

BUNDLE 2: FIRE: EXECUTION VERSION

Section C

Equipment

For the purposes of this procedure, Defined Cost relating to equipment is described in Schedule 2 (Payment) Part B (Schedule of Defined Cost Components), paragraph 2 (Plant and Equipment) of the Contract.

C.1 Audit Objectives

The audit objectives are divided into two main areas to verify:

Pre-order

- orders or purchases are based upon accurate documentation and competitive prices.

Post-order

- equipment orders are properly administered and payments made relate to usage on this Contract.

C1.1 Pre-Order

C.1.1.1 Confirm that requisitions and purchase orders identify the Period of hire and that requisitions have been authorised.

C.1.2 Post Order

C.1.2.1 Verify equipment deliveries are checked and align with orders.

C.1.2.2 Check a procedure is in place to ensure equipment is off hired in a timely manner.

C.1.2.3 Check that a procedure is place to ensure that contemporary Site records are kept of equipment employed (as distinct to present) in the Sites and that these are verified by the Company.

C.1.2.4 Verify that Site records for usage of equipment align with payments made to the Supplier and that payments are made at the appropriate time and that any Disallowed Costs have been taken into account.

C.1.2.5 Verify that the Supplier's cost is charged at the amount of invoice for the Period that the equipment is employed in the Sites

C.2 Procedures

C.2.1 Generally

C.2.1.1 The auditor shall be supplied with or given access to all information necessary for compliance with the procedures contained within this Audit Plan.

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C.2.1.2 Electronic requisitions and purchase orders shall be raised by the Supplier on the accounting system.

C.2.1.3 Each order shall contain specific codes so that invoiced costs are allocated accurately against Target Cost sub divisions.

C.2.2 Audit Objectives C.1.1.1, C.1.2.1 & C.1.2.6

C.2.2.1 The auditor shall review a list of equipment orders placed.

C.2.2.2 The auditor shall select orders and view documentation and resultant reports and recommendations, spot check that where possible competitive prices have been received and that costs incurred relate to this Contract.

C.2.3 Audit Objective C.1.2.2

C.2.3.1 The auditor shall select orders at random and view requisitions relating thereto.

C.2.3.2 The auditor shall carry out spot checks to verify:

- requisitions have been approved in accordance with the Supplier's relevant procedure; and
- requisitions and equipment orders identify the estimated period of hire.

C.2.4 Audit Objectives C.1.2.1, C.1.2.2 & C.1.2.3

C.2.4.1 The auditor shall select orders at random and review relevant delivery notes to ascertain that equipment has been checked and received and is intended for use on this Contract.

C.2.4.2 The auditor shall select orders at random to carry out spot checks. These checks shall include checking that payments are compatible with deliveries, periods of hire and invoices received. That the correct rates have been used for calculation of payment due, all discounts are disclosed and that periods of additional hire are backed up by revised requisitions based on Site assessments.

C.2.5 Audit Objective C.1.2.4

C.2.5.1 The auditor shall carry out spot checks determine that procedures are in place to monitor the use/need for equipment and that equipment is being returned in a timely manner where it is being hired.

C.2.5.2 The auditor shall check requisition forms, electronic or otherwise, and compare these with monitoring procedures.

C.2.6 Audit Objectives C.1.2.5

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C.2.6.1 The auditor shall spot check that amounts certified by the Supplier align with total payments made in respect of equipment.

C.3 Audit Records

C.3.1 Generally

Full audit records of equipment shall be kept and filed in accordance with this procedure.

C.3.2 Equipment Audit Report

The auditor shall issue an Equipment Audit Report to the Company's Representative on a four (4) weekly basis. It shall identify positive findings as well as items needing further action and consideration.

The Equipment Audit Report shall not be deemed completed until it has been signed off by:

- the auditor;
- the Company's Representative or his authorised representative; and
- the Supplier's Representative or his authorised representative.

C.3.3 Equipment record of audit

C.3.3.1 The record of audit is prepared by the auditor to record all tasks undertaken since the cut-off date of the previous Equipment Audit Report. It is retained by the auditor for review by the Company's Representative and third party or external auditors.

C.3.3.2 The record of audit shall summarise the records examined during the period and it shall note-the following:

- Period;
- basis of selection;
- items of equipment audited;
- equipment identification numbers;
- if requisitions correlate with orders and invoices; and
- if procedures for hiring equipment have been operated in the Period.

C.3.3.3 The record of audit shall be signed off by the auditor as a true record and forms the basis of the Equipment Audit Report.

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C.3.4 Filing

A file shall be established entitled with the “TfL-00924 - 1FM Bundle 2 - Fire Systems Maintenance – Equipment Audit Records”.

C.3.5 Timescales

The auditor shall initially carry out an audit within three (3) months of the Services Commencement Date.

Subsequent audits shall be carried out for each Period.

C.4 Information to be provided by the Supplier

In order to meet these objectives, the Supplier shall provide all necessary information including, but not limited to, the following:

- list of orders raised and estimated values;
- summary of payments made in the Period;
- quotations from suppliers;
- access to invoices and delivery note records;
- schedule of total equipment on Site;
- assessments/recommendations carried out by the Supplier prior to placing orders; and
- Site assessment of schedules of equipment.

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Section D

Materials

For the purposes of this procedure, Defined Cost relating to materials is described in Schedule 2 (Payment) Part B (Schedule of Defined Cost Components), paragraph 3 (Materials and Charges) of the Contract.

D.1 Audit Objectives

The audit objectives are divided into two main areas to verify:

Pre-order

- orders are based upon accurate documentation and competitive prices are obtained.

Post-order

- that materials orders are properly administered and that payments are accurate and timely.

D.1.1 Pre-order

D.1.1.1 Confirm that where possible competitive prices are obtained for the purchase of materials.

D.1.1.2 Confirm orders are, where applicable, based upon a reasonable assessment of quantities required.

D.1.1.3 Confirm a maximum order value based upon required quantities is ascertained and recorded.

D.1.1.4 Confirm orders detail payment periods and terms.

D.1.1.5 Confirm the final location of materials can be identified from the order and requisition.

D.1.1.6 Confirm details on orders match those on the requisition raising the order.

D.1.2 Post Order

D.1.2.1 Verify payments made are based upon materials delivered and agreed rates and payments exclude any Disallowed Cost.

D.1.2.2 Verify material delivery notes are being accurately checked.

D.1.2.3 Verify total delivery of materials corresponds with orders.

D.1.2.4 Confirm payments made for materials align with payments made to Supplier for

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same purpose and payments are made at the appropriate time.

D.1.2.5 All payments for materials held outside the Sites are accompanied by a vesting certificate providing indemnity to the Company against proof of ownership.

D.2 Procedures

D.2.1 Generally

D.2.1.1 The auditor shall be supplied with or given access to all information necessary for compliance with the procedures contained within this Audit Plan.

D.2.1.2 Electronic requisitions and purchase orders shall be raised by the Supplier on the accounting system.

D.2.1.3 Each order shall contain specific codes so that invoiced costs are allocated accurately against each Target Cost sub division.

D.2.2 Audit Objectives D.1.1.1 & D.1.1.5

D.2.2.1 The auditor shall select orders and view requisitions and purchase orders indents and verify competitive prices have been received and that the location for materials can be ascertained.

D.2.2.2 The basis of selection shall be recorded.

D.2.3 Audit Objective D.1.1.2

D.2.3.1 The auditor shall select an order at random and review quantities against ascertained required quantities.

D.2.3.2 The auditor shall carry out spot checks to determine that:

- latest specifications have been used; and
- quantities have been used as the basis for enquiries and are in alignment with ascertained required quantities.

D.2.4 Audit Objective D.1.1.3

D.2.4.1 The auditor shall carry out spot checks to verify that maximum prices recorded coincide with quotes received.

D.2.5 Audit Objective D.1.1.4

D.2.5.1 The auditor shall carry out spot checks on selected enquiries and orders to determine whether payment terms/payment periods are recorded and reasonable.

D.2.6 Audit Objective D.1.1.5 and D.1.1.6

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D.2.6.1 The auditor shall carry out spot checks on selected orders to determine whether requisition details match those on orders.

D.2.7 Audit Objectives D.1.2.1, D.1.2.2 & D.1.2.3

D.2.7.1 The auditor shall select orders and request access to delivery notes and invoices and shall carry out spot checks using selected delivery notes to ascertain that materials have been received and checked and that reconciliation has been carried out against the order.

D.2.7.2 The auditor shall select orders to carry out spot checks that payments made are consistent with actual deliveries made and that correct rates have been used for this purpose, and that all discounts are disclosed.

D.2.8 Audit Objective D.1.2.4

D.2.8.1 The auditor shall carry out spot checks that amounts certified by the Company for payment align with total payments made.

D.2.9 Audit Objective D.1.2.5

D.2.9.1 The auditor shall carry out spot checks that the amounts for materials held off Site are certified as vested for this Contract.

D.3 Audit Records

D.3.1 Generally

D.3.1.1 Full audit records of materials shall be kept and filed in accordance with this procedure.

D.3.2 Materials Audit Report

D.3.2.1 The auditor shall issue a Materials Audit Report to the Company's Representative on a four (4) weekly basis. It shall identify positive findings as well as items needing further action and consideration.

D.3.2.2 The Materials Audit Report shall not be deemed completed until it has been signed off by:

- the auditor;
- the Company's Representative or his authorised representative; and
- the Supplier's Representative or his authorised representative.

D.3.3 Materials record of audit

D.3.3.1 The record of audit is prepared by the auditor to record all tasks undertaken since

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the cut-off date of the previous Materials Audit Report. It is retained by the auditor for review by the Company and third party or external auditors.

D.3.3.2 The record of audit shall summarise the records examined during the period and it shall note the following:

- Period;
- basis of selection;
- items of materials audited; and
- if requisitions correlate with orders and invoices.

D.3.3.3 The record of audit shall be signed off by the auditor as a true record and forms the basis of the Materials Audit Report.

D.3.4 Filing

D.3.4.1 A file shall be established entitled "TfL-00924 - 1FM Bundle 2 - Fire Systems Maintenance - Materials Audit Records".

D.3.5 Timescales

D.3.5.1 The auditor shall initially carry out an audit within three (3) months of the Services Commencement Date.

D.3.5.2 Subsequent audits shall be carried out for each Period.

D.4 Information to be provided by the Supplier

In order to meet these objectives, the Supplier shall provide all necessary information including, but not limited to, the following:

- materials requisitions;
- list of orders raised and values of orders;
- vesting certificates;
- register of delivery notes for the period and access to invoices and records; and
- invoices received.

Section E

Sub-contractors

Defined Cost in respect of sub-contractors is defined in Schedule 2 (Payment) Part B (Schedule of Defined Cost Components), paragraph 4 (Sub-contractors).

E.1 Audit Objectives

The sub-contractor audit objectives are divided into (1) Pre Award and (2) Post Award tasks to verify that:

Pre Award

- sub-contract tender documentation is accurate;
- contractually fair and reasonable;
- competitive prices are obtained;
- sub-contracts are fairly awarded; and
- sub-Contracts are not awarded to organisations within the Supplier's group, i.e. subsidiaries, owned or part owned companies.

Post Award

- sub-contracts are properly administered;
- interim payments made to sub-contractors are fair and reasonable;
- final accounts are completed;
- pricing remains competitive; and
- payments in respect of sub-contract labour relate to timesheets verified on Site by the Supplier's supervisor.

E.1.1 Pre-Award

When requested by the Company's Representative, the audit shall be undertaken to:

- E.1.1.1 Confirm compilation of proposed sub-contract tender list is in accordance with the Supplier's Contractual obligations and includes sub-contractors who are included on its approved list of tenderers. The approved list of tenderers shall in no event include sub-contractors from within the Supplier's group without the written approval of the Company.

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E.1.1.2 Verify:

- consistency in contractual terms between the various sub-contract tenders issued for this Contract;
- tender enquiries are based on current specification documents;
- terms and conditions are fair and reasonable, take cognisance of the main contract conditions and comply with current legislation regarding sub-contracts; and
- reasonable price breakdowns have been requested.

E.1.1.3 Confirm that sub-contract tender enquiries are competitively sought or determine reasons for single tender action.

E.1.1.4 Confirm that sub-contract tenders are sent out and received back.

E.1.1.5 Confirm that tenders are being sought at an appropriate time and that tender periods are reasonable.

E.1.1.6 Confirm that tender returns are compared reasonably and that tender qualifications are withdrawn as far as possible.

E.1.1.7 Confirm that tenders have been fairly assessed and that the lowest price has generally been accepted (taking cognisance of any outstanding qualifications).

E.1.1.8 Confirm that there is full disclosure of discounts.

