



Smart Motorways Programme

Collaborative Delivery Framework
Smart Motorway Programme – Lot 1 Design Brief
Infrastructure Design & Assessment – Tranche 5

NEC3 Framework Contract (April 2013)

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1. PURPOSE OF THE SERVICES

1.1 Background

Support services are to be provided by the *Consultant* from time-to-time, as instructed by the *Employer* as part of the wider programme of services to be carried out under the Collaborative Delivery Framework (CDF).

The CDF is a collaborative framework, developed to streamline delivery of the increased capital investment proposed for the future growth, development, and upgrade of the network.

These services are required to enhance the capacity and reliability of the UK strategic road network in order to provide better and enhanced journey time reliability for Highways England customers.

The specific services to be carried out under this Package Contract are described in paragraph 2, description of the *services*.

1.2 *Employer's Objectives*

The services are provided as part of the wider Roads Investment Strategy (RIS) published autumn 2014 and are to be delivered in conjunction and collaboration with other CDF framework consultants and contractors.

The objectives of this framework are set out in Annex 1 of the Framework Information.

The *Employer's* key objectives for Smart Motorways are:

- Develop schemes with a step change reduction in customer disruption.
- Focus should be on minimising network occupancy.
- Reduce the overall cost to the economy compared to current day practices.
- Build a programme development team that deliver significant performance improvements
- Create a programme organisation that is collaborative, focusses on relationships and has the safety of all at its heart.

2. DESCRIPTION OF THE SERVICES

2.1 Description

The *Employer* is implementing highway technology interventions to operate some of the busiest sections of the network as individual schemes that share similar characteristics (i.e. technology based with no land take required – with the exception of M25 J10-16 which may require minimal land requisition). To maximise efficiencies in the scheme lifecycle, these schemes will be delivered by the *Employer* as an investment portfolio, or programme, termed the Smart Motorway Programme (SMP) to be delivered by 2021 (with the exception of M25 J10-16 which is due to open November 2022). There is a focus on delivering operational outcomes on the network, resulting in legacy improvements for customers.

The interventions deliver a combination of new and upgraded network assets operating under protocols to facilitate operating regimes aligned to the *Employer's* business plan objectives.

The *Employer* has already commissioned preliminary works for SMP with the

purpose of defining the scope of subsequent services covered in this document. These preliminary commissions include:

- Operational Concept
- Traffic Modelling
- Environmental Baseline
- Asset Data Collection (LiDAR Survey)
- Asset Data Collection

The *Employer* will appoint under CDF Lot 1 suppliers (Consultants) to undertake Operational, Assessment and Engineering design services for civil engineering works and Traffic Technology involving electronic signs and signals, CCTV, monitoring equipment etc, during the Development Phase (PCF Stage 3; from Design Fix 1 to Design Fix 3). Supplementary services within this Scope may include:

- Specific Product Development / Improvement tasks, as instructed by the *Employer*
- Specific tasks

The *Employer* requires services to Tranche 5 SMP schemes detailed in Table 1, below, subject to satisfactory performance being met.

The SMP is dynamic. Schemes or part of schemes are subject to addition, removal, or re-prioritisation as works progress. The *Consultant* is required to be flexible in the delivery of the services and accommodates SMP scope and priority changes.

Table 1

Package	Scheme	Anticipated Design Start	Anticipated Finish
Package 1	M25 Junction 10 to 16	May2018	May2019
Package 2	A1(M) Junction 6 to 8	May 2018	May 2019
Package 3	M40/M42 Interchange	May 2018	May2019
Package 4	M62 Junction 20 to 25	May 2018	May 2019

The *Employer* reserves the right to extend these Package Contracts with the successful Suppliers to PCF stages 4-5. Should The *Employer* wish to invoke this extension the following criteria will need to have been met for the scheme

- Highways England confirms approval of funding for the next PCF stages

- Confirmation there is no change to the Commercial and Procurement strategy to progress to the next PCF stages.
- Satisfactory Supplier performance not below the failure level for all Package Contract CPF measures in the last two quarterly intervals.
- Consideration of the impact on the CDF OJEU limit.
- The scheme still offers value for money.

Further details of the individual schemes are provided in Annex 13 (scheme descriptions).

A 'Single Option Project Pre-Construction Process Map (Annex 14) has been prepared by the *Employer* that aligns with PCF and is based around five 'Design Fixes' during the Pre-Construction development phase. In addition, the SMP Design Guide V3.1 provides practical guidance and advice on best practice for designing the roadside infrastructure. The objective of the SMP Design Guide V3.1 is to drive standardisation and consistency of approach across all SMP schemes.

The *Consultant* adopts the rationale and approach outlined in the Process Map, (and subsequent revisions) and SMP Design Guide V3.1 in the delivery of the services set out in this document. The Process Map and SMP Design Guide V3.1 are live documents and the *Consultant*, as part of their commitment to the Scope as set out in this document, provides feedback to the *Employer* to propose changes to these documents that will lead to a more efficient delivery of SMP. These efficiencies may be in the Design, Construction, Operation and Maintenance phases of the schemes. In the event that a scheme needs to follow a full statutory process the DCO process map (that will be made available to the *Consultant*) is to be followed.

In delivering the services, the *Consultant* adopts a programme-delivery approach and maximises efficiencies in governance; stakeholder engagement; resource utilisation; and financial and management control.

The *Consultant* at all times looks to protect the interest of the *Employer* and provides the services in the most cost effective manner possible without compromising the *Employers* requirements. The *Consultant* agrees with the *Employer* within four (4) weeks of the starting date a strategy for achieving the efficiency savings.

3. GENERAL CONSTRAINTS ON HOW THE CONSULTANT IS TO PROVIDE THE SERVICES

3.1 General Constraints

Project Risks

The *Employer* has carried out a risk assessment of the SMP and identified a number of strategic and programme-level risks and management actions. Specific details of individual schemes and the associated scope of works, site constraints and other constraints are still being determined by the preliminary works being delivered by the *Employer*. As such, high level project specific risks have been identified (see Annex 13), however risk assessments have not been undertaken.

Following award of the contract, the risks contained in Contract Data Part One with those in Contract Data Part Two will be combined to form the Risk Register. Each risk will be identified as either strategic; programme; project specific and will be filtered accordingly to inform discussions with various audiences.

The risks set out in this Risk Register are to be reviewed by the *Employer* and the *Consultant* at a risk reduction meeting within four weeks after the starting date.

The *Consultant* nominates a lead for risk management who shall:

- Assist on risk management and contribute to the Risk Register
- promote a consistent approach to risk management across the framework
- arrange and where appropriate lead the risk reduction meeting and reviews
- ensure that those required to carry out a risk management roles are suitably trained,
- provide periodic risk management reports in the format/s required by the *Employer*
- raise significant risk (Strategic/Programme/Project) and trends to the *Employer* in timely fashion.
- The Consultant shares its risk registers, forecasts and final costs with other Suppliers to allow risk reduction across the programme.
- The Consultant undertakes quarterly programme risk reviews in conjunction with the Employer.
- The Consultant reports separately on their financial position regarding project and programme risk.
- The Consultant uses the Employer's Project Control Framework (PCF) products for risk management.

The *Consultant* must use PCF products for risk management and undertake monthly project risk reviews in conjunction with the *Employer*, Development and Delivery Partners and other consultants as required, and must report on their financial position regarding cost and schedule risk.

The *Consultant* must include in their Risk Register (but not be limited to) risks associated with availability and provision of construction materials, plant and resources.

Environmental requirements

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.

The *Consultant*:

- takes account of and seeks to deliver the National Policy Statement for National Networks (NPSNN) as part of the design and assessment of the scheme.
- reviews the RIS environmental objectives and identifies the potential contribution of the SMP intervention to deliver better environmental outcomes. (These shall be agreed with the *Employer* at the beginning of the design process and reported as agreed with the *Employer*).
- undertakes reviews of the design against the *Employer's* environmental objectives included in NPSNN and RIS (and any other *Employer* instruction) at key design stages.
- documents the delivery of the *Employer's* environmental objectives in the Environmental Review or Environmental Report as appropriate.

Paper for written outputs produced by the *Consultant* in connection with the Contract, complies with the relevant sustainable **Government Buying Standards** and is used on both sides where appropriate. *Suppliers* that have certified their products as

meeting Government Buying Standards are identified on the buying solutions website www.buyingsolutions.gov.uk.

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 Standards**.

Further, specific environmental requirements are detailed in subsequent sections of this Scope and in the scheme-specific scoping reports that are being prepared by the *Employer* and will be made available to the *Consultant*.

3.2 Security and identification of people

Basic Security Checks

If requested by the *Employer* the *Consultant* carries out basic security checks on its employees and Subconsultants before they are involved in delivering the Scope. The checks are carried out in accordance with the *Employer's* procedures detailed in Annex 1.

3.3 Equality and Diversity

The *Consultant* assists the *Employer* in the achievement of its equality and diversity requirements.

Inclusion Action Plan

The *Consultant* prepares an Inclusion Action Plan in accordance with Annex 3 and submits it to the *Employer* for acceptance within four weeks of the *starting date*.

Apprenticeships

Overview

For the purposes of this paragraph, Contract Year is (as the case may be) the period commencing on the *access date* or each anniversary of the *access date* and ending 12 months later.

The *Consultant* appoints and delivers a number of new apprenticeships through this contract equating to the greater of

- 1 apprenticeship for every £5m of Price for the Services Provided to Date in each Contract Year or
- 2.5% of the total workforce on this contract in each Contract Year.

The *Consultant* ensures

- that the apprenticeships meet the approved apprenticeship standards, see <https://www.gov.uk/government/collections/apprenticeship-standards> and any later revisions; and
- any alternative graduate scheme has been approved as apprenticeships by the Institute of Apprenticeships.

Obligations

The *Consultant* ensures from the Contract Date until Completion that he

- identifies the skills required to deliver the *services*

- identifies the skills to be developed by apprentices to deliver the *services*
- retains the apprentices during the period of the apprenticeships on the Providing the Services unless agreed otherwise with the *Employer*;
- takes reasonable steps to retain the apprentices once an apprentice has completed the apprenticeship on the Providing the Services unless agreed otherwise with the *Employer*.

The *Consultant* within 30 days of, and on each anniversary of, the Contract Date makes an annual report and proposal for acceptance by the *Employer*

- recording the skills required to deliver the services identified under the above paragraph and how any shortfall in the *Consultant's* and subconsultants' (at any stage of remoteness from the *Employer*) staff skills will be met,
- recording the skills to be developed by apprentices to deliver the services identified under the above paragraph and how that development will be met,
 - identifying the retention and training of existing apprentices and
 - identifying the number and type of new apprenticeships to be commenced in the first or next Contract Year having regard to Transport infrastructure skills strategy: building sustainable skills.

The *Consultant* amends the annual proposal in response to any comments from the *Employer* and resubmits the annual proposal for acceptance by the *Employer*. Once the annual proposal has been accepted by the *Employer*, the *Consultant* complies with the annual proposal.

The *Consultant* ensures that the *Employer* is able to identify all apprentices individually appointed under the requirements of this contract and provides a quarterly monitoring report to the *Employer* within five (5) working days of the start of each calendar month detailing performance against the annual proposal in respect of each apprentice appointed under this contract including

- number of apprenticeship starts created in that month,
- postcode of workplace,
- gender,
- ethnicity,
- level of apprenticeship (1 – 8) in accordance with the table below,
- category of apprenticeship , (Note to *Suppliers* the list of categories is currently under review and may be updated)
- planned apprenticeship finish date,
- confirmation if the apprentice is still engaged on Providing the Services and
- national insurance number.

The *Consultant* provides a quarterly monitoring report to the *Employer* within five (5) Working Days of the start of each calendar month detailing

- performance in respect of the following for each apprentice that was appointed and has completed the apprenticeship including

- postcode of workplace,
- gender,
- ethnicity,
- level of apprenticeship (1 – 8) in accordance with the table below,
- category of apprenticeship,
- apprenticeship completion date,
- confirmation if the apprentice is still engaged on Providing the Services and
- national insurance number,
- the total number of apprentices that have been appointed in compliance with this contract and the total number of apprentices that are retained on the provision of the *services*,
- the total number of apprentices that have been appointed in compliance with this contract but are no longer used to the provide the services and
- the total number of apprentices that have been appointed in compliance with this contract but are no longer employed by the *Consultant* or a subconsultant (at any stage of remoteness from the *Employer*) .

The *Consultant*

- makes available to the *Consultant's* and subconsultants' (at any stage of remoteness from the *Employer*) staff information about the Government's apprenticeship programme and wider skills opportunities and
- uses reasonable endeavours to provide work experience placements for 14 to 16 year olds, work experience placements for other ages, student sandwich/gap year placements and graduate placements in relation to this contract.

Description of Apprenticeship Levels			
Apprenticeship type	National qualification level	National qualification equivalent	Higher education equivalent
	Entry	Entry level certificate	
	1	GCSE (grade D to G)	
Intermediate	2	GCSE (A* to C)	
Advanced	3	AS and A level NVQ level 3	
Higher	4	Certificate of Higher Education NVQ level 4	Certificate of Higher Education

Higher National Certificate	5	Higher National Diploma NVQ level 4	Higher National Diploma Foundation Degree
	6	NVQ level 4	Bachelor's Degree
	7	Postgraduate Diploma NVQ level 5	Master's Degree
	8	NVQ level 5	PhD

3.4 Project Control Framework

The *Employer* operates a Project Control Framework (PCF) as part of its project management process. The PCF comprises a number of products relating to the life cycle of a project. These PCF products are produced, reviewed, updated or refined at various stages of the project life cycle. The *Consultant* will be involved in production, review and revision of the PCF products as the project life cycle evolves.

The end reviewers, including Operations Directorate (OD) and Customer Operations (CO), will be able to contribute to the *Consultant's* Performance Indicators (PIs) on the basis of the quality of PCF products and PCF product satisfaction.

The schemes meet the criteria for Single Option Projects, and therefore only PCF products associated with Stages 3 and 5 are required for the Development phase. PCF Products are required for Stages 6 and 7 and the *Consultant* shall work collaboratively with the Contractor to deliver these products (Please note comments made re M25 in the Annex 13).

The *Consultant* notes that other deliverables are required, as detailed in this scope, in addition to PCF products. The *Consultant* uses the PCF Single Option Project Matrix (see Annex 7) as a guide and agrees with the *Employer*, within four weeks of the *starting date*, a list of scheme specific PCF products and other deliverables included in the services. These shall be included in the *Consultant's* delivery schedule.

Once a Contractor is appointed, the *Consultant* collaborates to identify the PCF products that they are responsible for preparing and provides assistance to the Contractor as required in their preparation.

3.5 Highways England Project Governance

The *Consultant* notes the requirement for Stage Gate Assessment Reviews (SGAR) and provides supporting information and resources, as required to assist the *Employer* with these reviews for the scheme.

SGARs and preparation of supporting information shall be included in the *Consultant's* delivery schedule and management plan.

The *Consultant* engages with and seeks feedback from the HE Safety and Governance team and makes amendments to safety products as necessary to ensure all such safety products are signed off. Construction works will not commence until safety related products are complete and signed off.

3.6 Continual Improvement/ LEAN

The *Consultant* operates processes for delivering innovation and continual improvement following the guidance in ISO 9004 and the procedures set out in Annex 4.

The *Consultant* appoints a suitably qualified and experienced Lean and Collaborative Planning Lead (LCPL) to lead and manage process improvement and collaborative planning interventions during the development of the schemes. Within two weeks of the *starting date*, the *Consultant* submits to the *Employer* the CV of the proposed LCPL for approval.

The LCPL organises, plans and facilitates Collaborative Planning Workshops, based on a routine of weekly reviews of actions and monthly reviews of the delivery schedule. At the end of the pre-construction phase and start of the construction phase the LCPL hands over the routine to the ownership of the Contractor. During the construction phase the *Consultant* supports the continuing Collaborative Planning Workshops organised by the Contractor.

Within four weeks of the *starting date*, and at intervals of no more than six months after that, the LCPL carries out reviews of projects recorded in the Lean Tracker and Knowledge Bank to ensure that, wherever possible, such existing learning and knowledge is applied by the *Consultant* to the scheme.

The LCPL, as opportunities arise or as directed by the *Employer*, organises, plans and facilitates Lean Process Improvement projects. These are to be logged, as agreed with the *Employer*, via the HE Lean Tracker, and the Benefits Realisation Capture Form (BRCF) or via the HE Knowledge Bank.

At intervals of no more than six months, the *Consultant*, in conjunction with the *Employer*, carries out an assessment of Lean capability, using the Simplified Lean Capability Assessment as described in the Collaborative Performance Framework (CPF) performance reporting, recording:

- Knowledge Bank entry, savings certified via BRCF; or
- Evidence of use by others of Best Practice derived on the scheme.

3.7 Category Management

The requirements for category management are prescribed in the *conditions of contract*.

Category suppliers may be appointed by the *Employer* to provide design or other support services to the *Consultant*.

The appointment of any category supplier does not operate to reduce or extinguish the *Consultant's* liability to the *Employer*.

The *Consultant* records, and reports CPF (Collaborative Performance Framework) scores for Category Suppliers to the *Employer*.

3.8 Behavioural Attributes

In Providing the Services, the *Consultant* performs in accordance with the *Employer's* behavioural attributes, which are based on industry best practice and aligned with BS11000 - Collaborative Business Relationships, an established industry standard for collaboration.

The behavioural attributes are as follows;

- Collaboration
- Accountability
- Performance Improvement
- People and Relationships
- Stakeholders and Engagement

The *Consultant* takes all reasonable steps to ensure that these behavioural attributes are embedded and implemented by both direct employees and also those in the supply chain on this Package Contract.

3.9 Strategic Alignment Review Tool (StART)

Section Not Used.

3.10 Insurance

The *Consultant* is required to have in place the required Insurances described in the Insurance Table shown in Annex 5.

4. CONSULTANT'S DESIGN

4.1 Design Responsibility

The *Consultant* has responsibilities, as detailed in this Scope, at the following lifecycle phase:

- Pre-Construction up to PCF Stage 3

The *Employer* has invested in a Rapid Engineering Model (REM), a parametric rules based platform to enable efficient development of the Infrastructure design for Smart Motorways. The *Consultant* will work with the *Employer* in deploying REM across the Tranche 5 schemes up to SGAR3. This may result in a reduction in the volume of work undertaken by the *Consultant* as part of the Infrastructure workstream (see 4.2.2 below).

Pre – Construction Phase - PCF Stage 3

The *Consultant* undertakes the design and activities associated with pre-construction phase for Operations, Assessment and Infrastructure work streams from Design Fix 1 to 3 (SGAR 3). This includes all pre-construction discipline works, including, but not limited to: highways; drainage; technology; geotechnical; structures; environmental; operations, safety and maintenance. This also includes the requirements of Section 4.1 Building Information Monitoring to be read in conjunction with the *Employers* Information Requirements (EIR). The *Employer* has undertaken activities up to Design Fix 1 that will define the outline operational concept and outline scope of work to existing assets that are to be designed by the *Consultant*.

Furthermore, the *Consultant* prepares information as necessary to support and inform the Governance and Statutory Process work streams that are led by the *Employer*.

The *Consultant* undertakes further surveys, investigations and consultations as necessary to inform the scope to be designed following the guidance and advice contained within the SMP Survey Guide Version 2.0.

4.2 Employer's Design Criteria

A consolidated approach to SMP delivery has led to the adoption of a five work stream approach structure and five work stages (Design Fix 1 to 5 and Notice to

Proceed), as detailed in the Single Option Process Map and SMP Design Guide V3.1. These work streams are: Operations; Assessment; Infrastructure; Governance; and Statutory Process. The following sections detail the *Employer's* Design Criteria that the *Consultant* undertakes as part of these services.

The *Employer* undertakes activities associated with delivery of Design Fix 1. The *Consultant* undertakes all activities associated with Design Fix 2 - 3 as detailed in this scope, the Product Development Handbook, the Single Option Process Map and SMP Design Guide V3.1.

The *Consultant* includes in his services the following requirements, and the Special Activities and Requirements detailed in Annex 10.

4.2.1 Operations

The *Consultant* accepts the outline Operational Concept associated with Design Fix 1 that is prepared by the *Employer*. The *Consultant* meets the *Employer's* team that prepared the design to ensure a comprehensive handover and thorough understanding of the decisions made, stakeholder views and any outstanding actions.

The *Consultant*:

- develops the Operating Regimes to deliver the Operational Concept for the scheme that will inform the infrastructure design, taking account of the following:
 - Special Requirements set out in Annex 10
 - The network's current and forecast operational issues, including stakeholder views.
 - The most appropriate location and extent of interventions, including junctions (potentially including Local Authority junctions), tie-ins and adjacent links taking into account route consistency and customer experience.
 - Interaction with adjacent roads and projects, including planned renewal schemes, highway improvements on both HE and Local Authority networks and new developments.
 - Operational requirements of all types of road user, including NMUs, and those that work on the road.
 - Specific operating regimes within the project extents or directly affected.
 - The potential operational changes that are desirable to improve network performance and achieve other scheme objectives.
 - Any effects for on-road or off-road procedures for the *Employer's* staff or other stakeholders.
 - The constraints and stakeholder views that may influence the proposed physical interventions.
 - The technology on-road and off-road that is needed to support the proposed operation.
 - The potential safety performance, safety risks and the associated necessary safety governance.
 - The impact of existing asset condition on proposed operational solutions and, where physical constraints exist, the existing asset

condition/life expectancy and the feasibility of providing new and/or improved assets.

- prepares and agree with the *Employer*, the Compliance Strategy for the scheme and incorporate this strategy into his infrastructure design.
- identifies the RCC technology and capacity implications.
- identifies the telecommunication requirements.

The *Consultant* follows the Safety Governance process as detailed in IAN 191 and produces: Safety Plan; Hazard Log; and Safety Report. The *Consultant* facilitates Project Safety Control Review Group (PSCRG) meetings and if necessary, attends National Safety Control Review Group (NSCRG) for escalated issues.

The *Employer* places a high degree of importance on establishing the correct governance, attendance, performance and behaviors at PSCRG to ensure that stakeholders are fully involved in developing appropriate solutions. The *Consultant* offers a strong lead in the way the PSCRG is established and run.

The *Consultant* undertakes RSA 1. The *Consultant* liaises with the SMP Operational Safety Lead (refer to Annex 8) regarding arrangements for audits.

The *Consultant* attends Operations Technical Leadership Groups (TLG) at key stages as described in the relevant PCF product for TLG certification ahead of SGAR.

Throughout the development of the scheme design the final operation and maintenance of the network assets shall be considered by the *Consultant* when determining the scheme solutions.

In addition to the requirements of IAN182, for the avoidance of doubt, the *Consultant* identifies and liaises with any emergency services, Maintenance Service Providers (MSPs) and other operational and maintenance stakeholders impacted by the scheme to ensure their requirements are incorporated into the operational regimes and infrastructure design.

Not less than 6 months prior to the scheme commencing operational service (IAN 182 Handover), the *Consultant* facilitates targeted and focussed workshops with these stakeholders to ensure they are familiar with the operational and maintenance requirements. The *Consultant* obtains confirmation from these stakeholders that they are sufficiently knowledgeable of these requirements and that they have amended (as necessary) their operating procedures.

Dependant on the agreed outcome of the PCF 'Plan for Monitoring' product, the *Consultant* develops and delivers monitoring functions, as appropriate.

The *Consultant* hands over any relevant data, as agreed with the *Employer*, to others e.g. other *Consultant*'s retained to carry out Post Opening Project Evaluation (POPE).

The *Consultant* incorporates within his infrastructure design the requirements of [IAN69](#) Designing for Maintenance and prepare a Metal Theft Assessment as stated in MPI 21.

4.2.2 Assessment

The Assessment work stream covers Traffic Modelling and Economic Assessment and Environmental Assessment, the early work activities of which, up to Design Fix 1, is being undertaken by the *Employer*. The *Employer* is also carrying out some Environmental Assessment aspects to support Design Fix 1 as noted below.

Subsequent work activities that require to be undertaken by the *Consultant* are detailed below:

Traffic Modelling and Economic Assessment

The *Employer* with support from Traffic Modellers, are currently leading these activities. The *Consultant* assists the *Employer* in the management and coordination of the work activities and incorporates them in their delivery schedule. Traffic modelling initial data will be available for the Designer, with the Traffic Modellers being available to assist with design.

The *Consultant* provides construction, maintenance and operational costings, taking into account existing employer operational and capital cost models, for the Operational Concept Design (Design Fix 1) prepared by the *Employer* for input to the economic and the supporting environmental assessment work. These costs are by major category of spend and on a year by year basis for a sixty-year period. Any areas of uncertainty which may have a material impact on costs should be separately identified. The same information will also be provided for the Preliminary Design (Design Fix 2).

The *Consultant* provides cost estimates in accordance with PCF requirements.

Environmental Assessment

The *Consultant* accepts the environmental works undertaken by the *Employer* up to Design Fix 1. The *Consultant* meets the *Employer's* team that undertook the work to ensure a comprehensive handover and thorough understanding of the decisions made, stakeholder views and any outstanding actions. To this end, attendance of the *Consultant's* leads for Environmental Coordinators and Lead Landscape, Air Quality, Acoustics and Biodiversity specialists shall be present at the Environmental Inception Workshop.

