

## **SCHEDULE 19: TRAINING**

### **1. GENERAL REQUIREMENTS FOR TRAINING**

- 1.1 The Supplier shall provide, or procure the provision of, training in accordance with this Schedule to the breadth and depth required to enable:
  - 1.1.1 the Purchaser's trainers to acquire all relevant knowledge and skills to carry out training of the Purchaser's staff to:
    - (A) enable operation and maintenance of the Goods as well as equipment used to carry out Tests for the Goods;
    - (B) conduct fault finding; and
    - (C) remove, replace and subsequently test all components of the Goods;
  - 1.1.2 the Installer's trainers to acquire all relevant knowledge and skills to carry out training of the Purchaser's staff to:
    - (A) conduct the installation of the Goods;
    - (B) enable Testing of the Goods; and
    - (C) operate and maintain the equipment used to carry out Testing for the Goods; and
  - 1.1.3 provide any required information to enable the Purchaser to train its Protecting Workers of Track operatives and other operational staff as required;
- 1.2 The Supplier shall also be required to train any person nominated by the Purchaser.
- 1.3 The introduction of technical enhancements in the Goods and/or any other changes, such as those arising from the rectification of Supplier Defects, shall be analysed by the Supplier, in consultation with the Purchaser, to determine whether further training is required. Any such training identified shall fall within the provisions of this Agreement and shall be provided by the Supplier at no additional cost to the Purchaser.
- 1.4 For the avoidance of doubt, the Supplier shall comply with its obligations under this Schedule 19 at its own cost and shall not be entitled to any adjustment to the Contract Price, unless expressly stated otherwise in this Schedule 19.
- 1.5 The Supplier shall be responsible for the modification of the training approach, materials and resources in consultation with the Purchaser, taking account of training pass/fail rates and in-service operations and maintenance experience.
- 1.6 The Supplier shall, as part of the Training Programme (as defined below), and for the Purchaser's subsequent use for training, provide all tools and equipment associated with the Goods for which training is being provided..
- 1.7 Training shall be provided on the set-up, use and maintenance of all:
  - 1.7.1 tools provided to support training;

- 1.7.2 e-learning and equipment, including diagnostic equipment and testing equipment and analysis tools.
- 1.8 The training provided by the Supplier shall cover the operation and maintenance of the Goods under normal, abnormal, degraded and emergency conditions and shall address all normal modes of operation, the symptoms of failure modes, corrective actions to be taken, safety precautions, the level of intervention that is permissible by the Purchaser and the events that would necessitate the Supplier's involvement. Such training shall include, but shall not be limited to:
- 1.8.1 The location, purpose and function of all systems and components relevant for the following activities associated with the Goods;
  - 1.8.2 The operation and maintenance (including all instructions and processes for installation, operation and maintenance, fault diagnosis, rectification and testing) of the Goods;
  - 1.8.3 System interfaces and associated failure modes and effects;
  - 1.8.4 The Goods Design, performance limits and capability (to ensure that the Purchaser has the capability to undertake specialist engineers' investigations); and
  - 1.8.5 Such other content that the Supplier shall propose and the Purchaser shall agree.
- 1.9 All training shall be accompanied by a full suite of documentation approved by the Purchaser including but not limited to:
- 1.9.1 Installation, operator and maintainer manuals (including detailed instructions for the installation, operation and maintenance of the Goods, including training tools and equipment);
  - 1.9.2 The documentation necessary to provide specialist engineers with all necessary information to enable them to carry out incident investigations on the Goods being supplied; and
  - 1.9.3 Training Materials (as defined below) including Training Plans (as defined below), detailed trainers' notes, presentation materials (e.g. slides, models, etc.), formative and summative assessments and trainee material (including for example, handbooks).
- 1.10 The Supplier shall be responsible for the provision of an adequate number of appropriately skilled trainers to complete all aspects of the analysis, design, development, delivery and evaluation of training (including, when required by the Purchaser, competency assessments) to meet the provision of the Training Programme.
- 1.11 Training delivery venues shall be at a nominated venue of the Purchaser.
- 1.12 In order to facilitate the development of technology based training (such as simulation or computer based training) by the Purchaser, the Supplier shall provide all required technical information, including documentation such as illustrations, schematics, display screen captures, training manuals and design information relating to the design parameters, installation, operation and maintenance of the Goods.
- 2. GENERAL REQUIREMENTS FOR TRAINING OF THE INSTALLER:**
- 2.1 For installation of the Goods, the required method of training is "Train the trainer" approach. The Supplier must provide sufficient training to all of the Installer's designated training personnel

(such personnel to be nominated by the Purchaser) to ensure that such personnel acquire the required knowledge and skills to enable them to train all staff who are involved in the installation of the Goods.

