

WI 500 – Programme

5.1 Programme Requirements

- (a) The *Contractor* shall consider in their programme minimising the affect of the operational Tramway underneath Blackhorse Lane Bridge South as much as reasonably possible. The *Contractor* shall consider the duration of any required possession/closure of the Tram networks with the shortest duration being more preferable for the *Employer*.
- (b) The *Contractor* proceeds regularly and diligently to Provide the Works in accordance with this contract, and uses all reasonable endeavours to prevent and/or reduce any delay in the progress of the works.
- (c) The Accepted Programme shall be used by the *Contractor* to direct his work by providing parameters for the more detailed implementation programmes and tools such as the EPPR, Procurement Schedule and Weekly Work Plan. It is also used to identify and resolve schedule problems, measure the impact of compensation events and delays, assist in earned value calculations and develop recovery plans.
- (d) Programmes shall be developed by the *Contractor* using CPM / network analysis techniques to produce a coherent schedule that covers the entirety of the *Contractor's* awarded scope.
- (e) The programmes should be defined at activity level, the cost of each activity, the man-hours required to perform it and its expected price, shall be reported in the programme, together with the activities' duration. The activities shall be classified according to the Standard Method of Measurement for Highways classification. The programmes typically contain between 1000 and 4000 activities and shall be submitted to the *Project Manager*. Exceeding these limits without prior approval by the *Project Manager* shall constitute cause for rejection of a programme submission.
- (f) The *Contractor* shall clearly identify both the North and South bridges as separate structures and works for the purposes of undertaking the works and all associated programming.
- (g) The North and South Bridges are to be programmed as a single project (refer to clause W1 100 hereinbefore). The works are to run concurrently. Planning and programming of the works must clearly show how works are linked and interact with each other. The *Contractor* is to plan the bridge works including the retaining wall and carriageway and footpath reconstruction to exploit maximum efficiencies with the use of plant, machinery, temporary works, traffic management delivery and use of materials, etc. The works are to be completed in the shortest possible time.
- (h) Information to be included in the programmes submitted for acceptance:
 - The dates when the *Contractor* plans to submit any particulars of the design required by the Works Information;
 - The dates when the *Contractor* plans to submit any particulars of the design of any items of Equipment required by the Works Information;
 - The dates from the *Contractor's* Procurement Plan when any key items of Plant and Materials and Equipment are required at Site;
 - The dates for any establishment of fabrication facilities and dates for fabrication of materials;

- The dates when any of the design information or other information provided by the *Employer* or Others will be required by the *Contractor*;
- the cost associated with each activity defined in the programme;
- the cost-loaded programme (including man hours, total of the Prices and quantities using suitable activities breakdown);
- details of any consents, permits and licenses development, submission and approvals allowing sufficient time for each stage of the process and also allowances for resubmission;
- details of any utility supplies development, submission and approvals allowing sufficient time for each stage of the process and also allowances for resubmission;
- details of any 3rd party (e.g. Network Rail, London Underground etc.) interfaces and/or submissions development, submission and approvals allowing sufficient time for each stage of the process and also allowances for resubmission;
- the dates when the *Contractor* plans to submit design and construction certification as required by the Works Information;
- Work Breakdown structure (WBS) – The scope is put into a valid WBS consistent with the *TFL* WBS Strategy to allow for detailed planning in a structured format. The structure to give a clear reflection of progress against each of the work packages being progressed when rolled up to summary level;
- Clear visibility of all deliverables and key milestones; and
- Quantities and Measurement items (MIs) to be assigned within the relevant work packages showing the key quantities to be installed to deliver the project.

5.2 Contractor's Possession Programmes

- (a) Detailed programmes shall be produced by the *Contractor* for all works undertaken during possessions or closures of the Tramway. These programmes shall have a maximum time unit of 1.0 hour unless agreed otherwise with the *Project Manager*. These programmes shall also be subjected to risk analysis by the *Contractor* to ensure that work is completed during the possession/closure or that alternative action can be taken to ensure that infrastructure is handed back on time.

5.3 Programme Arrangement

- (a) In addition to the requirements of the conditions of contract, the *Contractor* shall maintain a hierarchy of programmes that support each other whilst keeping detail at the appropriate level within the hierarchy. The programme hierarchy is identified below:

Programme Level	Description	Comments
Level 1	The <i>Contractors</i> Summary Programme.	A 1-2 A3 page summary of the Accepted Programme showing key elements phases to Completion of the <i>Works</i> , identifying the critical path and key milestones.
Level 2	The <i>Contractor's</i> Accepted Programme	Cost and resource loaded logic linked Critical Path Method (CPM) network, which the <i>Contractor</i> uses to plan the work and report progress. This programme will contain the whole scope of the <i>Works</i> including design deliverables and design

activities. The schedule is developed and maintained in a programme compatible with Primavera.

Level 3	The <i>Contractor's</i> Procurement Schedule	<p>The <i>Contractor's</i> procurement schedule identifies all of the following:</p> <ul style="list-style-type: none"> • Sub contract package listing; • Dates for procurement of sub contract <i>Works</i> including tender period, scope and sub contract terms; • Start on Site dates for identified sub contract packages; and • Duration of sub contract <i>Works</i>.
Level 3	The <i>Contractor's</i> Weekly Work Plan	A four-weekly rolling schedule, (one week look back, and three weeks look ahead) covering day to day activities.
Level 3	<i>Contractor's</i> Programme Performance Graphs	A suite of graphs derived from the <i>Contractor's</i> performance measurement schedule, and latest Accepted Programme (or most recently submitted programme for review by the <i>Project Manager</i>).
Level 3	<i>Contractor's</i> Commissioning, Operational Readiness and Possession Programme	Fully logic-linked Critical Path Method (CPM) network for use in co-ordinating all activities involved in commissioning. The schedule is developed and maintained in a programme compatible with Primavera. This programme will detail all <i>Works</i> undertaken during possessions, closures or blockades of the operational tramway. Possession activities shall have a maximum time unit of 1.0 hour unless agreed otherwise with the <i>Project Manager</i> .

- (b) All programmes created by the *Contractor* in relation to any of the *Works* are to be made available to the *Project Manager* if requested in the software format in which they were created.

5.4 Methodology Statement

- (a) All programmes submitted by the *Contractor* for acceptance by the *Project Manager* shall be accompanied by a programme narrative and shall contain as a minimum the following requirements, at a level of detail to be agreed by the *Project Manager*.
- Staffing plan indicating total manpower required per reporting period, inclusive of SubContractors;

- List of the major construction Equipment items including types, number of units, unit capacities, the proposed time each piece will be deployed and the activities on which it will be deployed;
- Description of the production rates, crew build-ups etc. used to determine the durations for key quantities;
- Weather windows and other non-work periods;
- Description of the critical path(s);
- Listing of key interfaces with the *Project Manager* or others and the dates those interfaces are planned to occur; and
- Listing of information required by the *Contractor* to meet his stated programme together with the date that information is required.

5.5.1 Earned Value Management (EVM) Information (Not Used)

5.5.2 Resource and Cost Loading the Programme

- (a) The *Contractor* shall ensure that the Programme for Acceptance is fully loaded with man hours, the total of the Prices and quantities for performance measurement purposes using suitable resource profiles, agreed with the *Project Manager*, which reflect the work required for each activity.
- (b) For the purposes of performance reporting and measurement, the Accepted Programme shall only be adjusted by agreement between the *Contractor* and *Project Manager*, to reflect the effects of implemented compensation events and/or significant changes to planned work sequences. The emphasis is to establish an accurate baseline from which to measure subsequent performance.

5.5.3 Cost Loading (Not Used)

5.5.4 Resource Loading

- (a) The *Contractor* shall resource load the Programme for Acceptance with resources and quantities, at a suitable level, to be agreed by the *Project Manager*.
- (b) Each four weekly reporting period, the *Contractor* shall update in his revised programme for acceptance the resource loading to reflect actual resources used to date and the *Contractor's* assessment of forecast to go including the impact of trends and implemented compensation events.

5.5.5 Budget Maintenance

- (a) The *Contractor* shall not change, or move cost or resources between activities on the Accepted Programme without the *Project Manager's* acceptance.

5.5.6 Planned Expenditure (BCWS: Budgeted Cost of Work Scheduled)

- (a) The Accepted Programme will be the basis of the planned expenditure unless the *Project Manager* instructs otherwise.

5.5.7 Earned Value (BCWP: Budgeted Cost of Work Performed)

- (a) The *Contractor* shall carry out detailed performance measurement using EVA and produce a four weekly report with Earned Value being calculated upon what has been physically achieved. The physical accomplishment will be determined by the quantity of MIs completed within a particular activity or work package, which in turn will yield the respective percent complete for each activity and the cost component.
- (b) This data shall be incorporated by the *Contractor* into a Cost Value report (CVR) for comparison with baseline.

5.5.8 Actual Cost (ACWP: Actual Cost of Work Performed)

- (a) Actual Cost of work performed, (including monies paid and accruals for works performed up to the cut-off date of each four weekly reporting period) shall be related to each element of the project highlighted in the programme.
- (b) This data shall then be incorporated by the *Contractor* into the CVR, for comparison with Earned Value.

5.5.9 Cost to Completion (FTC: Forecast to Completion)

- (a) Each reporting period the *Contractor* will produce a forecast of the remaining expenditure (total Defined Cost less PWDD) phased over the remainder of this Contract, by four weekly reporting periods. This will show separately, the original scope of works, and any implemented compensation events.
- (b) Separately, the *Contractor* will also show his forecast remaining expenditure associated with notified compensation events and early warning notices.
- (c) The *Contractor* shall present the relevant performance measurement data in the project performance measurement data analysis report template with accompanying performance curves for inclusion within the four weekly progress reports.

5.5.10 Performance Measurement Analysis

- (a) The *Contractor* shall present the relevant performance measurement data in the project performance measurement data analysis report template with accompanying performance curves, for inclusion within the four weekly progress reports.
- (b) For the Period reporting and KPI updates, and once the quantities have been validated by the *Project Manager*, these are to be inserted into the EV template.
- (c) In addition to providing the installed quantities and forecast to go per the above the *Contractor* will also be required to provide the standard reports for their entire associated works showing:
 - Variance analysis with detailed explanation
 - Critical issues/actions
 - Work around incurred/intended
 - EV Indicators listed below
 - Earned Value (EV)
 - Planned Value (PV)

- Actual Cost (AC)
- Cost performance Index (CPI)
- Schedule Performance Index (SPI)
- ETC – Estimate to Completion o BAC – Budget at Completion
- EAC – Estimate at Completion o VAC – Variance at Completion
- TCPI – To Complete Performance Index $(BAC-EV)/(BAC-AC)$

(d) The *Contractor* is required to point out anomalies that might have occurred in the calculations, explain poor performance, indicate if the contract has been baselines, and state any key achievements or issues that might impact performance in the future.

(e) The EV report will be attached to the four weekly *Contractors* Progress report.

5.6 Revised Programme

(a) If the volume of variations increases to the extent that the original planned values do not reflect the level of work on the contract, then approval can be sought from the Project Manager to re-baseline the programme.

(b) Submissions of revised programmes shall be accompanied by an updated programme narrative, which includes the following:

- details of any significant changes including revisions to critical path since the previous Accepted Programme;
- details of changes to Key Dates, milestones, and associated float and time risk allowances and relative impact on costs;
- the Earned Value Analysis shall be performed on the Revised Programme using two separate baselines: measuring EV on the original Accepted Programme, one using the Revised Programme when changes occur; and
- any delay mitigation measures incorporated.

WI 600 – Quality management

- (a) The following are Quality and Assurance System terms used in this section of the Works Information;

Term	Meaning
Assurance	Process of providing evidence that the <i>Works</i> have been designed and constructed in compliance with the <i>Employer's</i> Requirements.
Assurance Plan	A document that sets out how the <i>Contractor</i> will meet the <i>Employer's</i> Assurance requirements.
Conformity	Fulfilment of specified requirements.
<i>Contractor's</i> Project Quality and Assurance Plan	A document setting out how the quality requirements of the contract will be achieved, controlled, assured, demonstrated and managed.
Corrective Action Request (CAR)	A statement prepared to record a failure to implement a specified process or contractual requirement. Generally identified during an audit.
Handback	The process by which the <i>Contractor</i> returns into use an altered or unaltered asset where the function of the asset is not changed by the <i>Contractor's</i> occupation or alteration. And the responsibility for maintenance after the Handback returns to the <i>Employer</i> .
Handover	The process by which a new asset or an existing asset where the function has changed, is handed over to the <i>Employer</i> and the responsibility for maintenance after the Handover transfers to the <i>Employer</i> and is carried out on the <i>Employer's</i> behalf by a Supplier. Handover is the same as Completion or take over by the <i>Employer</i> (in accordance with clause 35 of the <i>conditions of contract</i>).
Hold Point	A point in time in the construction of an element of the <i>Works</i> at which the <i>Project Manager</i> is invited to inspect the <i>Works</i> to verify quality or completeness prior to the work progressing. The <i>Project Manager</i> will identify these Hold Points during his review of the Inspection and Test Plans.
Inspection & Test Plans (ITPs)	Plans specifying the activities required to establish how Conformity is to be verified. They identify the responsibilities for executing the activities, the documents controlling them and the records required to provide Assurance. These are prepared for a particular element of the <i>Works</i> to support the <i>Contractor's</i> Project Quality and Assurance Plan.
Non Conformance	A statement raised to record a Non-conformity (Defect) in the product, workmanship, or system.