The environmental activities to be undertaken by the *Consultant* include the requirements of current standards and guidance notes as well as the Scoping Report written for Design Fix 1 and the following specific requirements:

General

The *Consultant* shall:

- provide an integrated team of suitably qualified and experienced environmental specialists that allows consideration of environmental issues across all disciplines.
- adopt a design philosophy requiring the incorporation of key design solution, mitigation, and rectification and enhancement measures at the outset of the scheme design. The design process is then to progress by the 'designing out' of such measures rather than the inclusion of additional measures. Mitigation, rectification and enhancement measures are deliverable, cost effective and make a recognisable contribution towards Government and the Employer's objectives.
- follow the 'design out' approach as far as is possible, in which all foreseeable mitigation, rectification and enhancement measures are identified between Design Fix 1 and Design Fix 2. Measures are then to be deleted where they are no longer justified, such that at Design Fix 3 the final scheme design has been subject to its environmental assessment.
- adopt an open and accommodating approach, as the application of updated assessment guidance may be expected to challenge existing assessment practice

and processes in the context of an appreciation of the risks and consequences to delivery.

- contribute towards a consistent approach both within and across SMP schemes; and adopting a continuous learning and adaptive approach to assessment processes.
- provides in a timely manner BIM-GIS datasets to SMP in a format that facilitates input into EnvIS.

Collaboration

The *Consultant* will be expected to provide one participant for each the following Environmental P2P meetings by providing a senior level specialist suitable for each topic:

- Environmental Coordinator P2P
- Acoustics P2P
- Air Quality P2P
- Landscape & Biodiversity P2P
- Construction Environmental Management Plan P2P

The Environmental Coordinator P2P meetings are held on a monthly basis and may be held beyond Birmingham, the other P2P are held at an initial monthly frequency before reducing to that appropriate for the schemes.

The frequency of the topic based P2P meetings are likely to be on a monthly basis for two or three meetings each, thereafter their frequency is anticipated to be on a quarterly or bi-monthly basis. One week in advance of all P2P meetings the Consultant shall submit to the SMP Environmental Lead a list of the top five risks and opportunities for the relevant P2P theme.

Assessment

Scoping

The *Employer* has undertaken a series of Advanced Environmental Desk Studies (AEDS) for Air Quality; Acoustics; Biodiversity; Landscape & Heritage; Water and Spatial Planning. All the above information is captured on Business Collaborator (BC) as GIS shapefiles and mapped as hard copy PDFs.

The AEDS reports are being used by the *Employer* to prepare the Scoping Reports for the T5 schemes. AEDS reports will only be issued to the *Consultant* where there has been a delay with the Scoping Reports.

The *Consultant* will be required to update the baseline records presented in the AEDS or Scoping Reports up to the date of Design Fix 2; this will include but is not limited to:

- Air quality records from local authorities and Highways England where not otherwise provided directly to the Consultant;
- Land use planning development proposals and other transport proposals
- HADDMS datasets.

The *Consultant* will be required to maintain a dynamic approach to scoping such that where changes to the scheme design or other factors have a bearing on the robustness of the assessment methodology outlined in the Scoping Report, that the *Consultant* shall advise the Regional Environmental Advisor and the SMP Environmental Lead of the proposed changes prior to their adoption and shall not

proceed until agreement is in place. Subsequently the Environmental Assessment Report shall record those changes in scope that have been agreed.

Baseline Environmental Surveys

Whilst no Advanced Environmental Baseline Surveys have been commissioned for Tranche 5, initial Environmental Survey letters have been sent out to all appropriate landowners. Upon project commencement, a mini task commissioning plan is to be submitted within 10 days of appointment: the plan is to define the programme to ensure successful completion of the walkover, EPS, winter landscape survey and any other relevant surveys needed to confirm the findings of the desk based Scoping Report. It should also demonstrate that there are no resource constraints to the implementation of the plan. The *Consultant* is responsible for conducting the Winter Landscape Survey, assessments of the baseline and future impact of the scheme upon heritage assets, targeted Phase 1 habitat survey and the subsequent targeted European Protected Species Surveys. Only in exceptional cases is a night time visual intrusion survey to be undertaken. Also, only in exceptional cases will it be necessary to undertake Water Framework Directive assessments and hydrological studies to address a loss of floodplain storage as this should be designed out.

All surveys shall be informed by the Scoping Reports and shall specific plots to be surveyed to be proposed for approval by the Highways England Project Manager. Evidence shall be provided that the surveys are necessary by specifying the proximity to anticipated construction works, timed appropriately and rationalised to minimise risk and traffic management durations. The *Consultant* will be required to provide justification for each survey area based upon the character of the engineering works to be undertaken and the anticipated ecological risks at each survey location. The *Consultant* shall make the necessary road space bookings using NOMS after liaison with the maintenance service provider.

Land Access for Surveys

The intention is for the *Consultant* to be provided with details concerning land ownership for the neighbouring land where it is anticipated that access will be required for environmental surveys. Further, it is intended that the *Consultant* shall be provided with a schedule of those landowners for which access for survey has been sought, secured or refused. It should however be recognised that the *Consultant* may need to secure some supplementary landownership records and access permissions in addition to the process of notifying landowners/tenants of specific survey intentions to make arrangements for the walkover surveys, winter landscape survey and targeted phase 1 habitat surveys as well as the subsequent European and other Protected Species surveys. .

Delivery of Licence and RIS Objectives

The *Consultant* will be required to assist in delivering the *Employer's* aim to put people at the heart of our work by designing an inclusive, resilient and sustainable road network; admired for its functional elegance and usefulness, reflecting in its design the beauty of the natural and built environment through which it passes, and enhancing it where possible. To this end to demonstrate delivery against the following ten principles of good road design:

- makes roads safe and useful
- is inclusive

- makes roads understandable
- fits in context
- is restrained
- is thorough
- is environmentally sustainable
- is innovative
- is long-lasting
- is a collaborative

In delivery of the Licence Objectives, the *Consultant* shall have regard to the desirability of delivering environmental enhancements and rectification of existing impacts subject to the usual requirements of safety, practicability and sustainability. In terms of biodiversity the objective for the *Consultant* is to deliver a reduction in the loss of biodiversity in order that Highways England can demonstrate working towards no loss overall. This does not necessitate a detailed ecological survey.

The *Consultant* is required to review opportunities for enhancement both within the soft estate and on third party land such as that in public or charitable ownership along with any areas identified in the Scoping Reports for enhancement measures to meet the Highways England obligations under its Licence. In this regard, the *Consultant* is prior to DF3 to review the candidate sites on third party land, confirm land ownership, prepare a preliminary cost concept proposal to deliver an enhancement measure that is likely to gain the support of the land owner and provide benefit to Highways England. No contact is to be made with land owners until after DF3 and following approval of the Project Manager.

The *Consultant* shall as part of the design process, seek to deliver solutions within the bounds of the soft estate that provide for its environmental enhancement in line with the Highways England Licence.

The *Consultant* shall demonstrate how the evolution of their design adopts a risk based approach towards delivering a proportionate assessment. They will also be required to demonstrate in a succinct manner via the Project Design Report template how:

- Highways England's design principles have been taken into account within the design;
- the Highways England Licence and RIS objectives have been delivered; and
- Summarise impediments that have intruded upon the successful delivery of these requirements.

Habitats Regulation Assessment – The *Consultant*

The *Consultant* will need to comply with the existing guidance in the preparation of a Habitats Regulation Assessment screening and in doing so provide an early appreciation of the risks of an appropriate assessment being required leading to a formal Environmental Assessment and hence a DCO application.

In the case of the M25 J10-16 and the M62 J20-25 there are increased risks that a DCO application may be required due to the potential for likely significant effects on site integrity being identified in the HRA screening. It is essential that this preliminary screening is undertaken early in the assessment process on the basis of the best available information at Design Fix 2. The preliminary HRA screening report shall also document the additional information and decisions required to ensure that the final HRA screening report is able to reach conclusions that are beyond reasonable scientific doubt.

BIM-GIS and Environmental Data

While GIS shapefiles will be provided for the AEDS mapping alongside the Scoping Report, the GIS environmental mapping is a core component of the Highways England approach to BIM.

During Tranche 5 activities, change will be taking place in the manner in which environmental data is to be captured and extracted for reporting. It is envisaged that the BIM-Environmental Templates will continue to be used to capture the evolution of environmental data along the development of a scheme. It is possible however that an upload interface to the BIM-GIS will be available for use by the *Consultant*. It is also envisaged that the BIM-GIS will provide an export facility in order that standard EAR tables can be used.

Assessment Activities

The *Consultant* shall undertake assessment as required by adopting a risk-based approach. This necessitates reasoned assumptions on significance impacts to be reported based upon design and mitigation measures. The risk based approach applies to all elements of scheme design and survey. To this end, it is important that engineering, geotechnical and environmental design teams arrive at a common understanding of the assumptions and local design objectives to avoid conflicting assumptions late in the design process.

Such assumptions may require validation and potentially a response such as an immediate action on the ground or feedback causing a change to procedures/guidance a consequence of:

- Where the measures are innovative and thus not fully proven;
- Impact of new standards;
- Where impacts exceed expectations; and
- Unforeseen significant adverse effects.

The *Consultant* is to:

- Provide an assessment of construction impacts both within the scheme corridor and as a result of the diversion of motorway traffic;
- Set out the acoustic performance requirements for red and amber risk areas within the Outline Environment Management Plan (OEMP);
- Specify the acoustic performance requirements during construction based upon an understanding of the construction activities
- Prepare an OEMP that provides information to advise the Delivery Partners of what is expected in the Construction Environment Management Plan (CEMP);
- Are to record where future Delivery Partners in red risk areas where their preferred way of working may not necessarily be acceptable to Highways England and thus the need to provide at an early stage a way of working that is acceptable;

The *Consultant* shall challenge existing assessment practices and processes and adopts an approach, as agreed with the *Employer*, to minimise the risks to delivery in a proportionate and cost effective manner.

Cumulative Effects Assessment

To avoid any doubt, where the ARN for one scheme is expected to interact with the ARN for a second or third scheme then it will be essential that the cumulative effects of all schemes are considered particularly in the context of air quality. It will be necessary to establish that there is an absence of cumulative effects before schemes will be progressed as separate schemes.

Where the ARN for schemes interact then it is the responsibility of the Consultant to ensure that the cumulative effects assessment for air quality is prepared in an efficient manner without duplication of resource or different interpretations between the schemes. The objective should be to secure an agreed text that is applicable to all interacting schemes.

The opening year Air Quality Assessment is likely to be of principal concern within the cumulative assessment and the Consultant shall advise the Regional Environmental Advisor and the SMP Environmental Lead on scoping in or out a cumulative effects assessment for the design year traffic flows.

In considering the potential need to assess the cumulative effects of schemes on traffic noise, the *Consultant* shall advise the Regional Environmental Advisor and the SMP Environmental Lead of those situations where a difference in traffic flow in excess of 25% occurs between the scheme and the cumulative effects of other schemes *not* part of the scheme traffic model occurs prior to commencing any assessment of the cumulative effects on acoustics.

The cumulative effects associated with the degradation of environmental assets along the scheme must be considered, such as the cumulative loss of wetland habitat or the cumulative loss of floodplain storage within a single floodplain as a result of several SMP infrastructure works. Similarly, the cumulative effects associated with the change in vegetation along a scheme corridor may require assessment in terms of landscape character where that aspect has been scoped in.

Construction Noise

The assessment of construction noise is to focus upon those situations where the frequency of disturbance would risk being in excess of the values set out in BS 5228. Typically, this would involve situations where there is a need to widen an embankment through the installation of piling where residential property is located close by. In such situations where a risk of a significant impact could result, then the *Consultant* shall provide a specification for the construction noise levels and monitoring that shall be deployed on a site specific basis.

Where there is a need for the diversion of motorway traffic on to the local road network, the *Consultant* shall identify, based on the Planned Diversion Routes:

- The potential number of occasions that a particular diversion route would be used for each motorway link;
- The location of noise sensitive receptors along the diversion route;
- The occurrence and location of night time highway conditions that would cause a change in speed of HGV vehicles;
- The potential for need for mitigation measures to avoid breach of BS 5228.

Operational Noise

A design out approach will be taken to the assessment of acoustic mitigation as the *Consultant* will be provided with the locations of Candidate Noise barriers needed to address noise Important Areas. The viability of such barriers will be considered from

an engineering, landscape and ecological perspective prior to their acoustic performance and sustainability using a specific SMP methodology.

The viability of the candidate noise barriers shall take account of recent barrier costs and ideally be based upon indicative costs for the scheme. A view must also be provided on the anticipated ease of installation such as the extent to which ground conditions could adversely affect the value for money assessments. The engineering delivery of the barriers must be established before SGAR3. The *Consultant* should recognise that the location of the noise barrier may be such that it is located beyond the scheme specification. Any additional costs for traffic management would need to feature in the sustainability assessment at DF3 and DF4.

A value for money exercise shall be performed on all existing barriers regardless of their residual life, this should consider the utility of adding elements that extend the path length rather than the replacement of the entire barrier.

Where the specification of the SMP scheme changes from that defined at DF1, then the *Consultant* shall advise the Project Manager and the SMP Environmental Lead of any implications that may result for the design out approach to acoustic mitigation.

Where at DF4 approved noise barriers are identified as giving rise to costs not anticipated at SGAR3, then the *Consultant* should advise the Project Manager whether such costs are likely to adversely affect the cost benefit ratio of the barrier such that a ratio of less than 1 may result. Where there is a risk of that the sustainability of the approved noise barrier is questioned, then the *Consultant* shall review the situation, identify measures by which costs can be mitigated and in formulating a proposal to the Project Manager shall take into account the non-monetised benefits, the health profile of the local community and the contribution of the scheme towards the Noise Policy for Statement for England.

Proportionate Assessment and Reporting

The *Consultant* shall take account of the requirements of MPI57 as advised by SMP and will therefore follow the prescribed approach to the preparation of a baseline public health profile and then to assess the effects of the scheme on public health where they are scoped in to the assessment.

While it is not anticipated that climate change will be scoped into the assessments, the *Consultant* must have regard to the need to demonstrate recognition of the implications of climate change in the design of the proposed scheme.

Mitigation and Enhancement Measures

The *Consultant* ensure that mitigation measures to avoid, prevent or reduce, and offset significant adverse effects are identified and recorded for others to incorporate into Works Information for the construction period and future operation through the mechanisms at their disposal. This shall link to the preparation of a spatially focused Outline Environmental Management Plan (OEMP); coherence between the OEMP and Works Information and with clear linkages to the Traffic Management Plan insofar as the impacts of diversion routes are concerned. Hence there is a requirement to ensure that it is clear that those environmental risks identified in the Scoping Report and the EAR are:

- Captured in the OEMP;
- Addressed in the Works Information;
- A record is made of their implementation

Where there is uncertainty as to the likely effectiveness of the mitigation actions required to avoid a significant impact, then it may be appropriate to consider the adoption of targeted monitoring to enable corrective measures to be taken and also to demonstrate effectiveness for the benefit of other schemes. This may be particularly applicable to construction risks identified as being of elevated risk. The proposed monitoring requirements are to be established with due regard to the benefits to environmental management of the resultant information. The OEMP shall identify where proportionate monitoring of the deployment of a mitigation measure and potentially its effectiveness would be required

Reporting

It is envisaged that fixed templates will be provided for the T5 EARs. SMP envisage that data sets from the BIM-Environmental Tables and the GIS will also be deployed on a fixed basis within the EARs.

All environmental assessment products, including the EAR; survey results, technical reports supporting the EAR etc will need to be supported by evidence of the experience of the specialists used in its preparation. This will need to cover all topics in accordance with the template provided by SMP.

All environmental mapping prepared in support of the EAR will be prepared to an agreed set of plans using the SMP standard symbology and map arrangements. All mapping is to be provided to SMP at the stage gateway in GIS shapefiles for uploading.

The *Consultant* is expected to adopt the SMP standardised reporting of with the following report templates envisaged to be made available for T5 schemes:

- European Protected Species Survey proposals;
- European Protected Species Survey reporting;
- Outline Environmental Management Plan;
- Construction Environmental Management Plan.

All Environmental Reports shall be written in a succinct manner making use of SMP template text. Where circumstances suggest deviation from SMP templates then agreement must be sought from the Regional Environmental Advisor and the SMP Environmental Lead in advance.

All environmental PCF products shall be provided by the *Consultant* in accordance with Section 3.4.

Programme

In order that the *Consultant* is able to design a collaborative and integrated approach towards scheme design that delivers the Licence and RIS objectives in a proportionate manner, close coordination between the *Consultant*, the Regional Environmental Advisor (REA) and the SMP Environmental Lead will be required. The *Consultant* should ensure that the REA and SMP Environmental Lead is kept informed of key environmental delivery dates and invited to Progress Meetings with an environmental focus.

In maintaining the programme, the *Consultant*, shall recognise that the review functions performed by the REA may be required across several schemes. They should also recognise that the issue of reports for review must be accompanied by plans and other supporting reports if delay is not to ensue. Further, the period assigned for the review should be agreed with the REA in advanced, since some

schemes will inherently require a lengthier review period than others. Such factors as well as the availability of the REA must feature in the programmes issued to the Project Manager.

In establishing a programme for protected species surveys the *Consultant* must identify the following elements for each protected species for each survey site insofar as it affects scheme delivery:

- The construction works to be undertaken;
- The likely duration required for installation of mitigation measures in advance of construction;
- The license application and determination period, and;
- The survey window.

Determination

The *Consultant* shall keep under review the need for a statutory Environmental Assessment. Through the risk based approach, the Consultant shall take steps to ensure that those elements most likely to lead to the need for a statutory Environmental Assessment are scheduled to be determined as early as possible but no later than at Design Fix 2.

Should design or external circumstances suggest that re-scoping and a new determination should be considered at a later date, then this shall be agreed with the *Employer*.

Where there is a change in the definition of the scheme post completion of the Record of Determination, then the *Consultant* shall advise the Regional Environmental Advisor and the Project Manager of the need to revise the Determination documentation to ensure that the scheme as then specified matches its consented specification.

Material Resources

The *Consultant* provides an estimate of principal construction materials required for the scheme in a format agreed with the *Employer*. This data is separate from the scheme cost estimate. The materials to be reported should focus on those identified as being critical to the timely delivery of the scheme.

Infrastructure

The *Employer* has undertaken initial surveys across the schemes to determine existing asset condition and geometry (i.e. topographic surveys) and through limited liaison with OD has established an outline work scope to achieve a 5-year major renewals free network. The *Consultant* reviews and refines this scope by considering the principles and guidance in Annex 11. The *Consultant* provides a report to document the suitability and any deficiencies in the asset data and asset surveys; the report shall include sufficient information (alongside SMP Survey Guide) to be used by contractors appointed in any further survey contracts. Any further surveys, investigations, testing, consultations and the like are undertaken in accordance with the advice and guidance contained within the SMP Survey Guide. The refined scope is agreed with the *Employer*.

The *Consultant* accepts the Operational Concept undertaken by the *Employer* up to Design Fix 1. The *Consultant* meets the *Employer's* team that undertook the work to ensure a comprehensive handover and thorough understanding of the decisions made, stakeholder views and any outstanding actions. The infrastructure design enables the Operational Concept Design to be realised.

A detailed breakdown of the discipline specific activities and deliverables that the *Consultant* provides at each of the work stages is detailed in Annex 10.

The *Consultant* considers and reports at all stages in the design development the impacts of his design on material resources and takes steps to minimise material import / export by maximising the quantities of suitable site-won materials or locally available secondary materials. Surplus materials that may be re-useable on other local infrastructure projects are identified and valued by the *Consultant*. Specific requirements for Material Resource activities at each work stage are detailed in Annex 10.

The *Consultant* works with the *Employer* to develop the infrastructure design in accordance with this scope, current standards and guidance and the following specific requirements. The *Consultant* will work with the *Employer* in deploying the Rapid Engineering Model (REM), which may result in a reduction in the volume of work to be undertaken by the *Consultant*.

General – the *Consultant*

- adopts as his delivery approach, the Single Option Project Pre Construction Process Map, SMP Design Guide V3.1 and *Employers* Information Requirements. The *Consultant* liaises with the *Employer* as necessary to ensure they fully understand the approach detailed in these documents.
- identifies any gaps in the information on existing assets, including topographic survey, asset record information, existing utility information and the like and undertakes works as required to fill these gaps to enable the infrastructure design to proceed. This work may involve additional surveys/ site inspections performed in accordance with the SMP Survey Guide.
- undertakes consultation as required with relevant bodies and stakeholders including, but not limited to: SES; SES Geotechnical Advisers, OD, the product development team and the Maintenance Service Provider(s)
- prepares PCF Products in accordance with Section 3.4.
- undertakes highway, geotechnical, structures and technology discipline activities and prepare deliverables as necessary for each work stage (i.e. Design Fix) as detailed in the non-exhaustive list in Annex 10.
- undertakes Value Engineering at all stages to ensure the most cost effective infrastructure solution is developed.

4.3 Design Submission Procedures

The *Consultant* complies with the requirements of PCF and the philosophy set out in the Process Map and SMP Design Guide V3.1. Interim submissions of part or complete designs are submitted as required to the *Employer* and/or Technical Leadership Groups (TLGs) to aid collaboration and timely identification of issues. Comments made by the *Employer* are incorporated into the *Consultant's* design. The *Consultant's* delivery schedule includes reasonable timescales (i.e. 2 weeks) for the *Employer* to review, collate comments and feedback/ discuss with the *Consultant*.

The Consultant provides a design and check certificate when he submits his design to the Employer for acceptance, the design and check certificate is signed by an appropriately qualified and experienced engineer other than the engineer who prepared the design. If the certifying engineer is not an employee of the Consultant he is a Subconsultant.

Alternative Design

Where alternative solutions for the delivery of the scheme are identified and they have the potential for significantly different environmental outcomes, the *Consultant* records and reports them to the *Employer*.

If the accepted tender includes an alternative design, the *Consultant* submits to the *Employer* the name of the person who will carry out a check of the design. The person named must have experience in the checking of designs similar to the one proposed for this contract.

The *Consultant* appoints the named person to carry out a check in accordance with the *Employer's* procedures. The *Consultant* makes any amendments to the design arising from this check.

Following the completion of the check and the issue of a check certificate by the named person, the *Consultant* reports to the *Employer* any changes to the design and any proposed changes to the Scope.

4.4 Better Information Management (BIM)

The term BIM (Building Information Modelling) has many connotations and definitions, however the SMP adopts the *Employer's* definition as "Better Information Management".

The *Employer* is working towards implementing a range of efficiencies in defining, delivering and managing the asset lifecycle. This includes developing the *Employers* capabilities, skills and expertise in applying a range of evolving practices and standards including how to collaborate with the supply chain and how to create, manage and share information. It is the *Employers* goal to work towards compliance of these standards and take advantage of benefits wherever practicable.

Similarly, the *Consultant* is conversant with the latest thinking and application of appropriate standards such that collaborative working and deliverables can be optimised.

The *Employer* and the *Consultant* are aware of the Government's Strategy for Building Information Modelling as set out in the Cabinet Office Government Construction Strategy paper dated May 2011. This paper refers to a broad range of principles and practices that when applied under a number of circumstances can create efficiencies. It is the *Employers* objective to identify and apply these practices for the mutual benefit of stakeholders ultimately creating value across the asset lifecycle. For example, consideration of the application of 3D modelling and information and asset management.

Employer's Information Requirements (EIR)

The *Employer* has created an EIR which is the key mechanism for conveying the information requirements to the supply chain. For any given project, there may be a number of EIRs, each covering specialist areas of work, for example, an EIR may be issued to the design team for the procurement of survey information.

The EIRs will be maintained by the contract BIM Manager.

The EIR is split into three areas: Technical, Management and Commercial (see below):

Technical	Management	Commercial
<ul style="list-style-type: none"> • Software Platforms • Data Exchange Format • Co-ordinates • Level of Detail • Training 	<ul style="list-style-type: none"> • Standards • Roles and Responsibilities • Planning the Work and Data Segregation • Security • Coordination and Clash Detection Process • Collaboration Process • Health and Safety and Construction Design Management • Systems Performance • Compliance Plan • Delivery Strategy for Asset Information 	<ul style="list-style-type: none"> • Data drops and project deliverables • Client's Strategic Purpose • Defined BIM/Project Deliverables • BIM-specific competence assessment

If the *Consultant* is unable to meet the standards outlined in the EIR, the *Consultant's* BIM Manager liaises with the *Employer's* BIM Manager to resolve the issues.

Solutions or exceptions to the EIR compliance requirements are to be recorded in the *Consultant's* BIM Execution Plan (BEP) prior to any submission of the information deliverables and the BEP submitted to the *Employer* for acceptance. Failure to do so results in the information deliverables being rejected by the *Employer*.

The output from these requirements on completion of the project will be a project information model (PIM) – a model representing the 'as built' status or what was delivered by the construction team.

BIM Execution Plan (BEP)

The *Consultant* is required to produce a BIM execution plan within 4 weeks of the contract award. The BEP should consist of everything requested in the EIR plus the following information: (as detailed in PAS 1192-2[2]).

- The project implementation plan (PIP)
- Project goals for collaboration and information modelling
- Major project milestones consistent with the project programme
- Project information model (PIM) deliverable strategy

The BEP should be arranged into four themes – management, planning and documentation, the standard method and procedure, and the IT solutions.

The management theme includes information related to the management of the project, and covers such areas as roles and responsibilities, project milestones, model delivery strategy, use of existing data, information approval and PIM authorisation.

Topics covered under the planning and documentation theme include a revised PIP, processes for collaboration and modelling, responsibility matrices, and task information delivery plans (TIDPs) and master information delivery plans (MIDPs).

The standard method and procedure theme deals with the quality of the information and so includes requirements such as location, and layer naming conventions, data rules and attribute data content.

The final theme of IT solutions covers the software to be used and versions, the formats for information exchange and the data management systems to control it all.

As part of the post-contract award BEP, the master information delivery plan (MIDP) must be prepared. The MIDP demonstrates exactly how the supply is going to meet the EIR and lists the deliverables to be provided during the project, when and by whom. It is useful to reiterate at this point that the information required will not be just 3D graphical models, but may also include reports, specifications, schedules and correspondence.