E.1.1.9 Confirm that the tender to be accepted has a reasonable breakdown of prices to facilitate evaluation of variations.

E.1.1.10 Confirm that the tenders are awarded on the basis of latest information.

E.1.1.11 Purchase orders shall be placed for sub-contracts and formal sub-contract documentation shall be completed.

E.1.2 Post Award

The audit shall be undertaken to verify:

E.1.2.1 Changes to the sub-contract are being instructed properly in a timely manner and procedures are in place to ensure that sub-contractors have the latest specification issued by the Company's Representative.

E.1.2.2 Payments made to sub-contractors are based upon:

- work done and/or materials on-Site or off-Site;

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- sub-contract rates and prices;
- reasonable rates and prices (in respect of variations where sub-contract rates and prices do not apply).

E.1.2.3 All payments for materials held outside the Sites are accompanied by a vesting certificate providing indemnity to the Company against proof of ownership.

E.1.2.4 All payments prepared by the Supplier are for work carried out or for materials supplied for this Contract and do not include Disallowed Cost.

E.1.2.5 That payments made to sub-contractors align with payments made to the Supplier for the same purpose.

E.1.2.6 That periodic market reviews are undertaken to ensure that sub-contract prices remain competitive.

E.1.2.7 That in respect of sub-contract labour, operatives have completed weekly timesheets and that these have been verified by the Supplier's Representative to accurately record their time expended on the Contract.

E.1.2.8 That periodic reviews are undertaken to ensure that, in any period, amounts of invoice in respect of payments for sub-contracted labour do not exceed 12% of the Defined Cost of Maintenance Operatives and Core Team.

E.2 Procedures

E.2.1 Generally

The auditor shall be supplied with or given access to all information necessary for compliance with the procedures contained within this Audit Plan.

E.2.2 Audit Objectives E.1.1.1 & E.1.1.3

E.2.2.1 For sub-contract enquiries issued on this Contract, the auditor shall have made available for inspection a signed off list of tenderers.

E.2.2.2 Reasons for single tender actions shall be provided.

E.2.3 Audit Objectives E.1.1.2, E.1.1.4 & E.1.1.5

E.2.3.1 For all sub-contract enquiries to be issued on this Contract, the auditor shall have made available for inspection a copy of the draft tender documentation. The auditor may undertake a spot check of the documentation at any time. The auditor shall verify that the tender documentation:

- includes the latest specification by reference to document control records; and

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- is consistent for all enquiries and main contractual terms are relevant and clear.

E.2.3.2 Any review by the auditor shall not be allowed to delay/affect the issuing of the enquiry documents.

E.2.3.3 The auditor shall be advised of any subsequently issued documents detailing:

- any amendments made to the draft tender documents or price; and
- amendments to be made but currently excluded and how they are to be incorporated in the future.

E.2.4 Audit Objectives E.1.1.6 to E.1.1.10

E.2.4.1 For all sub-contract enquiries to be issued on this Contract, the auditor shall receive an initial summary of the tender offers, together with a summary of any significant qualifications included therein.

E.2.4.2 The Supplier shall assess the tenders in more detail, endeavour to remove qualifications and shall make available for inspection by the auditor a copy of their recommendation together with their reconciliation of prices and outstanding qualifications.

E.2.4.3 The auditor may review documents at any time and provide any comments on the Supplier's recommendation to the Company's Representative.

E.2.5 Audit Objective E.1.2.1

E.2.5.1 When requested by the auditor, the Supplier shall provide a schedule listing all instructions issued to sub-contractors.

E.2.5.2 The auditor shall carry out random checks by comparison to the contract document control records.

E.2.6 Audit Objectives E.1.2.2, E.1.2.3 & E.1.2.4

E.2.6.1 The auditor shall carry out spot checks on payment certificates. When requested by the auditor, the Supplier shall provide a copy of the latest payment certificate together with a breakdown of the latest or previous valuations as may be necessary.

E.2.6.2 The auditor may request further support documentation such as:

- site notes/measurements;
- measurements from drawings/final accounts;
- build-ups for new rates;

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- copies of sub-contract documentation;
- vesting certificates;
- invoices;
- delivery tickets; and
- schedule of Disallowed Costs.

E.2.6.3 The auditor shall carry out spot checks to verify:

- rates or prices used are Contract rates or prices or compatible therewith;
- work has been executed in relation to this Contract;
- the value included for materials relates to materials on-Site for this Contract;
- the value for materials held outside the Sites are certified as vested for this Contract;
- the value of variations is identified; and
- consideration has been made for Disallowed Costs.

E.2.6.4 On completion of the draft final account, the auditor may review the final account and carry out spot checks as referred to above.

E.2.7 Audit Objectives E.1.2.5

E.2.7.1 The auditor shall carry out spot checks that payments made to the Supplier in respect of sub-contractors have also been made to the sub-contractors.

E.2.7.2 The Supplier's sub-contract payment authority shall be endorsed with details of the form of payment to the sub-contractor e.g. cheque number, date of payments etc.

E.2.8 Audit Objectives E.1.2.6

E.2.8.1 The auditor shall carry out spot checks that the Supplier:

- has reviewed prices contained within the sub-contract; and
- has satisfied himself that the prices, at the date of his review, remain competitive in comparison to alternative providers.

E.2.9 Audit Objectives E.1.2.7 and E.1.2.8

E.2.9.1 The auditor shall determine the time periods to be audited and select 10 names (or varying number as may be determined from time to time by the auditor) from the list of names of sub-contract individuals employed on the Site.

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E.2.9.2 The auditor shall determine and record the basis of selection.

E.2.9.3 The auditor shall inspect their timesheets to ensure there they have been are no discrepancies and that it has been signed by the Supplier.

E.2.9.4 Amounts of Invoice, cleared to pay shall be checked to ensure that invoiced hours are consistent with hours recorded on the weekly timesheets and to ensure that they do not include Disallowed Costs.

E.2.9.5 Amounts of payment shall be checked to ensure they match the amount of cleared to pay invoices.

E.3 Audit Records

E.3.1 Generally

Full audit records of sub-contractors shall be kept and filed in accordance with this procedure.

E.3.2 Sub-contractor Audit Report

The auditor shall issue a Sub-contractor Audit Report to the Company's Representative and Supplier for each Period. It shall identify positive findings as well as items needing further action and consideration.

The Sub-contractor Audit Report shall not be deemed completed until it has been signed off by:

- the auditor;
- the Company's Representative or his authorised representative; and
- the Supplier's Representative or his authorised representative.

E.3.3 Sub-contractor record of audit

The record of audit is prepared by the auditor to record all tasks undertaken since the cut-off date of the previous Sub-contractor Audit Report. It is retained by the auditor for review by the Company's Representative and third party or external auditors.

The record of audit shall be the back-up document to the Sub-contractor Audit Report.

E.3.4 Filing

A file shall be established entitled with the "TfL-00924 - 1FM Bundle 2 - Fire Systems Maintenance – Sub-contractor Audit Records".

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E.3.5 Timescales

The auditor shall initially carry out an audit within three (3) months of the Services Commencement Date.

Subsequent audits shall be carried out for each Period.

PART F: TARGET COST ADJUSTMENT FOR CORE TEAM

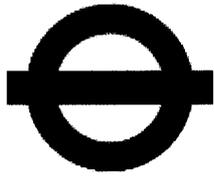
- 1.1 In the event the contract entered into by the Parties and titled Facilities Management Contract (Target Cost) Contract Reference Number TfL-00925 - 1FM Bundle 3 Lot 1 – Mechanical and Electrical Maintenance (Rail) and dated on or about the date of this Contract is terminated by either party to that contract, in accordance with its terms, then for the Contract Year in which such termination took effect and for each subsequent Contract Year, the total Target Costs set out in Schedule 2 Part C to this Contract shall increase by [REDACTED] (indexed in accordance with Schedule 2 Part D (Price Adjustment for Inflation)) per Period.
- 1.2 Where paragraph 1.1 above applies, the Parties acknowledge that:
- (A) the adjustment to the Target Costs shall take effect from the Period following the Period in which the contract termination took effect; and
 - (B) for the purposes of the calculation in Clause 18A, the adjustment shall apply pro rata for the relevant Contract Year.

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PART G: TfL BUSINESS AREAS AND DELIVERY UNITS

- 1.1 “Delivery Unit” means the sub-divisions of TfL Business Areas identified in Schedule 12b (Performance Measurement Matrix) under the heading of Delivery Unit.
- 1.2 “TfL Business Area” means the subdivisions of TfL identified in Schedule 12b (Performance Measurement Matrix) under the heading of TfL Business Areas.

SCHEDULE 3: SPECIFICATION



**Transport
for London**

TRANSPORT FOR LONDON PAN TFL FM PROCUREMENT
Fire Systems Maintenance Specification

COMMERCIAL IN CONFIDENCE

June 2016
Version 10

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Appendices

Appendix A. Service Matrix

Appendix B. Heritage Listed Station Data

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Appendix D. Asset Management Information Schedule



1 SCOPE

1.1 General Scope of Services

The scope of services is planned and reactive maintenance to fire detection and suppression systems.

1.2 Nature of Sites in Scope

The Sites include but are not limited to:

- Underground Stations;
- Underground Depots;
- Trackside accommodation;
- Operational accommodation;
- Offices;
- Bus/Coach stations;
- Bus stands;
- Surface Transport Depots;
- Workshops;
- Training centres;
- Stores;
- London Trams Depot & Sub-stations;
- River Piers; and
- Associated Public Spaces and Shopping Mall Areas.

1.3 TfL Business Areas and Delivery Units in Scope

The TfL Business Areas and/or Delivery Units covered under this specification are as follows:

- TfL Head Offices;
- London Underground;
 - Stations
 - Depots and Operational Facilities
 - Power
- Surface Transport; and
 - Buses (Stations and Stands)
 - Victoria Coach Station
 - River Services
 - Dial-a-Ride
- London Rail
 - London Overground
 - London Trams.

Notwithstanding the foregoing or any other term of this Contract, the requirement to provide the Services and the terms of this Specification shall not apply to the JNP Stations Delivery Unit or the Sites of the JNP Stations Delivery Unit until the earlier of:



(A) the date notified by the Company to the Supplier for the commencement of such requirement which may not be less than two months after the date of such notice (such notice, a "JNP Notice"); or

(B) 04 February 2018,

(such date, the "JNP Effective Date"). The requirement to provide the Services and the terms of this Specification shall apply to the JNP Stations Delivery Unit and the Sites of the JNP Stations Delivery Unit with effect from the JNP Effective Date. None of the giving of a JNP Notice, the occurrence of the JNP Effective Date or the provision of the Services to, or application of the terms of this Specification to, the JNP Stations Delivery Unit or any Site of the JNP Stations Delivery Unit shall constitute a variation or Additional Works or entitle the Supplier to any change in the Target Cost except to the extent expressly provided for in Clause 18.25 (JNP Stations).



2 GENERAL REQUIREMENTS

2.1 Account Management Team

- 2.1.1 The Supplier shall provide a team comprising of suitably qualified and experienced staff able to deliver a cost effective service that meets the specified quality standards (the "Account Management Team"). The Account Management Team structure including roles and responsibilities is subject to agreement by the Company.
- 2.1.2 The Supplier shall provide an adequate level of staff supervision at all times for all Supplier staff engaged in delivery of the Services.
- 2.1.3 The Supplier Representative or appropriate Key Personnel shall be available and contactable 24 hours per day, seven days a week every day of the year.
- 2.1.4 The Company's contract management structure and reporting requirements are detailed in Schedule 21 (Contract Management).

2.2 Supplier's Staff

- 2.2.1 The Supplier shall ensure that there is a sufficient level of trained and competent staff to provide all the requirements of the Services at all required times.
- 2.2.2 The Supplier shall provide staff qualified and competent in the discipline they are performing. The Supplier shall employ competent staff who will be responsible for planning, overseeing and signing off completed works / tasks.

2.3 Security Vetting

- 2.3.1 The Supplier acknowledges that Supplier staff requiring access to certain parts of the Sites shall be subject to security checks. Supplier staff working in these areas shall undergo a clearance procedure before working in these areas. In addition a Basic Level Scottish Disclosure will be required for all personnel undertaking maintenance in a sub-station environment, Long Acre and Greenwich Power Station.
- 2.3.2 The Supplier shall provide sufficient numbers of security cleared staff to deliver the Services without disruption.
- 2.3.3 The Supplier shall provide details of security cleared staff to the Company and shall keep full records of all clearances and rejected clearances.