Report (NCR)	
Nonconformity	A Defect - as defined in clause 11.2 (5) of the <i>conditions of contract</i> . (The term "Non-conformity" is used to be consistent with industry practice and includes System Defects as defined below).
Outstanding Work List	A list generated at an inspection or acceptance stage to identify Defects which must be remedied before an asset can be put into operational use.
Quality and Assurance System	The management system for achieving the quality requirements described in the Works Information and for demonstrating that achievement, including the provision of documentary evidence and supporting records.
Quality Management System	The <i>Contractor's</i> management system for achieving the quality requirements described in this Works Information.
Quality Control Procedures (QCPs)	Documents that specify operational techniques or activities that are used to fulfil requirements for quality, and as such support the contract quality plan.
Quality Plan	A document that sets out the governance and systems required within the <i>Contractor's</i> organisation that will satisfy the criteria of a quality management system to enable the delivery of quality in a structured, controlled and measured environment.
Safe System of Work	A statement submitted in accordance with the requirements of clause 31.2 of the <i>conditions of contract</i> describing how the <i>Contractor</i> plans to do the work, and identifying the principal Equipment and resources which he plans to use.
<i>Contractor's</i> Communication (CC)	A request for information, clarification or agreement to a proposed action.
System Defect	A failure to comply with the quality and Assurance management requirements specified in this Works Information.

6.1 Samples

- (a) The *Contractor* provides a schedule of all materials to be included into the Works for the *Project Managers* acceptance. The *Contractor* makes available representative samples of materials for the *Project Managers* inspection.
- (b) The *Employer*, the *Project Manager*, and authorised Others including statutory authorities and Statutory Undertakers, have the right to observe, witness, conduct audits, inspections and tests of all Works that are being executed by the *Contractor*, his designers, SubContractors and supply chain.
- (c) The *Contractor* provides all inspection and testing necessary to demonstrate that all the requirements of the Works Information and the law have been met. All non-conformities are resolved before final acceptance of the Works or any section of the Works.

- (d) All on-Site and off-Site testing is carried out by laboratories accredited by UKAS or by a similar national body or by persons accredited to a similar standard and are subject to acceptance by the *Project Manager*. The *Contractor's* quality system provides procedures for witnessing the manufacturing, construction, installation, testing and commissioning of the Works.
- (e) A reason for not accepting a laboratory is that it will not give the *Project Manager* the necessary Assurance that the Works will be constructed in accordance with this contract.

6.2 Quality Statement

- (a) "A key success factor for any programme or project is that the outcome meets the customer's quality expectations. This can only happen if the quality expectations are agreed, documented and communicated to all parties at the start of the programme or project, along with the means by which success will be measured."
- (b) The *Contractor* shall adopt and apply effectively and efficiently Quality Management Principals [ISO 9000] for this Project that enables;
 - o attainment of the Quality Statement set out above;
 - o achievement of all the Project objectives;
 - o sustainable culture of Continuous Improvement and Innovation to correct and prevent non-conformances; and
 - o Enables a robust and adequate application of Quality Management Systems [ISO 9001].
- (c) The approach to be taken is to be based on the eight Quality Management Principals as set out in ISO 9000, these being Customer Focus, Leadership, Involvement of People, Process Approach, System Approach to Management, Continuous Improvement, Factual Approach to Decision Making and Mutually Beneficial Supplier Relationships.
- (d) The *Contractors* Quality and Assurance Plan(s) [as required under ISO 10005] will explain how these eight principals are applied and validated by the *Contractor's* Quality Control Procedures.

6.3 Quality Management System

- (a) The *Contractor* shall establish a quality management system for all parts of the Works
- (b) The *Contractor* operates a quality management system complying with ISO 9001:2008 for his performance of the contract. The management, organisation, responsibilities, procedures, processes, resources and programme for the quality management system from design (where applicable) to procurement, construction, completion, testing and commissioning of the works until the defects date is contained in a quality plan which is submitted to the *Employer* in accordance with the Works Information. Any SubContractor appointed by the *Contractor* operates a quality system enabling him to comply with the *Contractor's* quality management system.
- (c) The Quality Management System is to be capable of demonstrating by *Contractor* self certification that all the requirements of the contract and all relevant standards, regulations etc. are being met. Self certification is the process whereby the *Contractor* can demonstrate that all the requirements of the contract have been fulfilled.
- (d) The *Contractor* shall ensure that SubContractors and suppliers of any tier also supply a

quality presence with adequate resources and appropriate authority to ensure the quality of work on this Contract.

- (e) The *Employer*, the *Project Manager*, the *Supervisor* and any third parties authorised by the *Project Manager*, including LUL, NR, DLR, TfL, statutory authorities and statutory undertakers, shall have the right to conduct audits, inspections and tests of any part of the works that are being executed in connection with their assets by the *Contractor* and to observe the execution of these activities.
- (f) The *Contractor* shall contribute to and participate in the identification, discussion and implementation of lessons learned initiatives agreed with the *Project Manager*. The *Contractor* shall make available for audit all records necessary to demonstrate that the works have been executed in accordance with the contract. They also provide the *Project Manager* with documents that demonstrate that the works are progressing in accordance with specified requirements. These documents are to be provided in a timely manner as the work progresses.
- (g) Quality issues shall also be identified in the *Contractor's* weekly reports which are provided to the *Project Manager*.
- (h) The *Contractor's* Quality Management System shall provide procedures for witnessing the manufacturing, construction, installation, testing and commissioning of the works. The *Contractor* shall develop, with the *Project Manager*, quality improvement initiatives.
- (i) Within 4 weeks of the starting date, the *Contractor* shall produce a Contract Quality Plan (CQP) and submit it to the *Project Manager* for acceptance. In the case of the first submission of the Contract Quality Plan the *Project Manager* replies within 4 weeks of the date of submission. The *Contractor* shall agree with the *Project Manager* the submittal timings of the CQP to interface with the requirements of the Accepted Programme. Any further revisions, submissions and responses shall be made within the period for reply.
- (j) The *Contractor* shall not start any activity on any part of the works for which the Contract Quality Plan, applicable QSPs or ITPs, are not accepted by the *Project Manager*. Where these documents together adequately address ongoing and imminent works but not the entire scope of the works, the *Project Manager* may give limited acceptance to the *Contractor's* submission in order to allow limited activities to proceed.

6.4 Quality Assurance

- (a) Unless otherwise accepted by the *Project Manager*, Plant and Materials forming part of the works or temporary works incorporated into the works shall be procured from sources that hold appropriate certification from a United Kingdom Accreditation Service (UKAS) accredited certification body (or one that has mutual recognition with UKAS). The existence of UKAS or similar acceptable
- (b) Accreditation does not relieve the *Contractor* from ensuring the quality of the products.
- (c) The *Contractor* shall make available certification to demonstrate that Plant and Materials used comply with the relevant legal requirements and standards. [For *Contractor* designed parts of the works the material quality and traceability requirements shall be indicated on applicable drawings or materials and workmanship specifications or by reference to appropriate codes of practice.]
- (d) Verification of the quality and material traceability of each element of the works shall be the responsibility of the *Contractor* and shall be achieved through checks, tests, inspections, audits and reviews, planned and implemented in accordance with the Contract Quality Plan developed by the *Contractor*.

- (e) Subject to the Works Information and any changes to it the *Contractor* warrants that to the extent the *Contractor* either is obliged to specify or approve products or materials for use in the works or does so specify or approve, the *Contractor* does not specify, approve or use any products or materials which are generally known within the construction industry to be deleterious at the time of use in the particular circumstances in which they are used, or those identified as potentially hazardous in or not in conformity with:
1. the report entitled "Good Practice in the Selection of Construction Materials" (1997, by Tony Sheehan, Ove Arup & Partners, published by the British Council for Offices and the British Property Federation) other than the recommendations for good practice contained in Section 2 of that report,
 2. relevant British or European Standards or Codes of Practice, or
 3. any publications of the Building Research Establishment related to the specification of products or materials.
- (f) If in the performance of its duties under this contract, the *Contractor* becomes aware that he or any other person has specified or used, or authorised or approved the specification or use by others of, any such products or materials, the *Contractor* notifies the *Project Manager* in writing immediately. This clause does not create any additional duty for the *Contractor* to inspect or check the work of others which is not required by this contract.
- (g) The *Contractor* obtains from and/or gives to Others all licences, consents, notices and approvals necessary or appropriate to enable him to Provide the Works other than those which the Works Information states will be obtained or given by the *Employer* or Others. The *Contractor* ensures that, prior to Completion and wherever necessary during the course of the works, the conditions and requirements of the licences, consents, notices and approvals, whether obtained by the *Contractor* or the *Employer*, are complied with and that the same are renewed whenever necessary or appropriate.

6.5 Assurance Management

General

- (a) *Contractor* Assurance requires the *Contractor* to provide sufficient evidence to demonstrate to the *Project Manager* that the general and specific requirements of the Works Information and the Standards have been complied with.
- (b) The *Project Manager* monitors Assurance by a process of planned sampling and critical interventions.
- (c) The *Contractor* monitors, inspects, audits and verifies that his suppliers and SubContractors and all tiers supplying the suppliers and SubContractors are providing acceptable Assurance, through procedures and evidence, in compliance with general and specific requirements and the relevant Standards.

Design Assurance

- (d) The *Contractor* provides Assurance to the *Project Manager*, that the proposed design is compliant with all relevant *Employer's* Design Requirements (subject to any concessions granted by the *Employer*), and reduction of all risks associated with the assets to as low as reasonably practicable (ALARP). The *Contractor's* processes for achieving Assurance are identified in the *Contractor's* Project Quality and Assurance Plan.

- (e) Where there is a Defect, the *Contractor* carries out such redesign as may be necessary (and appropriate having regard to the extent of the *Contractor's* design obligations under this contract) to correct, rectify or prevent a recurrence of such Defect. Any such redesign ensures that the performance and operation of the Works and the relevant part thereof is not degraded or reduced by virtue of such redesign from the Standards specified in the Works Information and/or in this contract or if no Standard is so specified, from the Standard reasonably inferred from this contract.
- (f) As a minimum, the design management process is documented in the *Contractor's* Design Assurance Plan to meet both LT-IMS-ENG-106 Issue 2 and ISO 9001 paragraph 7.3.
- (g) The *Contractor* shall verify and record that the Designer(s) or SubContractors undertaking any design have the appropriate professional qualifications to achieve the design assurance requirements.

Construction (including Testing and Commissioning) Assurance

- (h) The *Contractor* Provides the Works in accordance with the assured design and with all applicable law, the Standards and the contract requirements.
- (i) The *Contractor* assures the *Employer*, through submissions to be detailed in the Assurance Plan to the *Project Manager*, that the Works have been constructed in accordance with the contract. The *Contractor* prepares, retains and provides evidence to the *Project Manager* to that effect.
- (j) The *Contractor* implements self certification processes to ensure that the Works have been constructed in accordance with the contract. Such self certification processes includes demonstrably independent scrutiny, monitoring, checking and audit regimes in accordance with the contract requirements. The *Contractor* shall demonstrate independence in assessment, and certification in the quality assurance, quality control and building control processes. The processes are identified in the *Contractor's* Project Quality and Assurance Plan which will indicate the relevant processes and procedures used.

Handover Assurance

- (k) The process of access to the *Employer's* asset and Handback at the end of engineering hours or a closure and Handover of new and altered assets are described in WI 400.
- (l) The *Contractor* develops a strategy, for acceptance by the *Project Manager*, to provide Assurance when it is necessary to take existing assets out of service and to bring new or altered assets into use.
- (m) A reason for not accepting the strategy is that it will not give the *Project Manager* the necessary Assurance that the Works will be constructed in accordance with this contract.