The task information delivery plan (TIDP) breaks down the individual information tasks to each team manager and requires them to report on their particular deliverables. The TIDP contributes to the MIDP.

Project and Asset Information Models

The *Consultant* develops a Project Information Model (PIM) during the design and construction phase of a project. It is developed initially as a design intent model and then becomes a virtual construction model.

This model will be adopted by the Operations and Maintainers teams and becomes the Asset Information Model (AIM). The AIM and the information management process shall maintain the integrity of asset information to support the following activities related to asset management:

- a. defining asset management strategies and plans
- b. implementing asset management plans
- c. managing the asset lifecycle
- d. acquiring and managing asset knowledge
- e. managing the organization and its human resources
- f. managing and reviewing risk

Common Data Environment

The *Consultant* hosts the relevant Project Information Model on their own Common Data Environment (CDE) in compliance with BS1192-2/PAS1192:2 and [IAN184](#) during development. The *Consultant* records the specification, functionality and procedures of his information environment within the *Consultant's* BEP.

The *Employer* will appoint a BIM and Project Information Manager, as defined in the 'BIM Protocol'. The *Consultant* defines this role and the interfaces with the *Employer*, other consultants and *Contractor* within its Project BIM Execution Plan (BEP), ensuring that such does not include any design related duties.

5. COMPLETION

5.1 Completion Definition

The work to be done by the Completion Date for the whole of the *works* is all the work included in this contract. These works are detailed in Section 4.2 covering: Pre-Construction (Development); Construction; and, Operation and Maintenance phases.

5.2 Sectional Completion definition

Not used

5.3 Drawings, specifications, software, designs, documents, reports and other data

The deliverables to be provided to the *Employer* include, but are not limited to, the following:

- copies of reports and brochures which have been accepted by the *Employer*
- copies of drawings which have been accepted by the *Employer*;
- copies of correspondence and records of consultations and meetings, including copies of correspondence with the various external organisations;
- copies of all designs with supporting information, including the results of all surveys;
- copies of all procedures used in the development of any model; and
- details of all computer systems and programs used together with all relevant data tapes, disks and print-outs in connection with the work described above.]

Drawings, specifications, software, designs, documents, reports and other data submitted for the acceptance of the *Employer* are submitted in draft form for comment two weeks before the date for submission shown on the *Consultant's* accepted programme (Delivery Schedule). Following review of the document by the *Employer*, he will either accept it or return it to the *Consultant* with comments. Where there are comments, the *Consultant* takes appropriate action and re-submits to the *Employer*. The *Consultant* agrees the format of deliverables with the *Employer* and provides the number of draft and final copies of each submission as is required by the *Employer*.

5.4 Handover between Consultants

If required, the *Consultant* arranges for the transfer through the *Employer* of all information relating to technical and site assurance services on the scheme to the *Consultant* subsequently appointed as the *Employer's* advisor for the delivery or procurement of the services or otherwise.

The information to be handed over includes, but is not be limited to:

- copies of all approved reports relevant to the services prepared during the services and submitted to the *Employer*.
- copies of all drawings relevant to the services in appropriate electronic and in paper format prepared during the services and submitted to the *Employer*.
- copies of all correspondence and records of consultations and meetings relating to the services, including correspondence with the *Employer* and any public and private bodies and other parties, with the exception of correspondence and records which were 'in confidence'.
- all design information, background information and plans of the scheme so far developed.

- copies of all results, partial or complete of all surveys relevant to the scheme.
- copies of all relevant traffic reports partial or complete relevant to the services.
- original certificates or letters of approval concerning the development of the scheme generally where these are relevant to the services.
- details of all computer systems and programs produced, together with all relevant tapes, discs, inputs and printouts.
- list of stakeholder contacts and other relevant bodies.
- documentation relevant to the health and safety file (partial or complete).
- one-day presentation on the scheme background and technical requirements.
- information to inform the Post Opening Project Evaluation.

All information provided for handover is catalogued and indexed. Electronically stored data shall be in a format capable of transfer to BIM.

The *Consultant* returns the Scope or any other material relating to the *works* to the *Employer* at the *defects date*.

6. PROGRAMME

6.1 Programme Requirements

The *Consultant* prepares and submits to the *Employer* for comment within two weeks of the *starting date* a programme (schedule) for delivery of the services. Within 2 weeks of receipt of comments from the *Employer*, a revised schedule shall be prepared and submitted for acceptance. Provided no further comments are introduced and upon acceptance of the revised programme (schedule) by the *Employer*, this shall be the *Consultant's* 'baseline schedule' used for tracking and reporting progress. The 'baseline schedule' should be based on forecasted dates, therefore it should be free of any updates / actuals.

The schedule format shall be a Primavera P6 or similar, and the Work Breakdown Structure shown in Annex 12 shall be used. The programme (schedule) must comply with the requirement of NEC3 PSC Clause 31.2 and also clearly display the critical activities.

The programme (schedule) is scheme specific and must always include the agreed and complete scope of works. All activities should have clear descriptions. All activity durations should not be greater than 2 weeks, but if they are it should be clearly stated in the programme (schedule) narrative. Recognised public holidays and/or times of non-work must be included in the programme (schedule). The programme (schedule) should be resource and cost loaded aligned with the agreed/instructed budget. All activities (and milestones) must be logically linked, creating a realistic sequencing of works. Open-ended activities should not be used but if they are the reasoning should be clearly stated in the programme (schedule) narrative. Excessive use of lags between activities should be avoided but if used they should be clearly stated in the programme (schedule) narrative. Date constraints should be minimal as logic should drive completion dates but if used they should be clearly stated in the programme (schedule) narrative.

6.2 Timing

The *Consultant's* schedule aligns with, or betters the anticipated dates for scheme delivery detailed in Table 1 and Table 2 of Section 2.1.

The *Consultant* takes consideration of sessional restrictions for undertaking environmental surveys etc. and the timescales associated with booking (provisional and firm) roadspace bookings for pre-construction and construction phase activities.

6.3 Revised Programme

The *Consultant* updates the schedule at least monthly, (the Data date to tie-in with the end of period reporting dates of the *Employer*) to measure actual progress of activity against baseline. The *Consultant* includes in his monthly reporting a narrative on the schedule, including:

- the Data Date
- the Update Period
- the Primavera .xer file name
- overall commentary for the whole programme of works
- comparison of the Key Dates against the Baseline
- comparison of the Key Dates against the Previous submitted programme (schedule)
- explanation of the Critical path
- critical activities that are behind or ahead of baseline
- changes to critical path and impacts on completion timescales
- options for proposed mitigation for recovery of schedule slippage
- implemented changes in the period
- non implemented changes in the period
- review and Comment upon the programme (schedule) health-check (excessive float, excessive lags, date constraints, activity durations)
- response to comments made by the *Employer* on the previous programme (schedule) submission

The *Consultant* shall not amend his baseline schedule unless specifically agreed in writing by the *Employer*. The amended baseline shall become the new baseline that will be the basis of subsequent progress updates and reporting.

7. QUALITY ASSURANCE

7.1 Standards and Specifications

Except where otherwise directed, all services are to be provided in accordance with the Highways England standards, procedures, Interim Advice Notes, Guidance Notes and the like current at the *starting date*. These include, but are not limited to:

- National Policy Statement for National Networks ([NN NPS](#)).
- Design Manual for Roads and Bridges ([DMRB](#)).
- Manual of Contract Documents for Highway Works ([MCHW](#)).
- Interim Advice Notes ([IANs](#)), Chief Highway Engineer Memos (CHEMs) and Major Projects Instructions (MPIs).
- SMP Programme Instructions
- Network Management Manual and Routine & Winter Service Code ([NMM and RWSC](#)).
- Asset Data Management Manual (ADMM)

- Technology Management & Maintenance Manual ([TMMM](#)).
- Transport Analysis Guidance – [WebTAG](#).
- SMP Design Guide V3.1
- SMP Survey Guide V2.0
- PCF Matrix and guidance

Adoption of changes to standards and guidance will be agreed with the *Employer* and set out in the PCF Product ‘Implementation Report for New Standards.’

7.2 Quality Management

The *Consultant* Provides the Services under a quality management system which complies with the *Conditions of Contract*.

7.3 Quality Plan

The *Consultant* keeps a controlled copy of the Quality Plan available for inspection at all times by the *Employer* and their representatives.

7.4 Quality Statement

The *Consultant's* Quality Statement submitted during the Framework tender, setting out how the risks to the SMP would be managed, is incorporated into the Quality Plan.

8. TESTS AND INSPECTION

8.1 Tests to be completed

The *Consultant* undertakes tests or inspections that are required for delivery of the services. Once the tests and/or inspections are agreed in writing by *Employer* the *Consultant* progresses the works and confirms as necessary:

- the specification for the tests, identifying the resources required to carry out the tests
- the timing of the tests, including any requirements to carry out the tests in stages. If after completion, include access arrangements.
- the requirements for notice of tests and attendance by the Supervisor and *Consultant*
- provisions for rectification and retesting (if permitted) if the performance level is below that specified.

8.2 Performance Measurement

The *Employer* uses the current version of the Collaborative Performance Framework (CPF), in order to actively measure the *Consultant's* performance.

The *Consultant* records performance against each of the indicators in the CPF and assists the *Employer* in the development of this measurement framework by proposing and developing ways in which improvements can be made to the framework. No changes are implemented unless agreed in writing by the *Employer*.

Performance Review

The *Consultant* undertakes a performance review addressing all aspects of performance on a quarterly basis, or as instructed by the *Employer*.

The *Employer* leads additional annual reviews to assess all aspects of *Consultant* performance and trends in Performance Indicators (PIs).

Staff Performance

The *Consultant* promotes individual improvement of its staff (which may include employees of

- the *Consultant*,
 - any Subconsultant; or
 - any supplier of the *Consultant*),
- through mentoring, coaching and training.

The *Consultant* works with its staff to set individual objectives and targets that are aligned with the requirements of the specific scheme.

8.3 Defects

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.

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

- it does not take action required to ensure that nonconformities do not recur or
- it does not comply with the Scope.

If the *Employer* does not accept the proposed action, the *Consultant* submits a revised proposal to the *Employer* for acceptance within one week.

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.

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.

9. MANAGEMENT OF THE WORK

9.1 Management of the Services

The *Consultant* is responsible for actively managing all activities associated with delivery of the *services* and the integration of the *services* with activities of the *Employer* and other relevant parties involved in the delivery of schemes and programmes of work under SMP. This management includes, but is not limited to: coordination, supervision, administration, interfaces between Subconsultants /, Development or Delivery Partner, coordination, reporting, schedule and commercial.

The *Consultant* will work collaboratively with *Employer* to prepare and submit for acceptance within two weeks of the *starting date* the management plans detailed below. The plans developed will be based on the Programme Level Documents prepared for previous Tranches to ensure continuous improvement and consistency across all interventions. The plans are reviewed, amended as necessary and resubmitted to the *Employer* for acceptance every three months, or unless otherwise agreed with the *Employer*.

- Schedule Management Plan
- Commercial Management Plan
- Stakeholder Management Plan
- Information Management Plan
- Quality Management Plan
- Communications Management Plan
- Risk Register
- Issues Log

Management plans may be combined and cover multiple schemes being undertaken by the same *Consultant* under the SMP. The *Employer's* aspiration is that these management plans shall be harmonised collaboratively across the SMP Consultants.

9.2 Commissioning Report

The *Consultant* submits a commissioning report to the *Employer* within 2 weeks of the *starting date*. The commissioning report contains a summary of:

- a description of the *Consultant's* proposed method for Providing the Services (clauses 20 and 31) as included in the first programme, or, if not yet submitted, intended to be included in the first programme;
- the *Consultant's* programme (Clause 31) or, if not yet submitted, the intended first programme;
- proposals and recommendations for changes or additions to the Scope, including evidence as to why it would be advantageous to the *Employer* to make these changes or additions; and
- proposals for any Subconsultants as already submitted under Clause 26 and current intentions for future subcontracting of the services (which will still require submission under Clause 26).

The commissioning report must not contradict any of the requirements described in the *conditions of contract* or the Scope.

The *Employer* may ask the *Consultant* to clarify parts of the commissioning report, giving his reasons for the requested clarifications. Acceptance of the commissioning report does not change the requirements for submission and acceptance under the *conditions of contract*. Acceptance of the commissioning report does not constitute an instruction from the *Employer* to change the Scope.

9.3 Communications

The *Consultant* catalogues and indexes all documents and Communications.

Provision of cost information

A Work Breakdown Structure (WBS) incorporating a cost breakdown structure is prescribed by the *Employer*. The *Consultant* submits financial information in accordance with this WBS. It is intended that the *Consultant* will report Earned Value Management (EVM) performance against a standard Work Breakdown Structure (WBS) specified by the *Employer*.

Earned Value Reporting

The *Consultant* provides a verified monthly electronic Commercial Reporting and Monitoring System (CRaMS) form (on the current version or any replacement) to the *Employer's Project Manager* and Commercial Intelligence Team on the last working day of the Reporting Period. The *Consultant* provides a separate CRaMS for each of the phases. The *Consultant* submits an individual CRaMS for the design services and technical site assurance.

The *Employer's* requirements for Cost Capture are detailed below:

- A priced breakdown to the WBS, with expenses to be detailed separately.
- Resource rate build ups and schedules
- Resourced programme
- A schedule of risks

The *Consultant* contacts the *Employer's* Commercial Intelligence Team to discuss the requirements.

The *Consultant* provides a verified monthly electronic Commercial Reporting and Monitoring System (CRaMS) form (on the current version or any replacement) to the *Employer* on the last working day of the reporting period.

The outline requirements for Cost Capture as required by the *Employer's* Cost Intelligence Team are detailed below

Data to be supplied after signing of Negotiated Target Cost (NTC) includes

- 1) A bill of quantities structured and coded to the latest Work Breakdown Structure with a six column split (staff, labour, plant and materials, equipment, subcontract and other)
- 2) Resource rate build ups and schedules
- 3) Subcontractor comparison sheets
- 4) Full set of successful subcontractors quotations
- 5) A summary of all successful subcontractors quotations on a template provided by the *Employer*
- 6) Clause 31 programme
- 7) Full set of NTC drawings
- 8) Completion of scheme characteristics template provided by the *Employer*

- 9) Gantry Schedule where appropriate

Invoicing

The *Consultant* includes on his invoices the requisition number and, where appropriate, the purchase order number. The *Consultant* submits with each invoice

such records as the *Employer* requires, including weekly timesheets and details of expenses.

The *Consultant* submits all invoicing in accordance with the *Employers* prescribed WBS, and the *Consultant* ensures its Subconsultants' financial submissions are in the same WBS format. The *Consultant* codes all costs to the WBS with a three column split (staff, subconsultants and other).

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 facilitate payment by the *Employer* to the *Consultant* and make direct payments into that account.

Project Bank Account

When requested by the *Employer*, the *Consultant* provides details of suppliers who are required to enter into the deeds for Project Bank Account pursuant to clause Z22.

Data Collection System

The *Consultant* properly captures all costs within a data collection system to output in a format specified by the *Employer* for use on the scheme in respect of applications for payment.

If the *Employer's* minimum requirements for the *Consultant's* data collection system are not met, the *Consultant* shall be required to affect such modifications or enhancements to its own data collection system, or those of its supply chain, as are required, to meet the *Employer's* requirements. Any investment costs associated with implementing such enhancements shall be borne totally by the *Consultant* or its Subconsultants and not charged back to the *Employer*.

If at any point the *Employer's* minimum requirements for data collection systems are not being met and consequently the *Employer* has a valid concern with the financial controls being operated by the *Consultant* or its supply chain, the *Employer* shall give formal notice to the *Consultant* and all payments due to the *Consultant* will be reduced until the matter is rectified to the *Employer's* satisfaction.

The *Consultant* shall be required to provide the *Employer* with full transparency and audit rights to its own costs and those of its supply chain. The *Employer* reserves the right to carry out a range of overt and covert reviews and detailed audits to verify and provide assurances that all costs and resources have been properly incurred by the *Consultant* and its Subconsultants.

The *Employer's* expectation is that verification reviews and audits will be carried out as an integral part of the *Consultant's* process for the review of Price for Work Done to Date and Price for Work Done to Completion. The *Employer* requires that the *Consultant's* internal process and scope of these compliance reviews are approved by the *Employer* and that for all Schemes the *Employer* would require an audit plan to be developed for the *Employer's* review prior to implementation. For higher risk Subconsultants accounts the *Employer* expects that a robust schedule of verification checks and audits are carried out by appropriately qualified personnel to ensure that at all times the *Employer* achieves value for money.

The *Consultant* is required to provide the *Employer* with appropriate information and details.

If the *Consultant* fails to provide such timely information, and/or access, and that failure results in a delay to agreement of new rates and costs that are to be used for reimbursement of Defined Cost, then there shall be no liability on the *Employer* to adopt new rates and thereafter back date any rate increases beyond the date when

agreement is reached (unless the *Employer* agrees an extension of time). In addition, it will prejudice any right the *Consultant* otherwise may have had to interest. In cases where the annual commercial review has been delayed by the *Employer*, the *Employer* shall make payment for costs at the previously agreed rates, or forecast new rates, until changes are agreed. Once the new rates are agreed the *Employer* shall apply the new rates from the date that the agreement should have been reached and make any additional payments resulting from the difference between the old rates and the new rates.

The *Consultant* must keep contemporary records of all costs, directly-employed staff and operatives so that these can be validated by the *Employer* within a period of at least 24 months from the date on which such costs were incurred through sampling, inspection or audit, or 12 months after Completion, whichever is the later date. If the *Consultant* chooses to archive this information, retrieval costs from archive will not be allowed as Defined Costs, similarly archive costs will not be allowed as Defined Costs (such costs considered being out with the Schedule of Cost Components and included in the Fee). The *Consultant* must also ensure that there are similar obligations on its Subconsultants and that the *Employer* has a similar right to audit the contemporary records they are required to maintain.

Audit/reviews carried out by the *Employer* shall embrace any or all of the following in respect of which the *Consultant* is required to provide ready access to the *Employer* or the *Employer's* representatives, albeit on a controlled basis:

- all company accounts (statutory, management, divisional, Scheme);
- Scheme cost reports;
- staff and labour payroll;
- purchase ledger systems;
- ordering systems;
- discount and rebate information;
- internal cross charges;
- Scheme specific bank statements;
- variance analysis reports; and
- cash flow statements.

The *Employer* shall also require access to the same information from time to time in assessing the effect of compensation events and/or assessing the amount due at each assessment date. This list is not exhaustive and the *Employer* or the *Employer's* representative may request access to other records and sources of information. Access to such other records will be subject to the *Consultant's* prior agreement.

Provision of Electronic Documents and Data

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.

Electronically stored data is provided in a format capable of transfer to readily available equipment in general use.

9.4 Information Systems

The *Consultant* complies with the *Employer's* information requirements.

This section should be read in accordance with the BIM section at Section 4.4.

The *Employer* has implemented a secured Common Data Environment (CDE)

PAS 1192-2[2] defines the common data environment as a single source of information for any given project, used to collect, manage and disseminate all relevant approved project documents for multi-disciplinary teams in a managed process”

This single source of information is vital to maximise the potential benefits of collaborative working, with all information generated being managed and, when validated and verified, made available for future use. The validation and verification process is a key function of the CDE, and ensures the quality of the information for onward use.

The CDE process described in BS 1192[5], and developed further in PAS 1192-2 and PAS 1192-3[6], consists of four stages:

1. Work-in-progress (WIP) – where each company or individual works. In the case of SMP the WIP for the SMP projects will be held in the *Consultant's* own CDE and transferred to the *Employers* CDE in accordance with the defined data exchange points referenced in the EIR and the *Consultant's* BEP
2. Shared – output from a company or individual is approved and shared with the wider team
3. Published – verified and validated information is authorised by the client for contractual use
4. Archived – information or data superseded by a later version, or which is incorrect

In addition, the *Employer's* CDE has been configured to provide national areas for programme management and peer to peer collaboration

The *Employer* controls access to the environment. The environment has a number of roles defined by the *Employer* that have specific access rights within the environment. The *Consultant* requests access for members of its team as required, specifying their role, and the *Employer* grants access accordingly, which it may revoke at any time for security or negligence reasons.

Except specific confidential areas as agreed by the *Employer*, all technical and scheme data within the environment connected with Providing the Services will be readable by all suppliers to the SMP with the requisite access levels working on current schemes.

9.5 Information security

The *Consultant* collects the following Personal Data on behalf of the *Employer*:

- contact details of people involved as *key persons* and stakeholders

When processing personal data on behalf of the *Employer*, the *Consultant* complies with the following requirements.

The *Consultant* complies with the *Employer's* security policy set out in the documents "Statement of Highways England IT Security Policy" and Chief Information Officer Memos 01/09, 05/08 and 04/08 Annex X

The *Consultant* prepares a robust Information Security Plan complying with the *Employer's* security policy and ISO/IEC27001 and submits it to the *Employer* for acceptance. The *Consultant* includes the security plan in its quality management system. The security plan includes procedures which:

- ensure compliance with the Data Protection Acts;

- protect information against accidental, unauthorised or unlawful processing, destruction, loss, damage or disclosure of Personal Data;
- ensure that unauthorised persons do not have access to Personal Data or to any equipment used to process Personal Data;
- protect IT systems from viruses and similar threats;
- provide for disaster recovery, and in particular ensure that the Personal Data is safely backed-up; and
- provide for the vetting of its employees and Subconsultants' staff in accordance with the *Employer's* Personnel Security Standard set out in Annex 1 of the Scope.

The *Consultant* provides training for its employees and Subconsultants in accordance with the *Employer's* security policy and the security plan.

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. The *Consultant* implements measures to prevent the disclosure of such information by his employees or Subconsultants.

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.

Data Handling Requirements

The *Consultant* complies with the *Employer's* Data Handling policy when working on the *Employer's* systems or handling the *Employer's* data.

A system on which the *Consultant* holds any *Employer's* data, including back-up data, is a secure system that complies with the Security Policy.

If the *Employer's* data is corrupted, lost, stolen or sufficiently degraded as a result of the *Consultant's* default so as to be unusable, the *Consultant* immediately reports this to the *Employer*. The *Employer* may:

- require the *Consultant* (at the *Consultant's* expense) to restore or procure the restoration of *Employer's* data to the extent and in accordance with the requirements specified; and/or
- itself restore or procure the restoration of *Employer's* data, and shall be repaid by the *Consultant* any reasonable expenses incurred in doing so to the extent and in accordance with the requirements specified.

9.6 Meetings

The *Consultant* attends all meetings arranged by the *Employer* for the discussion of matters connected with the performance of the services. A "Routine Meetings Schedule" is included at Annex 9. Depending on the number of projects awarded to the *Consultant* there may be efficiencies in combining meetings. The *Consultant* reviews, and amends as necessary, this schedule with agreement of the *Employer*.

After agreeing the agenda with the *Employer*, the *Consultant* prepares the agenda for all meetings and forwards it to the *Employer* at least four (4) working days prior to the meeting.

The *Consultant* prepares short notes of meetings with actions/owners and formally issues to the *Employer* within two (2) working day of each meeting.

Progress Meetings

Following the award of the contract, the *Consultant* convenes and attends monthly progress meetings with the *Employer*.

The monthly progress meetings are held at a location to be agreed between the *Consultant* and the *Employer*.

The *Consultant* prepares and issues minutes of the meeting to the *Employer* for acceptance within two (2) working days of the date of the meeting. The minutes include an abbreviated action list with assigned responsibilities.

The *Consultant* prepares and submits to the *Employer*, at least two (2) working days in advance of the meeting, a monthly progress report.

9.7 Reporting

The *Consultant* prepares reports as required by PCF and this scope.

The *Consultant* adopts a reporting style and content to reports as advised by the *Employer*.

The *Consultant* submits monthly progress reports including the following information:

- dashboard and Lean action tracker;
- agenda and previous minute with commentary on actions;
- progress report for period covered by meeting;
- information related to project performance indicators;
- programme (schedule) for next reporting period;
- actual start dates of activities commenced since the previous updates and reasons for any changes from the approved scheme programme (schedule);
- actual completion dates of activities completed since the previous update and reasons for any changes from the approved scheme programme (schedule);
- the anticipated time for completion, in working days, for activities in hand;
- any change requested by the *Consultant* to the scheduled completion date and the reasons for any change;
- proposals for retrieving of any slippage to the approved scheme programme (schedule);
- issues log and design issues;
- confirmation of scheme cost estimates and budget forecast;
- payment schedule;
- agreement of compensation events;
- insurance related issues;
- list of current Subconsultants;
- quality management issues;
- safety and CDM issues;
- risk register; and
- media community liaison, publicity and advertising matters.

9.8 Personnel

The *Consultant* complies with the *Employer's* Personnel Security Procedures set out in Annex 1.

The *Consultant* appoints personnel identified in Annex 8 as required under this contract, in addition to those Key People identified in Contract Data Part Two.

9.9 Public Communications

The *Consultant* discusses and seeks approval from the *Employer* before any corporate communications or publicity activity is undertaken by the *Consultant* on behalf of the *Employer*.

The *Consultant* keeps the *Employer* informed of any significant community issues and any public meetings being held to discuss major projects issues.

The *Consultant* liaises with the *Employer* before accepting any invitations to appear at public meetings or events related to work being undertaken on behalf of the *Employer*.

Where required, the *Consultant* works with the *Employer* to create specific communication plans. The objectives and outcomes of these plan(s) are set by the *Employer*.

The *Consultant*:

- populates and maintains a stakeholder management tracker, to set out and record engagement and progress with key stakeholder groups for all major schemes; and
- is committed to regular and open communication with the *Employer* and its internal / external stakeholders.

Branding, Marketing, and Publicity

The *Consultant* complies with the *Employer's* visual identity specifications:

- The Highways England's visual identity specifications: 'What you need to know';
- 'Writing with style: The Highways England's tone of voice and style guide'

The *Consultant* adds the *Employer's* branding is to all scheme-related materials.