2.4 Security Passes

- 2.4.1 Supplier staff shall wear a relevant security pass and/or Supplier pass at all times when on the Sites. Where the Company does not provide such passes to the Supplier's staff, the Supplier shall implement its own security pass arrangements that shall be approved by the Company in advance. As a minimum the Supplier provided security pass shall include the staff member's name, photograph and an expiry date. This requirement does not replace and is in addition to any specific Company entry permits issued as part of a training course which may be required for certain Sites. Company specific training requirements are more particularly defined in Section 3 of this specification.



2.5 Dress Code

- 2.5.1 Whilst on duty, the Supplier's Staff shall wear an appropriate uniform and Personal Protective Equipment (PPE) for the tasks being performed, and for the location in which they are operating. The wearing of personal accessories including dangling neckwear or similar articles should also be considered and not impact on the safety of performing the tasks. This shall be agreed with the Company prior to the Services Commencement Date and prior to any proposed change in design or style. All uniforms and PPE must be distinguishable from that of Company branded clothing.
- 2.5.2 Uniforms and/or PPE shall be clean and free from marks and soiling and shall be in good repair at all times.

2.6 Appearance & Behaviour

- 2.6.1 The Supplier shall ensure that all staff engaged in delivery of the Services shall be of good character, capability, appearance and behaviour. Supplier staff shall undertake the Services with a high level of awareness of customer service.
- 2.6.2 The Supplier shall ensure that its staff maintain the highest standard of appearance and behaviour at all times and are professional and courteous when dealing with customers, Company staff and visitors.

2.7 Building Record Management

- 2.7.1 The Supplier shall be responsible for maintaining and updating the service records, compliance certificates, inspection programmes, orders, log books, system files, documents and the relevant Health and Safety file(s) (including a location specific risk register) relating to the delivery of the Services at the Sites. These shall be held at the Sites. The Supplier shall ensure that they remain fully up-to-date at all times, are fully detailed, legible, dated and signed by the Supplier.
- 2.7.2 The Supplier shall store retain and dispose of all records in accordance with the Company's policies and procedures. The Supplier shall hold all records electronically unless otherwise agreed with the Company.
- 2.7.3 In the absence of records including, but not limited to, those listed at paragraph 2.7.1 above, the Supplier shall create, manage and maintain appropriate records.
- 2.7.4 The Supplier shall keep up-to-date disposal records for all hazardous waste.
- 2.7.5 The Supplier shall have the items referred to in paragraphs 2.7.1 to 2.7.4 above available for inspection by the Company within 1 day of the issue of the request for inspection.

2.8 Materials and Equipment

- 2.8.1 The Supplier shall be responsible for the supply, delivery, offloading, storage (where no storage can be provided by the Company) and testing of all materials, consumables, tools and equipment including all safety equipment necessary to undertake the Services.



- 2.8.2 The Supplier shall provide to the Company, on request, any data/information on the safe use and storage of all Supplier materials, consumables, tools and equipment used at the Sites.
- 2.8.3 The Supplier shall ensure replacement materials, consumables, tools and equipment demonstrate optimal whole life costs and performance for the company wherever possible.
- 2.8.4 The Supplier shall ensure that all replacement parts, components or materials are on a like-for-like basis. Where this is not possible or would invalidate a warranty, parts or materials shall be of a comparable or better quality and appearance and shall be agreed in advance with the Company.
- 2.8.5 The Supplier shall submit details of materials, consumables tools and equipment to be used in the delivery of the Services to the Company for approval.
- 2.8.6 The Supplier shall ensure that all materials, consumables, tools and equipment are compliant with LU standards on fire safety of materials where required.
- 2.8.7 The Supplier shall provide and hold an adequate supply of fully tested spares to support the delivery of the Services. Any minimum requirements for specific spares are more particularly detailed in the main specification requirement
- 2.8.8 Any tools, equipment or spares which are provided by the Company for use by the Supplier, are solely for use in the delivery of the services. Title to the tools, equipment or spares shall remain with the Company.
- 2.8.9 The Supplier shall ensure that all tools, equipment or spares supplied and used in the delivery of Services is in good working order and shall carry the correct and valid certification/licence, and where applicable, shall be used by the relevant trained operative. The Supplier shall ensure all Equipment is suitably identified and maintain adequate records to satisfy an audit trail.
- 2.8.10 The Supplier shall ensure that inspection, testing and servicing of Supplier equipment and systems is undertaken to ensure they remain safe and available for operational use at all times.

2.9 On-Site Storage & Accommodation

- 2.9.1 Unless otherwise set out in Appendix A (Services Matrix), no office accommodation or vehicle parking facilities are provided at the Sites for the Supplier's use. The Supplier shall make their own arrangements in this respect and shall pay all fees and charges in connection therewith.
- 2.9.2 The Company will endeavour to provide suitable welfare and storage facilities at the Sites but these cannot be guaranteed. The provision of such facilities shall be subject to local agreement.
- 2.9.3 Where such facilities are unavailable, the Supplier shall make his own arrangements in this respect and shall pay all fees and charges in connection therewith.

2.10 Temporary Hoarding

- 2.10.1 The Supplier shall provide temporary hoardings should they be required in the delivery of the Services. The Supplier shall construct



temporary hoardings in accordance with the Standards, S1027 (Site Hoarding, Fencing and Barriers) and TLF 716.

2.10.2 The Supplier shall protect existing structures from damage during the delivery of the Services by the use of any necessary props, screens, fans, waterproof sheets, dust sheets and the like, and any damage caused shall be made good by the Supplier.

2.11 Utilities

2.11.1 The Company will provide water, gas and electricity to the Supplier. At some London Underground stations, this will include a single-phase 110 volt supply. The Supplier shall provide all electrical leads from the local socket outlet to the place of work, including all necessary extension leads. All leads shall be appropriately tested and tagged in accordance with all current Engineering and British Standards. The Supplier shall use battery operated tools and equipment where possible to prevent circuits being overloaded.

2.12 Removal of Waste

2.12.1 The Supplier shall be responsible for the prompt removal from the Sites of all waste or surplus material generated by the Supplier in the delivery of the Services and shall ensure its safe disposal.

2.12.2 The Supplier shall dispose of waste in accordance with the Company's waste policy and waste hierarchy.

2.12.3 The Supplier shall report to the Company at the end of each period of all waste arising in the delivery of the Services.

2.13 Keys and Access

2.13.1 When required, keys and access cards (including other methods of controlled access) shall be provided to the Supplier and the Supplier shall be responsible for the safe keeping of such keys and access cards. The Supplier shall not manufacture duplicate keys and access cards under any circumstances. The Supplier shall return to the Company all keys and access cards that have been issued on completion of any specific section of works for which keys and access cards have been issued.

2.13.2 Should the Supplier lose any key or access card provided by the Company then immediately on discovery of the loss, the Supplier shall:-

- a. notify the Company of the loss; and
- b. pay to the Company the cost of replacement of the key(s), card(s) and lock(s) including any associated installation work.

2.14 The Company's Helpdesk and Local Reporting Systems

2.14.1 The Company operates a number of helpdesk and/or local reporting systems for reporting and recording faults by Company staff. Faults reported to the Supplier will be via the Company's helpdesk facility or local reporting system utilised by the relevant Delivery Unit. Full details including the reporting process of each helpdesk or local reporting system utilised by each Delivery Unit will be provided to the Supplier.



2.14.2 It is the Company's intention to rationalise the process of fault reporting across the TfL business during the term of the Contract although this cannot be guaranteed.

The Supplier shall provide a 24/7 call centre facility to respond to all faults reported by the Company. The Supplier's call centre facility shall be the contact point for the Company and must be operated at all times by suitably trained staff. The call centre facility shall be contactable by telephone, facsimile and email at all times. The Supplier's call centre facility shall receive data from the Company and shall share data with the Company as required.

2.15 Additional Works

2.15.1 The Company may require the Supplier to provide Additional Works, on a temporary and/or ad hoc basis.

2.15.2 The process for the provision of Additional Works is defined in Schedule 6 Part B.

2.16 General

2.16.1 The Supplier has included for the temporary removal and reinstatement of suspended ceilings, vitreous enamel panels, floor trays, access covers and other such items to facilitate access to all Equipment, where applicable complex access shall go through Additional Works (Schedule 6 Part B).

2.16.2 Furniture, suspended ceilings, tiles, raised floor trays, vitreous enamel panels and other such items temporarily removed for access shall be reinstated at the end of the shift and any dust and dirt arising removed by vacuum cleaner (Battery operated or 110 volt with a current PAT label) and the site left clean and tidy. Suspended ceiling tiles, raised access floor trays, vitreous enamel panels and the like temporarily removed for access shall be referenced to ensure correct position and orientation upon reinstatement by the Supplier.

2.16.3 Suspended ceiling tiles, raised access floor trays, vitreous enamel panels and the like removed for access shall be cleaned to ensure no dirty marks, finger prints or other such blemishes are apparent upon reinstatement.

2.16.4 Any damage caused by the Supplier or his sub-contractors whilst carrying out the Services shall be made good and the cost of such remedial works treated as a Disallowed Cost. Where the Services necessitate the removal and reinstatement of suspended ceiling panels (other than lay-in), suspended ceiling grid and hangers, vitreous enamel panels or other similar finishes this shall be carried out by a competent person employed by the Supplier or a specialist sub-contractor employed by the Supplier.



3 SKILLS AND QUALIFICATIONS

3.1 Skills and Qualifications of Supplier Staff

- 3.1.1 The Supplier shall provide staff suitably qualified and experienced to deliver the Services.
- 3.1.2 The Supplier shall ensure that there is a sufficient level of trained and competent staff to provide all the requirements of the Services at all required times. A person is regarded to be competent where sufficient training and experience or knowledge and other qualities are held to enable them to properly meet the requirements set out in this specification. For example the attainment of accreditation by a recognised professional third party scheme (for example LPS 1014 or LPS 1048 or equivalent).
- 3.1.3 The Supplier shall provide staff qualified and competent in the discipline they are performing. The Supplier shall employ competent staff who will be responsible for planning, overseeing and signing off completed works / tasks.
- 3.1.4 The Supplier shall provide details of the number and types of staff to which training will be provided to meet the skills and qualification requirements detailed in paragraph 3.1.2 above. The Supplier's proposals shall be subject to agreement and approval by the Company.
- 3.1.5 Individual TfL Business Areas or Delivery Units may require specific qualifications or skill levels. Where applicable they are detailed in sections 5-10.

3.2 Company Mandatory Training of Supplier Staff

- 3.2.1 In addition to the skills and qualifications requirements, set out in paragraph 3.1.2 above, the Supplier's staff are required to undertake Company mandatory training courses as appropriate. The specific courses including the workplace areas and the staff types to which the training applies are more particularly defined in clause 32 (Key Personnel) and schedule 19 (Key Personnel) of the Contract.

3.3 Training Plan

- 3.3.1 The Supplier shall prepare a contract specific training plan for each of its staff who are engaged in the delivery of the Services. This shall include:
- the skills and qualifications requirements as detailed in paragraph 3.1 above;
 - the Company mandatory training requirements as detailed in paragraph 3.2 above; and
 - any other vocational, statutory or compliance training deemed necessary by the Supplier.
- 3.3.2 The Supplier shall review and update the training plan every four-week period.
- 3.3.3 The Supplier shall provide staff engaged in delivery of the Services with adequate training on the following, including, but not limited to:
- a. the tasks they have to perform;
 - b. use of all necessary equipment required to deliver the Services;
- and



- c. all relevant legislation, British Standards and Company rules, procedures, Standards and codes of practice which relate to delivery of the Services.



4 TFL HEAD OFFICES

4.1 Locations & Hours of Work

4.1.1 Locations

4.1.1.1 Facilities Operations is responsible within TfL for the provision of facilities management services to 44 TfL Head Office Sites. These range from large office buildings with over 2000 workstations to smaller spaces like garages. Facilities Operations strategy is to deliver quality, resilient and appropriate facilities management services to office and operational accommodation, working with business stakeholders and suppliers. Activities range from back office support to front line operational services.

4.1.1.2 The Services shall be delivered at Head Offices Building. A complete list of Sites subject to the scope of Sections 4 to 4.4 of this specification is provided in Appendix A (Services Matrix).

4.1.2 Hours of Work

4.1.2.1 The Supplier shall deliver the Services both inside and outside of the Core Hours. “Core Hours” are defined as 08:00 to 18:00 Monday to Friday. All other times, including public/bank holidays and Christmas Day are regarded as being outside of the Core Hours.

4.1.2.2 The Supplier shall deliver the Services outside of the Core Hours where working within the Core Hours would adversely impact the operation of the Sites or its occupants’ activities, particularly in relation to safety. The Supplier shall accommodate requests to change the scheduling of particular aspects of the Services to accommodate the Company’s specific operational requirements (at no additional cost to the Company).

