical specifications;
- r. produces and maintains disaster recovery, resilience, and business continuity procedures;
- s. undertakes CAV and C-ITS configuration changes;
- t. provides advice or assurance on CAV and C-ITS enhancements;
- u. provides CAV and C-ITS cyber security services;
- v. provides CAV and C-ITS asset management and inventory management services;
- w. undertakes CAV and C-ITS system resilience, availability and performance assessments;
- x. provides data mining and data analysis services;
- y. provides advice or assurance on machine learning, artificial intelligence and fuzzy logic services relating to CAV and C-ITS;
- z. provides advice or assurance on automotive systems, equipment and standards (e.g. ETSI, DENM, CAN etc.);
- aa. provides advice or assurance on cyber security and PKI standards planning and implementation;
- bb. produces, or provides or assurance on, technical standards;
- cc. provides advice or assurance on telecommunications standards (e.g. ITS-G5, LTE, hybrid, fixed networks etc.);
- dd. provides evaluation services;
- ee. produces, or provides advice or assurance on, access arrangements for CAV and C-ITS test sites;
- ff. undertakes, or provides advice or assurance on, data management services;
- gg. provides advice or assurance on the Amsterdam Group Day One Services and other C-ITS services;
- hh. produces deployment guidelines for CAV and C-ITS projects;
- ii. provides user research services;
- jj. provides advice or assurance on Intelligent Transport Systems (e.g. UTC, UTMC, tunnel control and management systems, advanced traffic management systems, ramp metering etc.) and their integration into a CAV and C-ITS environment;

- kk. undertakes, or provides advice or assurance on, health and safety impact assessments;
- ll. supports procurement activities;
- mm. deputises for the *Employer's* Task Order Manager when applicable.

Task Order 1 (TO1): Programme management and governance support services

- 1.1.5 The *Consultant* provides programme management and governance support services and maintains the UK InterCor Management Products (as defined in [PRINCE2](#)), including:
 - a. Benefits Review Plan;
 - b. Programme;
 - c. Issues Register;
 - d. Lessons Log; and
 - e. Communication Management Strategy.
- 1.1.6 The *Consultant* reports on overall progress against the project plan at the UK InterCor programme board meetings.
- 1.1.7 The *Consultant* ensures successful delivery of all projects within the UK InterCor programme. These include Task Orders 2 to 11 below.
- 1.1.8 The *Consultant* provides project control services for the UK InterCor programme.

Task Order 2 (TO2): UK InterCor common specifications

- 1.1.9 The *Consultant*, in collaboration with the *Employer*, undertakes a gap analysis against existing specifications and develops a common set of specifications, identifying any interoperability challenges in the following areas:
 - a. Service consistency of ITS-G5, to ensure interoperability of C-ITS services using ITS-G5 radio access;
 - b. Hybrid communications, in delivery of V2X services supported via multiple communication channels (ITS-G5, LTE etc.);
 - c. PKI specifications based on the ETSI and C2C-CC models; and
 - d. C-ITS services, for innovative or already deployed (e.g. Amsterdam Group Day One Services) services.
- 1.1.10 The *Consultant* ensures the specifications cover the interoperability criteria outlined below:
 - a. Communication protocols conformance;
 - b. Cross-component compatibility;
 - c. Application data consistency;
 - d. C-ITS services interworking;
 - e. Security and PKI conformance; and
 - f. Interoperability testing specification.

Task Order 3 (TO3): Validation of UK InterCor common specifications

- 1.1.11 The *Consultant*, in collaboration with the *Employer*, validates the specifications produced under Task Order 2 by participating in 4 interoperability TESTFESTs.

- 1.1.12 Where the *Employer* is leading a TESTFEST the *Consultant* may be required to assist with its facilitation.
- 1.1.13 The *Consultant* produces a report summarising the outcome of each TESTFEST event to assess the quality of the common set of specifications.
- 1.1.14 The *Consultant* produces a set of guidelines with best practices and cost indications.

Task Order 4 (TO4): UK InterCor pilot operation

- 1.1.15 The *Consultant*, in collaboration with the *Employer*, defines a common framework to carry out the UK InterCor pilot operation in a consistent way for the *Employer*, including:
 - a. Planning;
 - b. Methodology for the UK InterCor pilot areas;
 - c. User support procedures;
 - d. Roles and job specifications;
 - e. Specific operational constraints and operating procedures which need to be followed to ensure correct data collection;
 - f. Definition of equipment required to deploy C-ITS services;
 - g. Test plans; and
 - h. KPIs.
- 1.1.16 The *Consultant*, in collaboration with the *Employer*, supports the operational phase of the UK InterCor pilot.

Task Order 5 (TO5): UK InterCor pilot evaluation framework

- 1.1.17 The *Consultant*, in collaboration with the *Employer*, defines a common evaluation framework based on the FESTA approach and includes the definition of the use cases, hypotheses for the effects and KPIs.
- 1.1.18 The *Consultant*, in collaboration with the *Employer*, defines test scenarios and data quality criteria, including the common processes and procedures for data acquisition, management and data quality validations, from all relevant data sources (e.g. end user devices, road side units, and back office systems from traffic operations, fleet and service providers, and user feedback such as common questionnaires).

Task Order 6 (TO6): UK InterCor pilot evaluation

- 1.1.19 The *Consultant* evaluates the effects of the implemented C-ITS and CAV technologies on system performance and quality of services, including:
 - a. Interoperability, compliance and security;
 - b. Performance of security measures, hybrid communication, positioning and application triggers;
 - c. Performance (e.g. accuracy, location, timeliness and reliability) of advice and information provided to drivers and other users like traffic operators, fleet operators and service providers;
 - d. Assessment of the quality of collected data;
 - e. Detection and classification of situations in traffic and services as defined in test scenarios and use cases;

- f. Detection of events in driver support and applications as defined in use cases;
- g. Detection of anomalies in system behaviour or provided services; and
- h. Calculation of KPIs.

Task Order 7 (TO7): UK InterCor pilot impact assessment

1.1.20 The *Consultant* undertakes an impact assessment of the applications and services, including the identification of the rate of advice, follow-up and their impact on indicators such as speed adaptation, route choice, travel time, traffic efficiency, and safety.

Task Order 8 (TO8): UK InterCor pilot user acceptance

1.1.21 The *Consultant* undertakes user research and user acceptance testing, in order to collect user feedback through questionnaires or during a live journey on the UK InterCor pilot area.

Task Order 9 (TO9): Access management for interurban CAV test beds

1.1.22 The *Consultant* produces the access arrangements for, and supports the *Employer* in managing an agreed access process for, CAV test beds. The CAV test beds will support Testing Organisations in accessing the *Employer's* network asset base safely to test new infrastructure or vehicle technology

1.1.23 The *Consultant* produces a risk based approach to SRN access which provides safety and operational assurance across the following areas:

- a. SRN access:
 - Closures and traffic management on the *Employer's* SRN are closely monitored. The *Consultant* works with the *Employer* to design an acceptable SRN access strategy in line with the appropriate standards;
- b. Code of Connection (CoCo):
 - Connection to the *Employer's* power and telecommunications networks is regulated and requires certain requirements to be met, including cyber security. The *Consultant* works with the *Employer* to support the development and implementation of the *Employer's* code of connection for CAV;
- c. Safety risk assessment:
 - The SRN is the safest road network in the UK, due to its careful operational management and investment in safety schemes. To ensure this continues, and is improved further, by CAV technology the *Consultant* works with the *Employer* to further develop and implement the *Employer's* GD04 Safety Risk Assessment for CAV;
- d. Construction in an operational environment:
 - Any Testing Organisation must meet the requirements of the *Employer's* legislative and regulatory guidance for construction in the operational SRN environment, where applicable, such as but not limited to:
 - i. [Standard for Highways](#);
 - ii. [Construction Design and Management Regulations 2015](#);
 - iii. [New Roads and Street Works Act 1991](#).

Task Order 10 (TO10): Interurban CAV test bed value proposition

1.1.24 The *Consultant*, in collaboration with the *Employer*, supports the development of a value proposition for the development of an open access test bed for CAV, and produces a business case.

1.2 Employer's objectives

1.2.1 The *Employer's* CAV programme aims to prove that adoption of CAV technologies can create the following benefits:

- a. Reduce the need for costly roadside infrastructure (e.g. VMS, gantries), thus creating a better visual environment for road users and reducing costs associated with deploying roadside infrastructure;
- b. Improve safety for road maintenance workers who would no longer need to access the roadside;
- c. Reduce road traffic accidents by securely providing safety messages to CAVs; and
- d. Improve the productivity of current road capacity.

1.2.2 Initial impact assessments suggest that fully operational CAV road networks providing full traffic services with 100% connectivity coverage would result in increased road safety and decreased travel times, fuel consumption and CO2 omissions.

1.2.3 The *Employer's* CAV programme will develop over time. Initial services are likely to focus on relatively straightforward cooperative services but, as the benefits are realised, the *Employer* will continue to invest in its CAV programme. The full benefits of the CAV programme will not be realised until there are a significant number of fitted vehicles and aspects of the SRN utilising the cooperative systems.

1.2.4 It is important to note that one of the main objectives of the *Employer's* CAV programme is to create a real-world environment in which innovation in C-ITS technologies and services is stimulated and can be tested. Some of the specific outcomes and benefits will therefore be determined by the type of technologies and services that are developed and deployed by the *Employer* and Others during the lifetime of the CAV programme. Given that there is currently significant uncertainty about the costs and benefits of various technologies and services, another main objective of the CAV programme is to develop a business case and business models for the wider deployment of C-ITS and CAV technologies.

1.3 Background

Introduction to Highways England

1.3.1 Highways England (formerly Highways Agency) is the new company set up by government in April 2015. Working with DfT, Highways England is responsible for operating, maintaining and improving the SRN in England. The SRN is made up of England's motorways and all-purpose trunk roads (the major A roads), which totals 4,300 miles. Valued at over £100 billion and open 24 hours a day, seven days a week, the SRN carries a third of all road traffic in England and two thirds of all heavy goods vehicle traffic (forming the economic backbone of the country), and is relied on by communities and businesses across the country.