WI 700 – Tests and Inspections

7.1 Tests and Inspections

- (a) The *Contractor* is to provide an inspection and testing Plan that demonstrates that the Works meet the requirements described in WI 100, WI 400 and WI 600. This will typically require testing with regard to form and function as well as testing for compliance with Statutory Requirements, including EMC.
- (b) The requirements for inspection and testing are to be agreed with the *Project Manager* and are to be described in the *Contractor's* inspection and testing plan. The inspection and testing strategy is to include a schedule of Inspection and Test Plans (ITPs). The ITP's should take cognisance of the phased migration of the Works and the inspection details and approval hierarchy developed on a risk based approach.
- (c) The *Contractor* is to produce a Migration Plan. The Migration Plan will provide the proposed phasing of the Works, paying due regard to the transition between 'old' and 'new' assets particularly in the contexts of safety, operability, maintainability, performance, *Employer's* resources and hence also all the associated inspection and testing requirements to be determined during the design phase.
- (d) The *Contractor* is to carry out Takeover inspections under the *Employer's* Notification of Works Requiring Inspection

7.2 Management of Tests and Inspections

- (a) The *Contractor*, his Designers, SubContractors and suppliers engaged in the Design, supply, manufacture, construction, installation, commissioning and testing or any other service connected with the Works, maintain Inspection and Test Plans to satisfy the requirements of London Trams and the *Contractor's* Inspection and Testing Strategy, and other relevant Statutory Requirements appropriate for the deliverables being provided.
- (b) The format shall be submitted to the *Project Manager* for acceptance. The Inspection and Test Plan should make reference to the following:
 - procedures, Safe Systems of Work, etc. needed to carry out the work;
 - acceptance standards such as specifications, Standards and applicable law;
 - requirements for samples, benchmarking, trials and prototypes;
 - records and other deliverables generated as part of the inspection and test process (including any document/form templates to be used);
 - who is responsible for implementing the planned arrangements; and
 - who is responsible for certifying that compliance with requirements has been achieved.
- (c) The *Contractor* stipulates detailed acceptance criteria in the ITP's. As a minimum the acceptance criteria comply with the requirements specified in the Works Information. Where criteria are not specified the *Contractor* proposes acceptance criteria for the *Project Manager's* Acceptance, including the method and frequency of inspection and testing.
- (d) All records from the inspection and testing process are referenced to the location of the item in the Works, and collated and assembled as part of the Assurance

documentation. Copies of all test plans, records and results will be kept in the AMIS (Asset Management Information System).

- (e) The *Contractor* conducts inspections and tests in accordance with his detailed plans and ITPs. *Contractor* personnel performing key inspection activities are independent of those carrying out the Works. The *Project Manager* (or his delegate) will be given the opportunity to witness all inspections or tests as identified within the ITP's.
- (f) The *Contractor* raises a Non Conformance Report where a Non-conformity in a Works item or procedure is noted during inspection, and which cannot be put back in compliance within the same shift.
- (g) The *Contractor* raises defects and outstanding Works lists at appropriate inspection and acceptance stages to record work that has not been completed correctly or is outstanding. The *Contractor* implements agreed remedial action prior to the starting any further activities that may render the non-conforming item inaccessible or difficult to repair.
- (h) The *Project Manager's* acceptance is required where an exception or deviation from specified requirements is proposed by the *Contractor*.
- (i) The *Contractor's* Non-conformity system provides for monitoring and tracking of all Non-conformities that occur within the Contract regardless of who identifies the Non-conformity. Copies of all NCRs are submitted to the *Project Manager* for information, when raised and when closed.
- (j) The *Contractor* provides a copy of all test and inspection results to the *Project Manager* undertaken in the course of Providing the Works.

7.3 Covering up Completed Work

- (a) Works will usually be covered up once the test results are known and are acceptable. Works should not be covered before the results of any testing are known except by prior written agreement with the *Project Manager*. Exceptions requiring the covering up of work may exist if it is otherwise unsafe or is detrimental to the Works.

7.4 Supervisor's Procedures for Inspections and Watching Tests

- (a) The *Supervisor* is appointed by the *Employer* and is responsible for carrying out inspections and witnessing tests and recording the results. His procedure for this work is summarised as follows:
 - o The *Supervisor* may delegate his role, for example, to specialist independent testing firms;
 - o The *Supervisor* maintains a record of inspections he has carried out. This record is updated on a regular basis and issued to the *Contractor* and *Project Manager*;
 - o Each inspection item on the record is referenced back to the Accepted Programme;
 - o The *Supervisor* decides what inspections are necessary to monitor that the Works are delivered in accordance with the Works Information. The *Supervisor* may decline to attend some tests, but will confirm this in writing to the *Contractor*;

- Inspections include, but are not limited to those which the *Contractor* has requested the *Supervisor* to undertake;
- The *Supervisor* enters his observations on the record against each item. Where an element of work is clearly not completed and/or the *Contractor* has not requested an inspection the *Supervisor* only includes comments on the record in relation to significant Defects observed;
- The period following an inspection, by which time the *Supervisor* will issue the results to the *Contractor* will be agreed with the *Project Manager / Contractor*;
- The *Supervisor* shall make arrangements for notifying the *Contractor* of Defects, and shall include a process for discussing remediation proposals and the subsequent actions, including any forms to be used;
- The *Supervisor's* procedures will include a process for making the *Contractor* aware of all Defects as they occur and take measures to prevent repeating them;
- There is no requirement for the *Project Manager* or *Supervisor* to accept / sign off inspection / test sheets that the *Contractor* may wish to submit; and
- In addition to the *Supervisor*, designers or other specialists may carry out inspections. The reports from the inspections may at the discretion of the *Supervisor* be provided to the *Contractor*

WI 800 – Management of the works

8.1 Management and Staff

(a) *TfL* will have the following directly employed staff on site (either full or part time):

- Programme Manager
- *Project Manager*
- Assistant *Project Manager*(s)
- Construction Manager
- Planner
- Commercial team
- HSE Manager

(b) *TfL* will have the following consultant staff on site (either full or part time):

- Site Supervisor
- Assistant Site Supervisor/Clerk of Works (s)
- Ad hoc specialist supervision (environmental, archaeological, ecological) as required

(c) The *Contractor* is expected to have, as a minimum, the following site supervision and management staff:

- Contracts Director
- Site Agent
- Commercial team
- *Contractors* Site Safety Officer
- Public Liaison Officer
- Traffic Management Officer*
- *Contractors* Quality Manager*
- *Contractors* Traffic Safety and Control Officer*
- *Contractors* Designer
- *Contractors* General Foreman.*
- Planning Manager/Project controls Manager

(* means that these roles may form part of the duties of others)

8.2 Risk Management

(a) The *Contractor* submits, within four weeks of the starting date, for acceptance by the *Project Manager*, a Risk Management Plan. The *Contractor* liaises with the *Project Manager* during this time to identify and agree the parameters to be used in the identification and evaluation of risk.

(b) The focus of the Risk Management Plan should be reduction of risk exposure. It should be results-oriented and not place undue weighting on analysis at the expense of action.

It is in the interests of the *Employer* and the *Contractor* to share relevant risk information and work together to prevent the realisation of risks where possible. The Risk Management Plan should identify the impact of occurrence at project activity level and link their manifestation to the project schedules and the Earned Value Analysis monitoring templates.

- (c) In conjunction with clause 16 of the conditions of contract the *Contractor* identifies any changes or newly identified risks to the *Project Manager*.
- (d) The *Contractor* identifies to the *Project Manager* any risks which have been realised and become issues.
- (e) The *Contractor* reports risks and provides risk related information in accordance with the requirements of this contract.

8.3 Risk Reduction Meetings

- (a) The *Contractor* meets with the *Project Manager* not less than once in each four week period to review the Risk Register in accordance with clause 16 of the conditions of contract. The *Contractor* provides the appropriate level of representation at the meetings to review and action the identified risks and notified early warnings.

8.4 Communications

- (a) The *Contractor* does not remove any key person from the contract for more than twenty one (21) consecutive days without the prior written consent of the *Project Manager*, save where such key person is absent on sick leave, or other statutory leave (such as jury service/maternity/paternity or adoption leave) or has left the *Contractor's* employment.
- (b) Any formal claims need to be raised as a hard copy document as well as on the contract administration management system.

8.6.1 Progress Meetings and Reports

- (a) Progress meetings will be held weekly (or more frequently if required). These progress meetings will review the progress to date and the work expected to commence in the following 4 weeks. The schedule shall be reviewed and amended in line with the progress, expected progress, mitigations of delay, CE's etc.
- (b) The *Contractor* shall provide a weekly short progress report. This report shall be completed and submitted to the *Employer* two working days before the progress meeting.
- (c) The weekly progress meeting shall be preceded by a site inspection. This site inspection shall be made by (but not be limited to) the *Employer* and the *Contractors* senior site manager and appropriate *Supervisory* and commercial staff.
- (d) The *Contractor* attendance at the weekly progress meeting will be the *Contractors* *Project Manager*, the senior site manager as well as appropriate *Supervisory* and commercial staff.

8.6.2 Periodic Progress Report

- (a) A full periodic summary report of project progress shall be submitted to the *Project Manager* every 4 weeks. The periodic report contents shall cover progress to match the *TfL* periods. The report must include:
- A progress statement by reference to the accepted programme for the Works;
 - Details of any matters materially affecting the regular progress of the Works;
 - Key activities planned for next month;
 - Earned Value Analysis (EVA) report (including all elements described section 5.5.1);
 - Revised programme for acceptance together with an updated activity schedule.
 - Accidents, incidents and near miss information in relation to on site activities
 - Waste management
 - Total staff working hours

8.6.3 Possession Meetings

- (a) The *Contractor* will be required to attend the *Employer's* Weekly possession meeting where possessions during engineering hours are to take place in the forthcoming 2 weeks.
- (b) The *Contractor* shall attend ad hoc White Board Meetings where weekend possessions are planned to undertake the Works.
- (c) During weekend possessions the *Contractor* shall attend a progress meeting with the *Project Manager* and *Supervisor* at a minimum of twice daily to review progress against planned Works.

8.7 Cost Management and Estimating

- (a) The *Contractor* is to undertake cost management.
- (b) The *Contractor* shall be required to provide cost estimates for design and construction at the end of each *TfL* Pathway stage for internal management and budgetary purposes. An estimating template is to be agreed with *TfL*. This must be aligned to the *Employer's* estimating principles, which are as follows:
- The *Employer* will work with the *Contractor* and agree the cost estimates as it is being compiled. All estimates shall account for any specific work methodologies and contain a quantified risk allowance. The accuracy of the cost estimates and the detailed data within them shall be commensurate with the stage of design;
 - At the start of *TfL* Pathway Stage 3 Concept Design, the *Contractor* estimate will focus on achieving the correct relative cost between the various design solutions to enable the correct choice;
 - At the end of Concept Design, the *Contractor* estimate shall be a more structured cost model with a confidence level of within 20% expected. The main elements of the structure are identified and priced with evidence of market testing;
 - The estimate is to be confidently compare/benchmark with other similar completed schemes that demonstrate their assessments are robust;

- The *Contractor* should agree the estimate base date with *TfL*, prior to commencing any other estimating activities;
 - The *Contractor* shall prepare estimates in accordance with the *TfL* Cost Feedback Structure (CFS), Estimating Guidance notes and Cost & Estimating System Coverage & Inclusion Rules as defined in the cost capture template within schedule 17;
 - The Estimate shall be compiled, with indirect costs populated separately and assumptions logged;
 - The *Contractor* shall not include any design, preliminary, testing and commissioning and overheads and profit costs within unit. The estimates for these costs (with the exception of overheads and profit) are required to be fully resourced, based on programme;
 - The *Contractor* is not required to populate the agreed "Free Issue" and "Internal costs: Those values will be added by *TfL* at a later stage;
 - The *Contractor* shall form a view on estimating uncertainty. A reference to this value and a justification for its selection shall be included in the Assumptions. Estimating uncertainty is not to be treated as risk but as a means to inform *TfL* of the quality of design and price information available to the *Contractor* at the time of preparation of this estimate;
 - The *Contractor* should note that all estimates require approval by *TfL* and may ask to review/ revise certain elements within the estimate (quantities and/or rates) as part of *TfL*'s approval process;
 - All documents used in the preparation of the estimate shall be listed within the estimate;
 - All assumptions and exclusions applicable to the estimate must be described;
 - The *Contractor* shall ensure that estimate has been subject to an internal review by an experienced staff member who must satisfy himself that it is free from errors, that the scope of work has been accurately measured and that the level of pricing is appropriate;
 - The *Contractor* must provide details of the basis for establishing the level of any provisional sums and/or lump sum allowances where requested;
 - The *TfL* CFS structure only defines works up to Repeatable Work Item level. Beyond that level, the *Contractor* should use industry recognised Highways works methods of measurement such as MCHW where possible and if applicable;
 - The *Contractor* shall provide a measurement for each high level RWI in accordance with the unit of measurement suggested in the CFS as defined in the cost capture template within schedule 17. This is to enable the cost benchmarking of estimates against *TfL*'s historical costs;
 - The *Contractor* shall include for any "Temporary and Enabling" works as a subcategory within each of the direct works categories;
 - The *Contractor* is to provide a reconciliation between estimates at each stage along with a commentary of the key changes;
- (c) Risk shall be defined in accordance with *TfL* procedure and processes. The *Contractor* is required to show how the risk value was obtained and to list out all risk considerations. The *Contractor* shall provide cost feedback in the format specified by the *Employer* within the Works Information, as indicated in the cost capture template within Schedule 17 of the Framework Agreement. As a minimum, the *Contractor* must ensure this template is provided at the start and end of pre-construction (Stage 1) and at the end of construction (Stage 2) for final accounting.