4.1.3 Restrictions & Special Requirements

4.1.3.1 The access requirements detailed in Schedule 5 (Access) do not apply to this Delivery Unit.

4.1.3.2 Unless otherwise set out in Appendix A (Service Matrix), no specific restrictions are in place for day to day service delivery, other than the core hours requirements set out in paragraph 4.1.2 above.

4.2 Scope of Services

4.2.1 Scope

4.2.1.1 The Supplier shall provide a professionally managed, high quality maintenance service to ensure the effective operation of all items of plant and equipment forming the Company’s fire systems as detailed within the Company’s asset register (the “Asset Register”) (& subsequent updates) to ensure they are properly and safely maintained to remain safe, functional and operationally sound. Services include, but are not limited to, the management, maintenance and inspection of:



- control panels, printers (including the provision of printing consumables) & interfaces;
- interfaces with other assets not subject to the Services;
- dry droppers and risers;
- call points and break glass including door bolt glass;
- alarm sounders;
- field wiring;
- fire system isolators;
- passive fire protection systems (PFPA);
- suppression systems including but not limited to sprinklers, AFFF, inert gas and water mist;
- VA/PA;
- deaf alert systems (beacons and personal aids);
- door break glass;
- fire extinguishers, hose reels and blankets;
- CAD drawings & updates;
- water fog / gaseous systems;
- EDNE signage;
- fire dampers and smoke vents;
- magnetic door retainers and closers;
- aspirating smoke detection (ASD);
- fire alarm remote monitoring services;
- dedicated "Fire" computer terminals and displays (Graphical User Interfaces); and
- software and firmware.

4.3 Standards

4.3.1 General

- 4.3.1.1 The Services shall be provided at all times in accordance with a maintenance regime that complies with all statutory requirements, legislation, regulations and the following standards set out below.
- 4.3.2 British Standards, Regulations and Approved Codes of Practice
 - 4.3.2.1 The Supplier shall provide the Services in accordance with SFG20. Where SFG20 is not available for certain assets the Supplier shall provide the Services in accordance with all relevant British Standards.
- 4.3.3 TfL Standards
 - 4.3.3.1 The Supplier shall comply with all applicable TfL Standards as they relate to fire systems.
- 4.3.4 Other Standards
 - 4.3.4.1 Where there is no appropriate British Standard, the Supplier shall provide the Company with a proposed maintenance regime, to be approved by the Company.

4.4 Services Specification

4.4.1 Scope of Maintenance

- 4.4.1.1 The Supplier shall provide a professionally managed, high quality fire systems maintenance service in accordance with



- the specified Standards and to ensure the effective operation of all items of plant and equipment as detailed within the Asset Register (& subsequent updates).
- 4.4.1.2 The Supplier shall maintain all firmware, front-end software and database software upgrades for fire systems and associated remote monitoring systems. The Company shall retain access to all up to date fire systems software as related to the Sites, to be available for inspection to the Company or a third party appointed by the Company, at any time.
 - 4.4.1.3 All access and control of all firmware, front-end software and database software as related to the fire systems at the Sites shall be made available to the Company for the duration of the Contract and after the Contract has ended; this shall be irrespective of the manner in which the Contract comes to an end.
 - 4.4.1.4 The Supplier shall provide up-to-date fire panel data downloads on a regular basis to the Company, which will be held as copy only, and shall provide to the Company any software that is required for the Company to access and view the data.
 - 4.4.1.5 The Supplier shall maintain all asset data relevant to the delivery of the Services in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol.
 - 4.4.1.6 The format and layout of extinguisher service labels to be agreed with the company, and in accordance with relevant British Standards.
- 4.4.2 The Asset Register
- 4.4.2.1 The Supplier shall maintain the Asset Register up to date at all times prior to the Expiry Date. The Supplier shall ensure that data held in the Asset Register shall be in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol.
- 4.4.3 Asset Changes
- 4.4.3.1 The Supplier shall witness and document the testing and commissioning of new assets and shall add new assets to the Asset Register and annual planned maintenance schedule (the "Annual Planned Maintenance Schedule") within 2 weeks of the change occurring or at timescale agreed with the Company.
 - 4.4.3.2 Upon the discovery of additional assets (excluding assets referred to in 4.4.3.1 above), the Supplier shall provide to the Company details of each asset in a format approved by the company.
 - 4.4.3.3 Annually 1 month before each anniversary of the Services Commencement Date, and also 6 months before the Expiry Date, the Supplier shall review and submit an updated and revised Asset Register to the Company, taking account of any and all changes to the Sites including but not limited to changes to Appendix A (Services Matrix), acquisitions and



- disposals of Sites, additions and disposals of the assets, warranties and maintenance records within the previous year.
- 4.4.3.4 The Supplier shall maintain additional assets added to the Sites by the Company subject to the agreement of a Variation Order.
- 4.4.4 Annual Maintenance Planning
- 4.4.4.1 The Supplier shall update and issue for the Company's approval the Annual Planned Maintenance Schedule for all Sites no less than 30 calendar days prior to the anniversary of the Services Commencement Date.
- 4.4.4.2 The Company shall provide any comments or feedback on the Annual Planned Maintenance Schedule to the Supplier within 30 calendar days.
- 4.4.4.3 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
- 4.4.4.4 The Supplier shall include in the Annual Maintenance Plan:-
- a. Outstanding reactive maintenance requirements above the Reactive Maintenance Threshold
 - b. Proposed life-cycle replacement works.
- 4.4.4.5 The Supplier shall identify the reason for each item appearing on the Annual Maintenance Plan and prioritise each item in terms of:-
- a. statutory compliance requirements;
 - b. impact on health & safety;
 - c. impact on normal use of the Sites;
 - d. impact on on-going costs of maintenance;
 - e. the business resilience risks to the Company; and
 - f. any other relevant criteria.
- 4.4.4.6 The Annual Maintenance Plan shall provide indicative costs for each item, broken down into an appropriate level of detail to assist the Company in planning and budgeting.
- 4.4.4.7 The Supplier shall make the Annual Planned Maintenance Schedule available in a format to be agreed between the parties, to the Company for inspection by the Company or a third party appointed by the Company at any time.
- 4.4.4.8 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
- 4.4.5 Planned Maintenance Delivery
- 4.4.5.1 The Supplier shall deliver planned maintenance in accordance with the Annual Planned Maintenance Schedule.
- 4.4.5.2 The Supplier shall notify the Company no less than seven days in advance of any proposed changes to the dates or locations of planned maintenance and shall undertake the planned maintenance on the proposed changed date only if approved in advance by the Company.
- 4.4.5.3 The Supplier shall adapt the Annual Planned Maintenance Schedule to allow for any Company imposed 'maintenance



- freeze' periods. Notice will be provided by the Company as early as reasonably practicable.
- 4.4.5.4 If during maintenance carried out in accordance with the Annual Planned Maintenance Schedule, the Supplier identifies faults where there is a risk of danger to persons and / or property, the Supplier shall make safe immediately and escalate to the Company.
 - 4.4.5.5 The Supplier shall report the hazard to the Company as soon as practicable but in any case within no more than 2 hours of making safe.
 - 4.4.5.6 The Supplier shall identify any areas of deficient fire stopping or un-stopped penetrations (caused by others) that the Supplier discovers during the course of the delivery of the Services, and the Supplier shall report the same in an agreed format to the Company.
- 4.4.6 Fire Systems Maintenance to be Undertaken by the Company or Third Party Contractors
- 4.4.6.1 The Supplier shall not undertake weekly fire alarm testing. This is the responsibility of the Company's Security and Reception Services Contractor.
- 4.4.7 Fire Systems Isolations
- 4.4.7.1 Fire system isolations are outside the scope of planned maintenance. In the case of complex isolations the Company may request the Supplier to support this through the Additional Works process.
- 4.4.8 Reactive Maintenance Delivery
- 4.4.8.1 The Supplier shall receive instructions to carry out reactive maintenance from the Company's helpdesk.
 - 4.4.8.2 The Supplier shall undertake reactive maintenance in accordance with the response and rectification times detailed in Schedule 12 (Performance Measurement).
 - 4.4.8.3 The Supplier shall attend the Sites and permanently rectify faults. The Supplier shall endeavour to permanently rectify each fault during a single attendance visit but if necessary the Supplier shall make more than one attendance visit to make safe or permanently rectify the fault up to the value of the reactive maintenance threshold for each fault.
 - 4.4.8.4 At the end of each attendance visit the fault shall be left in a safe condition if it cannot be permanently rectified.
 - 4.4.8.5 The Supplier shall notify the Company's helpdesk or the local reporting system utilised by relevant business unit when faults have been permanently rectified or any other measures that may be required to mitigate any reduction in fire safety arrangements.
 - 4.4.8.6 Where reactive maintenance is identified which is outside the scope of the specification, the Supplier shall undertake the repairs having first gained the approval of the Company, except where failure to carry out the Services immediately will in the reasonable opinion of the Supplier, significantly disrupt



the Company's business or present a health and safety or security risk.

4.4.8.7 If when undertaking planned maintenance the Supplier discovers the need to undertake remedial works which can be undertaken within the value of the reactive maintenance threshold, this shall be treated as a fault. The Supplier shall report the fault to the Company's helpdesk and shall attend and permanently rectify the fault.

4.4.9 Interfaces with the Company's Third Party Contractors

4.4.9.1 The Company shall take overall responsibility for management of interfaces between the Contractor and third party contractors undertaking maintenance or projects at the Sites. The Supplier shall proactively provide support to the Company in respect of the requirements set out in paragraph 4.4.9.2 below when required by the Company. The Supplier shall coordinate and resolve issues on behalf of the Company including attendance in the event of any issues surrounding interfaces until these are resolved. The Supplier shall keep the Company's local managers informed of any maintenance work that they become aware of that is likely to have an impact on assets not in the scope of this specification.

4.4.9.2 The Supplier's activities shall include, but shall not be limited to:-

- a. arming/disarming life safety systems;
- b. bypassing infrastructure components; and
- c. training of its suppliers regarding risks associated with accidental service interruption.

4.4.9.3 The Supplier shall ensure that no equipment failures, downtime or interruptions are caused by the Supplier or their sub-contractors as a result of support activities.



5 DEPOTS & OPERATIONAL FACILITIES

5.1 Locations & Hours of Work

5.1.1 Locations

5.1.1.1 The Services shall be delivered at depots, stores, workshops, signal control centres, training centres and the office accommodation that is geographically connected with these locations. For the avoidance of doubt, the Sites of London Trams are subject to the Services set out in paragraphs 5 to 5.4 of the Specification. A complete list of the Sites subject to the scope of Sections 5 to 5.4 of this specification is provided in Appendix A (Services Matrix).

5.1.2 Hours of Work

5.1.2.1 The Supplier shall deliver the Services both inside and outside of the Core Hours (as defined in paragraph 4.1.2.1 of this specification).

5.1.2.2 The Supplier shall deliver the Services outside Core Hours where working in Core Hours would adversely impact the operation of the Sites or its occupants' activities, particularly in relation to safety. The Supplier shall accommodate requests to change the scheduling of particular aspects of the Services to accommodate the Company's specific operational requirements (at no additional cost to the Company).

5.1.3 Restrictions & Special Requirements

5.1.3.1 The access requirements detailed in Schedule 5 (Access) apply to this Delivery Unit.

5.1.3.2 Where access is either not possible or is unavailable during Traffic Hours, or to take an asset out of service will unacceptably impact the operation or safety of the Network, the Supplier shall undertake maintenance outside of core hours. Further information is set out in Appendix C (Implementation of Maintenance All Hours on Fire Assets).

5.1.3.3 Some locations are not permanently open or manned 24 hours per day and therefore access arrangements will require to be checked and agreed with site specific Company personnel prior to attendance at these locations.

5.1.3.4 The signal control centres listed as critical buildings in Appendix A (Services Matrix) may require an enhanced maintenance regime to be agreed with the Company due to the criticality of the assets.

5.1.3.5 For London Trams only the Supplier is required to visually check all fire safety signage to ensure compliance with statutory requirements and report any defects to the Company. Sites subject to this are provided in Appendix A (Services Matrix).

5.1.3.6 The minimum requirements for specific spares are to be defined locally. The Supplier will manage critical spares requirements and notify company of any changes. Adequate



spares shall be held to ensure system functionality is restored immediately regardless of lead time.

Critical spares listings will be reviewed with the company at period contract review meetings.