1.3.2 The *Employer's* key strategic and business priorities are to:

- a. Make our roads safer;

- b. Improve the experience of all road users;
 - c. Deliver the £15 billion of investment set out in the governments 5 year Road Investment Strategy.
- 1.3.3 The *Employer's* key business objectives are set out in a number of key documents, including (but not limited to):
- a. [Road Investment Strategy 2015 to 2020](#);
 - b. [Highways England Delivery Plan 2015 to 2020](#);
 - c. [Highways England Operational Technology Strategy 2015](#);
 - d. [Highways England Innovation, Technology and Research strategy](#);
 - e. [Highways England Traffic Information Strategy](#).
- 1.3.4 In order to deliver the above priorities, the *Employer's* staff, it's partners and suppliers are expected to demonstrate the following values:
- a. Safety;
 - b. Integrity;
 - c. Passion;
 - d. Ownership;
 - e. Teamwork.
- 1.3.5 The *Employer's* ambition is to ensure our major roads are more dependable, durable and most importantly, are safe.
- 1.3.6 The *Employer* works hard to make sure the SRN is:
- a. free flowing – where routine delays are infrequent and journeys are reliable;
 - b. safe and serviceable – where no-one should be harmed when travelling or working;
 - c. accessible and integrated – so people are free to choose their mode of transport and can move safely across and alongside our roads.
- 1.3.7 The *Employer* further aims to:
- a. support economic growth with a modern and reliable road network that reduces delays, creates jobs, helps business and opens up new areas for development;
 - b. ensure our activities result in a long term and sustainable benefit to the environment.
- 1.3.8 The SRN is managed through seven RCCs, a specialist centre for the Dartford river crossing, various tunnels (including Hindhead tunnel), NTOC (collectively referred to as TMCs"), various road maintainers (commonly referred to as "area service providers" or "maintenance and response contractors"), various RTMCs, and various road maintenance control rooms, which manage road maintenance on a regional basis (commonly referred to as "areas"). A number of road maintenance control rooms are now staffed directly by the *Employer*, through an initiative known as Asset Delivery (AD). On the *starting date*, there will be three active AD offices, operating at:
- a. Stirling House, Mansfield for area 7;
 - b. Penrith and Preston for area 13; and

c. Darlington for area 14.

1.3.9 A fourth area will be in Bristol from July 2017 (combining area 1 and 2).

1.3.10 The *Employer* has a uniformed TOS who serve in TMCs and patrol key areas of the SRN.

Strategic context

1.3.11 Connected vehicles will improve gathering and dissemination of data, together with better information provision, this will lead to better informed drivers and improved journeys. In the longer term, increasing automation can enhance road safety, efficiency and reduce congestion. The *Employer* has a £150 million innovation fund to allow it to place a greater emphasis on the future technologies that will positively impact users. Through the innovation fund, the *Employer* anticipates investing almost £40 million to further support the development of CAV technologies, around £15 million to improve the information and data that helps drivers plan their journeys, and over £20 million to work with academics and small to medium enterprises on R&D.

1.3.12 A major review ([Driverless cars in the UK: a regulatory review](#)) has recently confirmed that the UK is uniquely positioned to develop driverless car technology as its legal and regulatory framework is not a barrier to the testing of automated vehicles on public roads. Real-world testing of automated technologies is possible in the UK today, providing a test driver is present and takes responsibility for the safe operation of the vehicle; and that the vehicle can be used compatibly with road traffic law.

1.3.13 CCAV have announced £100m of funding for UK CAV testing environments; the *Employer* is reviewing two connected corridor proposals which could support this:

- a. The first is part of the UK government's [Road Investment Strategy](#) which sets out a long-term strategic vision for the SRN in England. The aim is that, by 2040, the busiest sections of the network will be transformed by technology to enable improved safety levels, smoother traffic flow, and increased capacity. Smart Motorways, which use technology to expand capacity and regulate the flow of traffic, will form the core of the SRN. The Road Investment Strategy stated that a specific investment commitment is required to "*incentivise the advancement of in-vehicle, vehicle-to-vehicle, and vehicle-to-infrastructure technologies, through the provision of roadside wi-fi. Target M2, M20, M26, M25*";
- b. The second is the UK CITE project, an InnovateUK funded joint industry-public sector project which is delivering connected vehicle services as supported by CCAV: "*The RIS identifies a key role for Highways England, and the innovation designated fund, in supporting and enabling CAV technologies, and in actively preparing our road infrastructure for the transition to CAVs in the long term. This is also in line with the broader discussions Highways England has been having with DfT about the priority to be given to this field in their innovation strategy. This (UK CITE) is an ideal opportunity to enable Highways England to work with market leaders in the field, to learn important lessons that will help shape plans to prepare our infrastructure for CAVs*".

Strategic position – European Union

1.3.14 The EU has prioritised the piloting of C-ITS services in corridors that can help inform EU-wide deployment. The EU has also established a C-ITS platform (C-ROADS) which will provide a roadmap to address the legislative, technical

and administrative barriers to deployment. National member states need to establish a framework to maximise the societal benefits from this connectivity whilst encouraging market development and innovation. Member states can facilitate this by piloting real world C-ITS deployment projects to build the evidence base, set the vision, and bring stakeholders together to address barriers and support implementation.

- 1.3.15 The EC has issued a CEF call for bids for corridor based studies and infrastructure needed to move CAV to a reality.

Technology

- 1.3.16 Currently, road operators largely use infrastructure to monitor and communicate with drivers. This is in the form of detection loops, ANPR, CCTV and VMS. In vehicle services are increasingly being used, e.g. the data in Highways England's Traffic England website combines these traditional data sources with PVD from GPS and mobile phones to show journey times. These are connected services but the information has focused on route journey time and delay and not information tailored to individual users.
- 1.3.17 The majority of the motorway infrastructure in the UK is served by a high speed data network as part of the NRTS road side infrastructure. CAV pilots offer the opportunity to investigate the ability to reuse this existing network to provide a connection to the Cloud and to wireless transmitters at the road side, whilst potentially transmitting a combination of traffic and commercial data between the V2I to demonstrate the potential for a fully connected network. The installation of these wireless communications services can be easily accommodated on the SRN, where NRTS is in place, and works can be integrated with other work programmes and with limited intrusion to the highway (to support rapid deployment, minimise traffic disruption and environmental impact).
- 1.3.18 C-ITS systems use wireless technologies to communicate in real-time from V2V and from V2I. There is 3G/4G mobile network service for the M2 motorway but the coverage is only just over 80% - there are significant areas where the communications will not be able to support the range and quality of data exchange needed. Cellular technology suffers from latency issues and has bandwidth constraints, both of which reduce its viability for road safety critical applications. To achieve the level of connectivity needed, the CAV pilots will develop proposals and deploy roadside receivers and fitted vehicles.
- 1.3.19 The basis for the deployment of C-ITS is already in place. Systems have been tested and developed within R&D projects and evaluated in field operational tests. The EC has funded a series of C-ITS projects, including COOPERS, SAFESPOT, DRIVE C2X and FOTSIS. These have developed and demonstrated both the supporting technology and numerous applications for cooperative infrastructures involving two-way communication of data between vehicles and road networks. The Amsterdam Group has also established the architecture and organisation to implement the ITS corridor between Rotterdam and Vienna and the majority of the enabling technology is already standardised.
- 1.3.20 The evolution in electronics, ITS and vehicle systems are at the point where cost effective connected car solutions can be realised. It is estimated that 75% of the 92 million cars shipped worldwide by the end of the decade will be able to connect to the internet and the connected car market will expand ten

times faster than the overall car industry, increasing 45% at a five-year compound annual growth rate.

- 1.3.21 CAV offer the potential to improve safety and road capacity, give road users a better experience and allow new services and products to be offered to people in cars and to freight users. These connections may be both V2V and V2I.

Business models

- 1.3.22 In order to assess and realise the benefits from C-ITS, there is a need to move from the current infrastructure based information to V2I and V2V based information. Whilst the technology for this is understood, business cases, business models (who pays what to whom), governance and rollout plans have not yet been developed.
- 1.3.23 A clear shared business model between vehicle makers and road operators is needed, by identifying user requirements and how they will be met and how policy and business outcomes can be balanced. The challenge lies in building enough confidence in both the public and private sector environments to cooperate and achieve an outcome that achieves both commercial and policy benefits and outcomes.
- 1.3.24 C-ITS applications will generate a significant amount of data for alternative uses. This will present challenges and opportunities relating to data security, privacy concerns and data analytics and aggregation. New models are needed to consider how this data can be collected and exchanged within a safe and controlled environment.

The A2/M2 Connected Corridor pilot

- 1.3.25 The DfT has established a partnership with KCC, TfL and Highways England to pilot a connected corridor on the A102, A2, M2 and A229.
- 1.3.26 The A2/M2 Connected Corridor pilot was confirmed in the [Highways England Delivery Plan](#) (para 3.1.6 “...install Wi-Fi technology in the South East”) and was announced in the [2016 Budget by the Chancellor](#) (“...plans for a £15m “connected corridor” between Dover and London with infrastructure that could communicate directly with vehicles”).
- 1.3.27 The corridor is a continuous route starting on the southside of the Blackwall Tunnel (A102) and terminating at Dover (A2). TfL is the highway authority within the London boundary and the route beyond London forms part of the *Employer’s* SRN. The route provides a combination of many types of road from urban tunnels, Smart Motorways through to rural dual carriageways and forms an important link from London to the rest of Europe.
- 1.3.28 The A2/M2 Connected Corridor pilot will trial the Amsterdam Group Day One Services.
- 1.3.29 The A2/M2 Connected Corridor pilot will create a real-time test environment to allow industry to innovate and to test and evaluate emerging technologies and services.

The A2/M2 Connected Corridor pilot outline vision statement

- 1.3.30 The investigation and testing, then subsequent installation and trialling, of C-ITS on a major road corridor between London and Dover will improve connectivity between the roadside and CAV, and between CAV.
- 1.3.31 The A2/M2 Connected Corridor pilot will deliver real-world capabilities, from research to deployment.

- 1.3.32 The A2/M2 Connected Corridor pilot will demonstrate to the UK Government, businesses, road operators and the EC the viability, scalability and interoperability of the wider deployment of CAV technology and will provide recommendations for business model designs.
- 1.3.33 The A2/M2 Connected Corridor Pilot will also deliver a robust evaluation of the benefits that V2I/V2V technology and new open licence datasets can bring to public and private sector partners in terms of traffic management, traffic and travel data services, and the exploitation of commercial opportunities for in-vehicle systems and C-ITS applications.

InterCor

- 1.3.34 The A2/M2 Connected Corridor pilot forms part of InterCor; an EC funded C-ITS study of 1530 km which aims to streamline C-ITS implementation in four member states, linking the national initiatives towards a harmonized strategic rollout and common specification.
- 1.3.35 C-ITS implementation will take place in 4 member states:
- The Netherlands (south, southeast and Utrecht);
 - France (extending SCOOP@F from Paris towards the North);
 - Belgium (several motorways linking France and the Netherlands); and
 - The UK (the A2/M2 Connected Corridor pilot).
- 1.3.36 The objectives of InterCor are to:
- Demonstrate a large-scale interoperable deployment of C-ITS;
 - Foster four member states cross border interoperability by organising several TESTFESTs;
 - Provide C-ITS services on a broader scale by hybrid communication;
 - Extend the strategic cooperation between C-ITS front running countries and assist other member states to step-in (to be done by publishing roll out guidelines for other member states); and
 - Evaluate the life benefits of C-ITS applications by reports on technical evaluation, impact assessment and user acceptance.