2.2 The Supplier shall provide appropriate training in advance of the commencement of installation, which shall be sufficient to ensure the Installer is trained and supported fully in its installation of the Goods. The Supplier shall provide ongoing support throughout the testing and installation process in accordance with Schedule 20 (*Continuing Support*).

2.3 The number of times each individual training course is delivered shall be dependant upon:

2.3.1 the maximum number of attendees, being 4 personnel per "train-the-trainer" course, up to a maximum of 10 employees; and

2.3.2 the actual number of personnel that the Purchaser elects to attend.

### **3. GENERAL REQUIREMENTS FOR ON-GOING MAINTENANCE:**

3.1 The Supplier shall provide training and materials sufficient to ensure that:

3.1.1 Those personnel nominated by the Purchaser to attend training shall acquire all relevant knowledge and skill in relation to the operation of the Goods, including facets relating to the function, malfunction (including the range and ramification of potential failure conditions), operation and use of the Goods that are relevant to the appropriate staff;

3.1.2 Those personnel nominated by the Purchaser to attend training acquire knowledge and skill in relation to the maintenance of the Goods, including all maintenance activity over the life of the Goods that are relevant to the appropriate staff. Such activities shall include (without limitation) inspection maintenance, casualty maintenance, diagnostic and monitoring activities, fault diagnosis, fault rectification;

3.1.3 Those personnel nominated by the Purchaser to attend training acquire knowledge and skill such that they are able to train the appropriate staff as per the requirements of paragraphs 3.1.1 and 3.1.2.

3.2 For ongoing maintenance and operation of the Goods, the required method of training is a "train-the-trainer" approach.

3.3 The number of times each individual training course is delivered shall be dependant upon:

3.3.1 The maximum number of attendees, being 4 personnel per "train-the-trainer" course, up to 10 employees;

3.3.2 The actual number of personnel that the Purchaser elects to attend.

### **4. TRAINING PROGRAMME**

4.1 The Supplier shall provide a training programme in accordance with the requirements of this Schedule 19. Once such training programme has been approved by the Purchaser, it shall be the "Training Programme" for the purposes of this Schedule 19.

4.2 The Supplier shall ensure that the Training Programme sets out the training that shall be provided by the Supplier to enable the Purchaser and Installer to train their employees (or those of the

Purchaser's nominees) to install, operate and maintain (as applicable) the Goods in accordance with the requirements of the Specification.

- 4.3 The Supplier shall ensure that the Training Programme is provided in accordance with the timescales required by this Agreement.
- 4.4 The Supplier shall ensure that the Training Programme details all training timescales associated with the:
  - 4.4.1 Production of all Training Materials;
  - 4.4.2 Delivery of all training courses and associated assessments to be provided by the Supplier; and
  - 4.4.3 Delivery of all deliverables under this Schedule 18.
- 4.5 At a minimum, in the Training Programme, the Supplier shall make programme provision in relation to training as follows:
  - 4.5.1 Training Programme preparation; submission to Purchaser; Purchaser review; update and re-submission to Purchaser (if required); Purchaser approval; regular review.
  - 4.5.2 For each training course:
    - (A) Completion and assurance of training needs analyses
    - (B) Production of a Training Plan, including (but not limited to): preparation (incorporating Supplier validation/assurance); submission to Purchaser; Purchaser review; update and resubmission to Purchaser (if required); Purchaser approval.
    - (C) Production of technical support documentation, including: installation, operation and maintenance manuals etc, preparation (incorporating Supplier validation/assurance); submission to Purchaser; Purchaser review; update and resubmission to Purchaser (if required); Purchaser approval.
    - (D) Production of Training Materials, including: preparation (incorporating Supplier validation/assurance); submission to Purchaser; Purchaser review; update and resubmission to Purchaser (if required); Purchaser approval.
    - (E) Provision of all training tools and equipment required for the training course concerned.
    - (F) Delivery, evaluation and certification of the relevant training (and licensing if required) and any required competence development and assessment activities;
  - 4.5.3 The Training Programme shall be reviewed in conjunction with the Purchaser and shall be maintained and updated as and when necessary or as requested by the Purchaser until the provision of the last training, and re-submitted for Approval to the Purchaser as required.

## **5. TRAINING NEEDS ANALYSIS**

Training needs analysis shall be conducted in accordance with the requirements of the Specification.