The *Consultant* assists with regular information updates for the *Employer's* websites. The *Consultant* does not set up independent websites or develop independent logos or branding for the *Employer's* major projects.

The *Consultant* undertakes information and communications activity as is required, while observing any spending or operational restrictions in force at that time.

The *Consultant* agrees the extent of communication and publicity with the *Employer*, through the development of agreed programme / scheme communication plans.

The SMP and scheme communication plans make use of existing approved material, so far as is practicable.

10. WORKING WITH THE EMPLOYER AND OTHERS

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

The *Consultant* cooperates as required with the *Employer*, their agents and suppliers and third parties to deliver the service. Third parties organisations, include, but are not limited to:

- Network Rail.
- Environment Agency.
- Natural England.
- Historic England

- Local Authorities

10.1 Sharing the Working Areas with the *Employer* and Others

NOT USED

10.2 Coordination

The *Consultant* co-operates with other Suppliers in obtaining and providing information which they need in connection with work under the Framework.

The *Consultant* complies with the special requirements of the following Statutory Bodies:

- Network Rail
- Environment Agency
- Natural England
- Historic England
- Local Authorities

The *Consultant* considers joint approaches to OD / Customer Operations (CO) with schemes in the same region, wherever possible.

The *Consultant* provides a programme (schedule) to OD and CO senior users of their Stage Gate Review (SGAR) and PCF timescales.

The *Consultant* schedules works in a manner that minimises the impact on the customer, working in conjunction with MP and OD/CO.

The *Consultant* schedules any PCF product review requests at least six (6) weeks in advance, and ensures that all scheduled dates are met.

The *Consultant* pursues practices where design, supply, construction and operational specialists work alongside each other, developing integrated solutions.

The *Consultant* co-locates teams where appropriate and encourages information sharing, communication, concurrent working and a proactive delivery culture.

The *Consultant* shares information; communicates openly with the *Employer*, continuously shares lessons learnt and achievements and enables embedded learning.

The *Consultant* provides knowledgeable and experienced resources to join the SMP Product Development Team, if requested by the *Employer* (see Annex 9 for roles). The *Consultant* provides CVs for such individuals and the *Employer* will approve these CVs, if acceptable. Once approved, the *Consultant* commits to making these individuals available to the SMP Product Development Team, as required, for the duration of the services. If the individuals leave, the *Consultant* must provide a suitable alternative that is acceptable to the *Employer*.

11. SERVICES AND OTHER THINGS TO BE PROVIDED

The *Consultant* provides services and other things as instructed by the *Employer*.

12. HEALTH AND SAFETY

12.1 Health & Safety Requirements

The *Consultant* operates an occupational health management system in line with the requirements of HSE's construction occupational health management model.

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.

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.

Employer's Health and Safety Requirements

The *Consultant* embraces and contributes to the Highways England's Aiming for Zero initiative.

The *Consultant* complies with the *Employer's* rules, regulations, health and safety policies and any safety and security instructions notified to the *Consultant*.

The *Consultant* complies with the minimum requirements specified in the Highways England's 'raising the bar' guidance.

Construction (Design and Management Regulations) 2015

The *Consultant* fulfils the duties of Designer as required by the Construction (Design and Management) Regulations 2015.

The *Consultant* fulfils the duties of Principal Designer in respect of all the services to which the Construction (Design and Management) Regulations 2015 apply.

The *Consultant* as Principal Designer meets the criteria in the HSE Guidance on the Construction (Design and Management) Regulations 2015. As the Principal Designer, the *Consultant* ensures that the design work in the pre-construction phase contributes to the delivery of positive health and safety outcomes. This includes that, as far as is reasonably practicable, foreseeable risks to health and safety are identified and once the risks have been identified the Principal Designer follows the approach to managing them as set out in the general principles of prevention in Appendix 1 of the HSE Guidance on the Construction (Design and Management) Regulations 2015.

12.2 12.2 Legal Requirements

The Employer appoints the Consultant to act as principal designer for the purposes of the Construction (Design and Management) Regulations 2015. The Consultant provides information to the Employer to demonstrate that individuals proposed for appointment to carry out the duties of the principal designer skills, knowledge and experience meet the requirements given in the Health and Safety Executive's guidance on regulations (L153), "Managing Health and Safety in Construction".

13. SUBCONTRACTING

13.1 Restrictions of requirements for subcontracting

The *Consultant* obtains a minimum of 3 competitive quotations for the appointment of any Subconsultant or supplier for service with a value in excess of £10,000 unless otherwise agreed with the *Employer's Project Manager*.

The *Consultant* provides full visibility to the *Employer* of the procurement process for the selection of any Subconsultant or supplier.

14. ACCEPTANCE OR PROCUREMENT PROCEDURE

Consultant must have a transparent procurement process that demonstrates that services procured offer the best value.

15. ACCOUNTS AND RECORDS

The *Consultant* must maintain accounts and records for 12 years after the end date.

16. PARENT COMPANY GUARANTEE

The form of parent company guarantee is set out in Annex 2.

Legal Opinion for non-United Kingdom Registered Companies

Any legal opinion provided by the *Contractor* in support of a Parent Company Guarantee from a non-UK registered company includes (among others) the following matters

- confirmation that
 - 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,
 - the Controller has full power to execute, deliver, enter into and perform its obligations under the Parent Company Guarantee,
 - 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,
 - execution by the proposed signatories in accordance with the method of execution proposed will constitute valid execution by the Controller,
 - 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
 - the constitutional documents of the Controller,
 - any provision of the laws of the jurisdiction in which it is incorporated,
 - any order of any judicial or other authority in the jurisdiction in which it is incorporated or
 - any mortgage, contract or other undertaking which is binding on the bidder or its assets and
 - (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,
- 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,

- 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,
- 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
- 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.

17. LOW PERFORMANCE DAMAGES

Not Used

18. EMPLOYER'S WORK SPECIFICATIONS & DRAWINGS

18.1 Employer's Work Specification

The work specification is contained in the Specification detailed below.

Specification

The Specification is the 'Specification for Highway Works' current at the Contract Date, published by TSO (formerly HMSO) as Volume 1 of the Manual of Contract Documents for Highway Works, as modified and extended by the following:

- (i) Appendix 0/1: Contract-specific Additional, Substitute and Cancelled Clauses, Tables and Figures;
- (ii) Appendix 0/2: Contract-specific minor alterations to existing Clauses, Tables and Figures;
- (iii) The Numbered Appendices listed in Appendix 0/3.

Insofar as any of the Numbered Appendices may conflict or be inconsistent with any provision of the Specification for Highway Works the Numbered Appendices shall always prevail.

Any reference in the contract to a Clause number or Appendix shall be deemed to refer to the corresponding Substitute Clause number or Appendix listed in Appendix 0/1 or 0/2.

Where a Clause is altered any original Table/Figure referred to in the Clause shall apply unless the Table/ Figure is also altered. Where a Table/Figure is altered any reference in a Clause to the original Table/Figure shall apply to the altered Table/Figure.

Where a Clause in the Specification relates to services which are not required to Provide the Services, it shall be deemed not to apply.

Any Appendix referred to in the Specification which is not used shall be deemed not to apply.

18.2 Drawings

The Drawings are listed in Appendix 0/4 of the Specification.

ANNEX 1 BASELINE PERSONNEL SECURITY STANDARD

NOTE: the terms used in this Baseline Personnel Security Standard mean the following under this contract:

for “Contract Manager” read Highways England Project Sponsor;

for “Company Liaison” read *Consultant*; and

for “contractors, consultants, and temporary employment Highways England staff” read *Consultant* staff.

STAGE 1 – VERIFICATION RECORD (Appendix A)

To be read by the Contract Manager and the applicant

1. For contractors, consultants, and temporary employment Highways England staff applying to work in Highways England offices, proof of identity must be confirmed.
2. There is no definitive list of identifying documents, but those taken from the list at Appendix E should provide adequate proof of identity:
3. Only original documents must be submitted. ***Under no circumstances must photocopies of the above documents be accepted.***
4. The Company Liaison must assess whether the documentation provided is acceptable. If only one document is available, try to ensure it includes a photo of the applicant. If the applicant does not have acceptable photo ID, ask them to provide at least two other documents from the list.
5. In some cases, particularly where young applicants are concerned, such documents may not be available. Where this appears to be a genuine problem, the applicant must supply a passport-sized photo, endorsed on the back with the signature of someone of some standing in the applicant’s community, e.g. a JP, Doctor, Clergyman Teacher etc. The signatory should have known the applicant for a minimum of three years. The photo must be accompanied by a signed statement from the signatory giving their full name, address and phone number and confirming the period they have known the applicant.
6. References obtained at Stage 2 of this process (see below) may also be used to provide proof of identity.

To be read by the Contract Manager

7. You must check that the signatures on the photo and the statement match. In cases of doubt, the signatory should be contacted to confirm that they did complete the statement and that they have known the applicant for the period of time stated.
8. When checking documentation, you should bear in mind that a small proportion of individuals may not be who they say they are. There can be a number of reasons for such deception including:-
 - (a) concealment of a criminal record;
 - (b) illegal immigration;
 - (c) concealment of identity for the purposes of terrorism or espionage, and
 - (d) DSS fraud.

Any of the above could cause someone to act improperly whilst in employment (e.g. commit theft or fraud; breach rules of confidentiality; provide false documents for others; threaten the safety and well-being of staff and members of the public). It is thus of considerable importance that care is taken to check documents thoroughly.

9. There are a number of simple steps which can be taken to verify the documents produced:-

- (a) examine the documents to make sure they are originals (modern photocopiers produce excellent results), comparing them where possible with other examples you may have to hand;
- (b) check, as far as possible, that the paper and typeface are similar to any others you may have to hand, or may have examined recently and that the watermark, where appropriate is present (passports and driving licences invariably contain a watermark);
- (c) examine the documents for alterations or signs that the photograph and/or signature have been removed and replaced.
- (d) check that any signature on the documents tallies with other examples in your possession and, if practicable, ask the prospective employee to sign something in your presence; and
- (e) check that details given on the documents before you correspond with what you already know about the individual.

10. You should also note the date of issue of the documents presented to you. Particular care should be taken where documents are recently issued, especially if all the documents available to you are new and there is little referee coverage (see below).

11. Other means of checking documentation may be available to you and they should not be neglected. For example, adequate referee coverage can provide a high level of assurance, (see paragraph 2 above).

12. If, having examined the information available to you, there remain doubts about the identity of a prospective applicant, the matter should be referred to the Highways England Security team for advice. In no circumstances should you confront the applicant without obtaining the prior agreement of the Highways England Security Team.

STAGE 2 – REFERENCES (Appendix B)

13. For a current employee who has been with your company for the past three years or more, and whose conduct has proved satisfactory, references may be replaced by a letter from your Company, signed by a Director or the head of your Personnel department, to that effect.

14. For employees with less than three years' employment with your company, personnel record and line management checks must be made as above and details of employment history from outside the company must be obtained sufficient to complete the three-year period. These should be from the applicant's previous employer; failing that, their place of full-time education (school, college or university) or the armed forces if they were serving. Only when these avenues of inquiry have been exhausted should references be sought from personal acquaintances. Family members (including in-laws) are not suitable for references.

15. To ensure that the right questions are addressed about the applicant's integrity and to minimise the workload on the referees and hence increase the probability

of obtaining a reply in good time, references should be sought using the Employment History\Reference Report form (Appendix B).

16. References can provide a high level of assurance, particularly where the reference is given by a reputable organisation or by someone known to your Company. However, reasonable steps should be taken to ensure that the reference is genuine. Written references should be treated with care and, where possible, followed up directly with the individual(s) concerned, particularly where the reference is less than convincing (e.g. on poor quality paper or containing spelling or grammatical errors).
17. Where someone, particularly a young person, has difficulty in providing both evidence of identity and adequate referee coverage, it may be appropriate to obtain both from the same person.
18. Employment history should be obtained from previous employers. Where this is not possible because the applicant has been unemployed for any reason, or his previous employer is no longer in business, a second personal reference (see below) must be obtained. This will not be necessary in cases where the period involved is less than six months. Where an applicant has been in full time education during the period, details of that education must be sought from the relevant school or other academic institution. In cases where the applicant has served in the armed forces or Civil Service during the past three years, employment history should be sought from previous line managers named by the applicant and not from the Service or Department.
19. Where a reference is sought from a personal referee named by the applicant, ideally such a referee should be of professional standing e.g. solicitor, civil servant, teacher, accountant, bank manager, doctor, officer of the armed forces. However, applicants should be advised to nominate such a person only when their personal knowledge of the applicant is likely to be sufficient to allow them to provide a considered reference. Where the applicant is unable to nominate such a person, then references should be obtained from personal acquaintances, who are not related or involved in any financial arrangements with the applicant.
20. If an individual has been overseas for a period greater than six months during the last three years, every effort must be made to obtain a reference from the overseas employer.
21. Where necessary, references may be obtained by telephone but must still be recorded on the standard form, together with identifying details of the referee and the person obtaining the reference. The fact that the reference has been obtained by telephone must also be recorded.

STAGE 3 - NATIONALITY CHECK AND THE RIGHT TO WORK IN THE UK (Appendix C)

22. It is important that both the individuals' nationality and either their National Insurance or (if they are not UK or EU citizens) their Home Office Work Permit number is checked and recorded on Part 2 of the account application form.

You should ask potential employees to produce one of:

- (a) A UK passport describing the person as a British citizen or citizen of the UK and colonies with the right of abode in the UK.
- (b) A passport with a certificate of entitlement issued by the UK with the right of abode in the UK.

- (c) A passport or ID card issued by European Economic Area (EEA) State, or State with an agreement forming part of the Communities Treaties (e.g. Switzerland) and which describes the holder as a citizen.
- (d) An EEA registration certificate, permanent residence document or (permanent) residence card, or EEA residence permit. (Swiss nationals are treated as EEA nationals for these purposes.)
- (e) A passport or travel document endorsed to show they are exempt from immigration controls, with indefinite leave to enter or stay in the UK, or no time limit on the stay.
- (f) A passport or other travel document endorsed to show that the holder has current leave to enter or remain in the UK and is permitted to take the employment in question (provided that it does not require the issue of a work permit).
- (g) An Application Registration Card (ARC) which indicates that the holder is entitled to take employment in the UK.

Or you can ask the potential employee to:

Produce a document issued by a previous employer, Inland Revenue, Department for Work and Pensions' Jobcentre Plus, the Employment Service, the Training and Employment Highways England (Northern Ireland) or the Northern Ireland Social Security Highways England, which contains the national insurance number of the person named in the document.

And one of the following

A full UK birth certificate which specifies the names of the holder's parents.

A birth certificate issued in the Channel Islands, the Isle of Man or Ireland.

A certificate of registration or naturalisation as a British citizen.

A letter issued by the Home Office, to the holder, which indicates that the person named in it has been granted indefinite leave to enter, or remain in, the UK.

An Immigration Status Document issued by the Home Office, to the holder, endorsed with a UK Residence Permit, which indicates that the holder has been granted indefinite leave to enter, or remain in, the UK.

A letter issued by the Home Office, to the holder, which indicates that the person named in it has subsisting leave to enter, or remain in, the UK and is entitled to take the employment in question in the UK.

An Immigration Status Document issued by the Home Office, to the holder, endorsed with a UK Residence Permit, which indicates that the holder has been granted leave to enter, or remain in, the UK and is entitled to take the employment in question in the UK.

Or you can ask the potential employee for:

A work permit or other approval issued by Work Permits UK **and** a passport or other travel document endorsed to show that the holder has current leave to enter or remain in the UK and is permitted to take the work permit employment in question, or a letter issued by the Home Office to the holder confirming the same

Photocopy or scan and save to a 'read only' format:

The front cover and pages with details of identity, expiry date and the information/endorsements which establish the nationality and/or immigration status of the potential employee.

All other documents must be photocopied or scanned in their entirety using this software so that the information is recorded.

You must be satisfied that each document produced relates to your potential employee, including a consistent relationship between their date of birth and photo and the person's appearance.

STAGE 4 - CRIMINAL RECORD DECLARATION (Appendix D)

23. Applicants are required to make a self-declaration of any unspent criminal convictions they may have, using the Part 3 of the application form. Individuals must be advised that they are not obliged to reveal the information on the Criminal Record Declaration to you. If they do not wish to do so, the form should be returned to the Highways England in a sealed envelope.

Note: Under the provisions of the Rehabilitation of Offenders Act (1974), certain convictions are deemed to be "spent" after a given period of time if an offender remains free of convictions during that period. Persons rehabilitated under the Act are not, in general, required to disclose spent convictions and their careers cannot normally be prejudiced by a failure to declare such convictions.

24. The completed application form, together with the original references and the Criminal Record Declaration should be passed to the Highways England Security Team. The Criminal Record Declaration may be sent in a sealed envelope if the person so chooses. Original documents, such as passports and birth certificates, or copies of those documents, used to verify identity should not be sent to the Highways England: nor are any copies required of these documents. Providing that the details on the form and the references are satisfactory, the Highways England Security Team will, by countersigning the completed form, indicate that the subject is approved for access to the Highways England system, and for working on Highways England property.

FOLLOW-UP ACTION

25. If any potential applicants are to be provided by your subcontractor(s), then the subcontractor should be made responsible for obtaining the necessary documentation, in accordance with the above procedures and passing the papers for assessment and approval to you. A copy of the papers, countersigned by you, should be forwarded to the Highways England Security Team.

26. If an employee, who has previously been subject to a Baseline Personnel Standard Security check, leaves your company and subsequently re-joins, the original check authorisation may be re-established if the period between leaving and re-joining does not exceed twelve months. If the period does exceed twelve months then the normal check references must be sought for the period since the employee left the company, and a new Criminal Record Declaration obtained.

27. The documentation associated with a Baseline Personnel Security Standard check should be retained by your company for a period of twelve months after the subject has ceased to be employed.

Baseline Personnel Security Standard Appendix A

Verification Record

1. Employee/Applicant details	
Surname:.....	Forenames:.....
Address:.....	
..... Tel No:.....	
Date of birth:.....	Place of birth:.....
Nationality:..... Former or dual nationality:..... (with dates if applicable)	

2. Certification of identity	
Document:	Date of issue:
a.....
b.....
c.....
d.....

3. Employment History (past 3 years)

Please include any gaps in employment.

Describe any overseas employment / travel within the past 3 years.

4. References (if taken)

a. Referee:..... Relationship:.....

Address:.....

..... Length of association:.....

b. Referee:..... Relationship:.....

Address:.....

..... Length of association:.....

c. Referee:.....

Relationship:.....

Address:.....

..... Length of association:.....

5. Other information (i.e. verification of nationality and immigration status; unspent criminal record declaration and independent verification via Disclosure Scotland (where undertaken); academic certificates seen; additional checks carried out; etc):

I certify that in accordance with the requirements of the Baseline Personnel Security Standard:

I have personally examined the documents listed at 2 above and have satisfactorily established the identity of the above named employee/applicant.

I have obtained the references (if taken) and information listed at 3 and 4 above and can confirm that these satisfy the requirements.

Name:.....

Appointment/Post:.....

Signature:..... Date:.....

Important: Data Protection Act (1998). This form contains “personal” data as defined by the Data Protection Act 1998. It has been supplied to the appropriate HR or Security authority exclusively for the purpose of the Baseline Personnel Security Standard. The HR or Security authority must protect the information provided and ensure that it is not passed to anyone who is not authorised to see it.

Appointment/Post:.....

Signature:..... Date:.....

Additional Notes:

Company Name and Address (Stamp if applicable):

Baseline Personnel Security Standard Appendix B

EMPLOYMENT HISTORY/REFERENCE REPORT FORM

(The draft covering letter shown below may be used together with the Baseline Personnel Security Standard Employment History / Reference Report Form overleaf. Alternatively, organisations may wish to include the Report Form with their normal letter requesting employment history / references.)

Dear [],

SUBJECT: _____

You may be aware that we are required to verify employment history / seek references to help confirm the reliability of persons who may have access to certain classes of Government material. The person named above who (is an employee of) / (has applied for employment with) this organisation comes within the terms of this procedure.

S/he has given us your name as a (previous employer) / (personal acquaintance willing to give such a reference). It would be appreciated, therefore, if you would be good enough to let us have (confirmation (with dates) of his/her employment with you) / (any information about him/her which you think may help us in assessing his/her reliability) by completing the attached Report Form and returning it to us by no later than [insert date]. Your reply will be treated in the strictest confidence.

Your cooperation and understanding in this matter will be greatly appreciated.

Yours sincerely,

[Signed]

SUBJECT: _____

1. How long did the subject work for you and in what capacity?

From:..... To:.....

Capacity (i.e. appointment/post):

2. Are you related to the subject? If so, please state your relationship.

.....

3. Over what period have you known the subject?

From:..... To:.....

4. Please state the nature and depth of your acquaintance:

.....

5. Do you believe the subject to be strictly honest, conscientious and discreet?

.....

6. Do you know of any factor concerning the subject which might cause his/her fitness for employment on sensitive work to be questioned? If so, please give details.

(Among the factors which are relevant are; significant financial difficulties, abuse of alcohol or drugs, an extravagant mode of living or signs of mental or physical illness which may impair judgement or reliability.)

.....

The above answers are correct to the best of my knowledge and belief.

Name:.....

Signature:..... Date:.....

Contact address:.....

..... Tel No:.....

Email:.....

To avoid difficulties in relation to the Disability Discrimination Act 1995, departments and agencies should note that in the case of mental or physical illness there will need to be a proper assessment of whether the person's condition genuinely is a barrier to carrying out the

role in question. It is very important to avoid assumptions about the effects which a particular condition (e.g. depression) may have on a person's ability to carry out their job.

Company Name and Address (Stamp if applicable):

Important: Data Protection Act (1998). This form contains "personal" data as defined by the Data Protection Act 1998. It has been supplied to the appropriate HR or Security authority exclusively for the purpose of the Baseline Personnel Security Standard. The HR or Security authority must protect the information provided and ensure that it is not passed to anyone who is not authorised to see it.

Baseline Personnel Security Standard Appendix C

Nationality and Immigration Status form

Note: If you are appointed, documentary evidence will be sought to confirm your answers. Your answers may, additionally, be checked against UK immigration and nationality records.

Full name:.....

Alias(es)/Other name(s) used:.....
.....

Date of birth: Male or Female:.....

Current/last known address:.....
.....
.....

Nationality at birth:.....

Present nationality (if different):.....

Have you ever possessed any other nationality or citizenship? YES/NO

If YES, please specify:.....
.....

Are you subject to immigration control? YES/NO

If YES, please specify:.....

Are you lawfully resident in the UK? YES/NO

Are there any restrictions on your continued residence in the UK? YES/NO

If YES, please specify:.....
.....

Are there any restrictions on your continued freedom to take employment in the UK?
YES/NO

If YES, please specify:

.....
.....
If applicable, please state you Home Office / Port reference number here:
.....

Declaration: I undertake to notify any material changes in the information I have given above to the HR or Security branch concerned.

Signature:.....
Date:

Important: Data Protection Act (1998). This form asks you to supply “personal” data as defined by the Data Protection Act 1998. You will be supplying this data to the appropriate HR or Security authority where it will be processed exclusively for the purpose of a check against the UK’s immigration and nationality records. The HR or Security authority will protect the information which you provide and will ensure that it is not passed to anyone who is not authorised to see it.

By signing the declaration on this form, you are explicitly consenting for the data you provide to be processed in the manner described above. If you have any concerns, about any of the questions or what we will do with the information you provide, please contact the person who issued this form for further information.

For official use only:
Reference:
(Organisation stamp)

Baseline Personnel Security Standard Appendix D

CRIMINAL RECORD DECLARATION FORM

Note: If you are appointed, a check against the National Collection of Criminal Records may be undertaken and documentary evidence sought to confirm your answers.

The company named at the bottom of this form has Government contracts, some or all of which require it to hold material or information which is the property of the Government. The company has a duty to protect these assets while in its possession and this obligation extends to its employees and agents. Since you are or may become such a person please complete the following sections:

Surname:.....

Full forenames:.....

Full permanent address:.....

.....

..... Date of birth:.....

1. Have you ever been convicted or found guilty by a Court of any offence in any country (excluding parking but including all motoring offences even where a spot fine has been administered by the police) or have you ever been put on probation (probation orders are now called community rehabilitation orders) or absolutely/conditionally discharged or bound over after being charged with any offence or is there any action pending against you? You need not declare convictions which are "spent" under the Rehabilitation of Offenders Act (1974).

YES / NO (delete whichever is not appropriate) *(If yes, please give details overleaf)*

2. Have you ever been convicted by a Court Martial or sentenced to detention or dismissal whilst serving in the Armed Forces of the UK or any Commonwealth or foreign country? You need not declare convictions which are "spent under the Rehabilitation of Offenders Act (1974).

YES / NO (delete whichever is not appropriate) *(If yes, please give details overleaf)*

3. Do you know of any other matters in your background which might cause your reliability or suitability to have access to government assets to be called into question?

YES / NO (delete whichever is not appropriate) *(If yes, please give details below)*

If you answered 'YES' to any of the questions on this form, please give details below.

I declare that the information I have given on this form is true and complete to the best of my knowledge and belief. In addition, I understand that any false information or deliberate omission in the information I have given on this form may disqualify me for employment in connection with Government contracts.

Signature:..... Date:.....

The information you have given above will be treated in strict confidence. You do not need to show the completed form to any representative of the company. If you wish, you may place the completed form in a sealed envelope, sign your name across the flap and return it to the company. The company will then forward it to the Government department concerned.