Outcome of the A2/M2 Connected Corridor Pilot feasibility studies

- 1.3.37 Two feasibility studies relating to roadside infrastructure, services and in-vehicle applications have recently been completed.
- 1.3.38 The feasibility studies recommendations are:
- Use ITS-G5 wireless connectivity on the A2/M2 Connected Corridor to support safety services;
 - Develop and implement a hybrid communications solution amongst the *Employer* and its UK InterCor consortium members for non-safety and long-range services;
 - Implement Amsterdam Group Day One Services;
 - Ensure detailed specifications are developed in collaboration with InterCor partners, ensuring interoperability with other EU initiatives (ECo-AT, SCOOP@F); and
 - Create detailed test-bed specifications once the corridor design is finalised.

UK CITE

- 1.3.39 UK CITE is an industry led consortium of multi-national companies who are specialists in the field of CAV technology. The *Employer* is working in collaboration with the partnership to test the potential use of CAV technology on the SRN.
- 1.3.40 This will increase the *Employer's* capability to develop its response to the impact that growth of CAV technology will have on the SRN and how it manages any policy on future implementation of it. The lessons learnt from the UK CITE project are informing the development of the A2/M2 Connected Corridor pilot. The major outcomes of the project are:
- a. An 'open' design specification for future installation of CAV technologies at roadside;
 - b. A set of safety messages that will support safer driving on the SRN;
 - c. An understanding of the likely costs to design, install and maintain CAV technologies on the SRN;
 - d. A set of cyber security protocols and how to implement and maintain them;
 - e. A view on whether CAV technology can be a viable replacement for VMS;
 - f. A real world 'live' test bed for vehicle manufacturers to access to test out their own V2I and V2V, thus ensuring their compliance with our protocols; and
 - g. A view on which of the currently competing wireless technologies are best suited for delivering the various CAV services.

1.4 NOT USED

1.5 Form of Novation

- 1.5.1 The form of novation is set out in Annex D.

2 General requirements

2.1 Task Orders

- 2.1.1 During the contract, the *services* shall be commissioned on a Task Order basis, in accordance with the tendered *staff rates*.
- 2.1.2 Before issuing a Task Order, the *Employer* issues a Task brief to the *Consultant*. The Task brief includes:
- a. A description of the *services* required;
 - b. The information to be provided to the *Consultant* by the *Employer*;
 - c. Contact details;
 - d. The timescale in which the work is to be carried out; and
 - e. Deliverables and any associated tests.
- 2.1.3 The *Consultant* responds to the brief with a Task proposal, containing the following information:
- a. Scope of the work;
 - b. Methodology (including timescales);
 - c. Personnel to manage and undertake the work including any additional specialists not named as *key people*;

- d. An estimate of the total of the Prices to undertake the work; and
- e. The reporting regime.
- 2.1.4 The *Consultant* submits the Task proposal to the Customer Relationship Manager by means of email.
- 2.1.5 The Task proposal may then be the subject of discussions to clarify the extent and scope of the work, proposed timescales or other matters. Following agreement, the *Employer* issues the Task Order to the *Consultant* using the *Employer's* Task Order form included at Annex F.
- 2.1.6 Task proposals shall be supplied to the Customer Relationship Manager within two weeks from the receipt of a Task brief.
- 2.1.7 If additional Task Orders are required, or revisions to existing Task Orders are required, the Customer Relationship Manager will instruct the Business Relationship Manager to provide a new proposal in accordance with the tendered *staff rates*. The *Consultant* is not permitted to charge for time in relation to the preparation of Task Orders.
- 2.1.8 The Business Relationship Manager and Customer Relationship Manager shall appoint Task Order Managers to each of the Task Orders.

2.2 Quality management

- 2.2.1 The *Consultant* Provides the Services under a quality management system which
 - a. complies with [BS EN ISO 9001:2008](#) (or equivalent);
 - b. incorporates an environmental management system consistent with [ISO 14001](#) (or equivalent);
 - c. has third party certification from an accreditation body approved by the applicable national member of the European Co-operation on Accreditation or is operating in preparation for accreditation within 12 months of the Contract Date;
 - d. includes processes for delivering continual improvement following the guidance in [ISO 9004](#) (or equivalent); and
 - e. complies with good industry practice.
- 2.2.2 The *Consultant* shall ensure that a quality policy statement and a quality plan (the exact format of which will be agreed after the *starting date*) is in place one month after the *starting date*, which shall be submitted to the Customer Relationship Manager for acceptance. The quality plan shall be reviewed and kept up to date from the *starting date* until the *completion date*. As a minimum, the quality plan must detail how the *Consultant* shall assure the quality of all outputs, how Defects will be corrected, the processes for regular audits, and how the *Consultant's* quality management system will be applied.
- 2.2.3 The quality plan incorporates the proposals in the Quality Statement and is sufficiently detailed to demonstrate how the *Consultant* will achieve each of the commitments in the Quality Statement and meet the *Employer's* objectives for the contract.
- 2.2.4 The *Employer* notifies the *Consultant* if he considers that the quality plan does not comply with the requirements of the Scope. Following such notification the *Consultant* reviews the quality plan and reports to the *Employer* setting out his proposed changes. If the *Employer* accepts the proposals the quality plan is changed.

- 2.2.5 The *Employer* may carry out audits of the *Consultant's* quality management system from time to time. The *Consultant* allows access at any time within working hours to any place where he or any Subconsultant carries out any work that relates to this contract for the *Employer* to carry out audits, to inspect work and materials and generally to investigate whether the *Consultant* is performing his obligations under this contract. The *Consultant* provides all facilities necessary to allow such audits and inspections to be carried out.
- 2.2.6 Following notification of a Defect, the *Consultant* submits to the *Employer* for acceptance the corrective and preventative action that he proposes to take to deal with the nonconformity. The *Consultant* does not take action to deal with the nonconformity until the *Employer* has accepted his proposals.
- 2.2.7 Within one week of the *Consultant* submitting the proposed corrective and preventative action to him for acceptance, the *Employer* either accepts the proposal or notifies the *Consultant* of his reason for not accepting it. A reason for not accepting the proposed action is that:
- a. it does not take action required to ensure that nonconformities do not recur or
 - b. it does not comply with the Scope.
- 2.2.8 If the *Employer* does not accept the proposed action, the *Consultant* submits a revised proposal to the *Employer* for acceptance within one week.
- 2.2.9 The *Consultant* corrects nonconformities and takes action to eliminate the causes of actual or potential nonconformities within a time which minimises the adverse effect on the *Employer* or Others and in any event before carrying out any operation the same or similar as that in respect of which the nonconformity occurred.
- 2.2.10 The *Consultant* notifies the *Employer* when the proposed actions have been taken and provides with his notification verification that the defective part of the *services* has been corrected.

2.3 NOT USED

2.4 Project Performance Indicators

- 2.4.1 The *Consultant* records performance against each of the Project Performance Indicators in the latest version of the CPF and assists the *Employer* in the development of this measurement toolkit by proposing and developing ways in which improvements can be made to the toolkit. No changes are implemented unless agreed in writing.
- 2.4.2 The *Consultant* works to the CPF toolkit, and provide scores on a quarterly basis. The CPF toolkit will be agreed between the *Consultant* and the *Employer* one month after the *starting date*. Scores for both the *Consultant* and the *Employer* will be agreed before they are sent on. Please refer to informational annexes for an illustrative example.
- 2.4.3 Interim assessments are made by the *Consultant* at monthly intervals and are reported in advance of progress meetings. If the interim assessments indicate that a performance target is not likely to be met, the *Consultant* submits proposals for changes to procedures to the *Employer* for acceptance. At the end of each Task, a final self-score report is produced and agreed with the Customer Relationship Manager. The *Consultant* prepares an improvement plan showing how performance will be improved during any further Tasks.

- 2.4.4 In determining the allocation of future work under this contract, the *Employer* will use the *Consultant's* performance against these Project Performance Indicators on each Task.
- 2.4.5 On each anniversary of the Contract Date the *Consultant* submits proposals for improvements for the following year in order to meet the requirement for continual improvement in performance.

2.5 Financial management

- 2.5.1 The *Consultant* includes on his invoices the purchase order number. The *Consultant* submits with each invoice such records as the *Employer* requires, including time sheets and details of expenses.
- 2.5.2 The *Consultant* notifies the *Employer* of the name and address of his bank, the account name and number, the bank sort code and any other details required to make direct payments into that account.

2.6 Health and safety requirements

- 2.6.1 The *Consultant* complies with the *Employer's* rules, regulations, health and safety policies and any safety and security instructions notified to the *Consultant*.
- 2.6.2 The *Consultant* works to the [ISO45001](#) standard for health and safety (or equivalent).
- 2.6.3 The *Consultant* provides the *Employer* with their standard health and safety risk assessments, and shall undertake new risk assessments for any non-standard tasks as required.
- 2.6.4 The *Consultant* reports to the *Employer* any accidents to people employed by the *Consultant* which require to be reported in accordance with relevant health and safety legislation.
- 2.6.5 The *Consultant* and the *Employer* notify each other of any known special health and safety hazards which may affect the performance of the *services*. The *Consultant* informs and instructs people employed by him on the hazards and any necessary associated safety measures.
- 2.6.6 The *Consultant* complies with *Employer's* [Interim Advice Note 128/15AR Highways England Supply Chain Health and Safety Incident Reporting](#) ("IAN 128"), or its later update or replacement, including any time periods required by IAN 128. If no time period is specified in IAN 128 the *period of reply* applies unless agreed otherwise by the *Employer*.
- 2.6.7 If any incident occurs that the *Consultant* considers is not within the remit of IAN 128 the *Consultant*.
 - a. notifies the *Employer* of the incident; and
 - b. reports the incident as if the incident was in the remit of IAN 128 if required by the *Employer*.
- 2.6.8 Any document that would otherwise fail to be disclosed by the *Consultant* to the *Employer* may be withheld by the *Consultant* provided the *Consultant's* legal advisor confirms to the *Employer* that the document is:
 - a. A confidential communication between the *Consultant* and its legal advisor for the purpose of seeking or giving legal advice that the legal advisor would normally expect to be given legal privilege in the normal course of its business with the *Consultant*; and

- b. A confidential communication between the *Consultant* or its legal advisors and third party where the communication came into existence with the dominant purpose of being used in connection with contemplated, pending or actual litigation in adversarial proceedings (as opposed to investigations or fact finding inquiries).

