



# Highways England Company Limited

## Smart Motorways Alliance

### Scheme Scope

### SVD Construction v2.0

**Responsible for this Drafting:**

	Project Sponsor
	Project Manager

**Sign off Approval:**

	SRO
	Commercial Delivery Director
	Development & Sponsorship Director

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## **Section A: Scheme Client Requirements**

Deployment of Stopped Vehicle Detection technology to cover the Smart Motorways All Lane Running network, including sections of hard shoulder within All Lane Running schemes by 31st December 2022.

SVD should not be provided on motorways sections incorporating variable mandatory speed limits with a hard shoulder, i.e. controlled motorway links, as per the DMRB standard (TD 131).

The Stopped Vehicle Detection technology solution will be required to be operational, detecting stopped vehicles in live lanes on the following Smart Motorways;

- M1 J39-42
- M1 J32-35a
- M1 J28-31
- M3 J9-14
- M20 J3-5
- M23 J8-10
- M27 J4-11
- M4 J3-12
- M6 J21a-26
- M56 J6-8
- M6 J16-19
- M62 J18-20
- M62 J10-12
- M1 J24-25
- M6 J13-15
- M1 J13-16
- M6 J11a-13
- M5 J4a-6
- M1 J16-19
- M6 J2-4
- M4 J3-12
- M27 J4-11
- M1 J13-16

The Stopped Vehicle Detection technology will need comply with the following standards;

- IAN 161/15 revised by MPI66 version 2 Smart Motorways
- TR 2642a Stopped Vehicle Detection using Scanning Radar; or
- TR 2643a Stopped Vehicle Detection System Alternatives
- TR 1100 General Technical Requirements for Motorway Communications

In addition, the following will apply

- Terminal Junctions where hard-shoulder are present will not be covered by SVD, unless ALR is present on either side of that junction.
- Where SVD is provided for hard-shoulder, the SVD is required to differential between hard-shoulder stops and live lane stops.

The Client requires 5% of additional SVD units to be delivered to Highways England Technology stores as spares.

## Section B: Scheme Scope Requirements

The Scheme Scope is to be delivered in conjunction with Volume 2.2 of the Alliance Contract, the Alliance Scope. The sections of the Alliance Scope are detailed below, the requirements of these sections are set out within Volume 2.2 of the Alliance Contract.

Scope Section	Description
S100	Description of the Works
S200	General Constraints
S300	Alliance's design
S400	Scheme handover
S500	Programme
S600	Quality Management
S700	Tests and inspections
S800	Management of the works
S900	Working with Others
S1000	Services and other things to be provided
S1100	Health and safety
S1200	Subcontracting
S1300	Title
S1400	Accounts and records
S1500	Commercial management
S1600	Transfer of rights
S1700	Information management
S2000	Project Bank Account (Y(UK)1)

S2100	Client's work specification
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Below identifies the additional description of the works included in the Scheme Scope.

## **S100 Description of the Works**

The Alliance Partners are required to deliver a programme to retrofit the stopped vehicle detection (SVD) technology on the smart motorways network. The Alliance Partner will need to undertake all site surveys, outline design, detailed design, installation, testing and commissioning management activities required to deliver and handover operational stopped vehicle detection to the Highways England Regional Control, demonstrating fault free performance in accordance with the specification.

The Alliance Partners will each deliver the Schemes relevant to their regional locations in accordance with the Work Allocation Procedure, as summarised below. The Alliance Partners are encouraged to consider whether there is a more efficient delivery allocation during optimisation;

*Production Management Partner - Fluor All Sites*

*Digitally Enabled Design Partner - North - WSP*

- M1 J23a - 25
- M6 J2 - 4
- M6 J11a - 13
- M6 J13 – 15
- M1 J39-42
- M1 J32-35a
- M1 J28-31
- M6 J21a-26
- M56 J6-8
- M6 J16-19
- M62 J18-20
- M62 J10-12