Important: Data Protection Act (1998). This form asks you to supply “personal” data as defined by the Data Protection Act 1998. You will be supplying this data to the appropriate HR or Security authority where it may be processed exclusively for the purpose of a check against the National Collection of Criminal Records. The HR or Security authority will protect the information which you provide and will ensure that it is not passed to anyone who is not authorised to see it.

By signing the declaration on this form, you are explicitly consenting for the data you provide to be processed in the manner described above. If you have any concerns, about any of the questions or what we will do with the information you provide, please contact the person who issued this form for further information.

Name and address of Sponsoring Company:

Baseline Personnel Security Standard Appendix E

Verification of Identity Examples of Permissible Documents

Document type	Obtained
Current signed full passport, National ID Card and/or other documentation relating to immigration status and permission to work (see further guidance in the 'verification of nationality and immigration status' section of this paper).	
Current UK photocard driving licence.	
Current full UK driving licence (old version).	
Current benefit book or card or original notification letter from the DWP confirming the right to benefit.	
Building industry subcontractor's certificate issued by HMRC.	
Recent HMRC tax notification.	
Current firearms certificate.	
Birth certificate.	
Adoption certificate.	
Marriage certificate.	
Divorce or annulment papers.	
Gender recognition certificate.	
Police registration document.	
HM Forces identity card.	
Proof of residence from a financial institution.	
Record of home visit *.	
Confirmation from an Electoral Register search that a person of that name lives at that address *.	
Recent original utility bill or certificate from a utility company confirming the arrangement to pay for the services at a fixed address on prepayment terms *.	
Local authority tax bill (valid for current year) *.	
Bank, building society or credit union statement or passbook containing current address *.	
Recent original mortgage statement from a recognised lender *.	
Current local council rent card or tenancy agreement *.	
Court order *.	

Note that not all documents are of equal value. The ideal is a document that is:

- issued by a trustworthy and reliable source
- difficult to forge
- has been dated

- is current
- contains the owner's name, photograph and signature
- itself requires some evidence of identity before being issued (e.g. a passport)

Example documents marked with an * should be recent (at least one should be within the last six months unless there is good reason why not) and should contain the name and address of the registrant.

ANNEX 2 FORM OF PARENT COMPANY GUARANTEE

DATED [●]

HIGHWAYS ENGLAND COMPANY LIMITED

as Employer

[●]

as Guarantor

PARENT COMPANY GUARANTEE

relating to a [framework/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;
 - c) 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;
 - d) the Contract or any of the provisions of the Contract being or becoming illegal, invalid, void, voidable or unenforceable;
 - e) any time given, waiver, forbearance, compromise or other indulgence shown by the Employer to the *Consultant*;
 - f) 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;
 - g) 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
 - h) 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:

- b) if a liquidator is appointed in respect of the Consultant and the liquidator disclaims the Contract; or
- a) 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*] in the presence of: Director

Name of witness:

Signature of witness:

Address:

Occupation:

ANNEX 3 INCLUSION ACTION PLAN

Guidance for Suppliers

Highways England believes that in order to achieve its vision of being **the world's leading road operator** it must better understand the different needs of our large and diverse customer base and factor these needs in to the design and delivery of service. We also believe that to achieve outstanding performance we must attract, recruit, develop and retain talented people from all groups within the active labour force and then work to ensure an inclusive environment in which all can thrive. Highways England expects our suppliers to share the same values in terms of Diversity and Equality as well as supporting our wider vision.

The Inclusion Action Plan covers the key areas of Equality and Diversity, and Skills/Apprenticeships.

The Action Plan should be accompanied by some contextual information including reference to your key relevant policies. The Action Plan should relate specifically to the [contract/project] you are contracted for. Key relevant policy documents such as the equality and diversity policy (or equivalent) can be appended.

All relevant information for the submission is to be included and the total Action Plan should not exceed 20 pages with the exception of any appendices. Any appendices should only include relevant policies as any other information will not be considered.

Suggested Action Plan Structure

- 'Inclusion' objectives – what are you seeking to achieve
- Current position/Baseline - what does your baseline data say about where you are (this should provide some guidance as to the additional actions to be taken or actions to be dis/continued. The Equality Act's protected characteristic groups are: age, disability, gender, gender reassignment, pregnancy and maternity, race, religion/ belief and sexual orientation
- Action/task – what are you going to do towards meeting your objectives
- When this will happen – when will you take the action specified above
- Person responsible – who will be responsible for this action
- Resource - you may also want to consider the resources needed to take action over and above the responsible officer
- Measure of success (outcome/PI's) – what will success look like

Inclusion Action Plan							
	Inclusion objective	Current position/baseline	Action/ task	When	Person responsible	Measure of Success (MoS) and progress update	Score
1	Employment Section – General						
1.1	Create an environment in which everyone has an equal opportunity to contribute and develop						
1.2	Create an environment in which policies, procedures and behaviours that inhibit fairness or prevent inclusion are changed						
1.3	Ensure Leadership and Governance established on contract to achieve plan objectives						
2	Employment Section – Workforce						
2.1	Workforce diversity - Establish baseline for workforce composition						
2.2	Ensure that all staff are aware of and contribute to the contract's Equality and Diversity requirements						
2.3	Ensure all relevant staff have undertaken diversity training						

Inclusion Action Plan							
	Inclusion objective	Current position/baseline	Action/ task	When	Person responsible	Measure of Success (MoS) and progress update	Score
3	Employment Section - Supply Chain						
3.1	Ensure supply chain recruitment policies and practices are free from discriminatory practices.						
3.2	Demonstrate due consideration has been given to the use of SMEs and Supported Businesses within the supply chain for this contract.						
4	Service Delivery Section – General						
4.1	Take reasonable steps to deliver products and services that our customers can access and that take account of their diverse needs						

Inclusion Action Plan							
	Inclusion objective	Current position/baseline	Action/task	When	Person responsible	Measure of Success (MoS) and progress update	Score
5 Service Delivery Section – Communities							
5.1	Seek ways to support the creation of workplace training places giving consideration to using these opportunities to encourage under the represented.						
5.2	Where the delivery of a scheme may be perceived to have an impact on local communities we will seek to minimise and mitigate any negative impact.						
5.3	Ensure that communications activities to all stakeholders are appropriate to address Equality and Diversity, and Skills/Apprenticeship issues						

ANNEX 4 CONTINUAL IMPROVEMENT

Purpose and Scope

This sets out the *Employer's* minimum requirements in relation to the *Consultant's* innovation and continual improvement of the delivery of all of the services.

Innovation and continual improvement under this heading comprises four parts:

- (i) Outcome requirements
- (ii) Strategic objectives
- (iii) The method (tools and techniques)
- (iv) Performance measurement

(i) Outcome Requirements

The primary outcome from using continual improvement is the generation and realisation of reductions in the cost of delivering the services for the benefit of both the *Employer* and the *Consultant*.

An additional outcome is the improvement of quality in delivering the services, at no additional cost to the *Employer*.

(ii) Strategic Objectives

The following strategic objectives in support of the above outcome are to be delivered by the *Consultant*:

- Engagement of the *Consultant's* executive leadership to ensure these continual improvement requirements are fulfilled
- Proactive management and engagement of the *Consultant's* supply chain in support of reductions in the cost of delivering the *services* enabled by a reduction in the *Consultant's* cost charged to the *Consultant*
- A systematic and prioritised approach to the improvement of all of the processes contained in the *Consultant's* Quality Plan
- The identification of improvement opportunities that primarily have the potential to generate reductions in the cost of delivering the *services*
- Realisation of the reduction in the cost of delivering the services by a measurable reduction in Defined Cost
- Realisation of other benefits that result in an improvement to the quality of the services, at no additional cost to the *Employer*

(iii) The Method

The most effective tool in ensuring project milestones are achieved is collaborative planning and this is mandated on all schemes with Major Projects.

The *Consultant* executes the following method, although it is accepted that it may adopt, at its own discretion, additional methods to deliver the above outcome requirements and strategic objectives.

Lean is a method of delivering the above outcome requirements and strategic objectives, and is a way of doing more with less. It produces what a customer wants, when it is required, with a minimum of waste, and to a high level quality. Lean works through a relentless elimination of waste and reduction of variation.

The *Consultant* uses Lean tools to systematically address, in a planned sequence, the processes in its Quality Plan in order to identify customer requirements, establish and optimise the execution of value adding activity, identify and minimise non-value adding activity, and eliminate waste.

The *Consultant* shall:

- (a) DEPLOY A LEAN STRATEGY
 - Adopt lean principles as part of formal strategic plans for the *Consultant's* business.
 - Employ formal processes for determining customer/client value.
- (b) ENSURE LEAN LEADERSHIP
 - Ensure senior leaders and management within the *Consultant's* organisation enthusiastically embrace the concept of Lean and support a transformation to a Lean culture in the organisation.
- (c) DELIVER CUSTOMER VALUE
 - Ensure value streams of all stakeholder processes have been mapped and value adding activities are identified and optimised.
 - Ensure critical interactions and interdependences are identified.
 - Ensure opportunities for minimising non value adding activity and eliminating waste are identified and realised.
- (d) ADOPT LEAN STRUCTURE AND BEHAVIOUR
 - Revise policies and procedures to promote, encourage and support Lean behaviour.
 - Delegate decision making to lowest practical level, with appropriate training.
 - Encourage prudent risk taking.
 - Implement a comprehensive programme of innovation/improvement initiatives and measure their impact.
- (e) ENSURE PROCESS FLOW
 - Design processes along value streams encouraging customer/client pull with minimum waste.
 - Minimise travel distance or time delay.
 - Ensure continuous flow through all value streams.
 - Ensure demand is aligned to customer pull in order to provide a balanced workload with minimum stock levels.
- (f) CREATE STANDARD WORK PRACTICES
 - Standardise processes across sites and departments.

- Standardise tools and systems used throughout the *Consultant's* organisation.
- (g) ENSURE PROCESS CONTROL AND QUALITY
- Reduce process variation throughout the *Consultant* organisation.
 - Analyse the root cause of defects and nonconformities, implement corrective action and update processes with lessons learned.
 - Ensure all processes include mistake proofing with preventative measures maintaining optimal process conditions.
 - Delegate authority for quality to lowest practical level minimising secondary inspection.
- (h) ENSURE PLANNING DESIGN AND CONSTRUCTION TAKES ACCOUNT OF CUSTOMER/CLIENT REQUIREMENT
- Continually evaluate customer/client needs with formal feedback.
 - Ensure customer/client is represented on integrated product/project teams.
 - Integrate planning/design/construction teams.
 - Identify and quantify priorities of downstream stakeholders.
 - Ensure services to sites designed to be in line with demand usage to minimise inventory.
- (i) DEPLOY EFFECTIVE EQUIPMENT MAINTENANCE
- Ensure equipment is in a condition to contribute to quality and provide a high level of availability. Keep records of defects to target proactive maintenance.
 - Ensure employees have full ownership and care for processes and maintain process performance.
 - Evaluate repair/maintenance schedules in line with available capacity and ensure risk contingency.
- (j) MAINTAIN EFFECTIVE SUPPORTING INFRASTRUCTURE
- Ensure financial/measurement system supports lean transformation and is readily accessible to stakeholders.
 - Ensure information systems are easily accessible and compatible with stakeholder communications and analysis needs.
 - Ensure personnel practices make suitable skills available.
 - Ensure education and training programmes support the needs of the enterprise transformation plan.
 - Make resources and support available to employees to contribute to Lean improvement.
 - Develop supply chain that can be effectively managed.
 - Define develop and integrate *Consultant* network to ensure efficient

creation of value for enterprise stakeholders.

- Provide trained Lean Practitioner resource to deliver lean activity at organizational and project level.

In carrying out the above process the *Consultant* assists and enables its supply chain in the adoption of lean methodologies and approaches, and engaging in lean improvement projects.

(iv) Performance Measurement

The *Consultant* records and measure the benefits realised from the execution of continual improvement processes in accordance with the *Employer's Lean Benefits Realisation Guide*.

The *Consultant*:

- Captures and records the reductions in cost.
- Captures and records any other benefits.
- Ensures results are recorded showing general details about the improvement, planned/targeted benefits, and actual / realised benefits with supporting calculations.
- Reviews and reports on performance on a monthly basis.
- Prepares a Knowledge Transfer Pack and Benefits Realisation Capture form.

The *Consultant* adjusts its delivery of continual improvement process based on lessons learned from the measurement of its performance.

The *Consultant* measures their adoption of a continual improvement culture using the *Employer's Lean Maturity Assessment Toolkit* at organizational and Project Level.

ANNEX 5 INSURANCE

Lot 1 Design Services (*Consultants*)

Insurance Table (Required Insurances)	
1.	Third Party Public and Products Liability Insurance
1.1	<u>Insured</u> <i>Consultant</i>
1.2	<u>Interest</u> To indemnify the Insured in respect of all sums which the Insured may become legally liable to pay, whether contractually or otherwise, (including claimant's costs and expenses) as damages in respect of accidental; 1.2.1 death or bodily injury, illness or disease contracted by any person; 1.2.2 loss or damage to property; happening during the Period of Insurance and arising out of or in connection with Lot 1 Design Services.
1.3	<u>Cover Features and Extensions</u> 1.3.1 Indemnity to principals' clause. 1.3.2 Health & Safety at Work Act(s) clause. 1.3.3 Defence appeal and prosecution costs relating to the Corporate Manslaughter and Corporate Homicide Act 2007.
1.4	<u>Principal Exclusions</u> 1.4.1 War and related perils. 1.4.2 Nuclear/radioactive risks. 1.4.3 Liability for death, illness, disease or bodily injury sustained by employees of the insured arising out of the course of their employment. 1.4.4 Liability arising out of the use of mechanically propelled vehicles whilst required to be compulsorily insured by legislation in respect of such vehicles. 1.4.5 Liability in respect of predetermined penalties or liquidated damages imposed under any contract entered into by the Insured. 1.4.6 Liability in respect of loss or damage to property in the care, custody and control of the insured. 1.4.7 Events more properly covered under a professional indemnity insurance policy. 1.4.8 Liability arising from the ownership, possession or use of any aircraft or marine vessels. 1.4.9 Liability arising from seepage and pollution unless caused by a sudden,

Insurance Table (Required Insurances)

unintended and unexpected occurrence.

1.4.10 Cyber risks

2. Professional Indemnity Insurance

2.1 Insured

Consultant

2.2 Interest

To indemnify the Insured for all sums which the Insured shall become legally liable to pay (including claimants' costs and expenses) as a result of any claim or claims first made against the Insured during the Period of Insurance by reason of any act, error and/or omission arising from or in connection with Lot 1 Design Services.

2.3 Cover Features and Extensions

2.3.1 Loss of documents and computer records extension.

2.3.2 Legal liability assumed under contract, duty of care agreements and collateral warranties.

2.4 Principal Exclusions

2.4.1 War and related perils.

2.4.2 Nuclear/radioactive risks.

2.4.3 Insolvency of the Insured

2.4.4 Bodily injury, sickness, disease or death sustained by any employee

3. Policies to be taken out as required by United Kingdom law.

The *Consultant* is required to meet 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*.

ANNEX 6 CATEGORY MANAGEMENT

CATEGORY MANAGEMENT PRINCIPLES

Category Management is a key element of the *Employer's* Procurement Strategy 'Delivering Sustainable Value Through Supply Chain Management' and as such:

1. All relevant scheme elements are tested by the *Consultant* against the *Employer's* Category Management (CM) framework where such agreements exist. These are:
 - Gantries
 - Pavement and Concrete
 - Temporary traffic management
 - Traffic management technology
2. Any proposal not to use the *Employer's* CM arrangements is submitted to the *Employer* for approval outlining why CM arrangements will not deliver value.
3. Any assessment of options for delivering CM works or services elements takes account of any identified whole life cost savings and non-financial factors, such as health and safety benefits, in addition to the initial capital cost.
4. Input into the Development stage is obtained by the *Consultant* from the *Employer's* Category Management framework suppliers during the Development stage of the Scheme and is encouraged.
5. Where availability to employ professional services through CM frameworks exists, the *Consultant* may choose to employ these services during and beyond the Development Stage of a Package Contract. Subject to the *selection procedure* in the applicable CM framework, in this instance the *Consultant* may propose a direct award of CM works or services at Delivery stage to a preferred CM supplier without the requirement for further competition. Any proposal shall demonstrate value for money and is subject to prior acceptance by the *Employer*.
6. In circumstances where the *Consultant* has employed professional services through an *Employer's* CM framework, the *Consultant* is not obliged to direct award the works or services at Delivery stage. In this instance the *Consultant* follows the CM framework *selection procedure* to identify a CM framework supplier to deliver the works or services requirements.
7. The *Consultant* liaises with the *Employer* to identify and plan a programme that allows the CM framework procurement and associated governance procedures to be implemented within the requirements of the overall project programme.

8. Where the *Employer's* approval is obtained not to use CM frameworks for CM works or services elements, the proposed Subconsultants and associated Subconsultant conditions are submitted for acceptance in accordance with the *conditions of contract* (Clauses 26.2 and 26.3).
9. Where the *Employer's* approval is obtained not to use CM frameworks for CM works or services elements and the *Consultant* proposes to use "in-house" arrangements, the *Consultant* demonstrates that the price is at open market or competitively tendered prices in accordance with the *conditions of contract* (Clause 52.1).
10. If so required by the *Employer*, the *Consultant* procures that a Subconsultant enters into a contract with a Category Supplier pursuant to a Category Purchase Agreement for the purchase of materials, works or services needed to provide the Services. The *Consultant* procures that the conditions of contract between the Subconsultant and the Category Supplier are those set out in the Category Purchase Agreement and that the Subconsultant does not change them unless the *Employer* agrees.

ANNEX 7 PCF SINGLE OPTION PROJECTS MATRIX

Scope	Client Scheme Requirements	Reviewed
	Analytical Requirements Report	Refined
	Appraisal Specification Report	Refined
Estimating	Developing Estimate	Produced
Risk	Risk Management Plan	Updated
	Risk Register	Refined
Business case and funding	Transport Data Package	Refined
	Transport Model Package	Refined
	Transport Forecasting Package	Refined
	Economic Appraisal Package	Refined
	Appraisal Summary Table	Refined
	Combined Modelling and Appraisal (ComMA) Report	Refined
	Business Case	Reviewed
Investment Submission	Produced	
Specification, requirements and design	Preliminary Design	Produced
	Safety Plan	Updated
	Combined Safety and Hazard Log Report	Produced
	Combined Operations	Produced
	Telecommunications Requirements	Produced
	RCC Technology and Capacity Implications Report	Produced
	Site Data Change Request	Produced
	Applications for Roadside Electricity Connections (Exit Points)	Produced
Tunnel Design Authority Report	Updated	
Managing Change	Change Request Log	Produced

	Change Request Form	Produced
	Exception Report	Produced
Value management	Value Management Delivery Plan	Updated
	Efficiency Register	Refined
	Value Management Workshop Report	Produced
Procurement	Project Level Procurement Strategy	Reviewed
	Technology Procurement Strategy incl. Bulk Purchase	Produced
Project Management	Product Checklist	Produced
	Stage Management Plan	Produced
	Project Management Plan	Updated
	Project Schedule	Refined
	Regular Reporting	Produced
	Stage Gate Assessment Review Certificate	Produced
	Certificate of Compliance with the Ops TLG	Produced
	End of Stage Report	Produced
	Lessons Learnt Log	Updated
	Equality Impact Assessment (EqIA) Screening, Analysis and Monitoring	Refined
	Integrated Assurance and Approvals Plan	Updated
Health and Safety	Pre-construction Information	Refined
	Health & Safety File	Updated
	Maintenance and Repair Strategy Statement	Refined
	Scheme Asbestos Management Plan	Produced
Communications	Communication Planning for Major Projects	Updated
SES Approvals	Ground Investigation Report	Produced
	Early Structures Notification Form Checklist	Produced
	Structures Options Report Checklist	Produced
	Approval in Principle (AIP) Checklist	Produced

Orders (Highways Act 1980)	Orders Requirements	Produced
	Draft Orders	Produced
	Publishing Draft Orders	Produced
	Exchange Land Certificates and Planning Consents	Produced
	Land - Gaining Access for Surveys	Updated
	Planning Statement	Refined
	Information and Justification to Support Compulsory Purchase	Refined
Orders (Planning Act 2008)	Pre-Consultation Activities - Statement of Community Consultation & Section 48 Notice	
	Pre-Consultation Activities- Statutory Consultation Section 42 Compliance	Produced
	DCO Application Consultation Report	Produced
	DCO Application - Development Consent Order & Explanatory Memorandum	Produced
	DCO Application - Form & Contents Overview	Produced
	DCO Application - Plans	Produced
	DCO Application - Land Referencing & Book of Reference	Refined
	DCO Application - Planning Statement & National Policy Statement Accordance	Produced
	DCO Application - Statement of Reasons & Funding Statement	Updated
	Land - Gaining Access for Surveys	
Public Inquiry (Highways Act 1980)	Programme Public Inquiry	Produced
Standards and Specifications	Road Safety Audit	Produced
	Departures from Standards Checklist	Produced
	Implementation Report For New Standards	Produced
Works Procurement	Contract Documents	Produced
	Statutory Undertakers Estimate	Refined
Public Consultation	Notification of Development	Reviewed

Handover	Technology Commissioning Plan	Produced
Environmental	EIA Screening (Determination)	Refined
	Habitat Regulations Assessment	Refined
	Environmental Scoping Report	Refined
	Environmental Assessment Report / Environmental Statement	Refined
	Preliminary Environmental Information	Produced
	Environmental Management Plans	Produced
	Project Design Report	Produced
Traffic Management	Traffic Management Plan	Produced

ANNEX 8 KEY PERSONNEL

The *Consultant* provides the following Key Personnel, for delivery of the services. The personnel fall into categories of management and technical, that aligns with the SMP technical delivery work streams of: **Infrastructure**, **Assessment** and **Operations** (as detailed in the Single Option Project Pre-Construction Process Map):

Management:

- Project Manager(s)
- Lean and Collaborative Planning Lead
- Stakeholder Manager

Operations:

- Operations Lead
- Operational Safety Lead
- Maintenance Interface Lead
- Construction Interface Lead
- Technology Systems Lead

Assessment:

- Environmental Lead
- Air Quality Lead
- DCO & Statutory Procedures Lead

Infrastructure:

- Highways Lead
- Technology Lead
- Structures Lead
- Geotechnical Lead
- BIM & Project Information Manager
- Design Assurance Lead (see below)

Design Assurance Lead

Purpose: To lead the technical assurance of the developed Operational Concept into a robust Outline Business Case, engaging with internal stakeholders (e.g. Operations, SES, ITD) which reflect the needs of the customer and the maintainer, working closely with them through the design process to ensure their needs are met and appropriate change control is put in place.

Key responsibilities:

- *Assure the development of the Operational Concept for the scheme. Ensure appropriate project assurance processes are in place, including robust change control process and adherence to design requirements.*
- *Assure product safety and quality throughout the design lifecycle. Maintain and improve technical assurance processes, working in conjunction with internal specialists (e.g. SES).*
- *Manage the evolution of digital representations of physical and functional characteristics of the developed Operational Concept, using the information to engage with internal stakeholders.*
- *Maintain and assure best practice methodologies into Business as Usual (BAU), and associated improvements to technical standards and guidance. Ensure that learning and emerging best practice (e.g. Survey Guide, Design Guide, Rapid Engineering Model) are utilized to optimise solutions which meet the needs of customer and internal stakeholders.*

-
- *Assure appropriate assessments to inform the business case appraisals.*
 - *Ensure customer insight informs the business case appraisals and the development of the Operational Concept.*
 - *Assure design and maintenance activity to release CapEx and OpEx benefits for the Outline Business Case (e.g. PMI025 – Fixing the Scope of Asset Renewals).*

The *Consultant* provides CVs for the Key Personnel above and identifies if the role is Full-Time (F/T) or Part-time (P/T), based on their resource estimate. With written agreement of the *Employer*, personnel may undertake more than one role provided they have the relevant competence, attributes, commitment and time availability to fulfil the duties.

ANNEX 9 ROUTINE MEETINGS SCHEDULE

The schedule below provides a list of the key meetings that the *Consultant* is represented.