- (d) The *Employer* shall manage and administer the booking of the *Contractor's* costs to WBS codes which align to the work undertaken in the schedule. The *Employer* shall issue WBS codes to the *Contractor* for allocation of his cost and invoices.
- (e) The *Contractor* shall submit all costs of staff (via time sheets) and any expenses to be received by the *Employer* on a weekly basis after the cost has incurred.
- (f) Allocation of *Contractor* Staff
- (g) The *Contractor* shall obtain approval from the *Employer* before any staff resources are allocated to work on the scheme. The *Contractor* shall issue a request setting out:
 - o the name, role and rate of staff (proposed for mobilisation);
 - o proposed mobilisation date;
 - o planned demobilisation date.
- (h) The *Contractor* shall not be entitled to payment for staff time for any person who has not been approved by the *Employer* in line with the above requirements.

WI 900 – Working with the Employer and Others

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

- (a) The works have a significant interface with Others in a variety of locations. These interfaces will require the *Contractor* to co-ordinate its works with Others.
- (b) The *Contractor* shall liaise and co-operate with Others in obtaining and providing, via the *Project Manager*, information required in connection with the works and the works of Others.
- (c) Certain operations shall be carried out within or adjacent to the Working Areas by Others under separate arrangements with the *Employer*.
- (d) The *Contractor* shall provide access to Others within the Working Areas to complete their works and be required to work in a collaborative manner with Others.
- (e) The *Contractor* shall hold and attend co-ordination meetings with Others who share the Working Areas. The *Project Manager* shall be invited to these meetings.
- (f) The *Contractor* is responsible for all co-ordination and co-operation within the Working Areas.
- (g) Certain operations not forming part of the works may be carried out within or adjacent to the Site by Others under separate arrangements with the *Employer*.
- (h) In addition, certain parts of the project will also be carried out by Others under separate arrangements with the *Employer*.
- (i) The *Contractor* is responsible for the co-ordination of the works with the activities of Others on the Site in respect of programme and technical interfaces. Failure to demonstrate this within accepted programme may give grounds for non- acceptance by the *Project Manager*.

9.2 Co-operation

- (a) The *Contractor* is only expected to facilitate works from the *Employer* and Others if agreed with the *Project Manager* prior and will have no effect on the progress of the programme.

9.3 Co-ordination

- (a) The *Contractor*, as *Principal Contractor*, holds regular general co-ordination meetings as specified below, to which the *Project Manager* shall be invited. All Others who share the Site will be invited as required.
- (b) The *Contractor* liaises with Others as to their actual progress and arranges the delivery schedules for his Equipment, Plant and Materials accordingly.
- (c) Where the *Contractor* is required to use shared areas within or adjacent to the Site the *Contractor* agrees with the *Project Manager* who is to be the *Principal Contractor* for these parts of the Site and shall ensure that the limits of primacy are clearly delineated.
- (d) The *Contractor* attends coordination meetings chaired by the respective *Principal Contractor* as agreed for that part of the Site, and provides the necessary assistance to the *Principal Contractor* to enable him to manage the construction area.

9.4 Authorities

9.4.1 Local Authority

- (a) The *Contractor* will need to liaise with the Local Authority through the *Project Manager* throughout the project. Points of co-operations are, but not limited to:
- Progress update
 - Design outputs
 - Planning and consents
 - Permissions
 - Legislation

9.4.2 London Trams (Tram Operator)

- (a) The *Employer* is responsible for the management of the Trams Network. Tram Operations Limited (TOL) is responsible for the operation of all trams on the Trams Network.
- (b) The *Contractor* takes all steps to minimise the impact of his construction activities on the Site operations and co-operates with TOL operational staff and the *Employer's* maintenance staff in providing safe and alternative routes and access.
- (c) It is anticipated there will be interfaces where the potential effect on safety and operational tram services may be affected, such operations and service takes priority over the execution of the Works.

9.5 Statutory Undertakers

9.5.1 Introduction

- (a) For the purposes of this part of the Works Information, Utility Works means the diversion, relocation and/or protection of above or below ground utility apparatus located in the public highway or private land. Utility Works in the public highway will be undertaken using the powers contained in the New Roads & Street Works Act 1991 (NRSWA).
- (b) This part of the Works Information describes the *Employer's* and *Contractor's* responsibilities in relation to Utility Works.

9.5.2 The *Employer's* Responsibilities

- (a) The *Employer* is responsible for making preliminary enquiries, requesting draft schemes or budget estimates from Undertakers as much as possible in relation to schemes during the Reference Design stage (i.e. Before the appointment of the *Contractor*). Where this is not possible, the Works Information and Site Information will clearly state the information obtained by the *Employer* and the *Contractor* will be responsible for all remaining information set out in this Works Information.
- (b) In discharging its responsibilities the *Employer* will:
- request records from the relevant statutory undertakers;

- undertake non-intrusive surveys (for example ground penetrating radar surveys);
- undertake trial pit and trial trench excavations to determine the actual location and extent of services;
- appoint the *Contractor* as an agent for the *Employer* and notify Utility providers as such.

(c) The current location of utility apparatus is shown on the drawings in the Site Information.

9.5.3 The *Contractor's* Responsibilities

General

(a) In providing the Stage 1 works the *Contractor* shall:

- request records from the relevant statutory undertakers;
- undertake non-intrusive surveys (for example ground penetrating radar surveys);
- undertake trial pit and trial trench excavations to determine the actual location and extent of services;
- identify the required Utility Works and agree them with the relevant statutory undertakers;
- develop with the statutory undertakers details of the Utility Works for each utility apparatus (including drawings and specifications);
- develop co-ordinated Utility Works plans with the statutory undertakers;
- plan the implementation of the Utility Works;
- agree with the statutory undertakers who will implement the Utility Works on a case by case basis;
- engage *Contractors* to implement Utility Works;
- commence and/or complete specific Utility Works as part of advance and enabling works packages; and
- instruct statutory undertakings to commence and/or complete specific works packages.

(b) In providing the Stage 2 works the *Contractor* shall:

- satisfy itself of the accuracy of the information provided and in particular the location of existing or diverted utility apparatus [if applicable];
- survey, locate and confirm the details of all utility apparatus in the vicinity of the works or affected by the works, whether within the Site, the Working Areas or on the public highway;
- obtain original (C2) drawings of Statutory Undertakers not older than 28 days prior to any excavation works being undertaken. The original drawings supplied by the utility companies indicating the location(s) of their apparatus are held by the *Employer* and are available for inspection by the *Contractor*;
- produce records and drawings indicating the location and details of all utility apparatus within the Site and/or the Working Areas or affected by the works;

- immediately notify the *Project Manager* in the event that uncharted utility apparatus is found and record the location and details on a drawing;
 - implement and operate a Permit to Dig process;
 - where stated in the Works Information, identify and adequately protect all utility apparatus liable to be exposed or to remain exposed or be affected during delivery of the works;
 - not interfere with the operation of utility apparatus without prior consent from the apparatus owner;
 - afford clear and uninhibited access to the utility apparatus owner for any of their apparatus located within the Site and/or the Working Areas or affected by the works;
 - comply with the specific procedures/processes prescribed by the Statutory Undertakers when working on or close to their assets;
 - identify any other Utility Works, temporary or permanent, required as a result of Providing the Works including those resulting from occupation of additional Working Areas it proposes to use;
 - report any damage to services immediately to the *Project Manager* through the agreed reporting procedure;
 - arrange the temporary site utility supplies other than those identified to be provided by the *Employer*;
 - be responsible for making good any temporary repairs to the road surface, the footways and kerbing following service and supplies alterations;
 - confirm with statutory undertakers the lowering/raising of chamber covers and type of construction to be included in the *Contractor's* works;
 - be responsible for reseating, replacing and the relocation of service and supply covers where necessary including lowering/raising of chamber walls;
 - be required to excavate redundant ducts and demolish redundant chambers as identified;
 - communicate and co-ordinate with Others undertaking Utility works on behalf of a Statutory Undertaker; and
 - obtain all required consents, licences with the Statutory Undertaker, communicates and co-ordinates with Others where the works include the execution of Utility Works.
- (c) As part of the Contract works or works carried out on behalf of Statutory Undertakers or other relevant parties, temporary reinstatements may be required in order to permit normal use of areas by the public.
- (d) Notwithstanding the above, if damage is sustained to services and supplies during the works that require repair or if unforeseen services and supplies affecting the works are discovered and require alteration, the *Contractor* shall make arrangements with the Statutory Undertakers and others concerned, for the co-ordination of his work with all work that needs to be done by them or their *Contractors*, to implement the repairs and/or alterations within the Accepted Programme of works.

Health and Safety

This section shall be read in conjunction with Section 11, Health and Safety of this Works Information.

- (a) Damage to underground and overhead utility apparatus can cause fatal or severe injury and is a particular hazard for construction activities. The *Contractor* shall ensure that all reasonable precautions are taken in Providing the Works to eliminate this hazard. This shall include but not be limited to:
- complying with the requirements of 9.5.3 above;
 - developing a safe system of work including the implementation and operation of a Permit to Dig process;
 - providing specific training for all employees to highlight the hazards and danger from utilities apparatus and explain the safe system of work;
 - compliance with the requirements of HSG47 – Avoiding Danger from Underground Services; and
 - using personnel protective equipment which address the specific hazards posed by utility apparatus, e.g. flame retardant clothing.

Utilities Personnel

- (b) The *Contractor* shall appoint a Utilities Co-ordinator. The *Contractor* shall submit a staffing plan for all utilities personnel as part of the Utilities Plan for the works.
- (c) The Utilities Coordinator shall:
- be the principal logistics point of contact for utilities related activities;
 - produce and implement the Utilities Plan;
 - develop and provide utilities training for all personnel to include induction, tool box talks and specific training for personnel with logistics responsibilities;
 - manage all utilities personnel;
 - co-ordinate between utilities personnel and the construction teams;
 - approve the utilities related elements of the *Contractor's* method statements;
 - ensure compliance with utilities legal and contractual requirements;
 - liaise with the *Contractor's* procurement personnel to ensure that procurement activities take due cognisance of utility requirements and risks;
 - analyse individual utility related incidents and complaints to identify root causes, corrective and preventative actions needed, trends and strategic actions;
 - manage logistics monitoring included in the Works Information or as required by consents, including analysis and interpretation of monitoring results and actions; and
 - produce report information for the utilities part of the progress report and attend the progress meeting to ensure that the Utilities Plan remains suitable, adequate and effective;
- (d) The Utilities Coordinator shall have the following competencies:

- appropriate experience of utilities management, including site experience on construction projects;
- experience of the NRSWA;
- experience of liaising with and co-ordinating statutory undertakers;
- good knowledge and practical experience of legal requirements and how to comply with them; and
- experience of liaison with stakeholders including local authorities, the police and Highways Agency.

9.5.4 Utilities Plan

(e) The *Contractor* will develop a plan for managing the Utility works or as otherwise agreed with the *Project Manager*. This should include resource requirements, co-ordination of works and other relevant information relating to the works.

(f) The *Contractor* shall not commence work on site until the *Project Manager* has accepted the Utilities Plan.

(g) The Utilities Plan shall include:

- the management processes and procedures for complying with the legal and contractual requirements and other requirements of the Works Information;
- a staffing plan containing:
 - the roles and responsibilities including the job title of the
 - nominated person responsible for each task;
 - the role fulfilled by the key person; and
- a schedule identifying personnel employed directly, SubContractors, full and part time personnel and the duration of their activity on the contract;
- the process for liaison and communication with others, including other Project *Contractors* and statutory bodies, where required by the Works Information;
- the processes for liaison and communication with SubContractors and suppliers or any tier and ensuring compliance with the minimum requirements of the Works Information;
- the *Contractor's* programme for training, site inspections, audits and consents submissions;
- the process for identifying, planning and implementing Utility Works;
- details of temporary works which may affect utilities, mitigation measures and details of how this will be communicated to the Statutory Undertakers in order to seek their acceptance;
- details of personnel protective equipment specific to Utility Works and other Health and Safety measures;
- a Permit to Dig procedure;
- details to ensure compliance with NRSWA and the Crossrail Act 2008;
- details of and process for complying with the requirements of *Contractor* Identified Utility Works; and

(h) details and process for complying with the requirements of Utility Works Implemented by the *Project Manager* or Statutory Undertaker. Contact details for the Statutory Undertakers responsible for each utility apparatus will be provided by the *Project*

Manager. The *Contractor* shall ensure the plan is appropriate to all activities included in the works. The *Contractor* shall train all employees, including SubContractors and suppliers of any tier, with direct or indirect responsibilities under the plan, on the contents of the plan that apply to its work.