*Digitally Enabled Design Partner - South – Jacobs*

- M20 J3-5
- M23 J8-10
- M27 J4-11
- M4 J3-12

- M1 J13-16
- M3 J9-14
- M5 4a-6
- M1 J16-19

*On Site Assembly Partner – North - Costain*

- M1 J39-42
- M1 J32-35a
- M1 J28-31
- M6 J21a-26
- M56 J6-8
- M6 J16-19
- M62 J18-20
- M62 J10-12

*On Site Assembly Partner – South – Balfour Beatty*

- M20 J3 - 5
- M23 J8 - 10
- M3 J9 – 14
- M27 J4-11
- M4 J3-12
- M1 J13-14

*On Site Assembly Partner – Midlands – Bam Morgan Sindall*

- M1 J16-19
- M1 J24-25
- M6 J13-15
- M6 J2-4
- M6 J11a-13
- M5 J4a-6
- M1 J14-16

The Client as a member of the Alliance will procure an SVD equipment supplier (see S1010). The Alliance will be responsible for undertaking all design, delivery, installation, testing and commissioning of the SVD equipment to achieve the Scheme Clients requirements, other than the activities identified in S1010.

For all Sites to be retrofitted in the programme prior to 31<sup>st</sup> December 2021. The Alliance Partners will need to design, build and install mounting brackets to support the stopped vehicle detection radar technology compliant with the technical requirements of TR2642. This Alliance will need to install new structures to support the mounting brackets, unless they can identify suitable existing structures on which to mount the brackets.

For all Sites to be retrofitted after 31<sup>st</sup> December 2021. The Client will confirm the SVD equipment to be utilised by the 1<sup>st</sup> June 2021 as detailed in S1010. The Alliance Partners will need to design, build and install all necessary structures to support the technology.

The Alliance Partners are required to produce all Project Control Framework products across the Smart Motorways Sites. The Alliance Partners will need to work with the SVD equipment supplier(s) procured by the Client as part of the Alliance, to ensure the adequacy of the detailed design in meeting the Client Scheme Requirements. The Alliance Partners will need to ensure the detailed design is compatible with the Regional Control Centre operating system in operation at the time of installation.

The Alliance Partners are responsible, where required, for connecting the SVD equipment to roadside cabinets at each Site. Where no suitable cabinets are available for connection, the Alliance will be required to undertake the improvements required to connect the technology to the Regional Control Centres.

The Alliance Partners will need to provide all other necessary activities including but not limited to site clearance, environmental mitigation and traffic management to meet the Client Scheme Requirements.

The Alliance Partners need to ensure that the optimised construction programme recognises the activities required to be delivered or supported by Others to meet the Client Scheme requirements in Section A, and recognises the general constraints detailed in S200.

## **S200 General Constraints**

### *Equipment Supply*

The SVD radar equipment to be installed as part of the SVD retrofit works undertaken prior to 31<sup>st</sup> December 2021 will be provided by the Client as a part of Alliance, through Navtech. The Alliance will need to work with Navtech to meet the Client Scheme Requirements. A full summary of the work to be undertaken by Navtech is detailed in Appendix A.

#### *HE systems*

Where COBs interface is not available in Regional Control Centres and Dynac is not yet installed an SVD alerting tool will need to be installed to notify the RCC operators of stopped vehicles. The Client will provide the alerting tool and will be responsible for the deployment in each RCC.

The Client will be responsible for the purchase of in-stations for the Regional Control Centres,

The Client as a member of the Alliance is reviewing whether there is the opportunity to provide more economically advantageous technology for works to be undertaken in 2022. The Client will confirm the detailed technology specification of the equipment for these works by the 1<sup>st</sup> June 2021.

#### *Other Works*

Smart Motorways construction activities will continue to be undertaken on the following Smart Motorways sections during the period of implementation of the retrofit programme;

- M6 J21A – 26
- M56 J6-8
- M6 13-15
- M3 J9-14
- M62 J10-12
- M20 J3-5
- M6 J2-4
- M23 J8-10

The Alliance Partner will need to ensure Site access to these Sites are agreed in advance with the Alliance Manager.



In addition to the works identified above, wider strategic and local road network works will be undertaken during this period. The Alliance Partners will need to ensure construction activities are coordinated with other Highways England suppliers to minimise disruption to road users and other works. The Alliance will need to coordinate these activities in line with S240 of the Alliance Scope.