## **6. TRAINING MATERIALS**

- 6.1 For each training course, the Supplier shall submit to the Purchaser, training materials for approval (the "**Training Materials**"). Such materials shall include:
- 6.1.1 Tester, operator and maintainer documentation, including manuals and training manuals;
  - 6.1.2 Output of training needs analysis;
  - 6.1.3 Training Plans;
  - 6.1.4 Presentation materials;
  - 6.1.5 Detailed trainer notes;
  - 6.1.6 Trainee materials, including handbooks, fault guides, handouts and other such materials;
  - 6.1.7 Tools and equipment;
  - 6.1.8 Formative and summative assessments including, for the summative assessments, a matrix that cross-references each learning objective with all related assessment questions.
- 6.2 The Purchaser shall be entitled, without further charge, to duplicate as many copies of the Training Materials and other materials provided as it requires.
- 6.3 The Training Materials shall be reviewed in conjunction with the Purchaser and re-submitted for approval to the Purchaser as required.
- 6.4 The Training Materials shall be maintained and updated by the Supplier as and when necessary or when requested by the Purchaser, until the final Unit Acceptance Certificate has been obtained, or if later, until the provision of the last item of training.
- 6.5 The Training Materials provided by the Supplier for the Purchaser shall be of sufficient quality and quantity as are reasonably necessary or desirable to permit the Purchaser's nominated trainers to undertake further training of the Purchaser's employees or those of any nominee.

## **7. TRAINING PLANS**

When developing the Training Plans, the Supplier shall:

- 7.1.1 Identify the time, location and attendee numbers for training courses, along with any prerequisites or dependencies for attendance;
- 7.1.2 Identify each training course where recommended attendance is linked to the prior completion of another training course;
- 7.1.3 Limit the number of such dependencies in so far as it is reasonably practical; and
- 7.1.4 Provide joining instructions specifying exact details regarding timings, location, direction, pre-course information and other requirements for each course delegate.



## **8. TRAINING ACCREDITATION / VALIDATION**

The Supplier shall provide to the Purchaser for the Purchaser's acceptance details of the training accreditation/validation process to accompany the Training Programme and Training Materials provided.

## **9. TRAINING DELIVERY, COST, EVALUATION AND ACCEPTANCE**

9.1 The Supplier shall at no additional cost to the Purchaser meet the requirements detailed within this Schedule 19.

9.2 Unless otherwise agreed with the Purchaser, all training provided by the Supplier shall contain formative and summative (immediate outcome) level assessments.

9.3 Assessments shall be provided by the Supplier in relation to each of the following activities in the Replacements to be supplied:

9.3.1 Planned preventative maintenance;

9.3.2 Corrective maintenance; and

9.3.3 Fault and failure diagnosis and rectification maintenance.

9.4 In relation to activities 9.3.1, 9.3.2 and 9.3.3 detailed above, competence assessments shall be provided by the Supplier to the Purchaser for all staff members who have been trained.

9.5 The Supplier shall provide to the Purchaser's nominees all required support in order to achieve competence, including task coaching, task shadowing and supervised practice.

9.6 All training shall be subject to approval by the Purchaser, once the Purchaser confirms its satisfaction with the:

9.6.1 Final version of the Training Materials (approved by the Purchaser pursuant to the approval process as detailed within Schedule 1); and

9.6.2 Delivery of the training concerned (to the Purchaser's nominees), including the delivery of training evaluation and delivery of competence assessments referred to in paragraph 9.2 of this Schedule 19.

9.7 Following approval of the training by the Purchaser, should any alteration be required to the Training Materials in light of in-service operations and maintenance experience, the Supplier shall complete any necessary analysis and provide updated Training Materials for the approval of the Purchaser. All necessary support shall be provided by the Supplier to ensure that the Purchaser's nominees acquire all required knowledge and skills associated with the changes concerned.

## **SCHEDULE 20: CONTINUING SUPPORT**

### **1. DURATION**

The Supplier shall provide the services set out in this Schedule 20 (*Continuing Support*) from the date of Delivery of the first P-CRID Units until the Continuing Support Expiry Date, as that may be extended in accordance with Clause 3.3.

### **2. SERVICES**

The Supplier agrees with the Purchaser that it shall, in respect of the Goods, carry out the Continuing Support Services in accordance with the terms of this Agreement.

### **3. CORE SERVICES**

#### **3.1 Design Authority**

3.1.1 The Supplier shall act as the Design Authority for the duration of this Agreement.

3.1.2 The Supplier shall comply with the following obligations in its role as Design Authority:

- (A) operate and maintain a system that tracks changes to the original Design of the Goods;
- (B) operate a system that can provide the "know-why" (factors which influenced the choice of the Design) in relation to Design information relating to the Goods;
- (C) operate a system that facilitates validation of technical changes to the current Design of the Goods;
- (D) maintain a comprehensive understanding of the technical and operational requirements of the Goods;
- (E) maintain comprehensive knowledge of how the technical and operational requirements influence the Design of the Goods and retain records accordingly;
- (F) retain information relating to the Design to enable performance and assessment of modifications, evaluation of change of use, understanding component behaviour, and support incident investigation as reasonably required by the Purchaser;
- (G) make informed judgements and validate operational safety implications relating to change of use and modifications including where the same is required by the Purchaser;
- (H) ensure that records are kept of the configuration levels of Design throughout the duration of this Agreement to ensure the above is carried out accurately and safely and that any modifications are compatible with the original Design and any subsequent modifications;
- (I) ensure that all systems and documentation established or maintained pursuant to this paragraph 3.1.2 take account of and integrate (where possible) all of the Supplier Documentation;