- (i) The *Contractor* shall review and update the plan to ensure it remains suitable, adequate and effective as the works progress, ensure that it reflects the current status of the works and:
 - o following any material change to the status of the works or site that has an impact on logistics requirements;
 - o as instructed by the *Project Manager*; and
 - o at least every 6 months, the revised plan shall be submitted to the *Project Manager* for acceptance.

9.5.5 Utility Works Using the New Roads & Street Works Act 1991

- (a) Utility Works in the public highway will be undertaken using the powers contained in the NRSWA and in particular Highway Authorities & Utilities Committee (HAUC) Code of Practice – Measures Necessary Where Apparatus is affected by Major Works (Diversionary Works). Appendix C of this HAUC Code of Practice details the process to be followed from identifying utility works to completion of those works. The *Contractor* shall take due cognisance of the time taken to serve notices and implement the Utility Works and/or obtain such consents when planning the works.

9.5.6 Contractor Identified Utility Works

- (a) If in providing the Works the *Contractor* identifies that further Utility Works will be required, it notifies the *Project Manager* of the additional Utility Works and provides details of the nature and extent of the Utility Works prior to making contact with the relevant Statutory Undertaker.
- (b) Where the *Contractor* identifies that further Utility Works are necessary, the *Project Manager* will instruct the *Contractor* on who will be responsible for implementation of the Utility Works.
- (c) Before commencing any work which is near to, or will / may affect any utility apparatus, and which requires additional Utility Works, the *Contractor* shall submit to the *Project Manager* for acceptance:
 - o a plan and description of the works including the additional Utility Works; and
 - o details of any protective measures to be undertaken in respect of the utility apparatus and a specification of those measures.
- (d) The *Contractor* shall not commence the relevant works until he has received approval from the Statutory Undertaker and acceptance from the *Project Manager*.
- (e) For *Contractor* identified additional Utility Works, the *Contractor* shall:
 - o demonstrate to the *Project Manager* that implementing the Utility Works is the most cost effective and efficient solution;
 - o agree with the *Project Manager* and Statutory Undertaker that the Utility Works are required and that the *Contractor's* chosen method of working cannot be altered to avoid the Utility Works;

- in conjunction with the *Project Manager*, identify the specific notices and undertakings and assurances required as part of that process;
- incorporate the Utility Works into the programme which shall then be submitted for acceptance and ensure that sufficient time is allowed in the programme for serving the relevant notices, obtain the necessary consents, provide the required information to enable those consents to be granted and implement the Utility Works;
- obtain agreement to the Utility Works from the Statutory Undertaker and *Project Manager*; and
- agree with the statutory undertaker and *Project Manager* who shall implement the Utility Works (the *Contractor*, other *Project Contractors* or the statutory undertaker).

(f) If the *Contractor* implements the Utility Works then the *Contractor* shall:

- produce a design for the civil engineering scope of the proposed Utility Works and submit it to the *Project Manager* for acceptance and for approval from the relevant statutory undertaker;
- use a SubContractors approved by the statutory undertaker to undertake the Utility Works;
- develop a detailed implementation plan for the Utility Works and agree it with the statutory undertaker and *Project Manager*;
- comply with the specific procedures/processes prescribed by the Statutory Undertakers when working on or close to their assets;
- ensure the statutory undertaker inspects the Utility Works as it is implemented;
- obtain approval from the statutory undertaker that the Utility Works are to the required standard and will be adopted by the statutory undertaker;
- arrange for the statutory undertaker to implement any connections or disconnections to their network where the Statutory Undertaker requires that they make their own connections/disconnections; and
- produce as-built records of the Utility Works including drawings, specifications, inspection and test certificates.

9.5.7 Utility Works Implemented by the *Employer* or Statutory Undertaker

(a) If the *Employer* or statutory undertaker implements the Utility Works then the *Contractor* shall:

- provide site and welfare facilities as required by the *Project Manager*;
- act as Principal *Contractor* under the CDM Regulations for Utility Works within the worksite or Working Areas for which it is identified as Principal *Contractor*;
- incorporate sufficient time for the Utility Works into the Accepted Programme;
- not alter the programme for the Utility Works without prior approval from the *Project Manager*; and
- afford clear and uninhibited access to the statutory undertaker or other *Project Contractors* to allow them to complete the Utility Works in a timely and efficient manner.

(b) Where appropriate, co-ordinate these works with other works within their remit and liaise with the Statutory Undertaker accordingly.

WI1000 Services and other things to be provided

10.1 Facilities/Services Provided by the *Contractor*

- (a) The *Contractor* will provide the following services in addition to those outlined in the Works Information:
 - Within the compound area, the *Contractor* is to provide an office facility for the sole use of the *Employer* and the *Project Manager*. This should include an office space big enough to facilitate two tables and the use of welfare facilities.
- (b) The *Contractor* will provide the following accommodation for the overseeing organisation;
 - Site accommodation for the exclusive use the overseeing organisation to house 2 persons with desk and chairs to suit
 - PPE for use on site for 4 persons [visitors]; Boots, Waterproof jackets and trousers; gloves, safety hats and glasses

10.2 Facilities/Services Provided by the *Employer* (ECC 25.2)

10.2.1 Access to Premises

- (a) Any *TfL* Premises made available to the *Contractor* in connection with this contract shall be free of charge and shall be used by the *Contractor* solely so the *Contractor* can Provide the Works provided, for the avoidance of doubt, that the *Contractor* is responsible for its own costs or travel including any congestion charging and/or low emission charging. The *Contractor* shall:
 - Have the use of such *TfL* Premises as licensee and shall not have or purport to claim any sole or exclusive right to possession or to possession of any particular part of such *TfL* Premises;
 - Vacate such *TfL* Premises upon the termination or expiry of the contract or at such earlier date as the *Employer* may determine;
 - Not exercise or purport to exercise any rights in respect of any *TfL* Premises;
 - Ensure that the *Contractor's* employees, SubContractors and Indirect SubContractors and persons connected to them carry any identity passes issued to them by the *Employer* at all relevant times and comply with the *Employer's* security procedures as may be notified by the *Employer* from time to time; and
 - Not damage the *TfL* Premises or any assets on the *TfL* Premises.
- (b) Nothing in this clause shall create or be deemed to create the relationship of landlord and tenant in respect of any *TfL* Premises between the *Contractor* and any member of the *TfL* Group.
- (c) The *Employer* shall be under no obligation to provide office or other accommodation facilities or services (including telephony and IT services) to the *Contractor* except as may be specified in the Works Information.
- (d) The *Employer* is responsible for maintaining the security of *TfL* Premises in accordance with its standard security requirements. The *Contractor* shall comply with all of the *Employer's* security requirements while on *TfL* Premises, and shall

ensure that all of the *Contractor's* employees, SubContractors, Indirect SubContractors and persons related to them comply with such requirements. Upon request, the *Employer* shall provide the *Contractor* with details of the *Employer's* security procedures.

- (e) The *Employer* reserves the right under this contract to refuse to admit to any *TfL* Premises any of the *Contractor's* employees, SubContractors, Indirect SubContractors and persons related to them who fail to comply with any of the *Employer's* policies and standards referred to in this contract.
- (f) The *Employer* reserves the right under this contract to instruct any of the *Contractor's* employees, SubContractors, Indirect SubContractors and persons related to them personnel to leave any *TfL* Premises at any time for any reason and such personnel shall comply with such instructions immediately.
- (g) Where the *Contractor* is required to access (with appropriate permission and approval of the *Employer*) any areas under the control of any of the *Employer's* PPP or PFI *Contractors*, the *Contractor* must comply (and ensure that any SubContractors and Indirect SubContractors comply) with all of their rules, regulations and standards as appropriate.

10.3 Materials Off Site

- (a) Not applicable

10.4 Contract Management System

- (a) The *Contractor* and *Project Manager* will utilise a web-based contract administration management system ("CAMS") called ASITE. Should the *Contractor* require training then the *Employer* can provide this free of charge

WI 1100 – Health and safety and Environmental

11.1 General Health and Safety Requirements

- (a) The *Contractor* complies with all of the requirements listed in the Surface Transport Contract Conditions when working on the highway, tramway and its structures.
- (b) The *Employer* is responsible for delivering the programme in accordance with the Surface Transport Health Safety and Environment Policy. The *Employer's* Health Safety and Environment Policy Statement sets the leadership framework for the delivery of the programme in line with this policy and the additional objectives set by the *Employer*.
- (c) The *Employer's* vision for health and safety is of a world class project delivery with zero harm. The *Employer's* strategy for delivering this is to implement effective health and safety management systems and behaviours.
- (d) The *Contractor* complies with the spirit and intent of the *Employer's* Health Safety and Environment Policy Statement and health and safety strategy.
- (e) The *Contractor* and their supply chain implements measures to mitigate and manage the key risks to as low as reasonably practicable (ALARP) through:
 - o robust design risk management
 - o effective processes for assessing risk and developing safe systems of work
 - o construction phase plan and emergency preparedness plan
 - o world class behavioural safety programme with full participation by all
 - o high levels of leadership commitment and supervision and engagement in monitoring and managing the works, rectifying deficiencies and continuously improving
 - o personal competency, development and innovation
 - o exemplary standards of health and safety performance and management whether in design, construction or procurement to ensure that the *Employer's* vision is delivered on the worksite and compliance with health and safety legislation
 - o comprehensive occupational health management scheme
 - o pre start meetings
 - o *Contractor's* workers are work ready through site inductions, toolbox talks and daily pre work briefings
 - o "One Team" culture, honesty, openness and engagement
 - o rewarding good performance and challenging poor performance.
- (f) The *Contractor* responds promptly if the *Project Manager* requests a meeting with a senior representative from the *Contractor* (typically a Director identified as responsible for the works) to discuss any reportable event, adverse trends or other evidence of a serious non-conformity with the legislation or health and safety requirements stated in this part of the Works Information.
- (g) The *Contractor* ensures that all employees and SubContractors and suppliers of

any tier are made aware of their responsibility for their own safety and the safety of others and for ensuring that the activities they undertake are safe and do not place others at risk. A banksman/signaller is used for all loading, unloading and lifting operations, for all vehicle movements across the public footway notwithstanding the presence of a dropped kerb and for all vehicle movements where the vehicle is reversing or the driver's view is restricted.. All vehicle entry and exit movements to each worksite are managed using a banksman. The *Contractor* ensures that employees do not enter any areas where they are putting themselves or others at risk in doing so. All associated work trackside shall comply with the *Employer* standards and processes

- (h) The *Contractor* ensures that his employees participate in the health and safety initiatives that the *Contractor* and *Employer* use to review and improve health and safety performance collectively with their supply chains. This includes the requirement to attend routine health and safety meetings, briefings and SubContractor forums.
- (i) The *Contractor* produces, cascades, communicates and circulates health and safety alerts and communications to all levels of the workforce. Records of these being briefed are retained by the *Contractor*.

11.2 Contractor's Health and Safety Management Systems

- (a) The *Contractor* has a health and safety management system that, as a minimum, meets the requirements contained in OHSAS18001.

11.3 Health and Safety Advice

- (a) The *Contractor* ensures the provision at all times of a suitably competent health and safety manager to oversee and direct a sufficiently sized and competent team of health and safety professionals to fully implement all the applicable health and safety requirements. The *Contractor* provides CV's for all members of the health and safety Team in their proposal and ensures that these people once accepted are made available to provide the works. The *Contractor* informs the *Project Manager* of any changes in personnel and provides CV's for new members of the Team.

11.4 Procurement and Supply Chain Management

- (a) During the procurement process and after the appointment of SubContractors, the *Contractor* is responsible for ensuring that SubContractors are aware of and understand the health and safety requirements stated within this part of the Works Information. The *Contractor* coordinates and manages the interface between his SubContractors to ensure compliance with the health and safety requirements set out in this part of the Works Information and monitors and reports health and safety performance periodically to the *Project Manager*.

11.5 Health and Safety Training

- (a) The *Contractor* ensures the delivery of health and safety training at all stages of the project for all persons (including SubContractors and suppliers of any tier) engaged on the works. In particular, training is provided early in the programme to raise awareness of how health and safety initiatives can be incorporated into the design and construction phases to maximise performance in these areas and assist with mitigating any associated impacts. Specific training is also provided to construction staff to ensure that they are aware of the required mitigation

measures detailed in the construction phase plan. The *Contractor* meets all training, assessment and associated costs.

- (b) The *Contractor* ensures that all employees, visitors, SubContractors and suppliers of any tier and others working on site attend a site induction and any other training appropriate to the work taking place before the person starts work on the site.
- (c) The *Contractor* puts in place systems that ensure all inductions/training are implemented effectively and that the persons providing inductions have received adequate training to do so. The *Contractor* ensures that these are carried out in a suitable place with appropriate visual aids.
- (d) The *Contractor* has a procedure in place that assists those personnel with learning, reading and language difficulties.
- (e) The *Contractor* maintains a written record of attendance for inductions and safety briefings. This record is available to the *Project Manager* on request.