## **S220 Security and identification of people**

Alliance Partners must verify any representatives of the equipment supplier have undertaken necessary security checks in accordance with the Clients personnel security procedures.

## **S225 Protection of existing Structures and Services**

The Alliance Partners shall identify any existing Structures and Services that require protection as part of the Scheme Scope.

## **S241 Recovery services**

Recovery services identified in the Alliance Scope are not required for SVD the retrofit.

## **S268 Aftercare/management of landscape works**

Aftercare/management of landscape works identified in the Alliance Scope are not required for the SVD retrofit.

## **S305 Design responsibilities**

The Alliance undertakes all design activities in accordance with the Alliance Scope and the Scheme Scope.

The Alliance undertakes all design activities associated with construction, unless stated otherwise in S1010. Outline design activities undertaken prior to the Alliance Scope are not to be relied upon. Should the Alliance Partners choose to utilise outline design undertaken in prior PCF stages, to inform the detailed design they will be considered to have verified the adequacy of the proposed outline design, and taken design responsibility.

Where any changes are made by the Alliance Partners to the proposed outline design prior to SGAR3, the Alliance Partners need to ensure these changes are reflected in

PCF stage products required for SGAR3, or Alliance Partners will need to undertake any necessary amendments.

### **S405 Scheme Open for Traffic**

The definition of Open for Traffic in the Alliance Scope is not used. Open for Traffic for the Stopped Vehicle Retrofit is when all works are complete and the SVD is operational and meeting the Technical Requirements identified in the Clients Scheme Requirements.

### **S502 Scheme programme requirements**

The programme is in the form stated in the Alliance Scope and shows all the information listed in clause 32.3 in relation to the Scheme. The following additional information is also required to be included in the programme;

- SVD Site access dates;
- SVD pre-site start Health and Safety meeting dates for each SVD Smart Motorways Site;
- SVD equipment delivery dates for each Site;
- SVD radar equipment roadside commissioning dates for each Site;
- SVD testing and commissioning acceptance dates for each Site;
- Dates where NRTS installation activities will be required on each Site.

### **Milestone Key Dates**

The following summarises the Milestone Key Dates for inclusion in the programme as detailed in the Implementation plan.

<b>Milestone Key Date</b>	<b>Date</b>
Provision of optimised construction programme	30 November 2020
Provision of Site boundary drawings	31 December 2020
Completion of Stage Gate Assessment Review 3 (SGAR3) for all sections.	31 January 2022
Detailed Design Acceptance (works up to 31 <sup>st</sup> December 2021)	30 June 2021
Detailed Design Acceptance (works in 2022)	31 May 2022
Completion of Stage Gate Assessment Review 5 (SGAR5) for all sections.	31 May 2022
M20 Junction 3-5 SVD operational and detecting stopped vehicles - Open for Traffic.	31 March 2021

Total of seven SVD retrofit full sections (including M20 Junction 3-5) - Open for Traffic.	31 December 2021
Total of eleven SVD retrofit full sections (including M20 Junction 3-5) - Open for Traffic	30 June 2022
All SVD retrofit full sections Open for Traffic	31 December 2022
Completion of Stage Gate Assessment Review 6 (SGAR6) for all sections.	31 March 2023
Completion of Stage Gate Assessment Review 7 (SGAR7) for all sections.	31 March 2024

## **S665 Risk Management**

The following matters will be included in the Early Warning Register;

- Failure to coordinate effectively with other suppliers on the network, in line with network occupancy, Client requirements and constraints may result in increases in the Defined Cost
- Failure to coordinate effectively with the Stopped Vehicle Detection equipment supplier may result in increases in the Defined Cost.
- Delays in the development of the Detailed Design may result in delays to the construction programme.

## **S905 Requirement of Others**

In addition to those identified in the Alliance Scope, the Alliance coordinates with the SVD equipment suppliers.

## **S1010 Services and other things to be provided by the Client as a member of the Alliance**

The Client will provide Scanning Radar outstations compliant with the technical requirements of TR2642 Stopped Vehicle Detection using Scanning Radar for works to be undertaken prior to 31<sup>st</sup> December 2021.