Meeting	Frequency	Purpose
Delivery Board	Monthly	Updating SMP Leadership, knowledge sharing and collaboration forum
Traffic	Monthly	Work with the traffic consultants to ensure the traffic forecasting and economic appraisal is conducted in a consistent, robust manner
Progress Meeting	Monthly	Project review of progress during the period, plans for next period, issues, commercial and schedule review.
Highways England <i>Project Managers Meeting</i>	Bi-weekly (subject to invitation from the <i>Employer</i>)	Co-ordination meeting to ensure consistency of delivery across the schemes. Particular focus on: Health and Safety Design Risk and Issues
Infrastructure Technical Leadership Group	2 nd Thursday of every month	Ad hoc attendance to ensure consistent, robust Infrastructure solutions
Scheme Assessment Technical Leadership Group	3 rd Tuesday of every month	Ad hoc attendance to ensure consistent, robust assessment
Operations Technical Leadership Group	3 rd Thursday of every month	Ad hoc attendance to ensure consistent, robust Operational solutions. Mandatory attendance half way through DF3.
Technical Peer to Peer Network Meetings	Monthly	Identify lessons learned Discuss best practice Early communication of issues Contributing to the development agenda
Technical Working Group	Monthly	Integrated discipline coordination meeting between Discipline Leads to ensure consistent, robust Product Development
Risk, Value and Opportunities review	Monthly	
Technology Technical Advisory Group	Bi-Monthly	Ad hoc attendance to ensure consistent, robust reactive and proactive Technology solutions
Operator and Maintainer Liaison Meeting	Quarterly	Meeting to inform operators and maintainers of progress and take feedback (seek user buy-in)
Operator and Maintainer Liaison Meeting Core Responders Liaison Meeting	Quarterly Quarterly	Meeting to inform operators and maintainers of progress and take feedback (seek user buy-in) Meeting to inform emergency services of progress and take feedback
Project Committee	Monthly	Updating Project Sponsors
PSCRG	Monthly	Project Safety Control Review Group

ANNEX 10 SPECIAL ACTIVITIES AND REQUIREMENTS

The following details a non-exhaustive list of special activities and requirements of the *Employer* to be undertaken by the *Consultant* for each of the work stages:

Work Stage – Design Period 2 (Design Fix 1 to Design Fix 2):

General:

The *Consultant* reviews and confirms the Baseline Conditions by:

- Following the guidance and recommendations of the SMP '*Survey Guide*';
- Collecting and reviewing existing asset data from available sources, including survey work specifically commissioned by the *Employer* for the scheme, asset databases, 4 year forward maintenance programmes, Maintenance Service Providers, NRTS, and other HE Suppliers and sources.
- Procuring necessary further surveys which may include topographic, geotechnical, ducting, drainage, pavement, structures, communications, lighting, and asbestos surveys.
- Preparing a 3D model in support of the Operations work stream to allow optimisation of key features based on operations and safety considerations.
- Developing the intervention design following the guidance and recommendations of the SMP '*Design Guide V3.1*'

Highways:

The *Consultant*:

- develops initial signing strategy to identify ADS and all other large sign locations.
- develops initial drainage strategy and engage the EA, SES, OD and the Maintenance Service Providers.
- agrees the lighting strategy
- confirm fixed taper point strategy, including associated remotely operated TTM signs
- reviews of pavement condition survey information and develops a pavement strategy to indicate the proposals for the refurbishment of the hard shoulder and other running lanes as required from the data available. Develop low-noise surfacing strategy
- develops central reserve VRS preliminary design with road cross-section
- develops and submit major departures from standard to SES; as a minimum these include all Type B and Type C departures agreed by PSCRG as these types as per IAN193.
- prepares and submit Departures from Standards (that will affect the environmental assessment)
- develops preliminary design using 3D model and produce details at minimum 1:1250 including:-
 - Gantry locations
 - Junction layouts
 - ERA locations
 - Cross section and lane configurations
- identifies sites and preliminary design for turnarounds and other facilities that connect to motorway
- identifies site clearance extents.

- develops Design Strategy Record, as required by [IAN 161](#).
- Prepares PSCRG material for PSCRG workflow as described in the SMP Design Guide

Structures:

The Consultant:

- Verifies list of all structures for scheme (Initial list from SMIS). Identify constraints at all structures
- Identify MS3 bases for reuse
- Liaise with MSP to understand condition of structures and any intended maintenance works
- reviews physical survey information from completed early programmed works – predominantly identification of ducts through structures.
- identifies any additional physical survey information required at specific structures identifies during operational concept work at Design Fix 1, locations of structures based on scheme specific preferred options.
- using detailed LIDAR survey information received, verifies structures concept options at 'pinch points' from Design Fix 1.
- inputs to initial 3D (BIM) model with information about existing structures and gantries and initial new gantry information.
- completes a review of headroom through all overbridge structures including gathering of existing OD risk assessments and existing departures.
- identifies at risk supports to overbridges in accordance with IAN 91.
- identifies and classifies parapets on underbridges in accordance with IAN 97.
- reviews existing assessment and inspection information on structures and completion of Review of Existing Asset Forms (REAFs) in accordance with BD95 to identify any assessments required on existing structures for the change in use for ALR.
- liaises with SES to discuss and agree the REAF process and agree the need for any further assessment.
- produces Approval in Principle (AIP) document where needed for any further agreed assessment work.
- continues liaising with Network Rail for structures that require works identified in Design Fix 1 to develop options further and review programme implications. Identify all structure references (Network Rail) ELR and zone.
- agrees concepts for gantry structure types, making use of existing gantry foundations where the position and condition is suitable.
- Review of existing gantries for re-use in the scheme to confirm suitability in accordance with [IAN161](#) paragraph 9.4. Produce Record of Structural Review Forms (RSRFs) in accordance with BD101 and agrees outcomes with SES
- Identify standard products to be used.

Geotechnical:

The Consultant:

- undertakes works in accordance with HD22 '*Managing Geotechnical Risk*' and in accordance with BS EN 1997-1:2004+A1:2013: '*Geotechnical Design*'.
- provides a Statement of Intent (Sol) in accordance with HD22 describing the proposed investigation strategy, the design strategy and the certification strategy.

Agree the content of the Geotechnical Design Report (GDR) in advance through liaison with the SES Geotechnical Advisers.

- describes in the Sol the strategy for ground investigation and shall recognise the aspiration not to undertake abortive ground investigation works. The Sol shall contain a gap analysis matrix of what data is intended to be procured as part of the subsequent studies.
- Provides a Preliminary Sources Study Report (PSSR) in accordance with HD22 and as described in the Sol. The PSSR shall recognise the data currently available in Highways England Geotechnical Management System (HAGDMS) or as separately provided to the Supplier by HE
- assesses the extent and quality of topographic survey and identify any gaps and undertake further surveys to sufficiently inform detailed design.
- undertakes appropriate outline optioneering designs based on interpreted parameters as identified in the PSSR.
- liaises with the relevant Maintenance Service Provider to understand the local geotechnical conditions and to understand any intended proposed geotechnical works.
- liaises with the maintaining agent to ensure that contemporaneous earthworks inspection records are available on HAGDMS prior to construction works commencing.
- provides a Geotechnical Risk Register which shall take account of the Supplier's intended strategy for investigation and design. The Risk Register shall be in sufficient detail to identify each individual proposed structure or earthwork. The Supplier shall provide a detailed strategy, scope of works and specification for a proposed targeted ground investigation. The scope of the ground investigation shall be agreed in advance through liaison with the SES Geotechnical Advisers.
- undertakes consultation with relevant stakeholders including the SES Geotechnical Advisers, OD, the product delivery team and the maintaining agent.
- Reviews the structural integrity and residual life of Acoustic & Environmental Barriers

Technology:

The Consultant:

- prepares the technology and lighting design incorporating into the 3D model for development in line with BIM requirements.
- prepares and submit major technology Departures from Standards.
- prepares and submit Statutory Undertaker 'C3' requests.
- reviews, validates and incorporates in his design, where appropriate, information that will be made available to the *Consultant* at the starting date, including:
 - details of on-site surveys completed to establish the location and condition of Cross Carriageway Ducts (CCD's) and Ducts Through Structures (DTS). The *Consultant* reviews the information and modifies the design as appropriate.
 - Technology Performance Management System (TPMS) data covering all the roadside technology has been received and the *Consultant* shall review the information and include the data in the design as required.
 - Electricity Interface (EI) cabinets have been identified from the TPMS data and the Distribution Network Operators (DNO) have been contacted to establish EI load capacities.
 - 'As built' MCY drawings have been received from NRTS Co. The *Consultant* reviews the information and modifies the design as required.

- Statutory undertakers and utility providers have been contacted and information including contact details has been stored ('C2' requests). The *Consultant* reviews the information and modifies the design as required.
- identifies new or upgraded DNO power supply requirements (including consideration of 'dual feed supply') and starts procurement process.

Environment:

The Consultant:

- Satisfies themselves that the Scoping Report and any other environmental and survey information is 'fit for purpose' and is acceptable for the basis for the environmental assessment.
- Provides GIS layers and data in accordance with the SMP *Employer's* Information Requirements (EIR)
- Reviews and updates, as necessary, the records provided by the *Employer* of the key environmental constraints and the issues that require attention. A series of proposals have also been made concerning rectifications and enhancements that require examination.
- Prepare proposals to deliver the Highways England requirements for mitigation/rectification and enhancement.
- Reviews and design-out the candidate noise barriers locations.
- Undertakes an approach to design that minimises the number of design iterations such as through the design out approach to noise barriers.
- Ensures that environmental constraints and opportunities are factored into engineering design considerations at an early stage and that integration between geotechnics and the environmental discipline is in place.
- Prepares a design that avoids the loss of screening vegetation within the soft estate the loss of which could contribute towards a significant impact.
- Locates items of infrastructure and associated works in a manner to minimise temporary and permanent land take effects upon ecological habitat and screening vegetation.
- Identifies vegetation clearance and planting areas in recognition of the enhancement objectives for the corridor.
- Devises a landscape planting strategy that minimises the risk the safety risk and maintenance requirements.
- Prepares a risk rating of the scheme corridor across the environmental topics scoped into the assessment.
- Keep under review the risk exists that a DCO application could be required.
- Undertakes assessment and justification activities to deliver the rectifications and enhancements identified within the Scoping Report and which are necessary to deliver Highways England policy and objectives. This shall be in a manner to enable a confirmed scheme definition to be delivered at Design Fix 2 such that the assessment is on a sound foundation.
- Maintain frequent contact with the REA and SMP Environmental Lead on the assessment, design and the evolving risks and opportunities associated with the scheme.
- Assess and report the significance of any potential changes that may result to the scheme post DF3 along with any associated mitigation, monitoring or management actions.

Material Resources:

The *Consultant*:

- takes steps to reduce the demand for resources upon the market for construction materials by maximising the quantities of site won and by maximising their value within the scheme.
- identifies and assigns a value to materials that may be useable on other infrastructure projects.

Work Stage - Design Period 3 (Design Fix 2 to Design Fix 3)

General:

The *Consultant* develops the intervention design by;

- Following the guidance and recommendations of the SMP '*Survey Guide*';
- Developing the intervention design following the guidance and recommendations of the SMP '*Design Guide V3.1*'

Highways:

The *Consultant*:

- Agrees signing strategy with SES and OD Area team, confirming start and end VMSL signs (required for Statutory Instrument).
- reviews, as appropriate, the drainage strategy including surface water collection system, ditches, outfalls and attenuation requirements.
- develops verge VRS preliminary design
- finalizes central reserve VRS design and carriageway cross-section
- demonstrates that the verge and central reserve cross-section strategy is developed to meet the overall aims of the project
- develops the pavement strategy and reports the strategy.
- develops the preliminary design from Design Fix 2 using the 3D model, and includes any turnarounds.
- identifies and submits remaining departures from standard (note these shall not affect the Environmental Assessment), and notes other environmental constraints.
- provides information for the Commercial & Procurement estimate using Form 303.
- develops the Design Strategy Record, as required by [IAN 161](#).
- Prepares PSCRG material for PSCRG workflow as described in the SMP Design Guide

Structures:

The *Consultant*:

- continues to provide input to the 3D model of the scheme.
- undertakes assessment of existing structures in accordance with AIP where agreed through REAF process.
- undertakes preliminary design of any pier strengthening works identified at overbridges through the IAN 91 process. Produces Approval(s) in Principal (AIPs) for the design proposal(s), if appropriate.
- undertakes preliminary design of any parapet works to underbridges identified through the IAN 97 process and/or strengthening works identified through assessment. This is agreed through an optioneering process in consultation with SES. Produce AIP(s) for the design, if appropriate.
- undertakes preliminary design of preferred options on structures with Network Rail interface.
- undertakes preliminary design options for new gantries. Agree approach through an optioneering process with SES.
- prepares AIPs for all new gantry designs.

- undertakes preliminary design of retaining wall solutions (e.g. at ERA's and gantry 'blisters'. Agree approach through an optioneering process with SES. Prepare AIP(s) for the design process, if appropriate.
- identifies all Departures from Standards required for structures issues.
- Identify all ancillary items requiring structural design aspects (for example, but not limited to CCTV cameras and sign bases).
- liaises with HE SMIS team for new structures references.
- inputs to Design Strategy Record, as required by [IAN 161](#).
- identifies additional work to existing structures to be included in the scope as part of the requirement for 5 years of major renewals free network, through liaison with OD/Area teams. This may typically include:
 - Replacement of joints on underbridges
 - Replacement of surfacing at underbridges
 - Repair or replacement of waterproofing at underbridges
 - Concrete repairs
 - Maintenance painting
- undertakes the following with regard to existing portal and cantilever structures used for signs and signals:
 - identify any gantries to be permanently removed or relocated and record the appropriate details e.g. type, age, function, etc.
 - If they are not required on the scheme, consult with the HE National Distribution Centre (NDC) at Telford early in the process, to confirm if they want the gantries returning to stores for refurbishment and re-use.
 - prepare and submit Departure from Standards for the reuse of existing gantries within the scheme. Includes those required for change to current loading requirements and access provision as applicable
 - Identify any gantry refurbishment requirements (including painting, fatigue repairs, and make arrangements as necessary for the refurbishment works to be undertaken.
 - Inform SMIS of planned reuse of whole or part and also removal.
 - Note for reused infrastructure all dimensions to be confirmed. Do not assume records are correct in all details.

Geotechnical:

The Consultant:

- undertakes a 'targeted' ground investigation based on the need as identified in the work undertaken for the Sol and the PSSR.
- provides a Ground Investigation Report (GIR) that takes account of all available ground investigation data.
- provides appropriate geotechnical parameters for inclusion in the structural AIPs and shall agree the approach to retaining solutions through an optioneering process with SES and the SMP production team.
- undertakes preliminary assessment of slope stability, strengthened earthworks and retaining solutions.
- undertakes preliminary designs for sub-structures to gantries.
- updates the detailed Geotechnical Risk Register based on the results of the targeted ground investigation and preliminary designs. The *Consultant* shall review all aspects of the works which may have an impact on or be influenced by the geotechnical asset.
- liaises with the SMP production team to undertake Value Engineering (VE) in the context of delivery of corporate and scheme objectives. This includes reviewing

the design, taking account of likely methods of construction and temporary works as identified during the VE exercise.

- prepares technical notes that respond to individual issues or combinations of issues, (including environmental).
- provides input to the understanding of material resource requirements

Technology:

The Consultant:

- completes the communications and power design to include documentation and drawings which together will form the communications detailed design package.
- incorporates in the design, electrical and electronic technology systems including but not limited to gantries, message signs, signals, Radar MIDAS, inductive loops, Emergency Roadside Telephones (ERT's), digital enforcement equipment, Remotely Operated Temporary Traffic Management (ROTTM) signs 'zero light' CCTV Equipment.
- confirms potential wayleave requirements for new EI supplies and finalise power design.
- completes the preparation and submission of Departures from Standard.
- liaises with both internal and external interfaces to obtain sufficient information and understanding of the various requirements of the design.
- commences the NRTS liaison in accordance with the recommendations of the Design Guide V3.1 and NRTS Co. documentation. Issue preliminary design to NRTS and review the NRTS Technology Acquisition Form (TAF) when submitted.
- agrees digital enforcement camera locations with the respective Police Authority, Regional Enforcement Coordinator (REC) and HE. Commence the preparation of the digital enforcement camera system 'Evidential Trail'.
- with reference to the SMP 'Design Guide V3.1' agrees procedures for the operation of the ROTTM signs with HE, Maintenance Service Providers and RCC Operators
- produces a Site Data load programme with a view to completing the Site Data Design (SDD) in accordance with MCH 1700. This programme should also include indicative attendance and witnessing at the Factory Acceptance Test(s) (FATs) at the Software Maintenance Contractor (SMC) premises and the Site Acceptance Test(s) (SATs) at the Regional Control Centre (RCC) in subsequent projects stages.
- completes any required Code of Connection (CoCo) requirements as per MCH 1514.
- completes MCH 1399 (which sets out the requirements to provide information about the technology assets being removed or added).
- adds Technology and Lighting into the 3D model for refinement.
- undertakes the following with regards Message Signs Version 3 (MS3)
 - Early in the design process, consult with the HE National Distribution Centre (NDC) at Telford to discuss the schemes existing MS3's. Identify all existing 3*18 and 2*16 MS3's and record type, age, TPMS numbers and serial numbers. Note that, newer version 1 signs can be upgraded to be IP enabled for use on SM schemes, however, older signs should go back to the NDC to be used for spare parts. Any version 2 signs can be returned to NDC for re-use if not required on the scheme. The signs should be carefully removed from site and cables should be disconnected and not cut. If any signs are to be relocated on another scheme the NDC can 'tag' them for re-use on the specific scheme.

- undertakes the following with regards Ramp Metering:
 - Reviews TPMS records and as built drawings to identify any existing Ramp Metering sites. Then follow the HE Guidance on the treatment of Ramp Metering sites within Smart Motorways schemes MPI-33-082014 (see Annex 15).
- undertakes the following with regards Remotely Operated Temporary Traffic Management (ROTTM) signs:
 - Consults with the Maintenance Service Providers (MSP) and agree Fixed Taper Points (FTP's) for location of the ROTTM signs. Include ROTTM signs within the design following the recommendations and guidance within the SMP 'Design Guide V3.1', Sign Specification TR2603A, IAN 150 and IAN 180.

Environment:

The *Consultant shall*:

- Prepare the Environmental Assessment, Outline Environmental Management Plan, Public Information Exercise,
- considers the full scope of site clearance (including all temporary works areas)
- considers where engineering will damage root systems and identifies where opportunities to coppice are
- proposes the locations of environmental / acoustic barriers and considers future maintenance of whole estate around them
- develops landscape designs, including offsite works (if required).
- identifies and prepares any environmental / protected species licenses

Environmental Reporting undertaken by the *Consultant* is to be proportionate and focused ensuring that the extent of reporting reflects the significance of each topic, or element within a topic (e.g. a listed building within the heritage topic) in line with IAN126. The objective is to provide a concise appreciation of the beneficial and adverse environmental consequences of the scheme for each significant impact. The landscape assessment shall subsume an assessment of any visual effects upon the setting of heritage assets subject to review by Highways England.

The Outline Environmental Management Plan (OEMP) shall conform to the reporting template provided by Highways England and shall provide spatially specific risk based statements of the management measures to be taken. In delivering the OEMP the *Consultant* shall review and deploy the standardised clauses in consultation with the Regional Environmental Advisor and SMP Environmental Lead

The *Consultant* shall demonstrate to the Project Manager that the Traffic Management Plan and the OEMP are consistent in describing the management of the diversion of motorway traffic during construction activities. Also, the *Consultant* shall demonstrate that the equalities Report (EDIT) is in aligned with the OEMP insofar as the effects of construction activities upon neighbouring communities.

The *Consultant* shall make full use of standard reporting templates and data tables within all reports.

Special Requirements for Tranche 5

Tabulated below are special requirements for the *Consultant* :

Scheme	Issue	Requirements
All Tranche 5 schemes	DF1 outputs	A file containing BC links to all deliverables is to be placed on Bravo. Where these deliverables contain an action for DF2/3 then these actions are deemed to be included in scope of services.
All Tranche 5 schemes	Place of Relative Safety (PRS), Emergency Refuge Area spacings and design	<p>The requirements will vary IAN161/15 and will be formally issued into SMP early in 2018 and must be applied to Tranche 5 schemes. To assist, a summary is below:</p> <p>All off-slips, intra-junction locations (either TJR or lane drop) and mainline Emergency Refuge Area locations developed for DF1 must be reviewed and the design amended to provide PRS/ERA spacings of no more than 1600m (NB: maximum, not average). This is likely to be a substantial change to the design which is also likely to affect gantry locations, particularly when the 2017 version of MPI11 is applied to the DF1 designs. The <i>Consultant</i> shall allow for liaison, assessment and preliminary design including any submission and justification of additional departures from standard that may result if the new requirements cannot be fully met by the updated design.</p> <p>Also note the new requirements will make changes to IAN 161/15 signing including approach signing and signing within ERA. There is also a requirement to re-assess any FTP and ROTTM positions developed in DF1.</p>
M25 J10-J16	J10 RIP scheme	<p>The J10 elements are excluded from the design service with the exception of reporting cumulative environmental effect. The RIP designer Atkins will design SMP elements on approach and through J10. The SMP <i>Consultant</i> shall also allow for:</p> <ul style="list-style-type: none"> - monthly liaison meeting with

Scheme	Issue	Requirements
		<p>Atkins and HE RIP team including supply and receipt of design information between both schemes</p> <ul style="list-style-type: none"> - comment and challenge service on behalf of SMP HE PM to provide assurance that the SM elements are consistent with all SMP requirements including SMP Design Guide and IAN 161.
M25 J10-J16	Highway Orders J15-J16	<p>As noted in DF1 deliverables there is a requirement for minor landtake at two underbridge structures. The <i>Consultant</i> shall provide full support to HE in preparing the necessary Highways Act Orders and supporting information and also liaison with landowners, planning authorities and statutory consultees including any negotiation that may obviate the need for Orders. No allowance shall be made for a public inquiry.</p>
M40/M42 interchange	Design at M42 J3	<p>The Df1 design shall be developed as per DF1 outputs as lane drop/ lane gain. In addition the prospect of the Tranche 6 scheme converting this junction to TJR shall be allowed for such that the design of the Tranche 5 scheme is future-proofed to minimise further site works. This process shall include, but not be limited to, structural design allowance and optimal location of sign and signal structures for both tranche scenarios. The service shall include consideration and submission of additional departures from standard where required to facilitate the future tranche 6 scheme.</p>
M62 J20-J25	J20 design	<p>The DF1 design shall be reviewed and amended as necessary taking into account the post opening traffic data from the Manchester SM scheme that opened in Dec 2017.</p>

ANNEX 11 AGREEMENT AND INCLUSION OF RENEWALS

The following guidance is provided for determining and agreeing the extent of asset renewal works that should be incorporated into each Smart Motorway Intervention.

The overarching principle to be adopted is that major asset renewal works would generally necessitate traffic management to be deployed on the network during peak periods, or, would require overnight full closures, with a subsequent result that customers experience additional travel time delay. This excludes temporary traffic management (TTM) for activities such as minor surfacing repairs, road marking renewal, routine maintenance, inspections etc. In addition, the works are to provide the opportunity for minimising future maintenance intervention to ensure optimum operation of the network and reduced road worker exposure. The aspiration is to achieve a five-year post opening, major asset renewal free period, subject to the asset renewal investment meeting affordability criteria.

For the avoidance of doubt, the following process has been agreed in principle with Operations Directorate for defining and agreeing asset renewal scope and investment (see Document Ref: SMP-HEX-GEN-CTW-RP-ZX-0003):

Determine Asset Condition and Operational Need

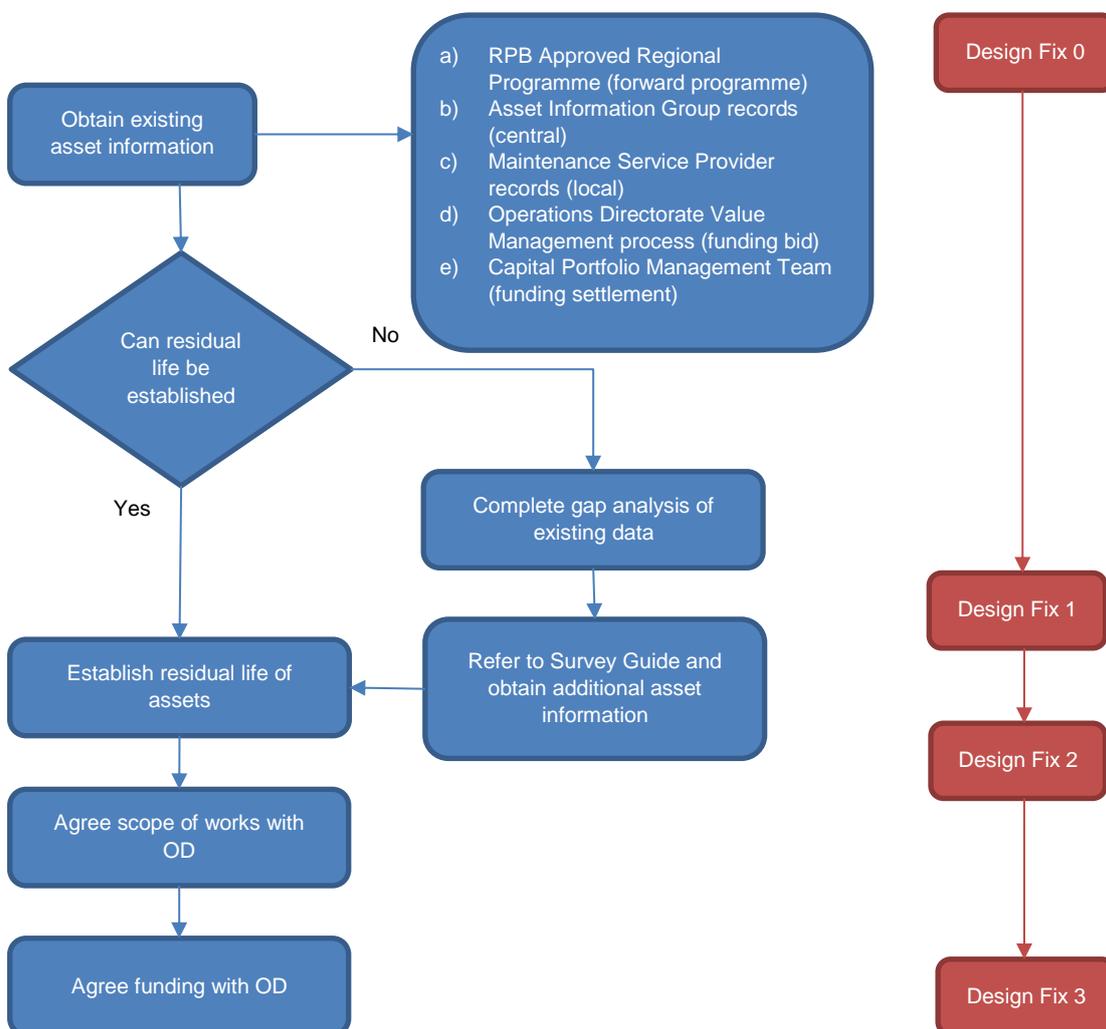


Figure 11-1 – Asset condition survey flow chart

It is essential that the condition of the existing asset is understood and agreed, and this shall be completed during Design Fix 2. Asset data collected and provided by the *Employer* must be validated, with additional asset data collection needs to establish residual life of assets agreed with the *Employer*, enabling clarification of scope and associated funding requirements ahead of SGAR 3.