11.6 Construction Skills Certification Scheme (CSCS)

- (a) The *Contractor* ensures that all employees, SubContractors and suppliers of any tier and other *Contractors* entering the site are in possession of a valid CSCS card. The *Contractor* ensures that the CSCS card held by any individual is appropriate to their specific job task(s).
- (b) An exception to this requirement is granted where the individual holds a valid card from a CSCS affiliated or amalgamated scheme or other accepted scheme which has been assessed as meeting similar standards. Special dispensation may be given by the *Contractor* to provide access to visitors when on an accompanied site visit.

11.7 Management of Site Hazards

- (a) The *Contractor* takes appropriate action with regards to the site hazards identified by the Principal Designer and/or the *Project Manager* in association with the works contained in the Pre Construction Information. The *Contractor* also considers the hazards identified in the development of their detailed design using the Design Risk Management process of the Construction (Design and Management) Regulations 2015 (CDM Regulations). The *Contractor* ensures that they properly communicate the hazards on drawings or through risk registers and controls the residual risks via risk assessments, method statements and activity plans as part of their safe system of work so that they are understood by the workforce.
- (b) The *Contractor* also considers the site hazards that are normally associated with working on a construction site and on the public highway. These include, but are not limited to, confined spaces, working at heights, asbestos containing materials, buried services, overhead utilities, hazardous materials, contaminated land, uneven surfaces, high and low voltage cables, moving machinery, moving vehicles and pedestrians. The *Contractor* undertakes his own site hazard survey prior to starting works on site to verify the site information and identify any other risks that may affect the works.
- (c) For the avoidance of doubt, the *Contractor* is responsible for the safe management, including removal if necessary, of all asbestos from site. The *Employer* is responsible for the safe management of asbestos in/on existing

Surface Transport structures/premises. The *Contractor* has regard to the Pre Construction Information.

11.8 The Construction (Design and Management) Regulations 2015

- (a) The *Employer* is the Client. The *Contractor* is the Principal Designer as defined in the CDM Regulations as named in the Contract Data.
- (b) The *Contractor* is the Principal *Contractor* as defined in the CDM Regulations as named in the Contract Data.
- (c) In accordance with its duties under the CDM Regulations, the *Contractor*, as Principal Designer and Designer and Principal *Contractor*, is responsible for developing the design(s) that meet the requirements of the CDM Regulations and planning, managing and monitoring the construction phase of the works including the work to be completed by others with whom the *Contractor* shares the worksite.
- (d) Without limitation to its duties under the CDM Regulations, the *Contractor*, as Principal Designer and Designer and Principal *Contractor*.
 - designs the works so that hazards are considered throughout the project lifecycles of construction, operation/use, maintenance and demolition and ensures that hazards are eliminated or reduced and controlled to ALARP;
 - the *Contractor*, as Principal Designer and Designer and Principal *Contractor* must ensure that regular design and build reviews are carried out and documented throughout the design life of the project in agreement with the *Project Manager*
 - provides site induction;
 - issues security passes and controls site access;
 - secures the site from unauthorised access;
 - maintains traffic management and pedestrian segregation 24/7;
 - reviews risk assessments and method statements of others for adequacy, coordinates the work of others, plans the work to eliminate injurious interfaces and records this planning in the construction phase plan;
 - provides and maintains adequate, suitable and sufficient welfare facilities; and
 - collates information for the Health and Safety File from others with whom the *Contractor* shares the worksite. The *Contractor* populates the Health and Safety File for each structure that is part of the works with the information required. Such information will be in a format prescribed by the *Employer* and fulfils the requirements of the CDM Regulations. The Health and Safety File will include those items identified in clause 3 of Appendix 4 of the Health and Safety Executive's guide to the CDM Regulations, Managing Health and Safety in Construction. The format of the Health and Safety File will comply with Surface Transport Standards.

11.9 Incident Reporting, Investigation, Performance Monitoring

- (a) The *Contractor* shall report all HSE incidents, accidents and near miss events which occur during the contract immediately via the agreed electronic reporting mechanism and complete an initial 48 hour report

- (b) If required by LT, the *Contractor* shall, within fourteen (14) days submit an initial written report detailing as a minimum the following:
- description of the incident;
 - immediate actions taken;
 - immediate causes;
 - root causes;
 - actions taken to prevent a recurrence;
 - skills, knowledge and experience of those involved – *Supervisors* and operatives; and
 - details of plant/equipment used including calibration and maintenance
- (c) With the agreement of the *Project Manager* a longer timescale to complete the final report may be agreed.
- (d) All investigation reports will be completed to establish root causes and to a level of detail acceptable at the time to the *Employer*. Any comments provided by the *Employer* shall be addressed by the *Contractor* and an updated report submitted if required.
- (e) Where serious accidents occur – Major injuries and Dangerous Occurrence (as defined in RIDDOR) - these shall be reported to the *Project Manager* immediately (by phone) and be subject to a thorough formal investigation and the relevant authority (HSE/ORR)
- (f) Nothing in this document supersedes the *Contractor's* responsibility for statutory reporting of incidents/accidents.
- (g) To support the analysis of health and safety performance, the *Contractor* provides the *Project Manager* with the details of the number of hours worked (including for the avoidance of doubt, by SubContractors and other suppliers) for the work carried out and the number of personnel involved, in each four week period to be stipulated by the *Project Manager*. This data is to be submitted no later than Wednesday of Week 1 of the following period, and includes for all the *Contractor's* staff and personnel employed on the works since last report. The cumulative report is broken down by management, site level supervision and operatives.

11.10 Non English Speaking Workers

- (a) The *Contractor* shall describe within the Construction Phase Plan their arrangements for ensure that health and safety information is effectively communicated and understood by all non-fluent English speaking staff and SubContractors. This information shall include but is not limited to:
- Site emergency procedures
 - First aid arrangements
 - Risk assessments/method statements

11.11 Personal Protective Equipment (PPE)

- (a) The *Contractor* shall assess and provide appropriate PPE for use of his employees and SubContractors as follows:
- PPE provided shall be free of charge to all personnel, as required and appropriate, for the job task; and
 - PPE fits the individual and is laundered, maintained and/or replaced to ensure that it remains effective at all time
- (b) The *Employers* minimum requirements are:
- hard hat with company branding;
 - eye protection (safety glasses or other suitable eye protection);
 - hand protection (gloves) (subject to a task specific risk assessment agreed by the *Contractor*, gloves may be omitted);
 - safety boots with ankle protection/support; and
 - high visibility jacket (Class 3 – EN 471) and trousers with reflective strips for all works undertaken on the railway with company branding.
- (c) Dependant on the job task function and site conditions, personnel are also to be provided with:
- respiratory protection equipment;
 - hearing protection; and
 - hot, wet or inclement weather protection.
- (d) The *Contractor* ensures that all personnel wear PPE appropriate to the risks of each task and demonstrate that risk control systems are in place.
- (e) The *Contractors* PPE and clothing requirements are to be provided for use on site of the *Project Manager*, his staff, visitors and other agents involved in the contract.

11.12 First Aid, Occupational Health, Drugs and Alcohol

- (a) The *Contractor* shall make suitable and sufficient arrangements for first aid based on the:
- nature and size of the works;
 - size and distribution of the workforce;
 - needs of traveling, remote and lone workers;
 - hours of work; and
 - multi-occupied worksites.
- (b) The *Contractor* shall ensure access to an occupational health services provider. The occupational health service will be active at all times when work is being undertaken.
- (c) The *Contractor* uses and consults specialist providers, where necessary, to

promote health surveillance, health awareness and general occupational health arrangements.

- (d) The *Contractor* shall operate a drugs and alcohol policy and implements suitable arrangements to verify compliance with that policy including undertaking the necessary alcohol and drug testing. In addition the *Contractor* shall co-operate with the *Employer* who may require the execution of random and/or for cause alcohol and drug tests. The *Contractor* shall provide records of testing if requested by the *Employer*.
- (e) The following reactive occupational health services are provided for each individual engaged by the *Contractor* (including the employees of site-based SubContractors and suppliers of any tier including labour only supply):
 - o testing for drugs and alcohol in individuals in accordance with the *Contractors* policy;
 - o providing pre-employment medicals;
 - o providing health questionnaires on commencement for all individuals including site and office-based staff;
 - o providing specific health appraisals for those referred following evaluation of questionnaires;
 - o providing specific health surveillance for those requiring it where identified under regulations and/or risk assessment;
 - o providing occupational hygiene services to support and assess ill health prevention management;
 - o contributing to the effectiveness of attendance management, rehabilitation and return-to-work programmes and support for ill health incidence investigation where necessary; and
 - o providing health promotion programmes applicable to construction operatives' workplace, lifestyle and wellbeing.
- (f) The *Contractor* has agreed occupational health protocols for the following health surveillance:
 - o Hand Arm Vibration syndrome surveillance
 - o Fatigue management
 - o Stress management
 - o Respiratory health

11.13 Welfare Arrangements

- (a) The *Contractor* provides welfare facilities to support the overall occupational health programme. Welfare facilities are established and in working order before the works commence. All toilet, washing, changing, personal storage and rest areas are easily accessible and have adequate heating, lighting and ventilation. Facilities may need to be provided at more than one location on a large site to ensure workers have easy access.
- (b) The *Contractor* ensures good hygiene standards throughout the welfare and office facilities are provided.

(c) As a minimum the *Contractor* ensures that all of the following are provided before the works commence:

- toilet facilities, including provision for female workers and accessible toilets;
- washing facilities with warm running water and showers (including provision of barrier and after care skin treatments etc.), including provision for female workers;
- facilities for storage and drying of work wear, including lockers;
- rest facilities;
- designated smoking areas;
- designated mobile phone use areas;
- drinking water;
- facilities for making hot drinks;
- general maintenance and cleaning; and
- welfare vehicles/temporary facilities.

11.14 Equipment, Materials or Substances Hazardous to Health

(a) The *Contractor* gives the *Project Manager* such written notice as the *Project Manager* requires prior to the use under the contract of any equipment, materials or substances that may be hazardous and a risk to the safety, health or welfare of persons or property. The *Contractor* identifies the hazards and provides full details of any precautions to be taken on the use of such equipment or materials.

(b) The *Contractor* only specifies substances and materials for incorporation in the works and incorporate substances and materials;

- which are in accordance with the relevant standards and general good building and engineering practice, and
- substances and materials which are not in accordance with the guidelines contained in any publication of the Building Council of Offices' Good Practice in the selection of Construction Materials current at the time of incorporation of such substances or materials into the works provided that this sub-bullet does not apply where an experienced *Contractor* would have judged at the time of the substances or materials being specified that there was no reasonable prospect of them being declared 0 by the scheduled date for their incorporation into the works.

(c) The *Employer* will supply all information in his possession in respect of the presence of asbestos containing materials within the site/structure. The information will be included in the Pre-Construction Information. Based on this information, the *Contractor* shall liaise with the *Project Manager* to determine where additional surveys will be required and the type of survey to be undertaken.

(d) Where no surveys exist the *Contractor* will consult with the *Project Manager* on the requirement for, number and type of any asbestos survey before the commencement of works.

(e) Where the *Contractor* believes that they have disturbed asbestos as a consequence of their works, they shall stop works immediately, inform the *Project*

Manager and report the incident as a Near Miss via the agreed reporting process. The *Contractor* will prepare a report of the incident and provide it to the *Project Manager* in accordance with the requirements described under Incident Reporting, Performance Monitoring and Meetings.

11.15 Emergency Plan and Fire Safety

- (a) The *Contractor's* Emergency Preparedness Plan (EPP) shall be submitted to the *Project Manager* for review prior to commencement of work on site. In addition to describing the emergency arrangements for the works and activities on site i.e. entry to confined spaces, the plan shall consider potential impacts beyond the site boundary, especially where there are interfaces with the road network, operational assets and neighbours etc. Any existing site specific EPPs will be provided as part of the pre-construction information, and should be incorporated in the *Contractor's* EPP as appropriate. The emergency arrangements for the works can be included in the Construction Phase Plan if preferred by the *Contractor*.
- (b) The *Contractor* provides fire prevention and fire precautions training to all employees, particularly fire wardens/marshals and training for key emergency management personnel as required for the effective implementation of the procedures.
- (c) The *Contractor* in consultation with the *Project Manager* arranges at least one simulated emergency exercise in each twelve week period following commencement of work on site.
- (d) Immediately following an emergency or following a simulated emergency exercise, the *Contractor* shall review the actions taken against the requirements set out in the EPP and revise the EPP accordingly. The output of these reviews shall be provided to the *Project Manager*.
- (e) The *Contractor's* EPP includes emergency pollution control measures compliant with Environment Agency (EA) guidelines including emergency phone numbers and the method of notifying local authorities and statutory authorities.
- (f) The *Contractor* ensures that all works are compliant with the relevant legislation, standards and guidance on fire safety.
- (g) The *Contractor* ensures that regular site inspections include those of the *Contractor's* fire safety arrangements, are recorded and the completed forms are maintained on site in the appropriate site files.
- (h) In accordance with the Regulatory Reform (Fire Safety Order) and Fire Safety on Construction Sites (HSG168) published by the Health and Safety Executive, as appropriate, the *Contractor* produces fire risk assessments identifying the nature and level of risk for the scope of works.
- (i) In the event of a fire emergency the *Contractor* complies with the requirements of the EPP in order to ensure a speedy evacuation of the site and to account for all personnel.
- (j) The *Contractor* complies with the requirements of the LFEPA or other relevant fire authority for the provision of site access points. Where appropriate, the accesses are designed to the requirements of LFEPA Publication: Fire Safety Guidance Note Number 29 Access for Fire Appliances. The access points must also be suitable for access for ambulances.