A full summary of the work to be undertaken by Navtech and Others is detailed in Appendix A.

The Client is currently reviewing the opportunity to utilise more economically advantageous technology to provide Stopped Vehicle Detection for Sites in 2022. If it is considered more economically advantageous the Client will use equipment compliant with the technical requirements of TR2643 Stopped Vehicle Detection System Alternatives for works to be undertaken after 31<sup>st</sup> December 2021.

The Client will also provide support for the Alliance Partners from the SVD technology equipment suppliers to witness the commissioning of the units, software configuration and site acceptance testing.

For works prior to the 31<sup>st</sup> December 2021 for in-station and programming responsibilities at the RCC/ROC please refer to Annex A Responsibility Matrix. Full details of the equipment specifications, design and commissioning support for equipment to be installed after 31<sup>st</sup> December 2021 will be available on the 1<sup>st</sup> June 2021.

The Client as part of the Alliance will provide an SVD alerting tool for deployment on schemes where COBS integration is not possible.

## Section C: Allocation of Scheme Scope between Alliance Partners

### KEY:

- **Responsible** – The Lot Partner(s) responsible for delivering the activities as defined in the Alliance Scope
- **Support** – The Lot Partner(s) support the delivery of the requirements as defined in the Alliance Scope

The Alliance as a whole remains responsible for delivering the Scheme.

<b>REFERENCE</b>	<b>The <i>Client</i> (as a member of the Alliance)</b>	<b>Lot 1 Fluor</b>	<b>Lot 2 North WSP South Jacobs</b>	<b>Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty</b>
<b>SECTION A: LOT SCOPE</b>				
<b>S100 Description of the works</b>				
S105 Introduction to Highways England				
S110 Introduction to the Smart Motorways Programme				
S115 The structure of the Alliance	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
S116 Alliance Objectives	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
S120 Core responsibilities of the members of the Alliance	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S120A Production Management Partner		<b>R</b>		
S120B Digitally Enabled Design Partner			<b>R</b>	

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S120C On-site Assembly Partner				R
S120D The <i>Client</i> as a member of the Alliance	R			
S130 Agile responsibilities of the members of Alliance				
Scoping of surveys				
Asbestos	S	S	R	S
Communications	S	S	R	S
Condition	S	S	R	S
Drainage and ducting	S	S	R	S
Environmental and ecology (e.g. protected species)	S	S	R	S
Lighting	S	S	R	S
Noise	S	S	R	S
Pavement	S	S	R	S
Structures and geotechnical	S	S	R	S
Topographical	S	S	R	S
Carrying out of surveys				
Asbestos	S	S	S	R
Communications	S	S	S	R
Condition	S	S	S	R

<b>REFERENCE</b>	<b><i>The Client (as a member of the Alliance)</i></b>	<b>Lot 1 Fluor</b>	<b>Lot 2 North WSP South Jacobs</b>	<b>Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty</b>
Drainage and ducting	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Environmental and ecology (e.g. protected species)	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Lighting	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Noise	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Pavement	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Structures and geotechnical	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Topographical	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Preliminary design				
Gantries, structures and bridges	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Noises and environmental barriers	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Piling and foundations	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Power and lighting	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Retaining walls	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Technology and communications	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Detailed design				
Gantries, structures and bridges	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
Noises and environmental barriers	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Piling and foundations	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Power and lighting	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Retaining walls	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Technology and communications	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Traffic management	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Development of as-built records	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Purchase and provision of				
Technology	<b>R</b>	<b>S</b>	<b>S</b>	<b>R</b>
Traffic management	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Any other products and services called off from CCS and other <i>Client</i> framework contracts	<b>R</b>	<b>S</b>	<b>S</b>	<b>R</b>
Consent and administrative activities				
Statutory and consent management (e.g. Statutory instruments, Statutory Undertakers, Distribution Network Operators (DNOs))	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>



REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
Environmental assessment	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
Customer service and external stakeholder management	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Setting up and administering of PBAs	<b>S</b>	<b>R</b>	<b>S</b>	<b>S</b>
Supporting SMP delivery (e.g. Red-X campaign)	<b>S</b>	<b>R</b>	<b>S</b>	<b>S</b>
Production activities				
Logistics	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Promoting use of off-site manufacture and standardisation	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
Continuous improvement and innovation	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>SECTION B: GENERAL REQUIREMENTS</b>				
<b>S200 General constraints</b>				
S201 Alliance behaviours	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
S202 Parent Company Guarantee	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S203 Conflict of interest	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

<b>REFERENCE</b>	<b><i>The Client (as a member of the Alliance)</i></b>	<b>Lot 1 Fluor</b>	<b>Lot 2 North WSP South Jacobs</b>	<b>Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty</b>
S204 Anti Bribery and Anti-Fraud	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S205 Data Protection	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S208 Official Secrets Acts	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S210 Confidentiality	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S211 Insurance	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S215 Security and protection of the Site	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S220 Security and identification of people	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S225 Protection of existing structures and services	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S230 Cleanliness of roads	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S240 Network occupancy	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S241 Recovery services	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
S245 Condition survey	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
S250 Considerate Constructor Scheme	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S251 Customer service	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S256 Project Control Framework	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S266 Energy Efficiency Directive	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S267 Environmental requirements	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S268 Aftercare / Management of landscape works	<b>NA</b>	<b>NA</b>	<b>NA</b>	<b>NA</b>
S269 Site Waste Management plan	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S270 Sustainable development requirements	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S272 Air Quality Strategy	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S274 Discrimination, bullying and harassment	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S275 Equality, diversity and inclusion	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S276 Employment and skills	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S285 Behavioural attributes	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S300 Design</b>	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
S305 Design responsibilities	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
S310 Design criteria	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S320 Design submission procedures	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
S325 Design approval from Others	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
<b>S400 Scheme handover</b>				
S405 Scheme Open for Traffic	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S410 Scheme handover	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S415 Scheme Completion	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S445 Documents	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S450 Access to information following Completion	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
<b>S500 Programme</b>				
S501 Alliance programme requirements	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S502 Scheme programme requirements	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S515 Scheme programme quality	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S520 Methodology statement	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S525 Revised programme	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S535 Earned value management	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S600 Quality Management</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S605 Alliance aligned/integrated management system	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S610 Lean	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S615 Quality planning	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S620 Authorised persons with adequate skills, knowledge and experience	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S625 Quality reviews	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S626 Audits	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S630 Registers	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S640 Non-conformity corrective action reports	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S645 Quality indicators	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S650 Deliverables	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S655 Alliance management review	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S660 Quality management points	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S665 Risk management	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
<b>S700 Tests and inspections</b>	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
<b>S800 Management of the works</b>				
S810 Communications	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S820 Disclosure requests	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S825 Information security	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S835 Business Continuity	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S900 Working with Others</b>	<b>S</b>			
S905 Requirements of Others	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S920 Utilities providers	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S1000 Services and other things provided</b>				
S1010 Services and other things to be provided by the <i>Client</i>	<b>R</b>	<b>S</b>	<b>S</b>	<b>S</b>
<b>S1100 Health and Safety</b>				
S1105 Supply chain health and safety maturity matrix	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1106 Management of health and safety	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1107 Alliance's health and safety management system	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

<b>REFERENCE</b>	<b><i>The Client (as a member of the Alliance)</i></b>	<b>Lot 1 Fluor</b>	<b>Lot 2 North WSP South Jacobs</b>	<b>Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty</b>
S1108 Subcontractor's health and safety systems	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1111 Action to rectify breaches	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1112 Health and safety culture	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1113 Health and safety – exchange of information	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1114 Asbestos	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S1115 Health and safety advice	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1116 Health and safety inspections	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1117 Health and safety in construction	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S1118 Incident investigation, reporting and follow-up	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1119 Incident statistics	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1121 Health and safety management audit	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1122 CDM compliance	<b>S</b>	<b>S</b>	<b>R</b>	<b>R</b>
S1123 Health and safety – charity-based incentive Schemes	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S1124 Particular requirements on Subcontractors	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1125 Management of road risk	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S1127 Substance abuse	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1128 Security	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1129 Employee safety	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1130 Fleet Operator Recognition Standard (FORS) Accreditation	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
S1131 Driving for better business	<b>R</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S1200 Subcontracting</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1205 Restrictions or requirements for subcontracting	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1210 Acceptance procedures	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S1300 Title</b>				
S1305 Marking	<b>S</b>	<b>S</b>	<b>S</b>	<b>R</b>
<b>S1400 Accounts and records</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1415 Form of documents to be retained	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>



REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
S1420 Records and audit access	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1425 Retention of records	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S1500 Commercial Management</b>				
S1505 Provision of cost information	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1510 Provision of price information	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1515 Cost verification	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1520 Invoicing	<b>S</b>	<b>R</b>	<b>S</b>	<b>S</b>
S1525 Forecasting	<b>S</b>	<b>R</b>	<b>S</b>	<b>S</b>
S1530 Earned value for assessment	<b>S</b>	<b>R</b>	<b>S</b>	<b>S</b>
<b>S1600 Transfer of Rights</b>				
S1605 Partner's rights over material prepared for the design of the works	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1610 Other rights to be obtained by the Alliance	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S1700 Information management (Option X10)</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S1705 Information management requirements	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>

REFERENCE	<i>The Client (as a member of the Alliance)</i>	Lot 1 Fluor	Lot 2 North WSP South Jacobs	Lot 3 North Costain Midlands Bam Morgan Sindall South Balfour Beatty
<b>1S2000 Project Bank Account (Option Y(UK)1)</b>				
S2010 Project Bank Account tracker	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>S2100 Client's work specification</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
S2110 Drawings	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex A Reference documents</b>				
<b>Annex B Form of Parent Company Guarantee</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex C Insurance Tables</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex D Alliance Inclusion Action Plan</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex E Alliance Employment and Skills Plan</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex F Special activities and requirements</b>	<b>S</b>	<b>S</b>	<b>R</b>	<b>S</b>
<b>Annex G Continuous improvement/lean minimum requirements</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex H Quality improvement process</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>
<b>Annex I Information management requirements</b>	<b>S</b>	<b>R</b>	<b>R</b>	<b>R</b>