2.6.9 The *Consultant* ensures that all subcontracts (at any stage of remoteness from the Employer contain requirements similar to paragraphs 2.6.4 to 2.6.6.

2.6.10 The *Consultant* does not:

- a. Appoint a Subconsultant; or
- b. Allow a Subconsultant to appoint a sub-subconsultant (at any stage of remoteness from the *Employer*)

until the *Consultant* has demonstrated to the *Employer* that the subcontract (at any stage of remoteness from the *Employer*) complies with paragraph 2.6.7.

2.7 Environmental management and related aspects

2.7.1 In Providing the Services the *Consultant* complies with the *Employer's* environmental policy, which is to conserve energy, water and other resources, reduce waste and phase out the use of ozone depleting substances and minimise the release of greenhouse gases, volatile organic compounds and other substances damaging to health and the environment.

2.7.2 Paper for written outputs produced by the *Consultant* in connection with the contract complies with the relevant Government Buying Standard (<https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs>) and is used on both sides where appropriate.

2.7.3 Goods purchased by the *Consultant* on behalf of the *Employer* (or which will become the property of the *Employer*) comply with the relevant minimum environmental standards specified in the Government Buying Standard (<https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs>).

2.8 Energy efficiency

2.8.1 The *Consultant* complies with [PPN 7/14](#)

- a. In Providing the Services; and
- b. in the purchase of products for use by the *Consultant* partially or wholly for the purpose of Providing the Services comply with the standards for products in Directive 2012/27/EU.

2.8.2 The *Consultant* demonstrates to the *Employer* how, through Providing the Services, any new products purchased by the *Consultant* for use partially or wholly for the purpose of Providing the Services, complies with the requirements of Procurement Policy Note 7/14 entitled "[Implementing Article 6 of the Energy Efficiency Directive](#)".

2.9 Project management

Rights to use material

2.9.1 The *Employer* may use material provided by the *Consultant* under this contract for any purpose.

Working with Others

- 2.9.2 The *Consultant* does not enter into commitments when dealing with third parties that might impose any obligations on the *Employer* except with the consent of the *Employer*.

Meetings and reports

- 2.9.3 The *Consultant* reports on the performance of the *services* and attends all meetings arranged by the *Employer* for the discussion of matters connected with the performance of the *services*.
- 2.9.4 The *Consultant* meets with the Customer Relationship Manager for monthly progress meetings. These meetings will take place in the *Employer's* office in Bristol or elsewhere by agreement. The *Consultant* records minutes and actions, and distributes these within one week following the meeting.
- 2.9.5 The *Consultant* provides monthly progress reports (at least one week in advance of the monthly progress meeting) to the Customer Relationship Manager, detailing progress against the programme, Defect updates, Risk Register updates, updates to Prices, early warnings, financial commitments and future forecasting, resourcing forecasts, alternative options for improving the effectiveness of the *services*, and change management (e.g. notification of new, and progress against existing, compensation events and Task Orders).
- 2.9.6 The *Consultant* may be required to produce Exception Reports (as defined in PRINCE2) for unusual occurrences.
- 2.9.7 The *Consultant* may be required to attend monthly internal programme board meetings.

Drawings, specifications, software, designs and other data

- 2.9.8 The *Employer* provides the *Consultant* with access to all relevant deliverables produced so far under its CAV programme.
- 2.9.9 The *Consultant* delivers to the *Employer* on Completion the final 'deliverable' version of any data in an agreed format.
- 2.9.10 If this contract is terminated the *Consultant* delivers to the *Employer* working versions of each deliverable that has not been completed.
- 2.9.11 If information is to be exchanged electronically, the *Consultant* complies with the *Employer's* procedures for safeguarding the connection and the format of transmitted data.
- 2.9.12 The *Consultant* provides to the *Employer* copies of such records and documents as the *Employer* requests.
- 2.9.13 The *Consultant* creates and maintains a deliverables register, to log all deliverables produced from the *starting date* until the *completion date*, which is released to the Customer Relationship Manager upon request.
- 2.9.14 The *Consultant* provides an electronic copy of all deliverables produced in relation to the *services* on an annual basis or upon instruction by Customer Relationship Manager.
- 2.9.15 The *Consultant* creates and maintains a register of all compensation events and Task Orders, which is released to the Customer Relationship Manager upon request.

2.10 Information security

- 2.10.1 The *Consultant* ensures that all staff deployed to Provide the Services from the *starting date* until the *completion date* have signed security operating

procedures appropriate to their role, such that they understand and have acknowledged their security responsibilities before being deployed to Provide the Services. These security operating procedures shall make clear the implications of a breach of security responsibility (which may include criminal prosecution, disciplinary action and civil redress).

- 2.10.2 The *Consultant* ensures that all staff deployed to Provide the Services from the *starting date* until the *completion date* have had security or information assurance training relevant to their role. The *Consultant* ensures that such training shall be updated, and all roles identified as requiring such training shall attend such training, on no-less than an annual basis. Where an individual is performing a specific function relevant to security within the *services*, the *Consultant* provides them with role-specific information assurance training as appropriate.
- 2.10.3 The *Consultant* ensures that a Security Management Plan (the exact format of which will be agreed after the *starting date*) is in place two months after the *starting date*, which shall be submitted to the Customer Relationship Manager for acceptance. The Security Management Plan shall be reviewed and kept up to date from the *starting date* until the *completion date*. As a minimum, the Security Management Plan must detail how the *Consultant* will adhere to the *Employer's* policies and procedures for handling and protecting data, how security risks and threats will be identified and mitigated, and how security Defects will be corrected.
- 2.10.4 The *Consultant* provides a level of security which:
- is in accordance with best practice;
 - complies with the *Employer's* Security Policy as defined in MCH2610 (please refer to annex);
 - complies with the Cabinet Office Security Policy Framework (as defined at <https://www.gov.uk/government/publications/security-policy-framework>); and
 - mitigates any specific security threats to the *services*.
- 2.10.5 The *Consultant* conducts regular audits of Subconsultants to ensure compliance with the security requirements. The *Consultant* provides the Customer Relationship Manager with the results of such audits on request and at no additional cost to the *Employer*.
- 2.10.6 The *Consultant* does not use any confidential or proprietary information provided to or acquired by it for any purpose other than to Provide the Services.
- 2.10.7 On Completion or earlier termination, the *Consultant* gives to the *Employer* all Personal Data held by them and destroys electronic and paper copies of such data in a secure manner.
- 2.11 Insurance**
- 2.11.1 The supply to the *Employer* of any evidence of insurance cover in compliance with requirements of clause 81.2 of the *conditions of contract* shall not imply acceptance by the *Employer* that the extent of insurance cover is sufficient or that the terms and conditions thereof are satisfactory nor be a waiver of the *Consultant's* liability under the contract.
- 2.11.2 The insurance shall be taken out and maintained with insurers who are of good financial standing and of good repute in the international market.

- 2.11.3 The *Consultant* notifies the *Employer* at least ten (10) days prior to cancellation, suspension, termination or non-renewal of any of the insurances required by the contract.
- 2.11.4 The *Consultant* does not (and the *Consultant* shall ensure that none of its Subconsultants of any tier) take any action or fail to take any action or, insofar as is reasonably within its power, permit anything to occur in relation to it which would entitle any insurer to refuse to pay any claim under any of the insurances required by this contract.
- 2.11.5 The *Consultant* meets its statutory insurance obligations in full. Insurances required to comply with all statutory requirements including, but not limited to, *Employers' Liability Insurance* and *Motor Third Party Liability Insurance*.
- 2.11.6 The limit of indemnity for the *Employers' Liability Insurance* shall be any one occurrence inclusive of costs, the number of occurrences being unlimited during the period of insurance or such greater amount as is required by the applicable law until the *completion date* or such greater period as is required by law.
- 2.11.7 Compulsory insurances are to contain an indemnity to principals clause in respect of claims made against the *Employer* arising out of the performance of the *Consultant* of its duties under this contract.

2.12 Legal Opinion for non-Untitled Kingdom Registered Company

- 2.12.1 Any legal opinion provided by the *Consultant* in support of a Parent Company Guarantee from a non-UK registered company includes (among others) the following matters:
- a. confirmation that:
 - a. the Controller is a corporation duly incorporated in the relevant jurisdiction, validly existing and in good standing under the laws of the jurisdiction in which it is incorporated;
 - b. the Controller has full power to execute, deliver, enter into and perform its obligations under the Parent Company Guarantee;
 - c. all necessary corporate, shareholder and other action required to authorise the execution and delivery by the Controller of the Parent Company Guarantee and the performance by it of its obligations under it have been duly taken;
 - d. execution by the proposed signatories in accordance with the method of execution proposed will constitute valid execution by the Controller;
 - e. the execution and delivery by the Controller of the Parent Company Guarantee and the performance of its obligations under it will not conflict with or violate:
 - i. the constitutional documents of the Contrisdiction in which it is incorporated;
 - ii. any order of any judicial or other authority in the jurisdiction in which it is incorporated; or
 - iii. any mortgage, contract or other undertaking which is binding on the bidder or its assets; and

- b. (assuming that it is binding under English law) the Parent Company Guarantee constitutes legal, valid and binding obligations of the Controller enforceable in accordance with its terms;
- c. notification of any other formalities to be complied with under local law which may be necessary to enforce the Parent Company Guarantee in the Controller's place of incorporation, including (for example) notarisation, legalisation or registration of the Parent Company Guarantee;
- d. notification of whether withholding is required to be made by the Controller in relation to any monies payable to *Employer* under the Parent Company Guarantee;
- e. confirmation of whether the *Employer* will be deemed to be resident or domiciled in the foreign jurisdiction by reason of its entry into the Parent Company Guarantee; and
- f. confirmation that the Controller and its assets are not entitled to immunity from suit, pre-judgment attachment or restraint or enforcement of a judgment on grounds of sovereignty or otherwise in the courts of England and Wales in respect of proceedings against it in relation to the Parent Company Guarantee.