5.2 Scope of Services

5.2.1 Scope

5.2.1.1 The Supplier shall provide a professionally managed, high quality maintenance service to ensure the effective operation of all items of plant and equipment forming the Company's fire systems as detailed within the Company's Asset Register (& subsequent updates) to ensure they are properly and safely maintained to remain safe, functional and operationally sound. Services include, but are not limited to, the management, maintenance and inspection of:

- control panels, printers (including the provision of printing consumables) & interfaces;
- mechanical interfaces;
- dry droppers and risers;
- call points and break glass including door bolt glass;
- alarm sounders;
- field wiring;
- fire system isolators;
- passive fire protection systems (PFPA);
- suppression systems including but not limited to sprinklers, AFFF, inert gas and water mist;
- VA/PA;
- deaf alert systems (beacons and personal aids);
- door break glass;
- fire extinguishers, hose reels and blankets;
- fire hydrants;
- CAD drawings;
- water fog / gaseous systems;
- EDNE signage;
- fire dampers and smoke vents;
- magnetic door retainers and closers; and
- aspirating smoke detection (ASD).

5.3 Standards

5.3.1 General

5.3.1.1 The services shall be provided at all times in accordance with a maintenance regime that complies with all statutory requirements, legislation, regulations and the following standards set out below.

5.3.2 TfL Standards

5.3.2.1 The Supplier shall comply with all relevant TfL Standards as they relate to fire systems.

5.3.3 British Standards, Regulations and Approved Codes of Practice

5.3.3.1 The Supplier shall provide the Services in accordance with SFG20. Where SFG20 is not available for certain assets the



Supplier shall provide the Services in accordance with all relevant British Standards.

5.3.4 Other Standards

5.3.4.1 Where there is no appropriate British Standard, the Supplier shall provide the Company with a proposed maintenance regime, to be approved by the Company.

5.4 Services Specification

5.4.1 Scope of Maintenance

5.4.1.1 The Supplier shall provide a professionally managed, high quality fire systems maintenance service in accordance with the specified Standards and to ensure the effective operation of all items of plant and equipment as detailed within the Asset Register (& subsequent updates).

5.4.1.2 The Supplier shall maintain all firmware, front-end software and database software upgrades for fire systems. The Company shall retain access to all up to date fire systems software as related to the Sites, to be available for inspection to the Company or a third party appointed by the Company, at any time.

5.4.1.3 All access and control of all firmware, front-end software and database software as related to the fire systems at the Sites shall be made available to the Company for the duration of the Contract and after the Contract has ended; this shall be irrespective of the manner in which the Contract comes to an end.

5.4.1.4 The Supplier shall provide up-to-date fire panel data downloads on a regular basis as agreed locally to the Company, which will be held as copy only, and shall provide to the Company any software that is required for the Company to access and view the data.

5.4.1.5 The Supplier shall hold all asset data relevant to the delivery of the Services in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol or as specified by relevant business unit.

5.4.2 The Asset Register

5.4.2.1 The Supplier shall maintain the Asset Register up to date at all times throughout the Contract period. The Supplier shall ensure that data held in the Asset Register shall be in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol or as specified by relevant business unit.

5.4.3 Asset Changes

5.4.3.1 The Supplier shall witness and document the testing and commissioning of new assets and shall add new assets to the Asset Register and Annual Planned Maintenance Schedule within 2 weeks of the change occurring.

5.4.3.2 Upon the discovery of additional assets (excluding assets referred to in 5.4.3.1 above), the Supplier shall provide to the Company details of each asset in a format approved by the company.



- 5.4.3.3 Annually 1 month before each anniversary of the Services Commencement Date, and also 6 months before the Contract Expiry Date, the Supplier shall review and submit an updated and revised Asset Register to the Company, taking account of any and all changes to the Sites including but not limited to changes to Appendix A (Services Matrix), acquisitions and disposals of Sites, additions and disposals of the assets, warranties and maintenance records within the previous year.
- 5.4.3.4 The Supplier shall maintain additional assets added to the Sites by the Company subject to the agreement of a Variation Order.
- 5.4.4 Annual Maintenance Planning
 - 5.4.4.1 The Supplier shall update and issue for the Company's approval the Annual Planned Maintenance Schedule for all Sites no less than 30 calendar days prior to the anniversary of the Services Commencement Date.
 - 5.4.4.2 The Company shall provide any comments or feedback on the Annual Planned Maintenance Schedule to the Supplier within 30 calendar days.
 - 5.4.4.3 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
 - 5.4.4.4 The Supplier shall include in the Annual Maintenance Plan:-
 - a. Outstanding reactive maintenance requirements above the Reactive Maintenance Threshold
 - b. Proposed life-cycle replacement works.
 - 5.4.4.5 The Supplier shall identify the reason for each item appearing on the Annual Maintenance Plan and prioritise each item in terms of:-
 - a. statutory compliance requirements;
 - b. impact on health & safety;
 - c. impact on normal use of the Sites;
 - d. impact on on-going costs of maintenance;
 - e. the business resilience risks to the Company; and
 - f. any other relevant criteria.
 - 5.4.4.6 The Annual Maintenance Plan shall provide indicative costs for each item, broken down into an appropriate level of detail to assist the Company in planning and budgeting.
 - 5.4.4.7 The Supplier shall make the Annual Planned Maintenance Schedule available in a format to be agreed between the parties, to the Company for inspection by the Company or a third party appointed by the Company at any time.
 - 5.4.4.8 The Supplier shall provide the Company with a regular update of the Annual Planned Maintenance Schedule as specified by the relevant Delivery Unit.
- 5.4.5 Planned Maintenance Delivery
 - 5.4.5.1 The Supplier shall deliver planned maintenance in accordance with the Annual Planned Maintenance Schedule.



- 5.4.5.2 The Supplier shall notify the Company no less than fourteen days in advance of any proposed changes to the dates or locations of planned maintenance and shall undertake the planned maintenance on the proposed changed date only if approved in advance by the Company.
- 5.4.5.3 The Supplier shall adapt the Annual Planned Maintenance Schedule to allow for any Company imposed 'maintenance freeze' periods. Notice will be provided by the Company as early as reasonably practicable.
- 5.4.5.4 If during maintenance carried out in accordance with the Annual Planned Maintenance Schedule, the Supplier identifies faults where there is a risk of danger to persons and / or property, the Supplier shall make safe immediately and escalate to the Company.
- 5.4.5.5 The Supplier shall report the hazard to the Company as soon as practicable but in any case within no more than 2 hours of making safe.
- 5.4.5.6 The Supplier shall identify any areas of deficient fire stopping or un-stopped penetrations (caused by others) that the Supplier discovers during the course of the delivery of the Services, and the Supplier shall report the same in an agreed format to the Company.
- 5.4.6 Fire Systems Maintenance to be Undertaken by the Company or Third Party Contractors
 - 5.4.6.1 The Supplier shall not undertake weekly fire alarm testing. This is the responsibility of the Company or a third party Contractor. In exceptional circumstances a variation of this will be specified locally.
- 5.4.7 Fire Systems Isolations
 - 5.4.7.1 Where isolations are required the Supplier shall undertake fire systems isolations and subsequent re-instatement of all affected equipment or apparatus in order for the Company to undertake project works or inspections outside of the scope of the Contract.
- 5.4.8 Reactive Maintenance Delivery
 - 5.4.8.1 The Supplier shall receive instructions to carry out reactive maintenance from the Company's helpdesk.
 - 5.4.8.2 The Supplier shall undertake reactive maintenance in accordance with the response and rectification times detailed in Schedule 12 (Performance Measurement).
 - 5.4.8.3 The Supplier shall attend the Sites and permanently rectify faults. The Supplier shall endeavour to permanently rectify each fault during a single attendance visit but if necessary the Supplier shall make more than one attendance visit to make safe or permanently rectify the fault up to the value of the reactive maintenance threshold for each fault.
 - 5.4.8.4 At the end of each attendance visit the fault shall be left in a safe condition if it cannot be permanently rectified.
 - 5.4.8.5 The Supplier shall notify the Company's helpdesk or the local reporting system utilised by relevant business unit when faults



have been permanently rectified or any other measures that may be required to mitigate any reduction in fire safety arrangements.

5.4.8.6 Where reactive maintenance is identified which is outside the scope of the specification, the Supplier shall undertake the repairs having first gained the approval of the Company, except where failure to carry out the Services immediately will in the reasonable opinion of the Supplier, significantly disrupt the Company's business or present a health and safety or security risk.

If when undertaking planned maintenance the Supplier discovers the need to undertake remedial works which can be undertaken within the value of the reactive maintenance threshold, this shall be treated as a fault. The Supplier shall report the fault to the Company's helpdesk and shall attend and permanently rectify the fault.

5.4.9 Interfaces with the Company's Third Party Contractors

5.4.9.1 The Company shall take overall responsibility for management of interfaces between the Supplier and third party contractors undertaking maintenance or projects at the Sites. The Supplier shall proactively provide support to the Company in respect of the requirements set out in paragraph 5.4.9.2 below when required by the Company. The Supplier shall coordinate and resolve issues on behalf of the Company including attendance in the event of any issues surrounding interfaces until these are resolved. The Supplier shall keep the Company's local managers informed of any maintenance work that they become aware of that is likely to have an impact on assets not in the scope of this specification.

5.4.9.2 The Supplier's activities shall include, but shall not be limited to:-

- a. arming/disarming life safety systems;
- b. bypassing infrastructure components; and
- c. training of contractors regarding risks associated with accidental service interruption.

5.4.9.3 The Supplier shall ensure that no equipment failures, downtime or interruptions are caused by the Supplier or their sub-contractors as a result of support activities.

5.4.10 Training

5.4.10.1 The following minimum skill levels and qualifications shall be provided to a sufficient number of staff as required to provide the Services:

Skills Level / Qualification	Required for
Passive Fire Qualification	Site Person in Charge (SPC) or nominated responsible person only
The Institute of Occupational Safety and Health (IOSH) - Managing Safely – Safety Management Level	HSE Management by Managers and Supervisors



Skills Level / Qualification	Required for
The National Examination Board in Occupational Safety and Health (NEBOSH) Certificate in Occupational Health (NVQ Level 3)	HSE Management by Managers
International Rope Access Trade Association (IRATA)	High Level Access
Prefabricated Access Suppliers' and Manufacturers' Association (PASMA) – Towers for Users	Constructing and Using Mobile Access Towers
International Powered Access Federation (IPAF) - Powered Access Licence (PAL)	Operating Mobile Elevated Working Platforms (MEWPS)
International Powered Access Federation (IPAF) - MEWPS for Managers	Planning, supervising and managing the use of Mobile Elevated Working Platforms (MEWPS)
UKAS Accredited Certification for Electrical and Installation and Maintenance in Potentially Explosive Atmospheres (for example CompEx)	All staff working in potentially explosive atmospheres
Confined Space Training	All personnel undertaking maintenance activities in White City Sidings, Greenwich Generating Station, King's Cross Hotel Curve and some London Underground Sub-Stations.



6 SURFACE TRANSPORT BUSINESS

6.1 Locations & Hours of Work

6.1.1 Locations

6.1.1.1 The Services shall be delivered at bus stations, bus stands, London River Services' piers, Victoria Coach Station and the Sites of Dial-a-Ride. A complete list of Sites subject to the scope of Sections 6 to 6.4 of this specification is provided in Appendix A (Services Matrix).

6.1.2 Hours of Work

6.1.2.1 The Supplier shall deliver the Services both inside and outside of Core Hours (as defined in paragraph 4.1.2.1 of this specification) for London River Services' piers. For the avoidance of doubt, the Supplier shall deliver the Services at Victoria Coach Station 24 hours per day, every day of the year and shall deliver the Services at bus stations 24 hours per day, every day except Christmas Day.

6.1.2.2 The Supplier shall deliver the Services outside Core Hours where working in Core Hours would adversely impact the operation of the Sites building or its occupants' activities, particularly in relation to safety. The Supplier shall accommodate requests to change the scheduling of particular aspects of the Services to accommodate the Company's specific operational requirements (at no additional cost to the Company).