Appendix A – Responsibility Matrix

Activity / Deliverable	SMA-SVD Team	OD	ITD	HE SMA Team	NavTech	HATMS Gateway Manager	HE Cyber Security Team	RCC ASC/RTMC	HE HATMS SMC Group	National Site Data Team	NRTS Team	RCC NTRM & FM Team	NSCRG	CAB	Comments
<b>Roadside</b>															
Traffic Management Roadspace booking etc	Deliver							Support							
Radar Deployment Surveys/Design	Deliver				Support									Advise	
Supply Radar Head					Deliver										
Supply Radar Base unit inc cabinet termination cables					Deliver										
Supply SVD site cables, connectors, joint box, ancillaries, (excludes 10mm 600 cabinet to Radar earthing cable)					Deliver										
SVD Complete Outstation (inc cable etc) EMC/Environmental/TR1100/UMSUG etc					Deliver										
SVD End-to-End MCH1514 (CoCo)	Support		Deliver		Support		Govern								Security meeting/workshop required to clarify/agree ownership and actions (TR2642)
Installation Training to OSA installation team					Deliver										
Issue SVD Outstation Engineer Terminal Software for OSA use					Deliver										
Supply Upgraded 6AMP MCB for SVD Site (if required)	Deliver														
Supply SVD Site Structures/brackets/Posts/Bases/Cabinets/Ducts (and 10mm earthing cable, cabinet)	Deliver														
Supply Radar levelling bracket	Deliver														
Construct and assemble SVD Outstation, fit cables, electrical works	Deliver														
Outstation cabinet BS7671 inspection and signoff	Deliver														
NRTS IP Bandwidth Request Proforma for SVD sites	Deliver				Support										
NRTS Communications Service Provision	Manage										Deliver				
Fit Radar, Radar Base unit and test power and communications	Deliver														
Connect Radar Base Unit to NRTS SDP and MCB/PDU	Deliver														
Local SAT SVD outstation installation comms/power	Deliver														
Stage 1: Final Levelling/Optimisation Radar Outstation	Support				Deliver										SMA to provide MEWPS, MEWP operators, Traffic Management. Navtech to provide SVD Radar engineers
Commission Radar to SVD Instation over NRTS Links					Deliver										
Commission Radar to RMAS & NavTech Office VPN over NRTS Links					Deliver										
Pre-handover SVD Outstation 1st line defect resolution/remediation	Deliver				Support			Support							
Pre-handover SVD Outstation 2nd line defect resolution/remediation	Support				Deliver										To be specified in Call Off contract/order
Outstation Spares Package					Deliver			Support							
RMC/ASC SVD Outstation Training					Deliver										
SVD Outstation MCH1349 Handover	Deliver				Support										
<b>SVD Instation Specific each RCC/each scheme</b>															
Permit to work/RAMS etc			Deliver					Support							
Design/Update SVD Networking Architecture at RCC			Deliver				Advise								
Design Instation Rack inc contents & internal/external cabling, networking			Deliver		Support		Advise	Support							
NRTS IP Bandwidth Request Proforma for SVD Instation	Deliver														
NRTS SVD Instation End SDP provision	Manage							Support			Deliver				
COBS HATMS Gateway SVD Local/Remote Circuit provision						Deliver	Advise					Govern			
Supply & build SVD Instation 42U rack, servers, cabling and ancillaries			Deliver									Govern			
Supply Operating System Software for servers inc licensing			Deliver												
Supply NavTech Instation Software inc licensing					Deliver										
Install Operating System Software onto servers			Deliver												
Install NavTech Software for SVD operation onto servers					Deliver										
CHARM SVD Alerting Tool Integration				Deliver	Support				Support						
Factory Test SVD Instation rack															
Install SVD Instation rack at RCC			Deliver					Support							
Supply and install of cables SVD Rack to HATMS Gateway & NRTS SDP			Deliver					Support							
Commission SVD Instation Link to HATMS/Outstations/NavTech office					Deliver										
Stage 2: Optimisation and Tuning SVD End to End System					Deliver										
Pre-handover SVD Instation hardware defect resolution/remediation			Deliver												
Instation Spares Package			Deliver												
<b>End to End System each scheme</b>															
GG104 Safety Assessment Report	Deliver				Support										
RCC HATO Liaison			Deliver		Support										
Stage 3: Site Acceptance Test at Control Room - End to End System															
SVD Complete System RMC Training Package	Manage			Support	Deliver			Support	Support	Support					SMA to provide MEWPS, MEWP operators, Traffic Management. Navtech to provide SVD Radar engineers
Collate and assemble MCH1349 Handover materials	Manage				Deliver										
HATO Operator Training															
RMC/ASC End to End Training	Deliver				Support			Deliver	Deliver						
Stage 4 Post Go-Live Monitoring/Assessment/Optimisation Ground Truthing					Deliver										
<b>Post Handover</b>															
Post Handover 1st Line SVD In/Outstation Maintenance															
SVD Instation 2nd Line software/hardware defect resolution/remediation				Manage	Deliver			Deliver							
COBS S/S software/hardware defect remediation															
SVD Instation/Outstation Tuning															
SVD Instation/Outstation O/S and application software updates				Manage	Deliver				Deliver	Deliver					
<b>HATMS Site Data and related Hardware Provision each scheme</b>															
COBS Site Data Design	Deliver									Support					
Site Data Entry Package Software Package enabled for SVD										Deliver					
Site Data Lat/Long Surveys	Deliver									Support					
MCH1704 NSDCN	Deliver									Support					
Presentation at SDAG	Deliver									Support					
Site Data Entry	Deliver									Support					
Software changes to COBS system to accommodate TR2642A															
Supply and install of COBS HSM/SS				Manage					Deliver						Govern
Supply and install of CHARM Interim Solution				Manage					Deliver						Govern
Permit to connect responsibility															
Site Data FAT	Deliver														
CHARM/SVD Alerting Tool Software Application Management and Software Delivery	Support								Deliver						Govern
Installation and commissioning SVD Alerting Tool Deployment (National Rollout)		Deliver		Deliver	Support				Support			Govern		Govern	