2.13 Conflict of interest

- 2.13.1 The *Consultant* does not take an action which would cause a conflict of interest to arise in connection to this contract. The *Consultant* notifies the *Employer* if there is any uncertainty about whether a conflict of interest may arise exist or arise.
- 2.13.2 The *Consultant* notifies the employees and Subconsultants (at any stage of remoteness from the *Employer*), and ensures any Subconsultant informs its employees, who are Providing the Service, that they do not take an action which would cause an actual or potential conflict of interest to arise in connection with the *services*.
- 2.13.3 The *Consultant* ensures that any employee and that any Subconsultant (at any stage of remoteness from the *Employer*) ensures any of its employees, who are Providing the Service, completes a declaration of interests and conflict of interests in the form set out in Annex E. The *Consultant* issues to the *Employer* any completed declaration of interests and conflict of interests.
- 2.13.4 The *Consultant* procures any Subconsultant (at any stage of remoteness from the *Employer*) immediately notifies the *Consultant* and *Employer* if there is any uncertainty about whether a conflict of interest may exist or arise, and immediately notifies the *Employer* if there is any uncertainty about whether conflict of interest may exist or arise.
- 2.13.5 If the *Consultant* or Subconsultant (at any stage of remoteness from the *Employer*) notifies the *Employer*, the *Employer* may:
 - a. require the *Employer* to stop Providing the Service until any conflict of interest is resolved; and/or
 - b. require the *Consultant* to submit to the *Employer* for acceptance a proposal to remedy the actual or potential conflict of interest.
- 2.13.6 A reason for not accepting the submission is that it does not resolve any conflict of interest. The *Consultant* amends the proposal in response to any comments from the *Employer* and resubmits it for acceptance by the *Employer*. The *Consultant* complies with the proposal once it has been accepted.

- 2.13.7 Any step taken under this condition is not a compensation event.
- 2.13.8 A failure to comply with this obligation is treated as a substantial failure by the *Consultant* to comply with his obligations.
- 2.13.9 The *Consultant* accepts that in Providing the Services, there are various restrictions on what related contracts they can tender for, in accordance with the *Employer's* procurement policy located at <https://www.gov.uk/government/organisations/highways-england/about/procurement>. As to avoid a conflict of interest, the *Consultant* accepts that they are prohibited from tendering for any *Employer* opportunities whereby they would lease, sell or tender the *Consultant's* own CAV and C-ITS software, hardware, equipment and infrastructure on the projects outlined in 1.1.3.

2.14 Other constraints on how the *Consultant* is to Provide the Services

- 2.14.1 It is anticipated that the majority of the *services* will be conducted by the *Consultant* during normal working hours. Normal working hours are defined as Monday to Friday 9am to 5pm inclusive, excluding bank holidays. In some exceptional circumstances, the *Consultant* may need to work outside these hours.
- 2.14.2 The *Consultant* claims *expenses* (where such claims are applicable, as agreed with the Customer Relationship Manager) in accordance with the *Employer's* policies.
- 2.14.3 The *Consultant* operates a robust document and configuration management process to ensure that deliverables and products are scheduled and managed with full traceability.
- 2.14.4 The *Consultant* uses business software that is fully compatible with the *Employer's* preferred business software, which is currently MS Office 2010.
- 2.14.5 The *Consultant* ensures that all staff deployed to Provide the Services from the *starting date* until the *completion date* have been security vetted in accordance with the HMG Baseline Personnel Security Standard (BPSS) guidance on pre-employment screening as defined at <https://www.gov.uk/government/publications/government-baseline-personnel-security-standard>.
- 2.14.6 The *Consultant* complies with all other standards as outlined in Schedule 2 clause 2.17 of the TMT2 Framework Agreement.
- 2.14.7 The *Consultant* appoints a Business Relationship Manager, and the *Employer* appoints a Customer Relationship Manager, who serve as the respective single points of contact for each party from the *starting date* until the *completion date*. The Business Relationship Manager oversees the day-to-day running of the *services*.
- 2.14.8 The *Employer's* CAV programme is delivered from its Bristol office. The *Consultant* delivers work from their own offices with regular meetings at the *Employer's* and its UK InterCor consortium members' offices in Bristol, Birmingham, London and Maidstone.
- 2.14.9 The *Consultant* attends an inception meeting with the *Employer* within two weeks from the *starting date*.
- 2.14.10 The *Consultant* is fully mobilised to Provide the Services within one month from the *starting date*.

- 2.14.11 The *Consultant* establishes and maintains appropriate channels of communication between stakeholders.
- 2.14.12 The *Consultant* produces and maintains a schedule of all *key people* from the *starting date* until the *completion date*.
- 2.14.13 The *Consultant* ensures that any *key people* hold the same Skills for the Information Age (SFIA) competencies (as defined at www.sfia-online.org) as are attributed to the grade for their *staff rates*, and that any *key people* hold the same skills as outlined in Annex A. Upon the request of the Customer Relationship Manager, the *Consultant* provides evidence that the resources assigned to Task Orders are appropriately qualified. The *Consultant* ensures that all resources assigned to Task Orders maintain their skills and level of expertise through continuous professional development.
- 2.14.14 The *Consultant* ensures that the following Management Products (as defined in PRINCE2) (the exact format of which will be agreed after the *starting date*) are in place one month after the *starting date*:
- Project Brief;
 - Communication Management Strategy;
 - Issue Register;
 - Lessons Log; and
 - Risk Management Strategy.
- The Management Products are submitted to the Customer Relationship Manager for their acceptance, and shall be reviewed and kept up to date from the *starting date* until the *completion date*. For the avoidance of doubt, these Management Products refer to management of the *services*, not the CAV programme.
- 2.14.15 The *Consultant* ensures that a Knowledge Transfer Plan (the exact format of which will be agreed after the *starting date*) is in place three months after the *starting date*, which shall be submitted to the Customer Relationship Manager for their acceptance. The Knowledge Transfer Plan is reviewed and kept up to date from the *starting date* until the *completion date*. As a minimum, the Knowledge Transfer Plan details how the *Consultant* shall transfer knowledge to the *Employer* prior to the *completion date*.
- 2.14.16 The *Consultant* ensures that an Exit Management Plan (the exact format of which will be agreed after the *starting date*) is in place three months after the *starting date*, which shall be submitted to the Customer Relationship Manager for their acceptance. The Exit Management Plan is reviewed and kept up to date from the *starting date* until the *completion date*. As a minimum, the Exit Management Plan details how the *Consultant* shall provide support to (and co-operate with) the *Employer* and any replacement *Consultant* appointed following the *completion date*, to enable a smooth transfer of responsibilities, assets and uncompleted work within the last three months prior to the *completion date*.
- 2.14.17 The *Consultant* ensures that a Business Continuity Plan (the exact format of which will be agreed after the *starting date*) is in place three months after the *starting date*, which shall be submitted to the Customer Relationship Manager for their acceptance. The Business Continuity Plan is reviewed and kept up to date from the *starting date* until the *completion date*. As a minimum, the Business Continuity Plan details how the *Consultant* shall

ensure continuity of the *services* in the event of an emergency, or transfer of staff.

- 2.14.18 The *Consultant* ensures that all communications to stakeholders are approved by the Customer Relationship Manager.
- 2.14.19 The *Consultant* keeps logs and records of all activities associated with the *services*, including a log of staff providing the *services*; Defects, tests and inspections etc.
- 2.14.20 The *Consultant* ensures that the language of all documentation produced will be in plain English and understandable by both technical and non-technical employees.

Annex A: Key roles

All individuals assigned to these roles shall be considered *key people*.

Reference	Role	Essential skills, knowledge and experience required from the role
R1	Automotive Telecommunications Technical Expert	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of working with automotive telecommunications standards, services and equipment; • Demonstrable knowledge and experience of developing and deploying fixed and mobile telecommunications technologies (e.g. 3G, 4G, LTE, private networks etc.).
R2	C-ITS Services Technical Expert	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of the technical standards relating to C-ITS; • Demonstrable knowledge and experience of other traffic management standards (e.g. UTMC, UTC/SCOOT); • Demonstrable knowledge and experience of the Amsterdam Group Day One Services; • Extensive knowledge of transport technology systems and associated architecture; • Evidence of working on projects with road authorities across boundaries.
R3	Programme Manager	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of running technology delivery programmes in the transport domain; • Evidence of working on projects with road authorities across boundaries.
R4	Cyber Security and PKI Technical Expert	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of advising on cyber security in a mission critical domain (e.g. aerospace, defence, transport, emergency services).
R5	Evaluation Specialist	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of undertaking evaluation programmes in the transport domain; • Evidence of working on projects with road authorities across boundaries.
R6	User Research Specialist	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of undertaking user research programmes in the transport domain; • Evidence of working on projects with road authorities across boundaries.

R7	Data Management and Analytics Expert	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of big data management and analytics methodologies; • Demonstrable knowledge and experience of Cloud technologies; • Demonstrable knowledge and experience in developing data management systems for use as part of safety related operational systems.
R8	Business Analyst	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of having developed user requirements for complex systems for complex projects which span organisations with potentially conflicting objectives; • Demonstrable knowledge and experience of developing as-is process maps; • Demonstrable knowledge and experience of developing to-be process maps based on the introduction of innovative technologies.
R9	Systems Architect	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of developing high level systems architecture based upon users requirements and in accordance with an organisations enterprise architecture strategy. • Demonstrable knowledge and experience of partitioning systems architecture into deliverable sub-systems; • Demonstrable knowledge and experience of project management methodologies (ITIL, APM, PRINCE2, Agile) to enable recommendation of suitable delivery methodology for sub systems; • Demonstrable knowledge and experience of working on complex systems which span organisations with potentially conflicting objectives.
R10	Business Models Commercial Specialist	<ul style="list-style-type: none"> • Demonstrable knowledge and experience of developing business models and value chains for new markets and industries. • Demonstrable knowledge and experience of value chain analysis to advise on where an organisation can best leverage emerging business models in their operations; • Demonstrable knowledge and experience of developing business cases for technology change projects. • Demonstrable knowledge and experience in developing organisational target operating models.

Annex B: Definitions

Term	Description
3G	The third generation of wireless mobile telecommunications technology.
4G	The fourth generation of wireless mobile telecommunications technology, succeeding 3G.
A2/M2 Connected Corridor	As defined in paragraph 1.3.25 to 1.3.29.
AD	Asset Delivery; an <i>Employer</i> initiative which outlines a new contracting model for road maintenance, whereby the <i>Employer</i> takes more responsibility for co-ordinating and prioritising maintenance activities.
Amsterdam Group	The Amsterdam Group is a strategic alliance of committed key stakeholders with the objective to facilitate joint deployment of C-ITS in Europe.
ANPR	Automatic number plate recognition is a technology for automatically reading vehicle number plates.
Benefits Review Plan	As defined in PRINCE2. Defines how and when measurement of project benefits achievement can be made.
Business Continuity Plan	The Business Continuity Plan details how the <i>Consultant</i> shall ensure continuity of the <i>services</i> in the event of an emergency, or transfer of staff.
Business Relationship Manager	An individual with responsibility for the day to day running of the <i>services</i> on behalf of the <i>Consultant</i> .
C2C-CC	The CAR 2 CAR Communication Consortium (C2C-CC) is a nonprofit, industry driven organisation initiated by European vehicle manufacturers and supported by equipment suppliers, research organisations and other partners.
CAN	Controller Area Network; a robust vehicle bus standard designed to allow microcontrollers and devices to communicate with each other in applications without a host computer.
CAV	Connected and Autonomous Vehicles.
CCAV	Centre for Connected and Autonomous Vehicles; a joint policy unit between Business Energy Innovation and Skills (BEIS) and DfT.
CCTV	Closed circuit television.
CEF	Connecting Europe Facility; a key EU funding instrument to promote growth, jobs and competitiveness through targeted infrastructure investment at European level call.