6.1.3 Restrictions & Special Requirements

6.1.3.1 The access requirements detailed in Schedule 5 (Access) do not apply to this Delivery Unit.

6.2 Scope of Services

6.2.1 Scope

6.2.1.1 The Supplier shall provide a professionally managed, high quality maintenance service to ensure the effective operation of all items of plant and equipment forming the Company's fire systems as detailed within the Company's Asset Register (& subsequent updates) to ensure they are properly and safely maintained to remain safe, functional and operationally sound. Services include, but are not limited to, the management, maintenance and inspection of:

- control panels, printers (including the provision of printing consumables) & interfaces;
- mechanical interfaces;
- dry droppers and risers;
- call points and break glass including door bolt glass;
- alarm sounders;
- field wiring;
- fire system isolators;
- passive fire protection systems (PFPA);
- suppression systems including but not limited to sprinklers, AFF, inert gas and water mist;
- VA/PA;



- deaf alert systems (beacons and personal aids);
- door break glass;
- fire extinguishers, hose reels and blankets;
- fire hydrants, tanks and pumps;
- CAD drawings;
- water fog / gaseous systems;
- EDNE signage;
- fire dampers and smoke vents;
- magnetic door retainers and closers; and
- aspirating smoke detection (ASD)

6.3 Standards

6.3.1 General

6.3.1.1 The Services shall be provided at all times in accordance with a maintenance regime that complies with all statutory requirements, legislation, regulations and the following standards set out below.

6.3.2 TfL Standards

6.3.2.1 The Supplier shall comply with all applicable TfL Standards as they relate to fire systems.

6.3.3 British Standards, Regulations and Approved Codes of Practice

6.3.3.1 The Supplier shall provide the Services in accordance with SFG20. Where SFG20 is not available for certain assets the Supplier shall provide the Services in accordance with all relevant British Standards.

6.3.4 Other Standards

6.3.4.1 Where there is no appropriate British Standard, the Supplier shall provide the Company with a proposed maintenance regime, to be approved by the Company.

6.4 Services Specification

6.4.1 Scope of Maintenance

6.4.1.1 The Supplier shall provide a professionally managed, high quality fire systems maintenance service in accordance with the specified Standards and to ensure the effective operation of all items of plant and equipment as detailed within the Asset Register (& subsequent updates).

6.4.1.2 The Supplier shall maintain all firmware, front-end software and database software upgrades for fire systems. The Company shall retain access to all up to date fire systems software as related to the Sites, to be available for inspection to the Company or a third party appointed by the Company, at any time.

6.4.1.3 All access and control of all firmware, front-end software and database software as related to the fire systems at the Sites shall be made available to the Company for the duration of the Contract and after the Contract has ended; this shall be irrespective of the manner in which the Contract comes to an end.



- 6.4.1.4 The Supplier shall provide up-to-date fire panel data downloads on a regular basis to the Company, which will be held as copy only, and shall provide to the Company any software that is required for the Company to access and view the data.
- 6.4.1.5 The Supplier shall hold all asset data relevant to the delivery of the Services in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol or as specified by relevant business unit.
- 6.4.2 The Asset Register
- 6.4.2.1 The Supplier shall maintain the Asset Register up to date at all times throughout the Contract period. The Supplier shall ensure that data held in the Asset Register shall be in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol or as specified by relevant business unit.
- 6.4.3 Asset Changes
- 6.4.3.1 The Supplier shall witness and document the testing and commissioning of new assets and shall add new assets to the Asset Register and Annual Planned Maintenance Schedule within 2 weeks of the change occurring.
- 6.4.3.2 Upon the discovery of additional assets (excluding assets referred to in 6.4.3.1 above), the Supplier shall provide to the Company details of each Asset in a format approved by the company.
- 6.4.3.3 Annually 1 month before each anniversary of the Services Commencement Date, and also 6 months before the Expiry Date, the Supplier shall review and submit an updated and revised Asset Register to the Company, taking account of any and all changes to the Sites including but not limited to changes to Appendix A (Services Matrix), acquisitions and disposals of Sites, additions and disposals of the assets, warranties and maintenance records within the previous year.
- 6.4.3.4 The Supplier shall maintain additional assets added to the Sites by the Company subject to the agreement of a Variation Order.
- 6.4.4 Annual Maintenance Planning
- 6.4.4.1 The Supplier shall update and issue for the Company's approval the Annual Planned Maintenance Schedule for all Sites no less than 30 calendar days prior to the anniversary of the Services Commencement Date.
- 6.4.4.2 The Company shall provide any comments or feedback on the Annual Planned Maintenance Schedule to the Supplier within 30 calendar days.
- 6.4.4.3 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
- 6.4.4.4 The Supplier shall include in the Annual Maintenance Plan:-
- a. Outstanding reactive maintenance requirements above the Reactive Maintenance Threshold
 - b. Proposed life-cycle replacement works.



- 6.4.4.5 The Supplier shall identify the reason for each item appearing on the Annual Maintenance Plan and prioritise each item in terms of:-
- a. statutory compliance requirements;
 - b. impact on health & safety;
 - c. impact on normal use of the Sites;
 - d. impact on on-going costs of maintenance;
 - e. the business resilience risks to the Company; and
 - f. any other relevant criteria.
- 6.4.4.6 The Annual Maintenance Plan shall provide indicative costs for each item, broken down into an appropriate level of detail to assist the Company in planning and budgeting.
- 6.4.4.7 The Supplier shall make the Annual Planned Maintenance Schedule available in a format to be agreed between the parties, to the Company for inspection by the Company or a third party appointed by the Company at any time.
- 6.4.4.8 The Supplier shall provide the Company with a regular update of the Annual Planned Maintenance Schedule as specified by the relevant Delivery Unit.
- 6.4.5 Planned Maintenance Delivery
- 6.4.5.1 The Supplier shall deliver planned maintenance in accordance with the Annual Planned Maintenance Schedule.
- 6.4.5.2 The Supplier shall notify the Company no less than fourteen days in advance of any proposed changes to the dates or locations of planned maintenance and shall undertake the planned maintenance on the proposed changed date only if approved in advance by the Company.
- 6.4.5.3 The Supplier shall adapt the Annual Planned Maintenance Schedule to allow for any Company imposed 'maintenance freeze' periods. Notice will be provided by the Company as early as reasonably practicable.
- 6.4.5.4 If during maintenance carried out in accordance with the Annual Planned Maintenance Schedule, the Supplier identifies faults where there is a risk of danger to persons and / or property, the Supplier shall make safe immediately and escalate to the Company.
- 6.4.5.5 The Supplier shall report the hazard to the Company as soon as practicable but in any case within no more than 2 hours of making safe.
- 6.4.5.6 The Supplier shall identify any areas of deficient fire stopping or un-stopped penetrations (caused by others) that the Supplier discovers during the course of the delivery of the Services, and the Supplier shall report the same in an agreed format to the Company.
- 6.4.6 Fire Systems Maintenance to be Undertaken by the Company or Third Party Contractors
- 6.4.6.1 The Supplier shall not undertake weekly fire alarm testing. This is the responsibility of the Company.



- 6.4.6.2 The Supplier shall not carry out annual checks on fire extinguishers or visual inspections of fire alarm panels. This is the responsibility of the Company.
- 6.4.7 Fire Systems Isolations
- 6.4.7.1 From time to time there will be a need for fire systems isolations and subsequent re-instatement of all affected equipment or apparatus in order for the Company to undertake project works or inspections outside of the scope of the Contract. The Company will take responsibility for managing all such isolations and may, in the case of complex isolations request the Supplier to support this process. Where this is the case, the Supplier shall provide a priced proposal for this work in advance of undertaking the work.
- 6.4.8 Reactive Maintenance Delivery
- 6.4.8.1 The Supplier shall receive instructions to carry out reactive maintenance from the Company's helpdesk.
- 6.4.8.2 The Supplier shall undertake reactive maintenance in accordance with the response and rectification times detailed in Schedule 12 (Performance Measurement).
- 6.4.8.3 The Supplier shall attend the Sites and permanently rectify faults. The Supplier shall endeavour to permanently rectify each fault during a single attendance visit but if necessary the Supplier shall make more than one attendance visit to make safe or permanently rectify the fault up to the value of the reactive maintenance threshold for each fault.
- 6.4.8.4 At the end of each attendance visit the fault shall be left in a safe condition if it cannot be permanently rectified.
- 6.4.8.5 The Supplier shall notify the Company's helpdesk or the local reporting system utilised by relevant business unit when faults have been permanently rectified or any other measures that may be required to mitigate any reduction in fire safety arrangements.
- 6.4.8.6 Where reactive maintenance is identified which is outside the scope of the specification, the Supplier shall undertake the repairs having first gained the approval of the Company, except where failure to carry out the Services immediately will in the reasonable opinion of the Supplier, significantly disrupt the Company's business or present a health and safety or security risk.
- 6.4.8.7 If when undertaking planned maintenance the Supplier discovers the need to undertake remedial works which can be undertaken within the value of the reactive maintenance threshold, this shall be treated as a fault. The Supplier shall report the fault to the Company's helpdesk and shall attend and permanently rectify the fault.
- 6.4.9 Interfaces with the Company's Third Party Contractors
- 6.4.9.1 The Company shall take overall responsibility for management of interfaces between the Supplier and third party contractors undertaking maintenance or projects at the Sites. The Supplier shall proactively provide support to the



Company in respect of the requirements set out in paragraph 6.4.9.2 below when required by the Company. The Supplier shall coordinate and resolve issues on behalf of the Company including attendance in the event of any issues surrounding interfaces until these are resolved. The Supplier shall keep the Company's local managers informed of any maintenance work that they become aware of that is likely to have an impact on assets not in the scope of this specification.

- 6.4.9.2 The Supplier's activities shall include, but shall not be limited to:-
- a. arming/disarming life safety systems;
 - b. bypassing infrastructure components; and
 - c. training of contractors regarding risks associated with accidental service interruption.
- 6.4.9.3 The Supplier shall ensure that no equipment failures, downtime or interruptions are caused by the Supplier or their sub-contractors as a result of support activities.

6.4.10 Training

- 6.4.10.1 The following minimum skill levels and qualifications shall be provided to a sufficient number of staff as required to provide the Services:

Skills Level / Qualification	Required for
Passive Fire Qualification	Site Person in Charge (SPC) or nominated responsible person only
The Institute of Occupational Safety and Health (IOSH) - Managing Safely – Safety Management Level	HSE Management by Managers and Supervisors
The National Examination Board in Occupational Safety and Health (NEBOSH) Certificate in Occupational Health (NVQ Level 3)	HSE Management by Managers
International Rope Access Trade Association (IRATA)	High Level Access
Prefabricated Access Suppliers' and Manufacturers' Association (PASMA) – Towers for Users	Constructing and Using Mobile Access Towers
International Powered Access Federation (IPAF) - Powered Access Licence (PAL)	Operating Mobile Elevated Working Platforms (MEWPS)
International Powered Access Federation (IPAF) - MEWPS for Managers	Planning, supervising and managing the use of Mobile Elevated Working Platforms (MEWPS)



Skills Level / Qualification	Required for
UKAS Accredited Certification for Electrical and Installation and Maintenance in Potentially Explosive Atmospheres (for example CompEx)	All staff working in potentially explosive atmospheres
Confined Space Training	All personnel undertaking maintenance activities in White City Sidings, Greenwich Generating Station, King's Cross Hotel Curve and some London Underground Sub-Stations.



7 LONDON UNDERGROUND STATIONS

7.1 Locations & Hours of Work

7.1.1 Locations

7.1.1.1 The Services shall be delivered at London Underground stations and associated non-public areas. A complete list of Sites subject to the scope of Sections 7 to 7.4 of this specification is provided in Appendix A (Services Matrix).

7.1.2 Hours of Work

7.1.2.1 The Supplier shall deliver the Services during all hours unless to do this would adversely impact the operation of the Sites particularly in relation to safety or where otherwise stated in this Specification. The Supplier shall accommodate requests to change the scheduling of particular aspects of the Services to accommodate the Company's specific operational requirements (at no additional cost to the Company).

7.1.3 Restrictions & Special Requirements

7.1.3.1 The access requirements detailed in Schedule 5 (Access) apply to this Delivery Unit.

7.1.3.2 Where access is either not possible or is unavailable during Traffic Hours, or to take an asset out of service will unacceptably impact the operation or safety of the Network, the Supplier shall undertake maintenance outside of core hours. Further information is set out in Appendix C (Implementation of Maintenance All Hours on Fire Assets).

7.1.3.3 Some locations are not permanently open or manned 24 hours per day and therefore access arrangements will require to be checked and agreed with site specific Company personnel prior to attendance at these locations.

7.1.3.4 The Supplier shall undertake maintenance to the following systems in Engineering Hours.

- Escalator Water Sprinkler System (EWSS) (and only where the escalator has been taken out of service);
- Aspirating Smoke Detection Systems (except when the station is subject to partial or full closure);
- Fire hydrant (flow testing) and condition assessment;
- Dry/Damp Falling Mains with Pressure Reducing Hydrant Valves (flow testing).

7.1.3.5 The minimum requirements for specific spares are to be defined locally. The Supplier will manage critical spares requirements and notify company of any changes. Adequate spares shall be held to ensure system functionality is restored immediately regardless of lead time.

Critical spares listings will be reviewed with the company at period contract review meetings.