Agree scope and funding of candidate asset renewal works

There are various assets that are likely to need replacement to achieve the aspiration of a five year post opening, major asset renewal free period. These can be generally classified as Asset Enablers (direct SMP scope), and Asset Renewals (discretionary SMP scope). The definition of works within these broad classifications are included below, and whilst not exhaustive it provides a detailed guide to what should be included in the scope of works. A flow chart to aid the decision making process of what should and shouldn't be included in the SMP scope is shown in Figure 11-02.

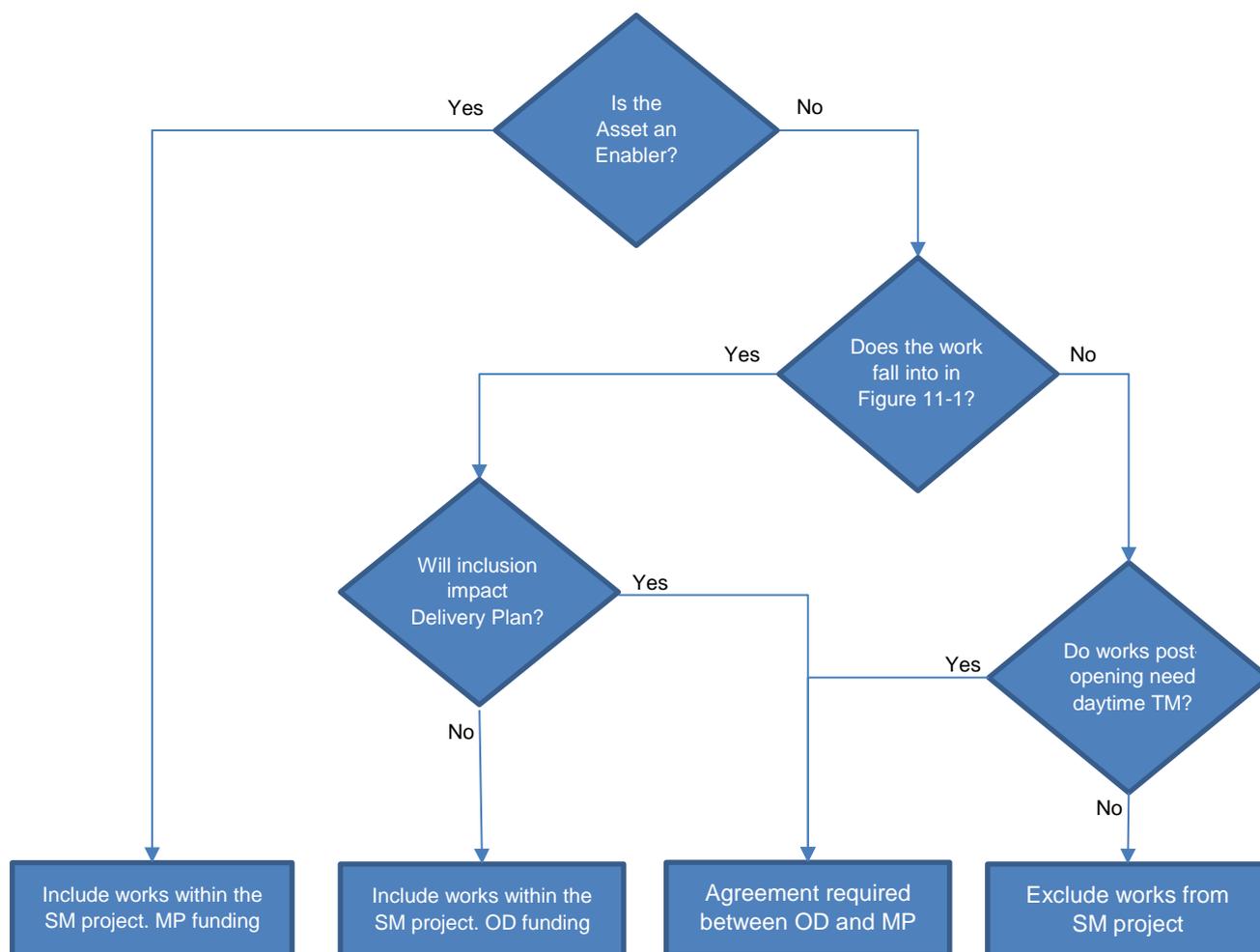


Figure 11-02 – Asset renewals inclusion flow chart

Define and confirm extent of Asset Enabler works

These are the assets that need to be replaced / upgraded to allow the safe operation of an ALR project (Enablers), and are therefore part of the core Smart Motorway delivery scope:

Road Restraint System

- Replacement of central reserve barrier with Reinforced Concrete Barrier (RCB)
- Replacement or renewal of existing verge barrier where it fails to meet ALR performance requirements. (see SMP Design Guide v3.1 Annex E1.04 for further guidance).

Fencing

- Replacement of existing environmental barriers where the operational need is confirmed (e.g. located coincident with identified Noise Important Areas). Funding should be as part of the scheme and would not be covered by designated funds.

Drainage

- Upgrading of drainage systems to accommodate additional paved areas.

- Any covers left in the carriageway to be renewed and where necessary biscuits rotated so that cover is positioned in the centre of the lane (see SMP Design Guide v3.1 for further guidance on the preferred design solution).
- Replacement of, or repairs to, any buried drainage assets in the central reserve if paving it.
 - All Category 4 & 5 defects (and possibly Cat 3 where it is considered to be cost effective), in accordance with SD15/03, to any buried drainage assets in the central reserve if paving it.
 - All Category 4 & 5 defects (and possibly Cat 3 where it is considered to be cost effective), in accordance with SD15/03, to any buried drainage assets under the existing hard shoulder.
 - All Category 4 & 5 defects, where there is standing water in the hard shoulder, to any buried drainage assets in the verge (and possibly CAT 3 where there are known flooding hotspots and standing water in the hard shoulder, where it is cost effective).
- Renewal of all gully gratings and covers, where resurfacing works taking place.
- Re-profiling of ditches due to increased outfall requirements.
- Clearing of drainage ditches causing standing water in the hard shoulder, or affecting the safe operation ALR.

Geotechnical

- Defects categorised in HD41 as feature grade 3 but change to feature grade 4 due to using the hard shoulder as a running lane

Pavement

- Full surface course renewal in lanes 1, 2, 3, and 4 (connector roads to be resurfaced to the extent of any realignment)
- Hard shoulder strengthening or reconstruction.
- Renewal of joints below the surfacing layer where they may be affected by the permanent realignment of trafficked lanes for ALR (i.e. strengthening to avoid binder course joints being in the wheel tracks of the new traffic lanes).
- Renewal of joints below the surfacing layer where they may be affected by the temporary realignment of trafficked lanes for ALR (i.e. prolonged temporary traffic management layouts which may detrimentally impact on the binder course joints being coincident with the wheel tracks of the temporary running lanes).

Traffic Signs

- Remove verge and gantry mounted signs that are no longer applicable due to the introduction of ALR.

Lighting and other electrical

- Where SMART meter technology is being installed for the SMP, this should be extended to cover other existing electrical assets.

Structures

- Joints within underbridges where recorded in SMIS MA – If Bridge joints need to be replaced where resurfacing operations effect the existing joint, or if resurfacing removes the joint and it needs replacing.
- Review of pier collision loading as required by IAN 91/07 and resulting works.
- Spalled concrete repairs to soffits of overbridges above existing hard shoulder (proposed lane 1).
- Parapets and/or transitions, IAN 97/07 assessments to identify the assets that require replacement.

- Pier damage in central reserve for CSB connection and verge where adjacent to carriageway. In locations where spalling concrete is at risk of dropping onto the carriageway or repair works would require TM greater than overnight lane closures.
- Renewal of longitudinal joints to bridges – this would normally be done during the CSB works.

The new infrastructure required to implement ALR will necessitate the inclusion of new equipment, which will have the knock on effect of replacing existing infrastructure, which may, or may not be within the renewals programme. These aspects should be considered to form part of the ALR design scope.

All assets (above and below ground) which are disconnected / abandoned as a result of the Smart Motorways should be removed from site, sealed or backfilled as appropriate where their continued presence would create a risk for on-going maintenance.

Define and confirm extent of Asset Renewal works

The renewal of assets that do not require replacement to safely operate the Smart Motorway, but are in the 5 year programme of renewal, should be funded by Operations Directorate. Inclusion of these works on the SMP project should be filtered using the flow chart in Figure 11-02, with formal agreement to be documented and agreed during Design Fix 3.

Road Restraint System

- Renewal of existing verge barriers based on inspection and VM data held by maintainer. (The majority of the road restraint in the verge is likely to need to be replaced as part of the main works, see Enablers).

Fencing

- Boundary Fences to be repaired (if damaged during SM works then SMP should fund)
- Environmental barriers to be repaired.

Drainage

- Verge filter drain renew or recycle stone
- Drainage ditches to be cleaned out that do not affect the safe operation of ALR
- All Category 4 & 5 defects, not covered as Asset Enablers, in accordance with SD15/03, to any buried drainage assets in the verge, not addressing standing water issues in the hard shoulder.

Geotechnical

- Defects categorised in HD41 as feature grade 2, 3, 4 and 5

Pavement

- Renewal of deeper layers on the basis of investigation data and assessment - HD29 and HD30 respectively

Traffic Signs

- Verge mounted signs that are life expired, if still required. (including tourist information signs)

Lighting and other electrical

- Test, Inspection & assessment of the electrical system (required every 5 years) within the works area, to verify the electrical integrity of underground network cabling & components.

- CAT2 defect repairs found during the electrical test & inspection and held by the maintainer.
- If SMART meter technology is being installed for the SMP extend this to cover other existing electrical assets.
- Lamp change that is due for renewal for both lighting columns & illuminated traffic signs. Use long life lamps (5yrs+).

Structures (defects as recorded SMIS Maintenance Actions)

- Waterproofing of underbridges where recorded in SMIS MA and where resurfacing operations require it i.e. known systems that are susceptible to failure post resurfacing.
- Joints within underbridges where recorded in SMIS MA – If Bridge joints need to be replaced due to condition or being life expired.
- Spalled concrete repairs to soffits of overbridges above existing live lanes (proposed lanes 2, 3 and 4).
- Repair/replace damaged drainage pipe work attached to underside of overbridges.
- Replacement of non-standard parapets where they have a history of impact.
- Deck repairs.
- Concrete remedials.
- Bearing replacement.
- Painting.
- Wingwall repairs.
- Pier repairs, where not necessitated as a direct consequence of ALR operation.
- Abutment strengthening or repair, where not necessitated as a direct consequence of ALR operation.
- Culverts.

ANNEX 12 WORK BREAKDOWN STRUCTURE/ COST BREAKDOWN STRUCTURE

WBS Code	WBS Name
SM Scheme WBS	Smart Motorways Scheme WBS
SM Scheme WBS.1	Key Dates
SM Scheme WBS.1.1	Contract Key Dates
SM Scheme WBS.1.1.1	OGC 1 - Business Justification
SM Scheme WBS.1.1.2	Design Fix 1 - Outline Concept Design
SM Scheme WBS.1.1.3	Design Fix 2 - Design for Assessment
SM Scheme WBS.1.1.4	Design Fix 3 - Design for Determination
SM Scheme WBS.1.1.5	SGAR 3
SM Scheme WBS.1.1.6	Design Fix 4 - Detailed Design
SM Scheme WBS.1.1.7	Design Fix 5 - Target Price Assessment
SM Scheme WBS.1.1.8	SGAR 5
SM Scheme WBS.1.1.9	OGC 3b - Investment Approval
SM Scheme WBS.1.1.10	Start of Works
SM Scheme WBS.1.1.11	OGC 4 - Readiness for Service
SM Scheme WBS.1.1.12	Road Fully Open
SM Scheme WBS.1.1.13	SGAR 6
SM Scheme WBS.1.1.14	OGC 5 - Operational Review & Benefits Realisation
SM Scheme WBS.1.1.15	SGAR 7
SM Scheme WBS.1.2	Planned Key Dates
SM Scheme WBS.2	Governance
SM Scheme WBS.2.1	Project Management
SM Scheme WBS.2.1.1	Scope
SM Scheme WBS.2.1.2	Value Management
SM Scheme WBS.2.1.3	Cost Management
SM Scheme WBS.2.1.4	Funding
SM Scheme WBS.2.1.5	Procurement
SM Scheme WBS.2.1.6	Change Management
SM Scheme WBS.2.1.7	Risk Management
SM Scheme WBS.2.1.8	Hand Over
SM Scheme WBS.2.1.9	Programme & Reporting
SM Scheme WBS.2.2	Stakeholder
SM Scheme WBS.2.2.1	Operations
SM Scheme WBS.2.2.2	Assessment
SM Scheme WBS.2.2.3	Infrastructure
SM Scheme WBS.2.2.4	Design PIE
SM Scheme WBS.2.2.5	Pre-Construction PIE
SM Scheme WBS.2.3	NoD
SM Scheme WBS.3	Operations
SM Scheme WBS.3.1	Network Performance Data
SM Scheme WBS.3.1.1	Accident Data
SM Scheme WBS.3.1.2	MTV Plots
SM Scheme WBS.3.1.3	Observed Traffic
SM Scheme WBS.3.1.4	Road Layout
SM Scheme WBS.3.1.5	Audit & Reviews
SM Scheme WBS.3.1.6	Safety Objective Evidenced

SM Scheme WBS.3.2	Operational Concept - Design Fix 1
SM Scheme WBS.3.2.1	Develop Operational Concept
SM Scheme WBS.3.2.3	Baseline Data Collection
SM Scheme WBS.3.2.2	Identify Constraints
SM Scheme WBS.3.2.4	Buildability Input - From Contractor / DP
SM Scheme WBS.3.3	Traffic Count & Road Bookings
SM Scheme WBS.3.3.1	Enable Existing Midas Loops as Traffic Counters
SM Scheme WBS.3.3.2	56 day High Resolution Traffic Count
SM Scheme WBS.3.3.3	Scheduled Road Works (SRW) Main Scheme Firm Booking
SM Scheme WBS.3.4	Operating Regime
SM Scheme WBS.3.4.1	Develop Operating Regime
SM Scheme WBS.3.4.2	Compliance Strategy
SM Scheme WBS.3.4.3	Core Responders
SM Scheme WBS.3.4.4	Technology
SM Scheme WBS.3.4.5	Telecommunications Requirements
SM Scheme WBS.3.4.6	Training
SM Scheme WBS.3.5	Bringing into Operation
SM Scheme WBS.4	Assessment
SM Scheme WBS.4.1	Traffic Modelling
SM Scheme WBS.4.1.1	Appraisal Specification Report
SM Scheme WBS.4.1.2	TAME Review 1
SM Scheme WBS.4.1.3	Traffic Surveys and Data Collection
SM Scheme WBS.4.1.4	Network Data Collection
SM Scheme WBS.4.1.5	Base Year Network Development
SM Scheme WBS.4.1.6	Base Year Model Development
SM Scheme WBS.4.1.7	Base Year Model Validation
SM Scheme WBS.4.1.8	Future Year Data Collection
SM Scheme WBS.4.1.9	Future Year Network Developments
SM Scheme WBS.4.1.10	Prelim Flows
SM Scheme WBS.4.1.11	Future Year Flows
SM Scheme WBS.4.1.12	TAME Review 2 (Forecasting)
SM Scheme WBS.4.2	Economics
SM Scheme WBS.4.2.1	Economic Assessment
SM Scheme WBS.4.2.2	TAME Review 3 - Economics
SM Scheme WBS.4.2.3	Social & Distributional Impacts (Traffic)
SM Scheme WBS.4.2.4	Business Case
SM Scheme WBS.4.3	Environmental
SM Scheme WBS.4.3.1	Environmental Scoring Report
SM Scheme WBS.4.3.2	Environmental Group Review 1
SM Scheme WBS.4.3.3	Environmental Surveys Assessment & Appraisal
SM Scheme WBS.4.3.4	Environmental Assessment & Appraisal (Non Traffic)
SM Scheme WBS.4.3.5	Environmental Assessment & Appraisal (Traffic)
SM Scheme WBS.4.3.6	Environmental Determination Report (EDR)
SM Scheme WBS.4.3.7	Social & Distributional Impacts (Environmental)
SM Scheme WBS.4.3.8	Environment Group Review 2
SM Scheme WBS.4.3.9	Statutory Environmental Bodies Consultation

SM Scheme WBS.4.4	Appraisal Summary Table
SM Scheme WBS.4.5	Scheme Assessment Report
SM Scheme WBS.5	Statutory
SM Scheme WBS.5.1	Statutory Instrument
SM Scheme WBS.5.1.1	Consultation
SM Scheme WBS.5.1.1.1	Appoint DfT Legal
SM Scheme WBS.5.1.1.2	Finalise Approved Consultation Documentation
SM Scheme WBS.5.1.1.3	Ministerial Permission to Consult
SM Scheme WBS.5.1.1.4	Mandatory Consultation (Road Traffic Reg Act)
SM Scheme WBS.5.1.1.5	Finalise SI Documents
SM Scheme WBS.5.1.1.6	SI Laid Before Parliament
SM Scheme WBS.5.1.2	Regulation
SM Scheme WBS.5.1.2.1	Regulation in Force
SM Scheme WBS.5.2	Traffic Regulation Order
SM Scheme WBS.6	Infrastructure - Development
SM Scheme WBS.6.1	Initial Surveys
SM Scheme WBS.6.1.1	Desktop Study
SM Scheme WBS.6.1.2	Drainage & Ducts
SM Scheme WBS.6.1.3	TOPO & Clearances
SM Scheme WBS.6.1.4	Pavement & Joints
SM Scheme WBS.6.1.5	Visual
SM Scheme WBS.6.1.6	Power Gap
SM Scheme WBS.6.2	Operation Concept - Design Fix 1
SM Scheme WBS.6.2.1	Develop Geometry
SM Scheme WBS.6.3	Final Surveys
SM Scheme WBS.6.3.1	Ground Investigation
SM Scheme WBS.6.3.2	Underground Obstructions
SM Scheme WBS.6.3.3	Services
SM Scheme WBS.6.3.4	Wayleaves
SM Scheme WBS.6.3.5	Land
SM Scheme WBS.6.3.6	CCTV
SM Scheme WBS.6.4	3D Model Development - Design Fix 2
SM Scheme WBS.6.4.1	Highways
SM Scheme WBS.6.4.2	Structures
SM Scheme WBS.6.4.3	Technology
SM Scheme WBS.6.4.4	Environmental
SM Scheme WBS.6.4.5	Geotechnical
SM Scheme WBS.6.4.6	Health & Safety
SM Scheme WBS.6.4.7	Lighting
SM Scheme WBS.6.4.8	Buildability Input - From Contractor / DP
SM Scheme WBS.6.4.9	Audits & Reviews - Value Engineering
SM Scheme WBS.6.5	3D Model Refinement - Design Fix 3
SM Scheme WBS.6.5.1	Highways
SM Scheme WBS.6.5.2	Structures

SM Scheme WBS.6.5.3	Technology
SM Scheme WBS.6.5.4	Environmental
SM Scheme WBS.6.5.5	Geotechnical
SM Scheme WBS.6.5.6	Health & Safety
SM Scheme WBS.6.5.7	Lighting
SM Scheme WBS.6.5.8	Buildability Input - From Contractor / DP
SM Scheme WBS.6.5.9	NRTS Outline Design
SM Scheme WBS.6.5.10	HA Commercial Estimate
SM Scheme WBS.6.6	Design for Target Price - Design Fix 4
SM Scheme WBS.6.6.1	Highways
SM Scheme WBS.6.6.2	Structures
SM Scheme WBS.6.6.3	Technology
SM Scheme WBS.6.6.4	Environmental
SM Scheme WBS.6.6.5	Geotechnical
SM Scheme WBS.6.6.6	Health & Safety
SM Scheme WBS.6.6.7	Lighting
SM Scheme WBS.6.6.8	Buildability Input - From Contractor / DP
SM Scheme WBS.6.6.9	Audits & Reviews - Value Engineering
SM Scheme WBS.6.6.10	NRTS Detailed Design
SM Scheme WBS.6.7	Target Price Agreement - Design Fix 5
SM Scheme WBS.6.7.1	Highways
SM Scheme WBS.6.7.2	Structures
SM Scheme WBS.6.7.3	Technology
SM Scheme WBS.6.7.4	Environmental
SM Scheme WBS.6.7.5	Geotechnical
SM Scheme WBS.6.7.6	Health & Safety
SM Scheme WBS.6.7.7	Lighting
SM Scheme WBS.6.7.8	Buildability Input - From Contractor / DP
SM Scheme WBS.6.7.9	Audits & Reviews - Value Engineering
SM Scheme WBS.6.7.10	Works Information
SM Scheme WBS.6.7.11	Target Price Submission
SM Scheme WBS.6.7.12	Target Price Negotiation
SM Scheme WBS.6.7.13	Target Price Agreed

CBS Code	CBS Name
SM Scheme CBS	Smart Motorways Scheme CBS
SM Scheme CBS.1	Governance
SM Scheme CBS.1.1	Project Management
SM Scheme CBS.1.1.1	Scope
SM Scheme CBS.1.1.2	Value Management
SM Scheme CBS.1.1.3	Cost Management
SM Scheme CBS.1.1.4	Funding
SM Scheme CBS.1.1.5	Procurement
SM Scheme CBS.1.1.6	Change Management
SM Scheme CBS.1.1.7	Risk Management
SM Scheme CBS.1.1.8	Handover
SM Scheme CBS.1.1.9	Coordination & Liaison
SM Scheme CBS.1.2	Programme & Reporting
SM Scheme CBS.1.3	Stakeholder
SM Scheme CBS.1.3.1	Operations
SM Scheme CBS.1.3.2	Assessment
SM Scheme CBS.1.3.3	Infrastructure
SM Scheme CBS.1.3.4	Design PIE
SM Scheme CBS.1.3.5	Pre-Construction PIE
SM Scheme CBS.1.4	NoD
SM Scheme CBS.2	Operations
SM Scheme CBS.2.1	Network Performance Data
SM Scheme CBS.2.1.1	Accident Data
SM Scheme CBS.2.1.2	MTV Plots
SM Scheme CBS.2.1.3	Observed Traffic
SM Scheme CBS.2.1.4	Road Layout
SM Scheme CBS.2.1.5	Audit & Reviews
SM Scheme CBS.2.1.6	Safety Objective Evidenced
SM Scheme CBS.2.2	Operational Concept - Design Fix 1
SM Scheme CBS.2.2.1	Develop Operational Concept
SM Scheme CBS.2.2.3	Baseline Data Collection
SM Scheme CBS.2.2.2	Identify Constraints
SM Scheme CBS.2.2.4	Buildability Input - From Contractor / DP
SM Scheme CBS.2.3	Traffic Count & Road Bookings
SM Scheme CBS.2.3.1	Enable Existing Midas Loops
SM Scheme CBS.2.3.2	56 day High Resolution Traffic Count
SM Scheme CBS.2.3.3	Scheduled Road Works (SRW) Main Scheme Firm Booking
SM Scheme CBS.2.4	Operating Regime
SM Scheme CBS.2.4.1	Develop Operating Regime
SM Scheme CBS.2.4.2	Compliance Strategy
SM Scheme CBS.2.4.3	Core Responders
SM Scheme CBS.2.4.4	Technology
SM Scheme CBS.2.4.5	Telecommunications Requirements
SM Scheme CBS.2.4.6	Training
SM Scheme CBS.2.5	Bringing into Operation

SM Scheme CBS.3	Assessment
SM Scheme CBS.3.1	Traffic Modelling
SM Scheme CBS.3.1.1	Appraisal Specification Report
SM Scheme CBS.3.1.2	TAME Review 1
SM Scheme CBS.3.1.3	Traffic Surveys and Data Collection
SM Scheme CBS.3.1.4	Network Data Collection
SM Scheme CBS.3.1.5	Base Year Network Development
SM Scheme CBS.3.1.6	Base Year Model Development
SM Scheme CBS.3.1.7	Base Year Model Validation
SM Scheme CBS.3.1.8	Future Year Data Collection
SM Scheme CBS.3.1.9	Future Year Network Developments
SM Scheme CBS.3.1.10	Prelim Flows
SM Scheme CBS.3.1.11	Future Year Flows
SM Scheme CBS.3.1.12	TAME Review 2
SM Scheme CBS.3.2	Economics
SM Scheme CBS.3.2.1	Economic Assessment
SM Scheme CBS.3.2.2	TAME Review 3 - Economics
SM Scheme CBS.3.2.3	Social & Distributional Impacts
SM Scheme CBS.3.2.4	Business Case
SM Scheme CBS.3.3	Environmental
SM Scheme CBS.3.3.1	Environmental Scoring Report
SM Scheme CBS.3.3.2	Environmental Group Review 1
SM Scheme CBS.3.3.3	Environmental Surveys Assessment & Appraisal
SM Scheme CBS.3.3.4	Environmental Assessment & Appraisal (Non Traffic)
SM Scheme CBS.3.3.5	Environmental Assessment & Appraisal (Traffic)
SM Scheme CBS.3.3.6	Environmental Determination Report (EDR)
SM Scheme CBS.3.3.7	Social & Distributional Impacts (Environmental)
SM Scheme CBS.3.3.8	Environment Group Review 2
SM Scheme CBS.3.3.9	Statutory Environmental Bodies Consultation
SM Scheme CBS.3.4	Appraisal Summary Table
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SM Scheme CBS.4	Statutory
SM Scheme CBS.4.1	Statutory Instrument
SM Scheme CBS.4.1.1	Consultation
SM Scheme CBS.4.1.2	Regulation
SM Scheme CBS.4.2	Traffic Regulation Order
SM Scheme CBS.5	Infrastructure - Development
SM Scheme CBS.5.1	Initial Surveys
SM Scheme CBS.5.1.1	Desktop Study
SM Scheme CBS.5.1.2	Drainage & Ducts
SM Scheme CBS.5.1.3	TOPO & Clearances
SM Scheme CBS.5.1.4	Pavement & Joints
SM Scheme CBS.5.1.5	Visual
SM Scheme CBS.5.1.6	Power Gap
SM Scheme CBS.5.2	Operation Concept - Design Fix 1
SM Scheme CBS.5.2.1	Develop Geometry
SM Scheme CBS.5.3	Final Surveys
SM Scheme CBS.5.3.1	Ground Investigation
SM Scheme CBS.5.3.2	Underground Obstructions
SM Scheme CBS.5.3.3	Services
SM Scheme CBS.5.3.4	Wayleaves