Term	Description
C-ITS	Cooperative Intelligent Transport Systems are a group of technologies and applications that allow effective data exchange through wireless technologies among elements and users of the transport system, very often between vehicles (V2V) or between vehicles and infrastructure (V2I).
Cloud	Cloud computing is a type of internet-based computing that provides shared computer processing resources (e.g. data hosting, application hosting), rather than a local server.
Communication Management Strategy	As defined in PRINCE2. Describes the means and frequency of communication between the project and its stakeholders.
COOPERS	A C-ITS project.
CPF	Collaborative Performance Framework; a toolkit used by the <i>Employer</i> to assess the <i>Consultant's</i> performance against the Project Performance Indicators.
C-ROADS	The aim of the C-Roads platform is to develop harmonised specifications taking the EU C-ITS platform recommendations into account, linking all C-ITS deployments and planning intensive cross-testing.
Customer Relationship Manager	An individual with responsibility for the day to day running of the <i>services</i> on behalf of the <i>Employer</i> .
Day One Services	V2I services (RWW, IVI, PVD, SPaT/MAP) and V2V services (hazardous location warning, slow vehicle warning, traffic jam ahead, stationery vehicle warning, emergency brake light, emergency vehicle warning, and motorcycle approach warning).
DENM	Decentralized Environmental Notification Message.
DfT	Department for Transport.
DRIVE C2X	A C-ITS project.
EC	European Commission.
ECo-AT	A C-ITS project. An Austrian project to create harmonised and standardised C-ITS applications jointly with partners in Germany and the Netherlands.
ETSI	European Telecommunications Standards Institute.
EU	European Union.
European Co-operation on	The European Co-operation for Accreditation (EA) is an association of national accreditation bodies in Europe that are officially recognised by

Term	Description
Accreditation	their national governments to assess and verify, against international standards, organisations that carry out evaluation services such as certification, verification, inspection, testing and calibration (also known as conformity assessment services).
Exception Reports	As defined in PRINCE2. Describes an exception situation, its impact, options, and recommendations to the programme board.
Exit Management Plan	The Exit Management Plan details how the <i>Consultant</i> shall provide support to (and co-operate with) the <i>Employer</i> and any replacement <i>Consultant</i> appointed following the <i>completion date</i> , to enable a smooth transfer of responsibilities, assets and uncompleted work within the last three months prior to the <i>completion date</i> .
FESTA	Field opErational teSt supportT Action, as detailed at https://www.its.leeds.ac.uk/festa .
FOTSIS	A C-ITS project.
Freight Platooning	Freight Platooning, also referred to as Truck Platooning or HGV Platooning, comprises a number of freight vehicles equipped with state-of-the-art driving support systems – one closely following the other. This forms a platoon with the freight vehicles driven by smart technology, and mutually communicating.
GD04 Safety Risk Assessment	A standard devised by the <i>Employer</i> for assessing health and safety risks.
GLOSA	Green Light Optimized Speed Advice, see SPaT/MAP.
GPS	The Global Positioning System, also known as Navstar, is a global navigation satellite system that provides location and time information.
Hybrid communications	Hybrid communications (also referred to as meshed networks) is a network that contains two or more communications standards in one network design. An example of this is a network that combines wired and wireless technologies.
InterCor	A C-ITS project.
In-vehicle information (IVI)	The services as defined in the Amsterdam Group’s IVI Functional Description . IVI enables the driver to have on time access to all relevant information continuously, based on the time and location of the vehicle, but also based on the characteristics and type of the vehicle.
Issues Register	As defined in PRINCE2. Captures and maintains information on all project issues that are being managed formally.
ITS	Intelligent Transport Systems.
ITS-G5	Also known as WiFi-P, IEEE802.11p, and DSRC, is a communications specification which has been specifically developed to support the

Term	Description
	requirements of ITS and CAV.
KCC	Kent County Council.
Knowledge Transfer Plan	The Knowledge Transfer Plan outlines how the <i>Consultant</i> will transfer knowledge, skills and expertise to the <i>Employer</i> .
KPI	Key performance indicators.
Lessons Log	As defined in PRINCE2. Provides an informal repository for lessons learned that apply to the current project and lessons from previous projects.
LTE	Long-Term Evolution is a standard for high-speed wireless communication for mobile phones and data terminals.
Management Products	PRINCE2 defines a set of baseline management products, records and reports that can be tailored and used in managing projects.
NRTS	National Roads Telecommunications Services is the fibre-optic network of communication and control that the <i>Employer</i> uses to monitor the SRN.
NTOC	National Traffic Operations Centre; the <i>Employer's</i> single, national, strategic TMC.
PKI	A public-key infrastructure is a set of roles, policies, and procedures needed to create, manage, distribute, use, store, and revoke digital certificates and manage public-key encryption.
Probe Vehicle Data (PVD)	PVD (also known as Floating Car Data, Floating Vehicle Data or Floating Cellular Data) involves the collection of data from vehicles such as location, speed, direction of travel and time.
Project Brief	As defined in PRINCE2. States the purpose, cost, time and performance requirements and constraints for a project.
Project Performance Indicators	The measures of success as defined in the CPF.
Quality Statement	The Quality Statement (also referred to as Quality Submission) is the statement setting out the <i>Consultant's</i> proposals for the management and resourcing of the <i>services</i> . The <i>Consultant</i> Provides the <i>Services</i> in accordance with the Quality Statement.
R&D	Research and development.
RCCs	Regional Control Centre. The <i>Employer</i> uses 7 regional TMCs to manage live traffic.
Road Investment	Road Investment Strategy 2015 to 2020 . Also referred to as "RIS1" or

Term	Description
Strategy	"the RIS".
Roadworks warning (RWW)	The services as defined in the Amsterdam Group's RWW Functional Description . RWW informs drivers of road works, the corresponding parameters and associated obstruction (e.g. lane closed) on the route ahead. The purpose is to alert the driver in time to increase awareness and to inform of potentially dangerous conditions.
RTMC	Regional Technology Maintenance Contractor; the <i>Employer</i> has 7 RTMC contracts which manage faults with on-road technology.
SAFESPOT	A C-ITS project.
SCOOP@F	A C-ITS project.
SCOOT	Split Cycle Offset Optimisation Technique is a tool for managing and controlling traffic signals in urban areas using UTC systems.
Security Management Plan	A Security Management Plan describes how the confidentiality, integrity, and availability of information will be ensured through the implementation of IT security measures.
Signal Phase and Time (SPaT) and Map Data (MAP)	The services as defined in the Amsterdam Group's SPaT/MAP Functional Description . SPaT will inform drivers about the current status and change of the traffic signal ahead as well as when the next signal stage change. It will also provide information about approaching traffic to optimize the signal system. MAP describes the physical geometry of one or more intersections.
Smart Motorways	A Smart Motorway (also known managed motorway) is a section of the SRN that uses active traffic management techniques to increase capacity by use of VMS and hard shoulder running at busy times.
SRN	Strategic Road Network; the motorways and all-purpose trunk roads that are managed by the <i>Employer</i> .
Task Order Manager	An individual with responsibility for the day to day running of a specific Task Order on behalf of the Customer Relationship Manager or Business Relationship Manager.
TESTFESTs	Testing events which enable ITS providers to run interoperability tests using test descriptions provided in approved guidelines.
Testing Organisation	Any entity who wishes to test CAV technologies on the <i>Employer's</i> SRN.
TfL	Transport for London.
TMC	Traffic Management Centre.
TOS	The <i>Employer's</i> Traffic Officer Service.

Term	Description
UK CITE	UK Connected Intelligent Transport Environment; an industry led consortium of multi-national companies working in collaboration with the <i>Employer</i> to test the potential use of CAV technology on the SRN.
UTC	Urban Traffic Control (UTC) systems are used for urban traffic management.
UTMC	The Urban Traffic Management and Control standard is an English standard developed for information exchange between TMCs and roadside technology. Urban Traffic Management and Control (UTMC) systems are designed to allow the different applications used within modern traffic management systems to communicate and share information with each other.
V2I	Vehicle to infrastructure, also known as Infrastructure to vehicle (I2V) or I2V-V2I.
V2V	Vehicle-to-vehicle.
V2X	Vehicle-to-everything.
VMS	Visual message sign.

Annex C: Example Parent Company Guarantee

DATED [•]

HIGHWAYS ENGLAND COMPANY LIMITED

as Employer

[•]

as Guarantor

PARENT COMPANY GUARANTEE

relating to a term contract for the provision of
consultancy services in respect of []

DATED [●]

PARTIES

- (1) **HIGHWAYS ENGLAND COMPANY LIMITED** (company no 09346363) whose registered office is at Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU1 4LZ (the “**Employer**”)
- (2) [●] (company no [●]) whose registered office is at [●] (the “**Guarantor**”)

BACKGROUND

- (A) By the Contract, the Employer has employed the Consultant to provide the Services.
- (B) The Guarantor is the ultimate parent company of the Consultant.
- (C) The Guarantor has agreed to guarantee the due performance by the Consultant of his obligations under the Contract in the manner set out in this deed.

OPERATIVE PROVISIONS

1. DEFINITIONS AND INTERPRETATION

- 1.1. Unless the contrary intention appears, the following definitions apply:
 - “**Contract**” means the contract dated [●] between the Employer (1) and the Consultant (2) under which the Consultant has agreed to provide the Services.
 - “**Consultant**” means [●] (company no [●]) whose registered office is at [●].
 - “**Insolvency Event**” means the Consultant being unable to pay its debts (as defined by Sections 123(1) and 268(1) of the Insolvency Act 1986) or any corporate action, legal proceedings or other procedure or step is taken in relation to:
 - (a) suspension of payments, a moratorium of any indebtedness, winding-up, dissolution, administration or reorganisation (by way of voluntary arrangement, scheme of arrangement or otherwise) of the Consultant other than a solvent liquidation or reorganisation of the Consultant;
 - (b) a composition, assignment or arrangement with any creditor of the Consultant;
 - (c) the appointment of a liquidator, receiver, administrator, administrative receiver, compulsory manager or other similar officer in respect of the Consultant or any of its assets; or
 - (d) enforcement of any security over any assets of the Consultant, or any analogous procedure or step is taken in any jurisdiction.
 - “**Services**” means the services to be provided by the Consultant pursuant to the Contract.
- 1.2. The clause headings in this deed are for the convenience of the parties only and do not affect its interpretation.
- 1.3. Words importing the singular meaning include the plural meaning and vice versa.