11.16 Behavioural Safety

- (a) The *Contractor* implements a behavioural based safety programme with the aims of:
- lead by example;
 - increase awareness of behaviours;
 - develop a no name/no blame culture with the workforce;
 - recognise safe behaviour, challenge and manage unsafe behaviour;
 - identify and remove hazards;
 - provide positive observations and feedback;
 - reduce at risk behaviours/conditions; and
 - increase immediate corrective action.
- (b) The *Contractor* appoints behavioural safety leaders from within their workforce. The behavioural safety leaders are required to:
- attend behavioural safety briefings;
 - manage behavioural safety logs;
 - lead by example on site and embody the values of behavioural safety;
 - walk the site and raise all safety concerns;
 - raise awareness and brief Site Team on behavioural safety and encourage all on site to raise safety concerns, remove hazards as they find them and record and report them as required;
 - liaise with the *Project Manager* and escalate any issues that may need resolving; and
 - attend behavioural safety leader meetings. The *Contractor* recognises and rewards safe behaviours.
- (c) The *Contractor* undertakes a safety culture survey of the workforce and staff quarterly and includes the *Project Manager*. The survey is based on an industry recognised survey tool. The *Contractor* reports on the progress towards a world class safety culture based upon the findings of each quarterly survey at the monthly meeting following the completion of the preceding quarterly survey and include an action plan to maintain and improve the culture.

11.17 Health and Safety Innovation, Best Practice and Campaigns

- (a) The *Contractor* identifies trials and implements health and safety innovations in consultation the *Employer* or *Project Manager*.
- (b) During the lifecycle of the project it is anticipated that a number of industry best practices will be developed and rolled out across the project. Where identified the *Contractor* adopts such industry best practice to improve health and safety performance. Such industry best practice may comprise of health and safety standards and behavioural techniques and processes along with general site safety 'best practices' adopted from specific *Contractors*.
- (c) The *Contractor* engages with *Employer* or *Project Manager* to identify and deliver health and safety campaigns.

11.18 Site Mobilisation and Start of Works

- (a) The *Contractor* does not commence construction of the works until he has fulfilled all of his obligations under the CDM Regulations and has received formal notification from the *Project Manager*.
- (b) A pre-commencement readiness assessment is undertaken by the *Project Manager* to ensure that the *Contractor* has in place the documentation, consents, processes and controls to allow the works to proceed. The *Contractor* supplies all necessary information and/or access to information that the *Project Manager* requires to support this process.

11.19 Information

- (a) The *Contractor* ensures that:
 - health and safety records relevant to the works, including induction, training and equipment inspection and testing records, are kept on site and are available for inspection on request;
 - copies of all relevant health and safety information to particular worksite activities is held by the team carrying out the work including method statements, risk assessments, written briefings, permits to work and safety alerts/bulletins;
 - site safety briefings are provided to all persons carrying out work tasks subject to method statement, risk assessments and permit controls and written records maintained of briefings signed by all persons carrying out the tasks (these briefings are completed daily and when the task or condition changes);
 - the works are suitably supervised at all times and that operatives are aware of the person supervising their work activities and their whereabouts at all times;
 - *Supervisors* receive induction on the health and safety requirements and of their specific responsibilities for health and safety aspects; and
 - good use is made of visualisation boards at each site/work area where daily group briefings take place with the task specific briefing carried out at the workplace with the individual task team.

11.20 Site Supervision

- (a) The *Contractor* ensures that competent persons supervise and manage the works at all times and that there are arrangements in place to specifically address the supervision of new personnel to site and any others at particular risk. The arrangements also include those for addressing foreseeable emergencies. The *Supervisory* arrangements are reviewed for adequacy and suitability in connection with any lone or isolated work.
- (b) Persons appointed to *Supervisory* and management positions have the necessary skills, knowledge and experience for the role and are regularly assessed throughout the works. Training and induction includes demonstration by example of good practice and the impact of poor practice.

- (c) All persons employed by the *Contractor* who have *Supervisory* responsibilities for others (including those from SubContractors and suppliers of any tier) hold a current CITB Site Supervisors Safety Training Scheme certificate (SSSTS) (or equivalent agreed by the *Project Manager*). Persons considered to have *Supervisory* responsibilities are those involved in the direction of day-to-day work activities with direct responsibility for putting people to work. They typically brief the workers on how to carry out their work and ensure that they are carrying out their work safely.
- (d) All persons employed by the *Contractor* who are responsible for managing a worksite or managing the activities of others (including those from SubContractors and suppliers of any tier) hold a current CITB Site Management Safety Training Scheme (SMSTS) certificate (or equivalent agreed by the *Project Manager*). Construction Directors, construction *Project Managers*, Site Agents, Sub-Agents, Site Managers/Engineers, and senior *Supervisors* such as General Foreman and Works Managers are considered to be persons having management responsibilities.

11.21 Confined Spaces

- (a) The *Contractor* evaluates the workplace to determine which spaces (if any) are confined spaces and develops a written risk assessment and method statement identify the controls required for the safe operation of a safe system of work in accordance with The Confined Space Regulations and INDG258: Safe Work in Confined Spaces. The risk assessment and method statement shall include the confined space entry permit and the control systems required for working in confined spaces including communication, evacuation and rescue.
- (b) The *Contractor* eliminates the need to enter confined spaces wherever possible. Where entry to a confined space is necessary the *Contractor* ensures that a safe system of work is identified that documents all hazards, safety precautions and safe working practices associated with all confined space activities performed by employees.
- (c) The *Contractor* ensures their safe system of work includes:
 - o checks that employees have the necessary skills, knowledge and experience to enter a confined space, are appropriately healthy (e.g. lung function for BA use) and have received adequate training;
 - o an adequate communication system to enable clear communication between those inside and outside of the confined space;
 - o testing and monitoring of the atmosphere within a confined space for hazardous gas, fume or vapour and checks on the concentration of oxygen prior to entry; and
 - o a requirement for emergency arrangements to be in place before any person enters or works in a confined space and contingency plans appropriate to the nature of the confined space, the risks identified and consequently the likely nature of an emergency rescue.

11.22 Working at Height

- (a) The *Contractor* complies with the Working at Height Regulations and eliminates the need to work at height wherever possible. Where working at height is necessary the *Contractor* ensures that a safe system of work is identified that documents all hazards, safety precautions and safe working practices associated with all working at height activities performed by employees.
- (b) The *Contractor* ensures that the work is properly planned, appropriately supervised and that employees have the skills, knowledge and experience to work at height. The *Contractor* ensures that collective measures take precedence over personal protective

measures i.e. fall prevention equipment.

- (c) The *Contractor* implements an inspection and testing regime for all equipment identified as assisting in any working at height operation to ensure that is compliant with statutory regulations, maintaining records of all inspections and test.

11.23 Lifting Operations

- (a) The *Contractor* complies with the Lifting Operations and Lifting Equipment Regulations, producing a risk assessment and lifting plan identifying the nature and level of risks associated with a proposed lifting operation. The *Contractor* briefs the content of the risk assessment and lifting plan to all employees involved in lifting operations.
- (b) The *Contractor* ensures that all employees involved in lifting operations have the required skills, knowledge and experience and hold an appropriate valid construction plant competence scheme card.
- (c) The *Contractor* implements or sources adequate training for employees who operate or test/examine lifting equipment. Training records are kept and where lifting operations are planned, copies of these records are submitted to the *Project Manager*.
- (d) The *Contractor* ensures that any persons who operate lifting equipment or conduct inspections, examinations or tests have the required skills, knowledge and experience and hold an appropriate valid construction plant competence scheme card to ensure that the safe system of work is compliant with statutory regulations and the approved code of practice for safe use of lifting equipment published by the Health and Safety Executive.
- (e) The *Contractor* ensures that there are adequate competent persons to approve all lift plans on the worksite in accordance with The Lifting Operations and Lifting Equipment Regulations (LOLER). No lifts are carried out without this prior approval.

11.24 Excavation

- (a) The *Contractor* ensures that all excavations are planned before works commence taking reasonable steps to obtain and review survey drawings, utility records and ground penetrating radar and other appropriate survey information when planning the works.
- (b) In conjunction with suitable detection methods to be agreed with the *Project Manager*, sufficient trial holes will be undertaken to confirm the location of all buried utilities The *Contractor* will employ a permit to dig process and ensure that all employees undertaking excavations have the necessary skills, knowledge and experience.
- (c) The *Contractor* ensures that reference is made to the Health and Safety Executives Guidance Note HSG 47 Avoiding Danger from Underground Services.

11.25 Construction Plant and Equipment

- (a) The *Contractor* ensures that all plant and equipment operators have the skills, knowledge and experience and hold a valid construction plant competence scheme card for the plant/equipment they are required to operate and that they have been assessed as competent.
- (b) The *Contractor* ensures that all plant and equipment, including hired plant/equipment, is maintained, inspected and tested in accordance with manufactures instruction and/or

requirements within legislation. The *Contractor* ensures that all plant/equipment is only maintained (including changing cutting blades) by personnel qualified to do so and that the results from all maintenance, inspection and test are recorded.

11.26 Traffic Management and Pedestrian Segregation

- (a) The *Contractor* shall ensure that adequate provision is made for traffic management to either the Safety at Street Works and Road Works Code of Practice or Chapter 8 of the Traffic Signs Manual, whichever is the most appropriate for the risks and type of works. All Traffic Management shall only be installed and maintained by employees with the necessary skills, knowledge and experience and hold an appropriate valid competence scheme card.
- (b) The *Contractor* shall provide all traffic management plans to the *Employer* for agreement prior to commencement of works as part of the Traffic Management Act Notification (TMAN).
- (c) The *Contractor* ensures that adequate pedestrian management/segregation is included within traffic management arrangements and consults with the *Project Manager* before implementation.
- (d) Subject to the degree of risk and location, the *Contractor* shall implement such arrangements as are necessary up to and including permanent Traffic Management employees to inspect and maintain traffic management and pedestrian segregation arrangements. As a minimum, inspections of traffic management will be undertaken once every two (2) hours 24/7 with records maintained for the *Project Managers* review.

11.27 Site Inspections and Assurance

- (a) The *Contractor* shall agree with the *Project Manager* a programme of active assurance activities including site inspection and audits, the frequency of which to be at least weekly and take account of the nature of the work, previous results and any other relevant factors. The *Contractor* shall provide for information a copy of the completed audit/inspection report to the *Project Manager* no later than five (5) business days after the audit inspection.
- (b) Inspections and audits will be undertaken by the *Contractor's* health and safety support, *Supervisors* and other management staff, including Project and Construction Managers. SubContractors should carry out regular health and safety inspections of their own workforce and provide information to the *Contractor*.
- (c) The inspections are performed in coordination with the *Project Manager's* own inspection schedule to avoid duplication and to maximise the use of resources and effectiveness of the inspection system.
- (d) The *Contractor* addresses all actions and recommendations arising from inspections within the agreed timescales, regardless of who has undertaken the inspection.
- (e) The *Contractor* holds a Health and Safety Supplier Meeting every four (4) weeks. The *Contractor*, SubContractors and members of the workforce attend the meetings. The *Project Manager* will be invited to attend.

11.28 Senior Management Safety Tours

- (a) Senior managers from the *Contractor* and the *Employer* complete safety tours in accordance with the programme expectations. The frequency of safety tours is agreed with the *Project Manager* but is at least quarterly. The *Contractor's* senior managers and those of their SubContractors contribute actively in these safety tours as part of the joint commitment to deliver health and safety excellence across the project.
- (b) Representatives from the workforce are engaged in safety tours to build relationships between management and the workforce in the drive to world class safety performance.
- (c) The basis of any safety tour is to engage with the workforce, address the criteria listed below, provide an opportunity for employees and the *Contractor* to raise any health or safety concerns and to seek assurance that health and safety systems across the project are understood and followed.
- (d) Senior management safety tours will focus on:
 - o acknowledgement/engagement of all persons involved in an activity;
 - o management of any particular issues, problems or risks;
 - o identification and addressing of the health and safety concerns found on site during the tour;
 - o seeking assurance that health and safety systems are understood and being followed by ensuring that standards and expectations for best practice are realised in all work areas and practices;
 - o culture (safety culture and behaviours);
 - o safety performance data;
 - o changes: organisational or activity;
 - o project activity;
 - o incident or accident data; and
 - o review of methods of work, quality of briefings, site documentation.