7.1.3.6 There are some assets located within King's Cross Hotel Curve which are subject to special access arrangements. These include working in confined spaces and working in intrinsically safe or potentially explosive environments.



Suitable competencies/licences should be held by personnel undertaking these works, or by those employed to accompany maintenance staff.

- 7.1.3.7 Some assets in locations with particularly harsh environments may require an enhanced maintenance regime to be agreed with the Company.

7.2 Scope of Services

7.2.1 Scope

7.2.1.1 The Supplier shall provide a professionally managed, high quality maintenance service to ensure the effective operation of all items of plant and equipment forming the Company's fire systems as detailed within the Company's Asset Register (& subsequent updates) to ensure they are properly and safely maintained to remain safe, functional and operationally sound. Services include, but are not limited to, the management, maintenance and inspection of:

- control panels, printers (including the provision of printing consumables) & interfaces;
- mechanical interfaces;
- dry droppers and risers;
- damp droppers and risers;
- call points and break glass including door bolt glass;
- alarm sounders;
- field wiring;
- fire system isolators;
- passive fire protection systems (PFPA);
- suppression systems including but not limited to sprinklers, AFFF, inert gas and water mist;
- VA/PA interface;
- deaf alert systems (beacons and personal aids);
- door break glass;
- fire extinguishers, hose reels and blankets;
- fire hydrants, tanks and pumps;
- CAD drawings;
- water fog / gaseous systems;
- EDNE signage and DNE functionality of EDNE signage;
- escalator detection systems;
- fire dampers and smoke vents;
- magnetic door retainers and closers; and
- aspirating smoke detection (ASD).

7.2.2 Listed Buildings and Buildings of Heritage Interest

7.2.2.1 The Supplier shall be aware that many of the Company's Stations and buildings are statutorily listed, locally listed, within conservation areas or are of heritage interest. Listed stations or stations with listed buildings or structures are set out in Appendix B (Heritage Listed Station Data).



- 7.2.2.2 The Supplier shall priorities repair, rather than replacement, of original work and finishes on listed buildings and buildings of heritage interest where applicable and possible.
- 7.2.2.3 The Supplier shall ensure good workmanship and that skilled and experienced operatives are used to match any repairs to the original work on listed buildings and buildings of heritage interest. Materials and finishes shall always be selected to show minimum evidence of alteration.

7.3 Standards

7.3.1 General

- 7.3.1.1 The Services shall be provided at all times in accordance with a maintenance regime that complies with all statutory requirements, legislation, regulations and the following standards set out below.

7.3.2 TfL Standards

- 7.3.2.1 The Supplier shall comply with the following London Underground Standards as they relate to fire systems.

- S1538 Assurance;

Category 1

- 1-080 The Application of Fire Safety Engineering Principles to London Underground Premises;
- 1-081 Design and Installation of Fire Protection Systems and Compartmentation Measures;
- 1-082 Active Fire Protection Systems and Portable Fire Equipment;
- 1-083 Passive Fire Protection Systems;
- 1-084 Maintenance of Fire Protection Systems and Compartmentation Measures;
- 1-085 Fire Safety Performance of Materials;
- Bb001 Fire Precautions Guidance Document;
- Bb218 Fire Precautions Exemptions Applications;
- S1088 Managing Changes in Stations Fire Precautions;
- S1086 Fire Safety Classification of Stations; and
- S1087 Fire Prevention and Protection – Emergency Do Not Enter Signs.

Category 2

- PR0632 Fire Detection System – Fire Records Change Request
- PR0631 Licensing of Fire System Engineer;
- PR0630 Fire Detection Isolations, Smoke to Heat Detector Substitutions;
- S2100 Fire Engineering – Fire Safety Design and Strategy
- S2101 Fire Engineering – Fire Suppression and Fire Fighting Equipment;
- S2102 Fire Engineering – Fire Compartmentation;
- S2103 Fire Engineering – Fire Detection and Alarm Systems;



- S2104 Maintenance of Fire Systems and Fire Compartmentation.

Management Work Instruction

- W0325 Management of Emergency Remote Isolations of Fire Protection Equipment.
- WI7315 Management of Emergency Remote Isolations of Fire Protection Equipment.

7.3.3 British Standards, Regulations and Approved Codes of Practice

7.3.3.1 The Supplier shall provide the Services in accordance with SFG20. Where SFG20 is not available for certain assets the Supplier shall provide the Services in accordance with all relevant British Standards.

7.3.4 Other Standards

7.3.4.1 Where there is no appropriate British Standard, the Supplier shall provide the Company with a proposed maintenance regime, to be approved by the Company.

7.4 Services Specification

7.4.1 Scope of Maintenance

7.4.1.1 The Supplier shall provide a professionally managed, high quality fire systems maintenance service in accordance with the specified Standards and to ensure the effective operation of all items of plant and equipment as detailed within the Asset Register (& subsequent updates).

7.4.1.2 The Supplier shall maintain all firmware, front-end software and database software upgrades for fire systems. The Company shall retain access to all up to date fire systems software as related to the Sites, to be available for inspection to the Company or a third party appointed by the Company, at any time.

7.4.1.3 All access and control of all firmware, front-end software and database software as related to the fire systems at the Sites shall be made available to the Company for the duration of the Contract and after the Contract has ended; this shall be irrespective of the manner in which the Contract comes to an end.

7.4.1.4 The Supplier shall provide up-to-date fire panel data downloads on a regular basis to the Company, which will be held as copy only, and shall provide to the Company any software that is required for the Company to access and view the data.

7.4.1.5 The Supplier shall hold all asset data relevant to the delivery of the Services in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol.

7.4.1.6 Fire extinguishers located on London Underground station are replaced when necessary from a stations group 'pool' by the Company's operational staff. The 'pool' is to be serviced in accordance with this specification.



- 7.4.2 The Asset Register
- 7.4.2.1 The Supplier shall maintain the Asset Register up to date at all times throughout the Contract period. The Supplier shall ensure that data held in the Asset Register shall be in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol.
- 7.4.3 Asset Changes
- 7.4.3.1 The Supplier shall witness and document the testing and commissioning of new assets and shall add new assets to the Asset Register and Annual Planned Maintenance Schedule within 2 weeks of the change occurring.
- 7.4.3.2 Upon the discovery of additional assets (excluding assets referred to in 7.4.3.1 above), the Supplier shall provide to the Company details of each Asset in a format approved by the company.
- 7.4.3.3 Annually 1 month before each anniversary of the Services Commencement Date, and also 6 months before the Expiry Date, the Supplier shall review and submit an updated and revised Asset Register to the Company, taking account of any and all changes to the Sites including but not limited to changes to Appendix A (Services Matrix), acquisitions and disposals of Sites, additions and disposals of the assets, warranties and maintenance records within the previous year.
- 7.4.3.4 The Supplier shall maintain additional assets added to the Sites by the Company subject to the agreement of a Variation Order.
- 7.4.4 Annual Maintenance Planning
- 7.4.4.1 The Supplier shall update and issue for the Company's approval the Annual Planned Maintenance Schedule for all Sites no less than 30 calendar days prior to the anniversary of the Services Commencement Date.
- 7.4.4.2 The Company shall provide any comments or feedback on the Annual Planned Maintenance Schedule to the Supplier within 30 calendar days.
- 7.4.4.3 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
- 7.4.4.4 The Supplier shall include in the Annual Maintenance Plan:-
- a. Outstanding reactive maintenance requirements above the Reactive Maintenance Threshold
 - b. Proposed life-cycle replacement works.
- 7.4.4.5 The Supplier shall identify the reason for each item appearing on the Annual Maintenance Plan and prioritise each item in terms of:-
- a. statutory compliance requirements;
 - b. impact on health & safety;
 - c. impact on normal use of the Sites;
 - d. impact on on-going costs of maintenance;
 - e. the business resilience risks to the Company; and



- f. any other relevant criteria.
- 7.4.4.6 The Annual Maintenance Plan shall provide indicative costs for each item, broken down into an appropriate level of detail to assist the Company in planning and budgeting.
- 7.4.4.7 The Supplier shall make the Annual Planned Maintenance Schedule available in a format to be agreed between the parties, to the Company for inspection by the Company or a third party appointed by the Company at any time.
- 7.4.4.8 The Supplier shall provide the Company with a 4 weekly update of the Annual Planned Maintenance Schedule.
- 7.4.5 Planned Maintenance Delivery
 - 7.4.5.1 The Supplier shall deliver planned maintenance in accordance with the Annual Planned Maintenance Schedule.
 - 7.4.5.2 The Supplier shall notify the Company no less than seven days in advance of any proposed changes to the dates or locations of planned maintenance and shall undertake the planned maintenance on the proposed changed date only if approved in advance by the Company.
 - 7.4.5.3 The Supplier shall adapt the Annual Planned Maintenance Schedule to allow for any Company imposed 'maintenance freeze' periods. Notice will be provided by the Company as early as reasonably practicable.
 - 7.4.5.4 If during maintenance carried out in accordance with the Annual Planned Maintenance Schedule, the Supplier identifies faults where there is a risk of danger to persons and / or property, the Supplier shall make safe immediately and escalate to the Company.
 - 7.4.5.5 The Supplier shall report the hazard to the Company as soon as practicable but in any case within no more than 2 hours of making safe.
 - 7.4.5.6 The Supplier shall identify any areas of deficient fire stopping or un-stopped penetrations (caused by others) that the Supplier discovers during the course of the delivery of the Services, and the Supplier shall report the same in an agreed format to the Company.
- 7.4.6 Fire Systems Maintenance to be Undertaken by the Company or Third Party Contractors
 - 7.4.6.1 The Supplier shall not undertake weekly fire alarm testing. This is the responsibility of the Company's staff.
- 7.4.7 Fire Systems Isolations
 - 7.4.7.1 The Supplier may carry out fire systems isolations using two separate pieces of technology and in accordance with two methodologies as set out in paragraphs 7.4.7.2 to 7.4.7.9 below. Where neither technology is available there may be a requirement to carry out on site isolations. The Supplier shall work with the Company to align the two methodologies during the term of the Contract.



Bakerloo, Central, Victoria and Sub-Surface Lines

- 7.4.7.2 The Company shall provide the Supplier with the use of the Company's remote monitoring facility (a modem) for fire systems to be located at the Supplier's sites. The Supplier shall maintain the remote monitoring facility and all its outstations at both the Supplier's sites and the Sites. The Supplier and the Company shall use the remote monitoring facility to review systems, changes and faults.
- 7.4.7.3 The Supplier shall undertake emergency isolations (where available) to the fire detection and protection systems in order to allow the Sites to remain open and operational. The Supplier shall undertake this remotely using the remote monitoring facility. Should the remote monitoring facility be unavailable for any reason, the Supplier shall attend the Sites to undertake the emergency isolation.
- 7.4.7.4 The Supplier shall undertake planned isolations and de-isolations to the fire detection and protection systems to facilitate planned work by third party contractors of the Company.
- 7.4.7.5 The Company will advise the Supplier of the requirement by no later than 15.00 hrs on the day the planned isolation is required and the Supplier shall attend the Sites to undertake planned isolation and de-isolation at the close of traffic on the same day.
- Jubilee, Northern & Piccadilly Lines
- 7.4.7.6 The Company shall provide the Supplier with the use of the Company's internet based monitoring facility for fire systems. The system operates on a Local Area Network (LAN) at the Sites and is managed by the Company's staff. The Supplier shall maintain the monitoring facility and all its outstations. The Supplier and the Company shall use the monitoring facility to review systems, changes and faults.
- 7.4.7.7 The Supplier shall undertake emergency isolations (where available) to the fire detection and protection systems in order to allow the Sites to remain open and operational. The Supplier shall undertake this remotely using the remote monitoring facility. Should the remote monitoring facility be unavailable for any reason, the Supplier shall attend the Sites to undertake the emergency isolation.
- 7.4.7.8 The Supplier shall undertake planned isolations and de-isolations to the fire detection and protection systems to facilitate planned work by third party contractors of the Company.
- 7.4.7.9 The Company will advise the Supplier of the requirement by no later than 15.00 hrs on the day the planned isolation is required and the Supplier shall attend the Sites to undertake planned isolation and de-isolation at the close of traffic on the same day.