SM Scheme CBS.5.3.5	Land
SM Scheme CBS.5.3.6	CCTV
SM Scheme CBS.5.4	3D Model Development - Design Fix 2 - Highways
SM Scheme CBS.5.5	3D Model Development - Design Fix 2 - Structures
SM Scheme CBS.5.6	3D Model Development - Design Fix 2 - Technology
SM Scheme CBS.5.7	3D Model Development - Design Fix 2 - Other
SM Scheme CBS.5.7.1	Environmental
SM Scheme CBS.5.7.2	Geotechnical
SM Scheme CBS.5.7.3	Health & Safety
SM Scheme CBS.5.7.4	Lighting
SM Scheme CBS.5.7.5	Buildability Input - From Contractor / DP
SM Scheme CBS.5.7.6	Audits & Reviews - Value Engineering
SM Scheme CBS.5.8	3D Model Refinement - Design Fix 3 - Highways
SM Scheme CBS.5.9	3D Model Refinement - Design Fix 3 - Structures
SM Scheme CBS.5.10	3D Model Refinement - Design Fix 3 - Technology
SM Scheme CBS.5.11	3D Model Refinement - Design Fix 3 - Other
SM Scheme CBS.5.11.1	Environmental
SM Scheme CBS.5.11.2	Geotechnical
SM Scheme CBS.5.11.3	Health & Safety
SM Scheme CBS.5.11.4	Lighting
SM Scheme CBS.5.11.5	Buildability Input - From Contractor / DP
SM Scheme CBS.5.11.6	NRTS Outline Design
SM Scheme CBS.5.11.7	HA Commercial Estimate
SM Scheme CBS.5.12	Design for Target Price - Design Fix 4 - Highways
SM Scheme CBS.5.13	Design for Target Price - Design Fix 4 - Structures
SM Scheme CBS.5.14	Design for Target Price - Design Fix 4 - Technology
SM Scheme CBS.5.15	Design for Target Price - Design Fix 4 - Other
SM Scheme CBS.5.15.1	Environmental
SM Scheme CBS.5.15.2	Geotechnical
SM Scheme CBS.5.15.3	Health & Safety
SM Scheme CBS.5.15.4	Lighting
SM Scheme CBS.5.15.5	Buildability Input - From Contractor / DP
SM Scheme CBS.5.15.6	Audits & Reviews - Value Engineering
SM Scheme CBS.5.15.7	NRTS Detailed Design
SM Scheme CBS.5.16	Target Price Agreement - Design Fix 5 - Highways
SM Scheme CBS.5.17	Target Price Agreement - Design Fix 5 - Structures
SM Scheme CBS.5.18	Target Price Agreement - Design Fix 5 - Technology
SM Scheme CBS.5.19	Target Price Agreement - Design Fix 5 - Other
SM Scheme CBS.5.19.1	Environmental
SM Scheme CBS.5.19.2	Geotechnical
SM Scheme CBS.5.19.3	Health & Safety
SM Scheme CBS.5.19.4	Lighting
SM Scheme CBS.5.19.5	Buildability Input - From Contractor / DP
SM Scheme CBS.5.19.6	Audits & Reviews - Value Engineering
SM Scheme CBS.5.19.7	Works Information
SM Scheme CBS.5.19.8	Target Price Submission
SM Scheme CBS.5.19.9	Target Price Negotiation
SM Scheme CBS.5.19.10	Target Price Agreed

ANNEX 13 SCHEME REQUIREMENTS FOR TRANCHE 5

M25 J10-16

<p>Scheme Objectives – Strategic Case & Transport Objectives</p>	<p>The strategic case of the Smart Motorway Programme supports achievement of the following national objectives:</p> <ul style="list-style-type: none"> • Support the Treasury’s Business Plan 2011-2015; • The government’s priority to invest in the strategic road network; • Delivering a Sustainable Transport System, implementing the recommendations of the Eddington Transport Study 2006; • Support continued enhancements to the Trans European Road Network (TERN). <p>The programme also supports the Strategic Outcomes of Highways England, as defined in the Delivery Plan, directly contributing to the following outcomes:</p> <ul style="list-style-type: none"> • Supporting economic growth; • Achieving a more free-flowing network. <p>The Smart Motorway programme will also support the remaining Strategic Outcomes of ‘A Safe and Serviceable Network’, ‘Improved Environment’ and an ‘Accessible and Integrated Network’.</p> <p>The overarching transport objectives of the Smart Motorway Programme shall be:</p> <ul style="list-style-type: none"> • To support and enhance the role of the current motorway network as a major national and inter-urban regional transport artery; ▪ To deliver a consistent operational concept that is easily understood by customers, operators and maintainers.
<p>Status</p>	<p>Options (Operational Concept - Design Fix 1) complete, signed-off as an interim SGAR3 (green status June 2017). Next phase (Development – Preliminary Design) is to progress the scheme through Design Fix 2 and 3 to enable the Outline Business Case and achieve full SGAR 3 sign-off.</p>
<p>Project Scope Description</p>	<p>The scheme is to be designed as a Smart Motorway solution in line with Interim Advice Note 161/15. The Operational Concept phase (completed in May 2017) has identified that this will consist of 5 lanes “All Lanes Running” between J15 and J16 and the conversion of the hard shoulder through junction 10 (see Annex 10 for specific requirements), 11, 12 and 15 to give 4 lanes through those junctions. All mainline links J10-J15 will retain the same number of lanes as existing and will also remain as Controlled Motorway.</p>
<p>Project Scope Assumptions</p>	<p>The assumptions are that the scheme generally fulfils the requirements of a ‘Single Option’ scheme, is designed to IAN161/15 and the Concept of Operations without land take, and does not trigger the threshold criteria for a Development Consent Order under the Planning Act 2008; TJR and hard shoulder reconstruction are presumed throughout; Minimal land take has been identified as required for the intervention at J15-J16 only; this land acquisition is presumed to be actioned (see Annex 10 for specific requirements) through Highways Act 1980 powers (e.g. land-take does not exceed the 15Ha threshold for Planning Act 2008 through Development Consent Order); Major improvements involving land take at connecting junctions with local authority roads have been found to be unnecessary, but proportionate and high value for money improvements to enhance conditions for all forms of road users at these junctions shall be considered throughout the design process.</p>
<p>Project Exclusions</p>	<p>An option does exist to enhance capacity at J13 by converting the hard shoulder through the junction to a fifth lane. This would require economic testing, to determine viability and impact, and would be subject to formal change control (as</p>

	this is currently out with the agreed RIS1 scope).
Interfaces	<ul style="list-style-type: none"> ▪ Three Rivers District Council ▪ Greater London Authority ▪ Mole Valley District Council ▪ Wokingham Borough Council ▪ Epsom & Ewell Borough Council ▪ South Bucks & Chilton District Council ▪ London Borough of Sutton ▪ South Central Ambulance Service NHS Foundation Trust ▪
Project Risks and QRA	The delivery timescales do not make an allowance for Development Consent Order (DCO). Any scheme that shows significant negative environmental impacts may require DCO.

A1(M) J6-8

<p>Scheme Objectives – Strategic Case & Transport Objectives</p>	<p>The Roads Investment Strategy 2015-2020 (RIS) stated the scheme scope as follows: “A1(M) Junctions 6-8 Smart Motorway – upgrading the existing two-lane section of the A1(M) around Stevenage to Smart Motorway to provide a third lane of capacity.” The strategic case of the Smart Motorway Programme supports achievement of the following national objectives:</p> <ul style="list-style-type: none"> • Support the Treasury’s Business Plan 2011-2015; • The government’s priority to invest in the strategic road network; • Delivering a Sustainable Transport System, implementing the recommendations of the Eddington Transport Study 2006; • Support continued enhancements to the Trans European Road Network (TERN). <p>The programme also supports the Strategic Outcomes of Highways England, as defined in the Delivery Plan, directly contributing to the following outcomes:</p> <ul style="list-style-type: none"> • Supporting economic growth; • Achieving a more free-flowing network. <p>The Smart Motorway programme will also support the remaining Strategic Outcomes of ‘A Safe and Serviceable Network’, ‘Improved Environment’ and an ‘Accessible and Integrated Network’.</p> <p>The overarching transport objectives of the Smart Motorway Programme shall be:</p> <ul style="list-style-type: none"> • To support and enhance the role of the current motorway network as a major national and inter-urban regional transport artery; <p>To deliver a consistent operational concept that is easily understood by customers, operators and maintainers.</p>
<p>Status</p>	<p>Options (Operational Concept - Design Fix 1) complete, signed-off as an interim SGAR3 (green status June 2017). Next phase (Development – Preliminary Design) is to progress the scheme through Design Fix 2 and 3 to enable the Outline Business Case and achieve full SGAR 3 sign-off.</p>
<p>Project Scope Description</p>	<p>This scheme is to be designed as a Smart Motorway solution in line with Interim Advice Note 161/15. The Operational Concept phase (completed in May 2017) has identified that this will consist of 3 lane “All Lanes Running” including 3 lanes through junctions 6, 7 and 8.</p>
<p>Project Scope Assumptions</p>	<p>The assumptions are that the scheme fulfils the requirements of a ‘Single Option’ scheme, is designed to IAN161/15 and the Concept of Operations without land take, and does not trigger the threshold criteria for a Development Consent Order under the Planning Act 2008 - TJR; Hard shoulder reconstruction throughout, No land take has been identified as required for the intervention. Major improvements involving land take at connecting junctions with local authority roads have been found to be unnecessary, but proportionate and high value for money improvements to enhance conditions for all forms of road users at these junctions shall be considered throughout the design process.</p>
<p>Project Exclusions</p>	<p>The Order of Magnitude Estimate is not informed by asset condition surveys which are due to be undertaken in 2017/8. Assumptions on typical asset conditions have been made within the estimate based on previous SMP experience, and will need to be validated before SGAR3.</p>

Interfaces	<ul style="list-style-type: none">▪ Grant Shapps MP▪ Stephen McPortland MP▪ Peter Lilley MP▪ RT Hon Sir Oliver Heald QC MP▪ Hertfordshire County Council▪ North Hertfordshire District Council▪ St Albans City & District Council▪ Hertfordshire LEP▪ Network Rail – Asset Protection Line / EM▪ Hertfordshire Police
Project Risks and QRA	The delivery timescales do not make an allowance for Development Consent Order (DCO). Any scheme that shows significant negative environmental impacts may require DCO.

M40 / M42 Interchange

<p>Scheme Objectives – Strategic Case & Transport Objectives</p>	<p>The strategic case of the Smart Motorway Programme supports achievement of the following national objectives:</p> <ul style="list-style-type: none"> • Support the Treasury’s Business Plan 2011-2015; • The government’s priority to invest in the strategic road network; • Delivering a Sustainable Transport System, implementing the recommendations of the Eddington Transport Study 2006; • Support continued enhancements to the Trans European Road Network (TERN). <p>The programme also supports the Strategic Outcomes of Highways England, as defined in the Delivery Plan, directly contributing to the following outcomes:</p> <ul style="list-style-type: none"> • Supporting economic growth; • Achieving a more free-flowing network. <p>The Smart Motorway programme will also support the remaining Strategic Outcomes of ‘A Safe and Serviceable Network’, ‘Improved Environment’ and an ‘Accessible and Integrated Network’.</p> <p>The overarching transport objectives of the Smart Motorway Programme shall be:</p> <ul style="list-style-type: none"> • To support and enhance the role of the current motorway network as a major national and inter-urban regional transport artery; <p>To deliver a consistent operational concept that is easily understood by customers, operators and maintainers.</p> <ul style="list-style-type: none"> ▪ .
<p>Status</p>	<p>Options (Operational Concept - Design Fix 1) complete, signed-off as an interim SGAR3 (green status June 2017). Next phase (Development – Preliminary Design) is to progress the scheme through Design Fix 2 and 3 to enable the Outline Business Case and achieve full SGAR 3 sign-off.</p>
<p>Project Scope Description</p>	<p>This scheme is to be designed as a Smart Motorway solution in line with Interim Advice Note 161/15. The Operational Concept phase (completed in May 2017) has identified that this will consist of 4 lane “All Lanes Running” on the two east/west links and the north-south link. The interchange links within J3a will be Dual 2 lane Controlled Motorway with the exception of the west to north and south to west links which will be 3 lane All Lanes Running. Special consideration of M42 Junction 3 is required (see Annex 10).</p>
<p>Project Scope Assumptions</p>	<p>The assumptions are that the scheme fulfils the requirements of a ‘Single Option’ scheme, is designed to IAN161/15 and the Concept of Operations without land take, and does not trigger the threshold criteria for a Development Consent Order under the Planning Act 2008;</p> <p>TJR;</p> <p>Hard shoulder reconstruction throughout;</p> <p>No land take has been identified as required for the intervention. Major improvements involving land take at connecting junctions with local authority roads have been found to be unnecessary, but proportionate and high value for money improvements to enhance conditions for all forms of road users at these junctions shall be considered throughout the design process.</p>
<p>Project Exclusions</p>	<p>The Order of Magnitude Estimate is not informed by asset condition surveys which are due to be undertaken in 2017/8. Assumptions on typical asset conditions have been made within the estimate based on previous SMP experience, and will need to be validated before SGAR3.</p>

Interfaces	<ul style="list-style-type: none">▪ Greater Birmingham & Solihull LEP▪ Worcestershire County Council▪ Warwickshire County Council▪ Solihull Metropolitan Borough Council▪ Coventry City Council▪ Stratford-Upon-Avon District Council (Within Warwickshire County)▪ North Warwickshire District Council
Project Risks and QRA	The delivery timescales do not make an allowance for Development Consent Order (DCO). Any scheme that shows significant negative environmental impacts may require DCO.

M62 J20-J25

<p>Scheme Objectives – Strategic Case & Transport Objectives</p>	<p>The strategic case of the Smart Motorway Programme supports achievement of the following national objectives:</p> <ul style="list-style-type: none"> • Support the Treasury’s Business Plan 2011-2015; • The government’s priority to invest in the strategic road network; • Delivering a Sustainable Transport System, implementing the recommendations of the Eddington Transport Study 2006; • Support continued enhancements to the Trans European Road Network (TERN). <p>The programme also supports the Strategic Outcomes of Highways England, as defined in the Delivery Plan, directly contributing to the following outcomes:</p> <ul style="list-style-type: none"> • Supporting economic growth; • Achieving a more free-flowing network. <p>The Smart Motorway programme will also support the remaining Strategic Outcomes of ‘A Safe and Serviceable Network’, ‘Improved Environment’ and an ‘Accessible and Integrated Network’.</p> <p>The overarching transport objectives of the Smart Motorway Programme shall be:</p> <ul style="list-style-type: none"> • To support and enhance the role of the current motorway network as a major national and inter-urban regional transport artery; <p>To deliver a consistent operational concept that is easily understood by customers, operators and maintainers.</p>
<p>Status</p>	<p>Options (Operational Concept - Design Fix 1) complete, signed-off as an interim SGAR3 (green status June 2017). Next phase (Development – Preliminary Design) is to progress the scheme through Design Fix 2 and 3 to enable the Outline Business Case and achieve full SGAR 3 sign-off</p>
<p>Project Scope Description</p>	<p>M62 Junctions 20-25 – together with other Smart Motorways already under construction in Greater Manchester and existing Smart Motorways in Yorkshire, this will provide a full four lane Smart Motorway link between Leeds and Manchester.</p> <p>This scheme is to be designed as a Smart Motorway solution in line with Interim Advice Note 161/15. The Operational Concept phase (completed in May 2017) has identified that this will consist of 4 lanes “All Lane Running” on all links, with the exception of links that have existing 4 lanes plus hard shoulder which shall be converted to Controlled Motorway and retained hard shoulder. The provisions at J20 require specific examination in light of the major scheme (Manchester Smart Motorways, M62 J18-20) traffic impact.</p>
<p>Project Scope Assumptions</p>	<p>The assumptions are that the scheme fulfils the requirements of a ‘Single Option’ scheme, is designed to IAN161/15 and the Concept of Operations without land take, and does not trigger the threshold criteria for a Development Consent Order under the Planning Act 2008;</p> <p>TJR;</p> <p>Hard shoulder reconstruction throughout;</p> <p>No land take has been identified as required for the intervention. Major improvements involving land take at connecting junctions with local authority</p>

	<p>roads have been found to be unnecessary, but proportionate and high value for money improvements to enhance conditions for all forms of road users at these junctions shall be considered throughout the design process.</p>
<p>Project Exclusions</p>	<p>The Order of Magnitude Estimate is not informed by asset condition surveys which are due to be undertaken in 2017/8. Assumptions on typical asset conditions have been made within the estimate based on previous SMP experience, and will need to be validated before SGAR3.</p>
<p>Interfaces</p>	<ul style="list-style-type: none"> ▪ West Yorkshire Combined Authority ▪ Transport for greater Manchester (TfGM) ▪ Highways Team – Kirklees Council ▪ West Yorkshire Fire & Rescue Services
<p>Project Risks and QRA</p>	<p>The delivery timescales do not make an allowance for Development Consent Order (DCO). Any scheme that shows significant negative environmental impacts may require DCO. In the case of M62 J20-J25 there is a specific constraint at the South Pennine SAC and SPA where detailed assessment will be required. Highways England has employed CH2M to provide specialist advice. This does not amend any requirements of the <i>Consultant</i>.</p>

ANNEX 15 MAJOR PROJECTS INSTRUCTION

2017
MPI – 62 - 092017 Alignment of the Project Control Framework (PCF) with the new Major Projects (MP) governance arrangements (Issue September 2017)
MPI – 61-082017 Alignment of Single Option Project SGARs and design fixes (August 2017)
MPI – 60- 082017 Implementation of the enhanced Project Management Plan (please ensure you use the Template for Project Management Plan Version:0.7 issued 10/08/2017)
MPI - 59- 062017 Implementation of new Major Projects Governance Arrangements
MPI - 01- 082012 Operating Instructions for MPIs (Revised and reissued 17/04/2017)
MPI-57-052017 Environmental Impact Assessment
MPI – 27- 062014 Procurement of Roadside Technology (revised and reissued 24/05/2017)
MPI-58-062017 Improving the customer experience through roadworks: Debriefing of Incidents within Roadworks
MPI - 52- 062016 Highways England Complaints process June 2016 (Revised and reissued July 2017)

2016
MPI - 56- 082016 Critical PCF products
MPI - 55- 082016 Improving the customer experience through roadworks – updates to Traffic England
MPI - 54- 062016 Improving Customer Experience Through Roadworks (Revised and reissued 17/05/17)
MPI - 11- 062013 Provision of off Network Access to Equipment on SM-ALR Schemes (Revised and reissued 17/06/2016 and 13/07/17)
MPI - 53 - 062016 Remotely Controlled Temporary Traffic Management Signs – Assessment Guidance
MPI - 52- 062016 Revised corporate complaints process June 2016 (revised and reissued July 2017, see under 2017)
MPI - 51- 052016 Safety Products and the Operations TLG Certificate of Compliance (Reviewed 12/06/17)
MPI - 31- 082014 Clarification on the role of the operations TLG and Programme Board (Revised and reissued 24/05/2016)
MPI - 50- 052016 Mandatory training for all staff involved in the application of the Major Projects Project Control Framework

(Reviewed 12/06/17)
MPI - 41- 052015 Smart Motorways Design Guide (Revised and reissued 14/04/2016)
MPI - 49- 042016 Smart Motorway Programme Survey Guide – V1
MPI - 48- 042016 National Rollout of scheme Billboards (Reviewed 12/06/17)
MPI – 47- 042016 Tata Steel P4 Ramped Terminal (Reviewed 3/05/17)
MPI – 46- 042016 Pavement Strategy
MPI - 45- 012016 Road Safety Audit of SMP Temporary Traffic Management (Reviewed 28/04/17)
MPI - 44- 012016 Independent Certification – Icert (2) (WITHDRAWN 12/06/2017)

2015
MPI – 43- 122015 Evidential Trail Suite of Documents
MPI - 21- 012014 Requirement and guidance for new schemes to perform a metal theft risk assessment (revised and reissued 07/12/2017)
MPI -15- 072013 Editorial control on aspects of MP scheme web pages (revised and reissued 08/09/2015)
MPI – 42- 062015 Safety Governance
MPI – 41- 052015 Smart Motorways Design Guide (Revised 12/10/2017)
MPI – 31- 082014 Clarification on the role of the Ops TLG (Withdrawn 31/08/2017)
MPI – 40- 062015 Appointment of Principal Designer under CDM Regulations (previously MPI – 40- 042015)
MPI – 40- 042015 Annex A - letter
MPI – 39- 032015 Gantry Access – Assessment of Risk for the Provision of Fixed Access
MPI - 38- 032015 Issue – withdrawal of revised Technology Position Statements
MPI – 37- 032015 Alignment of the Project Control Framework with a programme approach to delivery (WITHDRAWN 24/04/2017)
MPI - 36- 032015 Launch of Major Projects Lifecycle Process Flow Maps (WITHDRAWN 24/04/2017)
MPI – 27- 062014 Procurement of Roadside Technology (revised and reissued 24/05/2017) See under 2017

2014
<u>MPI - 35- 122014</u> <u>Guidance on the Safety Management of survey and investigation works undertaken as part of all projects</u>
<u>MPI - 34- 122014</u> <u>EA HA Environment Assessment and Drainage Design Philosophies</u> (Revised and Reissued 10/05/17)
<u>MPI - 33- 082014</u> <u>Guidance on treatment of Ramp Metering sites within Smart Motorways Schemes</u> (Revised and Reissued 27/04/17)
<u>MPI - 32- 082014</u> <u>Provision of Observation Platforms</u>
MPI - 31- 082014 Clarification on the role of the Ops TLG and RSPG (revised and reissued 24/04/2015) see under 2015
<u>MPI - 30- 082014</u> <u>PowerSteering – Review and Implementation of Mandated Areas</u> <u>MPI - 30- 082014 Annexes</u>
<u>MPI - 29- 082014</u> <u>Joint Delivery by Traffic and Environmental Teams</u>
<u>MPI - 28- 082014</u> <u>Determining the correct base year traffic model to support air quality assessments</u>
MPI – 27- 062014 Procurement of Roadside Technology (revised and reissued 27/03/2015) see under 2015
MPI - 26- 052014 Route Protection (TR111 form) (WITHDRAWN 28/04/2017)
MPI - 25- 052014 Update to WebTAG May 2014 (WITHDRAWN 03/11/2017)
<u>MPI - 24- 042014</u> <u>Environment Assessment & Design for Scenario Planning Schemes</u>
<u>MPI - 23- 022014</u> <u>Health and Safety Raising the Bar</u> (Revised and reissued 17/05/17)
MPI - 22- 012014 Update to WebTAG January 2014 (WITHDRAWN 31/08/2017)
<u>MPI - 21- 012014</u> <u>Requirement and guidance for new schemes to perform a metal theft risk assessment</u> (revised and reissued 18/12/2015) see under 2015

2013
<u>MPI -20- 112013</u> <u>Issue/Withdrawal of Revised Technology Position Statements</u>
MPI -19- 112013 Road Worker Safety Assessment Tool (WITHDRAWN)

MPI -18- 102013 Legal Services Framework - Support to Project Teams (WITHDRAWN 03/05/2017)
MPI -17- 082013 Independent Certification Trial – Icert (WITHDRAWN 01/06/2017)
MPI -16- 072013 Analytical Assurance Statements (WITHDRAWN 25/04/2017)
MPI-15-072013 UPDATE Editorial control on aspects of MP scheme web pages
MPI -14- 072013 Matrix Estimation & WebTAG Limits guidance (WITHDRAWN 03/11/17)
MPI -13- 072013 Controlled Environment Definition (Revised and Reissued 12/05/17)
MPI -12- 062013 Health and Safety - Raising the Bar - WITHDRAWN
MPI -11- 062013 Provision of Maintenance Access to Equipment on MM-ALR Schemes (Revised and Reissued 16/06/2016) see under 2015
MPI -10- 062013 MM-ALR Maintenance Activities - ERIC Assessment
MPI -09- 052013 Policy positions on noise and application to major improvement schemes
MPI -08- 052013 Issue/Withdrawal of Revised Technology Position Statements
MPI -07- 032013 Raising the Bar - WITHDRAWN
MPI -06- 012013 Managed Motorway Statutory Instruments - update on the Better Regulation Clearance Process (WITHDRAWN 24/05/2017)
MPI -05- 012013 Review of Appraisal Summary Table guidance for completion
MPI -04- 012013 EIA Cumulative Assessment (WITHDRAWN 28/11/17)
MPI -03- 012013 Adaptation of the Project Control Framework (PCF) for Managed Motorway – All Lanes Running (MM-ALR) and Single Option projects (WITHDRAWN 25/04/2017)

2012
MPI - 02- 092012 Review of Project Control Framework Revised and Reissued 31/05/17
MPI – 01 – 082012 Operating Procedures of Major Projects' Instructions See '2017' (Revised and Reissued 17/04/2017)