- 1.4. Words denoting the masculine gender include the feminine and neuter genders and words denoting natural persons include corporations and firms and all such words shall be construed interchangeably.
- 1.5. References in this deed to a clause are to a clause of this deed.
- 1.6. References in this deed to any statute or statutory instrument include and refer to any statutory amendment or re-enactment for the time being in force.

2. GUARANTEE

- 2.1. In consideration of the Employer agreeing to enter into the Contract with the Consultant, the Guarantor irrevocably and unconditionally guarantees and undertakes to the Employer that:
 - a) the Consultant will perform and observe all his obligations under the Contract at the times and in the manner provided in the Contract; and
 - b) in the event of any breach of such obligations by the Consultant, the Guarantor shall procure that the Consultant makes good the breach or otherwise cause it to be made good and shall indemnify the Employer against any loss, damage, demands, charges, payments, liability, proceedings, claims, costs and expenses suffered or incurred by the Employer arising from or in connection with it.
- 2.2. The Guarantor shall also indemnify the Employer against:
 - a) any costs, losses and expenses (including legal expenses) which may be suffered or incurred by the Employer in seeking to enforce and enforcing (i) this Guarantee and/or (ii) any judgment or order obtained in respect of this Guarantee; and
 - b) any loss or liability suffered or incurred by the Employer if any of the obligations of the Consultant under the Contract is or becomes illegal, invalid or unenforceable for whatsoever reason as if such obligations were not illegal, invalid or unenforceable.
- 2.3. Except in the case of an action under clause 2.2 or clause 5, any limitation or defence which would have been available to the Consultant in an action under the Contract shall likewise be available to the Guarantor in a corresponding action under this deed.

3. GUARANTOR'S LIABILITY

- 3.1. The obligations of the Guarantor under this deed are in addition to and independent of any other security which the Employer may at any time hold in respect of the Consultant's obligations under the Contract and may be enforced against the Guarantor without first having recourse to any such security.
- 3.2. The obligations of the Guarantor under this deed are in addition to and not in substitution for any rights or remedies that the Employer may have against the Consultant under the Contract or at law.
- 3.3. The liability of the Guarantor under this deed shall in no way be discharged, lessened or affected by:
 - a) an Insolvency Event;
 - b) any change in the constitution, status, function, control or ownership of the Consultant or any legal limitation, disability or incapacity relating to the Consultant or any other person;

- c) the Contract or any of the provisions of the Contract being or becoming illegal, invalid, void, voidable or unenforceable;
 - d) any time given, waiver, forbearance, compromise or other indulgence shown by the Employer to the Consultant;
 - e) the assertion or failure to assert or delay in asserting any rights or remedies of the Employer or the pursuit of any right or remedy of the Employer;
 - f) the giving by the Consultant of any security or the release, modification or exchange of any such security or the liability of any person; or
 - g) any other act, event, omission or circumstance which but for this provision might operate to discharge, lessen or otherwise affect the liability of the Guarantor,
- 3.4. in each case with or without notice to, or the consent of, the Guarantor and the Guarantor unconditionally and irrevocably waives any requirement for notice of, or consent to, such matters.
- 3.5. Any decision of an adjudicator, expert, arbitral tribunal or court in respect of or in connection with the Contract and any settlement or arrangement made between the Employer and the Consultant shall be binding on the Guarantor.

4. VARIATIONS TO THE CONTRACT

- 4.1. The Guarantor authorises the Consultant and the Employer to make any addition or variation to the Contract, the due and punctual performance of which shall likewise be guaranteed by the Guarantor in accordance with the terms of this deed. The liability of the Guarantor under this deed shall in no way be discharged or lessened by any such addition or variation.

5. LIQUIDATION/DETERMINATION

- 5.1. The Guarantor covenants with the Employer that:
- a) if a liquidator is appointed in respect of the Consultant and the liquidator disclaims the Contract; or
 - b) if the Consultant's employment under the Contract is determined for any reason,
- the liability of the Guarantor under this deed shall remain in full force and effect.

6. WAIVER

- 6.1. The Guarantor waives any right to require the Employer to pursue any remedy (whether under the Contract or otherwise) which it may have against the Consultant before proceeding against the Guarantor under this deed.

7. RIGHTS OF GUARANTOR AGAINST CONSULTANT

- 7.1. The Guarantor shall not by any means or on any ground seek to recover from the Consultant (whether by instituting or threatening proceedings or by way of set-off or counterclaim or otherwise) or otherwise to prove in competition with the Employer in respect of any payment made by the Guarantor under this deed nor be entitled in competition with the Employer to claim or have the benefit of any security which the Employer holds for any money or liability owed by the Consultant to the Employer. If the

Guarantor shall receive any monies from the Consultant in respect of any payment made by the Guarantor under this deed, the Guarantor shall hold such monies in trust for the Employer for so long as the Guarantor remains liable or contingently liable under this deed.

8. CONTINUING GUARANTEE

- 8.1. The terms of this deed are a continuing guarantee and shall remain in full force and effect until each part of every obligation of the Consultant under the Contract has been performed and observed and until each and every liability of the Consultant under the Contract has been satisfied in full.

9. THIRD PARTY RIGHTS

- 9.1. Unless the right of enforcement is expressly granted, it is not intended that any third party should have the right to enforce any provision of this deed pursuant to the Contracts (Rights of Third Parties) Act 1999.

10. NOTICES

- 10.1. Any notice or other communication required under this deed shall be given in writing and shall be deemed to have been properly given if compliance is made with section 196 of the Law of Property Act 1925 (as amended by the Recorded Delivery Service Act 1962 and the Postal Services Act 2000).

11. GOVERNING LAW

- 11.1. The application and interpretation of this deed shall in all respects be governed by English law and any dispute or difference arising under it shall be subject to the exclusive jurisdiction of the courts of England and Wales save that any decision, judgment or award of such courts may be enforced in the courts of any jurisdiction.

This deed has been executed as a deed and delivered on the date stated at the beginning of this deed.

EXECUTION PAGE

Executed as a deed by
[GUARANTOR] acting by [*name of* Director
director] in the presence of:

Name of witness:

Signature of witness:

Address:

Occupation:

or

Executed as a deed by **[GUARANTOR]**)
acting by:)

Director

Director/Secretary

Annex D: Example form of novation

DATED [●]

HIGHWAYS ENGLAND COMPANY LIMITED

as Old Employer

[●]

as New Employer

[●]

as Consultant

DEED OF NOVATION

relating to a term contract for
the provision of consultancy services in respect of [●]

DATED [●]

PARTIES

- (1) **HIGHWAYS ENGLAND COMPANY LIMITED** (company no 09346363) whose registered office is at Bridge House, 1 Walnut Tree Close, Guildford, Surrey GU1 4LZ (the “**Old Employer**”)
- (2) [*insert details of replacement authority*] (the “**New Employer**”)
- (3) [●] (company no [●]) whose registered office is at [●] (the “**Consultant**”)

BACKGROUND

- (A) By the Contract, the Old Employer has employed the Consultant to provide the Services.
- (B) The Old Employer has agreed (with the consent of the Consultant) to transfer all its rights and obligations under the Contract to the New Employer and the Consultant has agreed to accept the liability of the New Employer in place of the liability of the Old Employer under the contract upon and subject to the terms of this deed, which is supplemental to the Contract.

1. DEFINITIONS AND INTERPRETATION

- 1.1. Unless the contrary intention appears, the following definitions apply:
 - “**Contract**” means the term contract dated [●] between the Employer (1) and the Consultant (2) (including any further agreement varying or supplementing the Contract) under which the Consultant has agreed to provide the Services.
 - “**Services**” means the services to be provided by the Consultant pursuant to the Contract.
- 1.2. The clause and paragraph headings in this deed are for ease of reference only and are not to be taken into account in the construction or interpretation of any provision to which they refer.
- 1.3. Words in this deed denoting the singular include the plural meaning and *vice versa*.
- 1.4. References in this deed to any statutes or statutory instruments include any statute or statutory instrument amending, consolidating or replacing them respectively from time to time in force, and references to a statute include statutory instruments and regulations made pursuant to it.
- 1.5. Words in this deed importing one gender include both other genders and may be used interchangeably, and words denoting natural persons, where the context allows, include corporations and *vice versa*.

2. NOVATION

- 2.1. The Old Employer and the Consultant release and discharge each other from the further performance of their respective obligations under the Contract and the Consultant acknowledges and accepts the liability of the New Employer in place of the liability of the Old Employer under the Contract.
- 2.2. The Consultant undertakes to be bound to the New Employer by the terms of the Contract in every way as if the New Employer was and always had been a party to the Contract in place of the Old Employer.

- 2.3. The Consultant acknowledges and warrants to the New Employer that it has duly observed and performed and will continue duly to observe and perform all its obligations under the Contract.

3. NEW EMPLOYER'S UNDERTAKING

- 3.1. The New Employer undertakes to be bound to the Consultant by the terms of the Contract and to perform the obligations on the part of "the Employer" under the Contract in every way as if the New Employer was and always had been a party to the Contract in place of the Old Employer.

4. PAYMENT OF SUMS DUE

- 4.1. The Consultant and the Old Employer agree that the total amount to be paid by the Old Employer to the Consultant for Services provided under the Contract prior to the date of this deed is £[●]. The Consultant acknowledges that the Old Employer has paid the sum of £[●] prior to the date of this deed. The balance of £[●] shall be invoiced by the Consultant to the Old Employer and paid by the Old Employer in accordance with the Contract.

- 4.2. The Consultant and the New Employer agree that the New Employer shall be solely responsible (to the exclusion of the Old Employer) for payment of all sums due to the Consultant under the Contract for Services provided after the date of this deed.

- 4.3. [Where, under Clause 2.2 above or under any other contract between the New Employer and the Consultant, any sum of money is recoverable from or payable by the Consultant to the New Employer, such sum may be deducted from or reduced by the amount of any sum then due or which may at any time become due from the New Employer to the Consultant under Clause 4.2 above or under any other contract with any Department or Office of Her Majesty's Government.]¹

5. NOTICES

- 5.1. Any notice or other communication required under this deed shall be given in writing and shall be deemed to have been properly given if compliance is made with section 196 of the Law of Property Act 1925 (as amended by the Recorded Delivery Service Act 1962).