7.4.8 Reactive Maintenance Delivery

- 7.4.8.1 The Supplier shall receive instructions to carry out reactive maintenance from the Company's helpdesk.
- 7.4.8.2 The Supplier shall undertake reactive maintenance in accordance with the response and rectification times detailed in Schedule 12 (Performance Measurement).
- 7.4.8.3 The Supplier shall attend the Sites and permanently rectify faults. The Supplier shall endeavour to permanently rectify each fault during a single attendance visit but if necessary the Supplier shall make more than one attendance visit to make safe or permanently rectify the fault up to the value of the reactive maintenance threshold for each fault.
- 7.4.8.4 At the end of each attendance visit the fault shall be left in a safe condition if it cannot be permanently rectified.
- 7.4.8.5 The Supplier shall notify the Company's helpdesk or the local reporting system utilised by relevant business unit when faults have been permanently rectified or any other measures that may be required to mitigate any reduction in fire safety arrangements.
- 7.4.8.6 Where reactive maintenance is identified which is outside the scope of the specification, the Supplier shall undertake the repairs having first gained the approval of the Company, except where failure to carry out the Services immediately will in the reasonable opinion of the Supplier, significantly disrupt the Company's business or present a health and safety or security risk.
If when undertaking planned maintenance the Supplier discovers the need to undertake remedial works which can be undertaken within the value of the reactive maintenance threshold, this shall be treated as a fault. The Supplier shall report the fault to the Company's helpdesk and shall attend and permanently rectify the fault.

7.4.9 Critical Sites Maintenance

- 7.4.9.1 The Supplier shall monitor at an appropriate 24 hour monitoring centre all automated alarms for critical Sites (as set out in Appendix A (Services Matrix)).
- 7.4.9.2 The Supplier shall immediately escalate all alarm activations or other performance abnormalities at critical Sites to the Company in accordance with the agreed procedures.
- 7.4.9.3 The Supplier shall inform the Company no less than 3 weeks in advance of all operations and maintenance activities which have the potential to present an increased risk (for example loss of redundancy) to the Company's normal operations in critical Sites.
- 7.4.9.4 The Supplier shall treat unplanned outages and emergencies at critical Sites with the utmost importance, and work to restore normal service in the shortest possible time.
- 7.4.9.5 The Supplier shall provide frequent and comprehensive written updates to the Company in accordance with agreed



procedures regarding unplanned outages and emergencies detailing as a minimum:-

- a. description of the problem or asset failure;
- b. impact of the problem or asset failure; and
- c. the expected time to restoration of normal service.

7.4.9.6 The Supplier shall, following any unplanned outage or emergency at critical Sites, initiate a root-cause analysis and report to the Company findings and recommendations from the investigation.

7.4.10 Interfaces with the Company's Third Party Contractors

7.4.10.1 The Company shall take overall responsibility for management of interfaces between the Contractor and third party contractors undertaking maintenance or projects at the Sites. The Supplier shall proactively provide support to the Company in respect of the requirements set out in paragraph 7.4.10.2 below when required by the Company. The Supplier shall coordinate and resolve issues on behalf of the Company including attendance in the event of any issues surrounding interfaces until these are resolved. The Supplier shall keep the Company's local managers informed of any maintenance work that they become aware of that is likely to have an impact on assets not in the scope of this specification.

7.4.10.2 The Supplier's activities shall include, but shall not be limited to:-

- a. arming/disarming life safety systems;
- b. bypassing infrastructure components; and
- c. training of contractors regarding risks associated with accidental service interruption.

7.4.10.3 The Supplier shall ensure that no equipment failures, downtime or interruptions are caused by the Supplier or their sub-contractors as a result of support activities.

7.4.11 Training

7.4.11.1 The following minimum skill levels and qualifications shall be provided to a sufficient number of staff as required to provide the Services:

Skills Level / Qualification	Required for
Passive Fire Qualification	Site Person in Charge (SPC) or nominated responsible person only
The Institute of Occupational Safety and Health (IOSH) - Managing Safely – Safety Management Level	HSE Management by Managers and Supervisors
The National Examination Board in Occupational Safety and Health (NEBOSH) Certificate in Occupational Health (NVQ Level 3)	HSE Management by Managers
International Rope Access Trade Association (IRATA)	High Level Access



Skills Level / Qualification	Required for
Prefabricated Access Suppliers' and Manufacturers' Association (PASMA) – Towers for Users	Constructing and Using Mobile Access Towers
International Powered Access Federation (IPAF) - Powered Access Licence (PAL)	Operating Mobile Elevated Working Platforms (MEWPS)
International Powered Access Federation (IPAF) - MEWPS for Managers	Planning, supervising and managing the use of Mobile Elevated Working Platforms (MEWPS)
UKAS Accredited Certification for Electrical and Installation and Maintenance in Potentially Explosive Atmospheres (for example CompEx)	All staff working in potentially explosive atmospheres
Confined Space Training	All personnel undertaking maintenance activities in White City Sidings, Greenwich Generating Station, King's Cross Hotel Curve and some London Underground Sub-Stations.



8 GREENWICH GENERATING STATION

8.1 Locations & Hours of Work

8.1.1 Locations

8.1.1.1 The Services shall be delivered at Greenwich Generating Station Only, as detailed in Appendix A (Services Matrix).

8.1.1.2 For information, Greenwich Generating Station is a 103MW Open Cycle Gas Turbine (OCGT), Power Station comprising of seven 14.7MW gas turbines which are dual fuelled (natural gas and low-sulphur gas oil).

8.1.2 Hours of Work

8.1.2.1 The Supplier shall deliver the Services both inside and outside of Core Hours (as defined in paragraph 4.1.2.1 of this specification).

8.1.2.2 The Supplier shall deliver the Services outside Core Hours where working in Core Hours would adversely impact the operation of the Sites or its occupants' activities, particularly in relation to safety. The Supplier shall accommodate requests to change the scheduling of particular aspects of the Services to accommodate the Company's specific operational requirements (at no additional cost to the Company).

8.1.3 Restrictions & Special Requirements

8.1.3.1 The access requirements detailed in Schedule 5 (Access) apply to this Delivery Unit.

8.1.3.2 As detailed in the Greenwich Site Induction, there are many areas on site which fall under the remit of the Dangerous Substances Explosive Atmospheres Regulations, (DSEAR), for which entry into these areas shall be controlled by the Company. Therefore the Supplier's staff shall report to the Greenwich Shift Engineer (GSE) or Greenwich Day Manager (GDM), at the start of each period of working on Site, for a handover of any updates in Site conditions and to request from the GSE/GDM, access to the required areas of work. The Supplier shall have trained CompEx certified staff to work on ATEX equipment installed within these areas with CompEx certificated staff.

8.1.3.3 Some areas on Site are designated as a confined space requiring the Supplier to have trained staff for work within a confined space environment.

8.1.3.4 Any equipment required to be taken into an area which is classified as a hazardous environment shall be of an EEx ib 11A T1 intrinsically safe standard.

8.1.3.5 Any local LV electrical isolations required for the fire system equipment, electrical initiation sources and extinguishant release systems shall be carried out by the Supplier's staff on equipment/systems and loops operating at $\leq 50V$ DC.

8.1.3.6 All other required isolations shall be carried out by the GSE only and not the Supplier's staff, in accordance with the Greenwich Mechanical & Electrical, (Non-HV), Safety Rules.



This isolation shall be secured, where reasonably practicable, and a Permit to Work/Safety Document shall be issued/accepted by the Site Person in Charge (SPC) whom shall be deemed competent, by their employer, to accept/receive Safety Documentation for isolations and the safe working on the fire systems equipment, with all of the associated legal responsibilities that this incorporates.

- 8.1.3.7 The minimum requirements for specific spares are to be defined locally. The Supplier will manage critical spares requirements and notify company of any changes. Adequate spares shall be held to ensure system functionality is restored immediately regardless of lead time.

Critical spares listings will be reviewed with the company at period contract review meetings.

8.2 Scope of Services

8.2.1 Scope

- 8.2.1.1 The Supplier shall provide a professionally managed, high quality maintenance service to ensure the effective operation of all items of plant and equipment forming the Company's fire systems as detailed within the Company's Asset Register (& subsequent updates) to ensure they are properly and safely maintained to remain safe, functional and operationally sound. Services include, but are not limited to, the management, maintenance and inspection of:

- control panels, printers (including the provision of printing consumables) & interfaces;
- mechanical interfaces;
- dry droppers and risers;
- call points and break glass including door bolt glass;
- alarm sounders;
- field wiring;
- fire system isolators;
- wireless fire detection system consisting of break glass units, sounders and beacons;
- passive fire protection systems (PFPA);
- suppression systems including but not limited to sprinklers, AFFF, inert gas and water mist;
- VA/PA;
- deaf alert systems (beacons and personal aids);
- door break glass;
- fire extinguishers, hose reels and blankets;
- CAD drawings;
- water fog / gaseous systems;
- EDNE signage;
- fire dampers and smoke vents;
- magnetic door retainers and closers;
- aspirating smoke detection (ASD);
- UVIR flame detectors;



- heat detectors;
- hydrants/dry-risers; and
- diesel fire pump/engine.

8.3 Standards

8.3.1 General

8.3.1.1 The services shall be provided at all times in accordance with a maintenance regime that complies with all statutory requirements, legislation, regulations and the following Standards set out below.

8.3.2 TfL Standards

8.3.2.1 The Supplier shall comply with all applicable TfL Standards as they relate to fire systems.

8.3.3 British Standards, Regulations and Approved Codes of Practice

8.3.3.1 The Supplier shall provide the Services in accordance with SFG20. Where SFG20 is not available for certain assets the Supplier shall provide the Services in accordance with all relevant British Standards.

8.3.4 Other Standards

8.3.4.1 Where there is no appropriate British Standard, the Supplier shall provide the Company with a proposed maintenance regime, to be approved by the Company.

8.4 Services Specification

8.4.1 Scope of Maintenance

8.4.1.1 The Supplier shall provide a professionally managed, high quality fire systems maintenance service in accordance with the specified Standards and to ensure the effective operation of all items of plant and equipment as detailed within the Asset Register (& subsequent updates)). In addition set procedures to be followed for assets detailed in Sections 8.4.2 -8.4.8.

8.4.1.2 The Supplier shall maintain all firmware, front-end software and database software upgrades for fire systems. The Company shall retain access to all up to date fire systems software as related to the Sites, to be available for inspection to the Company or a third party appointed by the Company, at any time.

8.4.1.3 All access and control of all firmware, front-end software and database software as related to the fire systems at the Sites shall be made available to the Company for the duration of the Contract and after the Contract has ended; this shall be irrespective of the manner in which the Contract comes to an end.

8.4.1.4 The Supplier shall provide up-to-date fire panel data downloads on a regular basis to the Company, which will be held as copy only, and shall provide to the Company any software that is required for the Company to access and view the data.



8.4.1.5 The Supplier shall hold all asset data relevant to the delivery of the Services in the format and hierarchy prescribed by PAS 1192-2, PAS 1192-3 and BIM protocol.

8.4.2 Fire Detection and Alarm System Control Panels

8.4.2.1 All Fire Detection and Alarm System Control Panels as detailed in Appendix A (Services Matrix) shall be inspected/tested to the following procedure-

- All system control panels, junction boxes, isolators, detection devices and cabling are to be checked for any defects or damage. On the initial service visit all terminations shall be checked to ensure that they are tight and all system components are correctly identified.
- All fire indication zones to be tested for correct alarm mode indication, all alarms raised on a single system which are duplicated on another system must be proved for correct alarm initiation and indication on that associated system. All alarm text to be checked for correct zone/device indication/description.
- The System Programmes of all addressable Fire Detection and Alarm System control panels to be downloaded, printed-off and compared with the original programmes to ensure all system components are present.
- All ASD systems to be serviced by means of cleaning the filters, checking correct operation of the pump and correct indications on the front of the unit. Units to be calibrated as to manufacturer's recommendations and Procedures.
- All standby power supplies and fault indicators associated with each system to be tested in the following manner:-
 - Disconnect one alarm line from each zone to ensure correct fault indication of each zone.
 - Disconnect the AC Supply to the charger equipment to prove the Mains Failure Indication. Disconnect the AC Supplies to prove the Supply Failure Indication.
 - Disconnect Standby Batteries to Prove Battery Fail Indications.
 - Using an appropriate test unit measure and record battery Amp/Hr capacity to demonstrate that it is above the minimum requirement of 65%. Record both battery charger and battery voltages both before and after testing, and record battery capacity.
 - With the AC Supply disconnected run the system on the Standby Batteries for 75% of its rated duration to demonstrate its integrity.
- All lock off controls, Isolators, lamp indicator units and relays to be function tested to check for correct operation.

8.4.3 Smoke Detectors, UVIR Flame Detectors, Heat Detectors, Sounders, Beacons/Strobes, Call-Points, Isolators and Switches

8.4.3.1 All Smoke Detectors, UVIR Flame Detectors, Heat Detectors, Sounders, Beacon/Strobes, Call-Points, Isolators and