11.29 Work Related Road Risk (WRRR)/ Fleet Operator Recognition Scheme (FORS)

- (a) Unless already accredited, where the *Contractor* operates delivery and/or servicing vehicles to provide the works, it shall within 90 days of the contract date register for FORS and attain and maintain a minimum of Bronze Accreditation.
- (b) Within 90 days of the Contract Date, the *Contractor* shall make a written report to the *Employer* detailing its compliance with WRRR and FORS (the WRRR Self- certification Report). The *Contractor* shall provide updates of the self-certification to the *Employer* on each three month anniversary of its submission of the initial self-certification report.
- (c) The *Contractor* shall ensure that every lorry, which it uses to provide the works, shall have:
 - o side guards;
 - o front, side and rear blind spots completely eliminated or minimised as far as practical and possible, through the use of fully operational direct and indirect vision aids and driver audible alerts;
 - o equipment fitted with an audible means of warning other road users of the vehicle left manoeuvre; and

- prominent signage on the lorry to warn cyclists and other road users of the dangers of passing the lorry on the inside and of getting too close to the lorry.
- (d) The *Contractor* shall ensure that it has a system in place to ensure all its drivers hold a valid driving licence for the category of vehicle that they are tasked to drive, along with recording any endorsements, or restrictions on the Drivers licence. The *Contractor's* arrangements shall include a means of checking and confirming with the DVLA, the driving licence of all employees undertaking driving operations.
- (e) The *Contractor* shall ensure that all employees undertaking driving operations undergo approved progressive training (to include a mix of theoretical, e-learning, practical and on the job training) and continued professional development to include training covering the safety of vulnerable road users and on-cycle hazard awareness, throughout the duration of the contract.
- (f) The *Contractor* shall ensure that it has a system in place to capture, investigate and analyse road traffic collisions that results in fatalities, injury or damage to vehicles, persons or property and for generating collision reports and within 15 days of the contract date, provide to the *Employer* a collision report. The *Contractor* shall provide to the *Employer* an updated collision report within five working days of a written request from the *Employer*.

11.30 Environment

11.30.1 Environmental Management Plans

- (a) The *Contractor* shall as he Provides the Works (while taking into account best available techniques not entailing excessive cost and the best practicable means of preventing, or counteracting the effects of any noise or vibration) have appropriate regard (insofar as the *Contractor's* activities may impact on the environment) to the need to preserve and protect the environment and to the need to avoid, remedy and mitigate any adverse effects on the environment, enhance the environment and have regard to the desirability of achieving sustainable development, conserve and safeguard flora, fauna and geological or physiological features of special interest, and sustain the potential of natural and physical resources and the need to safeguard the life-supporting capacity of air, water, soil and ecosystems.
- (b) Environmental management plans include but are not limited to:
- Vehicle management;
 - Noise and vibration management;
 - Dust management;
 - Lighting management;
 - Waste and materials management;
 - Water management
 - Ecology management;
 - Carbon and energy management;
 - Green travel plans,
 - Asbestos management;
 - Environmental policy;
 - Planning;
 - Implementation and operation;

- Checking;
- Management review;
- Emergency planning and response;
- Archaeology, and protection of Listed Buildings and heritage Sites;

11.31 Method Statements

- (a) The *Contractor* is responsible for producing all safe systems of work and risk assessments included within Method Statements submitted to the *Project Manager* for Acceptance in accordance with LT-IMS-ENG-801. Safe Systems of work should include where appropriate Site plans and specifications of equipment to used.
- (b) The *Contractor* submits an initial schedule of proposed safe systems of work for use throughout the contract to the *Project Manager* for Acceptance before the Starting Date and provides subsequent four (4) weekly updates as the contract develops and as instructed by the *Project Manager*. The schedule should be updated on a bi-weekly basis.
- (c) The *Contractor* submits for Acceptance safe systems of work specifically instructed by the *Project Manager* for review no later than 3 weeks prior to the commencement of the relevant element of works.
- (d) The *Project Manager* responds to a safe system of work submitted for Acceptance within 2 weeks.
- (e) If the *Project Manager* has commented on a proposed safe system of work that requires a response and/or corrective action, the *Contractor* must respond accordingly allowing sufficient time to obtain the *Project Manager's* Acceptance prior to commencing the element of the works.
- (f) No element of the works commences without a safe system of work for that element of the works being produced by the *Contractor* and accepted and being readily available for review by *Project Manager*.
- (g) All safe systems of work and supporting documentation, including any relevant approvals from others, represent and detail the *Contractor's* planned works and addresses construction sequences, co-ordination with third parties and the relevant control and mitigation measures for identified risks.
- (h) With each safe system of work the *Contractor* produces a risk assessment that demonstrates how potential risks resulting from the works have been mitigated to ALARP status

WI 1200 – Subcontracting

12.1 Subcontracting

- (a) The *Employer* does not consider that there are any particular tasks or work packages that cannot be subcontracted, with the exception of the following:
- *Contractor's* management of the works.

12.2 Requirements for all Subcontracts

- (a) The *Contractor* ensures that each subcontract he lets in relation to this contract contain provisions:
- requiring the proposed SubContractor (and sub-SubContractors of any tier) to meet the Conditions stated for a Key Date on or before such Key Date and to achieve Completion on or before the Completion Date and to minimise the level of Defined Cost;
 - requiring the proposed SubContractor (and sub-SubContractors of any tier) to maintain accounts and records and grant audit rights to the *Employer* and its authorised representatives of an equivalent extent and nature to those required by this contract;
 - requiring the proposed SubContractor (and sub-SubContractors of any tier) to assign to the *Employer* the IPR in all documents, drawings, materials, computer software and any other material or works prepared or developed by or on behalf of the proposed SubContractor in the performance of the subcontract;
 - requiring the proposed SubContractor (and sub-SubContractors of any tier) to grant a non-exclusive, perpetual, irrevocable, royalty-free licence to the *Employer* to use Background IPR (including the right to grant sub- licences) of an equivalent extent and nature to those required by this contract;
 - imposing equivalent obligations of confidentiality on the proposed SubContractor (and sub-SubContractors of any tier) to those required by this contract; and
 - imposing equivalent obligations regarding Prohibited Acts and health and safety (including Safety Breaches) as required by this contract on SubContractors (and sub-SubContractors of any tier).
- (b) For all proposed subcontracts (or series of subcontracts with the same SubContractor), the *Contractor* intends to place (including contracts with any associated, affiliated or subsidiary companies of the *Contractor* and the *Contractor's* group of companies), *TfL* requires the *Contractor* to complete Attachment 6 of this document (*TfL_scp_001430_its_vol1_sch17_ (Works_Information) _attachment_6_tender events_ schedule*), during pre-construction. The *Contractor* within the Subcontract Procurement Plan shall submit Attachment 6 for acceptance to the *Project Manager*.
- (c) The Tender Events Schedule contains two tabs; the first (Package Identification) to be completed during pre-construction and the second tab (Procurement Schedule) to be completed before any procurement is undertaken. The *Contractor* shall supply this information in the Excel format provided with all fields completed. The *Contractor* shall update the Tender Events Schedule and re-submit it to the *Project Manager* for their acceptance if the *Contractor's* proposals for subcontracting of the works changes.

12.3 The Subcontract Procurement Plan (Not Used)

12.4 SubContractor Procurement Transparency

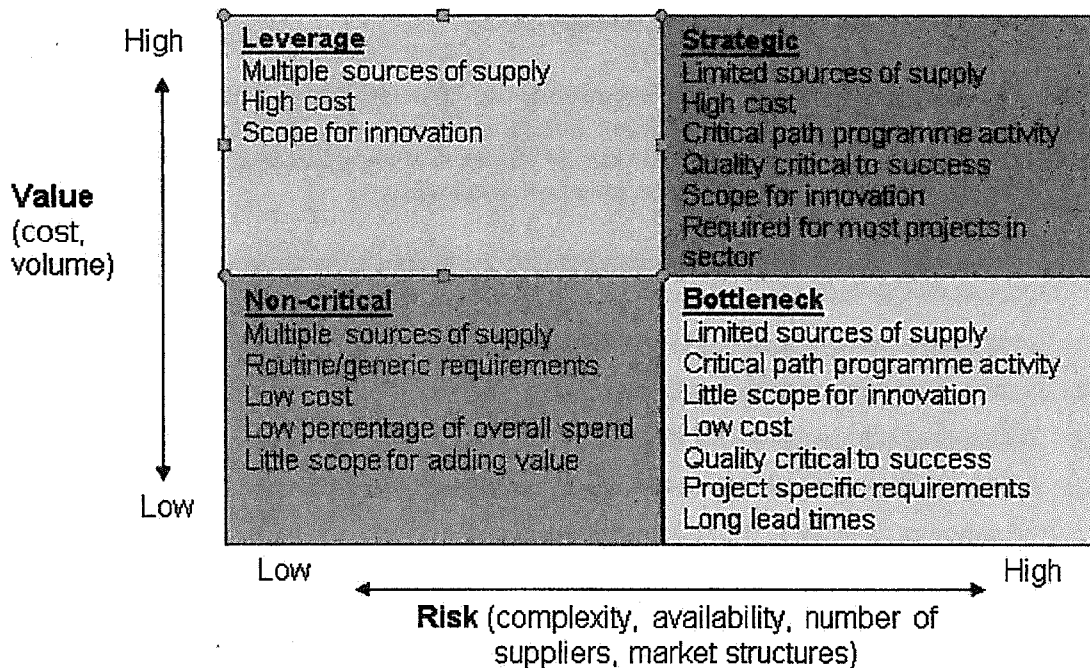
- (a) The *Contractor* provides full transparency to the *Employer* of all subcontract procurement activity. The *Contractor* submits proposed subcontract procurement information for acceptance to the *Project Manager* if the *Project Manager* instructs the *Contractor* to make the submission of any of the following:
- subcontract pre-qualification, including but not limited to proposed and final lists of companies to invite to participate in pre-qualification;
 - proposed and final subcontract tender lists;
 - subcontract tender documentation;
 - subcontract tender evaluation;
 - subcontract post tender contract and commercial negotiation;
 - approval of SubContractor key personnel; and
 - subcontract award recommendations
- (b) At Periodic Progress Review Meetings the *Contractor* provides the *Project Manager* with an update of progress against:
- the overall procurement programme; and
 - progress on the procurement and performance of the subcontract packages;
- (c) The *Project Manager* notifies the *Contractor* of any matters of the *Contractor's* tendering activity relating to Critical Subcontracts which could adversely affect the *Contractor* Providing the Works.

12.5 Critical Subcontract Packages

- (a) The information provided by the *Contractor* is used to determine which work packages are Critical Subcontracts. A Critical Subcontract is any subcontract, which fulfils one or more of the following criteria below.
- (b) When the *Contractor* assesses that at least one of the following applies to the subcontract:
- Value of subcontract falls within the top 80% (by value) of all subcontracts (i.e. Pareto); and/or
 - Is on the critical path for delivery; and/or
 - Has a limited or constrained supply market; and/or
 - Is highly complex product within subcontract design; and/or
 - Has a long lead time; or
 - does not fall within the non-critical box in the diagram below.
- (c) Thereafter and on an on-going basis, where applicable, within two weeks of a subcontract being identified as a Critical Subcontract, the *Contractor* shall work with the

Project Manager and TfL's Procurement/Commercial Manager to agree the sourcing strategy for the package.

Supply Chain Risk/Value Matrix



12.6 CompeteFor

- In order to maximise the number and diversity of businesses (small and medium sized enterprises (SMEs) and local businesses) contributing to the Project and located in the region of the Project, the *Contractor* ensures all packages which are valued below £10m are advertised using the CompeteFor web-sourcing portal, unless otherwise accepted by the *Project Manager*.
- The *Contractor* ensures that SubContractors and Suppliers use the CompeteFor web-sourcing portal to advertise further opportunities within the supply chain.
- The *Contractor* promotes the CompeteFor web-sourcing portal to in-house supply chain stakeholders/representatives (i.e. approved suppliers) and encourages company registration.
- For packages that are below £10,000, the *Contractor* may use the 'Request for Quotation' tool on CompeteFor ensuring all the Boroughs within the region of the Project have been selected as part of the process.
- The *Contractor* provides a full detailed description of the works and package using the CompeteFor tool and a naming convention as specified by the *Employer* for all opportunities the *Contractor* posts on CompeteFor.
- The *Contractor* monitors the number, type and value of CompeteFor contract opportunities advertised and awarded in its supply chain. This information is reported and reviewed with the *Project Manager* at Periodic Progress Review Meetings.
- The *Contractor* ensures the package opportunity is closed on the CompeteFor system one week following the award of the contract.
- The *Contractor* is encouraged to award packages to CompeteFor registered companies.