6. GOVERNING LAW AND DISPUTES

- 6.1. The application and interpretation of this deed shall in all respects be governed by English law and any dispute or difference arising under this deed shall be subject to the jurisdiction of the English courts.

This Deed has been executed as a deed and delivered on the date stated at the beginning of this Deed.

¹ Delete if not novated to a Department or Office of Her Majesty's Government

EXECUTION PAGE

*OPTION 1a [execution by a Highways
England under seal]*)
)

Executed as a deed by **HIGHWAYS
ENGLAND COMPANY LIMITED** by affixing
his common seal in the presence of:

Director

Director/Secretary

*OPTION 1b [execution by a Highways
England under seal]*)
)

Executed as a deed by **HIGHWAYS
ENGLAND COMPANY LIMITED** by affixing
his common seal in the presence of:

Authorised Signatory

Authorised Signatory

OPTION 2a Executed as a deed by)
HIGHWAYS ENGLAND COMPANY)
LIMITED acting by:

Director

Director/Secretary

OPTION 2b Executed as a deed by)

HIGHWAYS ENGLAND COMPANY LIMITED acting by:

)

Authorised Signatory

Authorised Signatory

Executed as a deed by **[NEW EMPLOYER]**
in the presence of:

)

)

Authorised Signatory

Authorised Signatory

Executed as a deed by **[CONSULTANT]**
in the presence of:

)

)

Director

Director/Secretary

Annex E: Declaration of interests

**Official-Sensitive
(only when not a nil return)**

**Highways England Company Limited Declaration of Interest Form
(for use by individuals with non-employment contract status)**

Purpose

This form asks you to provide information in respect of actual, potential or perceived conflicts of interest in line with the Public Contracts Regulations 2015, the Concession Contract Regulations 2016 and Highway England’s own policies including in regard to procurement and transparency.

The fact that you have an actual, potential or perceived conflict of interest is not necessarily a barrier to your involvement in a particular decision. The nature of action taken, when handling conflicts of interest, will depend on a number of factors which will be considered by Highways England and the decision of Highways England will be final.

Personal details (for Highways England and statutory records, please advise any subsequent changes)	
Role/service provided	
Present surname and any former surname(s)	
Present forename(s) and any former forename(s)	
Phone Numbers a) landline b) mobile (Highways England restricted use only)	
Date form completed	
Directorships	
Are you a director or a "shadow director" ² of any company? YES/NO	If YES, please provide the names of the companies, business sector, and date you became a director.

² “shadow director “ means a person in accordance with whose instructions the directors of the company are accustomed to act. If you are a director or a shadow director of a company and, as a consequence are also a director or shadow director of several subsidiaries, a general description of the subsidiaries will suffice.

Other business interests	
<p>Are you a partner, employee or a consultant (paid or otherwise) in any business? YES/NO</p>	<p>If YES state the names and give the nature of the businesses where this is not indicated in the title and the nature and start date of your involvement with each partnership, employment or consultancy.</p>
<p>Have you held any fiduciary office or position of trust (paid or otherwise) in the last 10 years? YES/NO Include public and any political offices.</p>	<p>If YES please give details and if you no longer hold the position, describe the circumstances in which you ceased to do so.</p>
<p>Do you have a direct shareholding in any company in the sector in which Highways England operates? YES/NO</p>	<p>I hold the following shares/I do not hold any shares in the sector in which Highways England operates.</p>
Voluntary work	
<p>Are you involved in or a member of any professional bodies, charities, special interest or political groups in the sector which Highways England operates? YES/NO.</p>	<p>If YES provide details.</p>
Other	

<p>Are there any other matters which you, or a reasonable member of the public might perceive that Highways England should be aware of which might impact on your role as a consultant to Highways England or the reputation of Highways England? YES/NO</p>	<p>If YES provide details.</p>
<p>Are there any matters or relevant interests, (including significant interests of close members² of your family) which might influence your judgement, deliberation or action in providing services to/your role in Highways England or be perceived by a reasonable member of the public as doing so? YES/NO</p> <p>Please include information on any directorships and business interests in respect of close members³ of your family in respect of the sphere in which Highways England operates.</p>	<p>If YES provide details.</p>
<p>Connected persons</p>	
<p>Please confirm (in the box to the right) that, in relation to the questions contained in sections 3, 4, 6, above, no additional information would need disclosure in relation to any connected person.</p>	<p>I confirm that no additional information requires disclosure.</p> <p>I have provided additional information above.</p>

³ Close members means a) an individual's domestic partner and children b) children of individuals domestic partner c) or independents domestic partners, d) parents and in-laws and e) siblings.

Declaration

1. I declare that to the best of my knowledge and belief (having taken all reasonable care to ensure that such is the case) the answers to all of the above questions are true and not misleading.
2. I shall not communicate to any person, firm, company or other legal entity other than Highways England employees or consultants engaged by or on behalf of Highways England in connection with the same matter any commercially sensitive or confidential information in connection with my work at Highways England (unless Highways England grants permission in writing to share commercially sensitive or confidential information with such person, firm, company or other legal entity).
3. During and for a period of 12 months following the expiry of my appointment to work for Highways England, I shall not seek to obtain any commercial advantage for myself, my employer or any connected persons, or personal advantage, from my work at Highways England.
4. During and for a period of 12 months following the expiry of my appointment to work for Highways England, I shall not assist my employer, any organisation connected with my employer, or any other organisation or person in tendering for any contract opportunity with Highways England that I have worked on in my capacity as a consultant to Highways England.
5. I shall not pay, give, receive or offer to pay, give, receive any sum of money or other consideration directly or indirectly to any person whatsoever for any act described in paragraphs 2, 3 and 4 above. If any offer is made to me to breach this declaration, I shall report it immediately to Highways England.
6. All documentation that I have access to in my role as a consultant to Highways England shall be made available to Highways England to form part of any relevant tender information pack. Any information that may give me, my employer or a third party any advantage in a tender process shall be returned to Highways England.
7. I understand that I may only be involved in the evaluation of a tender for Highways England where expressly sanctioned in writing by Highways England. I understand that I will not be involved in the process for agreeing any extension to my contract or the contract of any consultant who shares with me the same employer.
8. I understand that I am not to be involved in looking at the route to market for any contract, project or task for which I or my employer may wish to tender and not to be involved in the assessment of resources being proposed for such contract, project or task. I agree to remove myself from any discussions relating to the procurement route for any contract, project or task for which I or my employer may wish to tender and I agree not to discuss these matters with my employer or with the team responsible for managing the contract, project or task in my firm.
9. Should any of the information on this declaration change or should I become aware of a potential, perceived or actual conflict of interest I will immediately contact Highways England to inform them and will take all reasonable steps to mitigate or remove the potential, perceived or actual conflict of interest.
10. I understand that if I do not comply with the statements in this declaration I may prejudice my employers ability to participate in tendering for contract opportunities with Highways England, I may have my contract with Highways England terminated and could face legal action.

11. I confirm that I have read and understood the requirements related to conflicts of interest in the contract between my employer and Highways England for the provision of the *services*.

Signed by the <i>Consultant</i> Date	
--	--

Acknowledged by the <i>Employer</i> Date	
--	--

For Highways England’s use only - Only applicable when involved in the tendering process

Acceptance/ Non-acceptance

I have considered the impact on the assessment and the risks to the Highways England objectives.

- I am willing to accept this supplier for this assessment as a result of this consideration.
- I am not willing to accept this supplier for this assessment as a result of this consideration.

Please record reasoning for decision:

Signed:

Name in Block Capitals:

Post and Grade:⁴

⁴ This section of the agreement must be completed by PB8 SSD, or if no one is available PB8 PLT member.

Annex F: Task Order form

Section 1: Task Order details (to be completed by the *Employer*)

Contract reference:	e.g. TMTii 31
Contract name:	e.g. CAV-PIP
Task Order reference:	e.g. TMTii 31 TO1
Purchase Order number:	e.g. 4087189-1
Date upon which the Task brief was issued to the <i>Consultant</i> by the <i>Employer</i>:	
Deadline for the Task proposal from the <i>Consultant</i>:	e.g. 2 weeks after the above date
Date upon which the Task Order was accepted by the <i>Employer</i>:	
From the <i>Employer</i>:	e.g. Customer Relationship Manager Highways England Company Ltd Bridge House 1 Walnut Tree Close Guildford GU1 4LZ
To the <i>Consultant</i>:	Insert supplier details
Task to be provided at:	Enter location
Task starting date:	
Task Completion Date:	

Section 2: Task brief (to be completed by the Employer)

The Task brief should include:

- A detailed description of the work in the Task;
- A description of the *services* required;
- The information to be provided to the or *Consultant* by the *Employer*;
- Contact details;
- The timescale in which the Task is to be carried out;
- Deliverables, milestones and any associated tests or acceptance criteria;
- When using PSC Option G, whether the Task is commissioned on a lump sum or Time Charge basis;
- The amount of delay damages for the late completion of the Task;
- Task starting date(s) and Task Completion Date(s).

Section 3: Task proposal (to be completed by the Consultant)

The Task proposal should include:

- The scope of the Task;
- The methodology (including timescales);
- Personnel utilised to manage and undertake the Task, including any additional personnel not named in Contract Data Part Two;
- An estimate of the total of the Prices to undertake the Task;
- Reporting regime;
- The Task Order programme, including:
 - The Task starting date and the Task Completion Date;
 - Planned Task Completion;
 - The order and timing of the operations which the *Consultant* plans to do in order to complete the Task;
 - Provisions for:
 - Float;
 - Time risk allowances;
 - Health and safety requirements; and
 - The procedures set out in the PSC *conditions of contract*.
 - For each operation, a statement of how the *Consultant* plans to do the work identifying the principal equipment and other resources which he plans to use; and
 - Other information which the Scope requires the *Consultant* to show on a Task Order programme submitted for acceptance.
- Details of any service levels affected;
- Details of any operational service impact;
- Details of any interfaces affected;
- Details of any risk assessments undertaken.

Section 4: Task Order Prices (to be completed by the Consultant)

The Task Order Prices should include:

- When using PSC Option G:
 - A priced list of items of work in the Task in which items taken from the Task Schedule are identified;
 - When the Task is on a Time Charge basis, details of any new *staff rates*.

Section 5: Acceptance of Task Order (to be completed by the *Employer* and the *Consultant*)

i) Acceptance on behalf of the *Employer*:

Financial approval

Name:	
Position:	e.g. Service Manager, Customer Relationship Manager
Signature:	
Date:	

Contractual approval

Name:	
Position:	e.g. Procurement Officer
Signature:	
Date:	

ii) Acceptance on behalf of the *Consultant*:

Name:	
Position:	e.g. Business Relationship Manager
Signature:	
Date:	