- (J) provide the Purchaser with any relevant information relating to changes in sub-suppliers, modifications to the original designs of the Goods, changes to maintenance requirements or any other changes relevant to the continued operation of the Goods ("**Relevant Changes**") along with the details of any recommended modifications to the design or Supplier Documentation as a result of the relevant Changes for the Purchaser's consideration and approval;
- (K) following prior written approval from the Purchaser, implement any of the modifications recommended by the Supplier pursuant to paragraph 3.1.2(J);
- (L) provide the Purchaser with such information as the Purchaser may reasonably require in respect of the Supplier's obligations pursuant to this paragraph 3.1.2 within 28 Working Days of receipt of written notice from the Purchaser requesting such information, unless otherwise agreed between the Parties; and
- (M) monitor the performance of the P-CRID Units and produce a quarterly performance report.

3.1.3 The Parties agree that any failure to comply with this paragraph 3.1 will constitute a material breach for the purposes of Clause 25.1.

## 3.2 **Obsolescence Management**

3.2.1 The Supplier shall provide and update every six (6) months an obsolescence plan in respect of the Replacement System, which will include:

- (A) a register of Spares at risk of obsolescence; and
- (B) research and recommended measures by which the Purchaser can mitigate operational or maintenance risks arising from obsolescence at the lowest practical cost to the Purchaser. Implementation of such recommendations shall be subject to the prior written approval of the Purchaser.

3.2.2 The Supplier shall ensure that it regularly communicates with its suppliers and/or Subcontractors via telephone, email or otherwise to ensure that it is notified as soon as possible of any Spares that are at risk of obsolescence.

3.2.3 The Supplier shall ensure that, where it intends to or becomes aware that any of its suppliers and/or Subcontractors intends to:

- (A) dispose of any item of Spares due to such Spare becoming obsolete or being replaced by a comparable spare; and/or
- (B) stop the production or sale of any item of Spares,

(together, the "**Potential Obsolete Spares**"), the Supplier shall:

- (i) notify the Purchaser Representative as soon as possible prior to any such disposal or cessation of production and sale of the Potential Obsolete Spares; and



- (ii) propose to the Purchaser Representative a range of suitable alternative spares and/or parts.

3.2.4 The Purchaser may in such circumstances as described in Paragraph 3.2.3 above require the Supplier to:

- (A) supply one of the suitable alternative spares proposed by the Supplier pursuant to Paragraph 3.2.3(ii), and the Purchaser shall bear any increased costs of such alternative spare provided that the Supplier has complied with its obligations contained in this Paragraph 3.2 to the Purchaser's satisfaction; and/or
- (B) supply one or more of the Potential Obsolete Spares for the Purchaser; and/or
- (C) sell any remaining Spares or Potential Obsolete Spares to the Purchaser Representative at the rates set out in Part A (*Maintenance Spares*) of Schedule 4 (*Spares*).

3.2.5 The Parties agree that any failure to comply with this Paragraph 3.2 will constitute a material breach for the purposes of Clause 25.1.1.

#### **4. SUPPLY OF ADDITIONAL SPARES**

4.1 The Purchaser may request Additional Spares, from time to time, by giving the Supplier a notice setting out reasonable details of its requirements.

4.2 The Supplier shall use all reasonable endeavours to make Additional Spares available to the Purchaser by delivering them to the relevant Delivery Location as notified by the Purchaser in writing to the Supplier:

4.2.1 within the lead times specified for such Spares in Part B (*Additional Spares*) of Schedule 4 (*Spares*);

4.2.2 where no lead time is specified in Part B (*Additional Spares*) of Schedule 4 (*Spares*) within 48 hours (or such longer time as the parties may agree, acting reasonably) of receipt of the Purchaser's request; or

4.2.3 as otherwise agreed by the Parties by way of a Variation, which may include an agreement to deliver Spares earlier than the stated lead times.

4.3 Where the Supplier supplies a Spare to the Purchaser, the Supplier shall, following delivery, invoice the Purchaser for that Spare in accordance with Clause 20 (*Payment*) on the basis of the prices and rates set out in Part B (*Additional Spares*) of Schedule 4 (*Spares*).

#### **5. OPTIONAL SERVICES**

5.1 The Purchaser shall be entitled to instruct the Supplier to undertake the Optional Services which includes without limitation:

5.1.1 Spares Supply

- (A) procure on the Purchaser's behalf and supply Spares required by the Purchaser to carry out all servicing, maintenance and overhaul required by the P-CRID Units;

- (B) such assistance as the Purchaser may reasonably require, from time to time, to assist it in understanding and predicting its scheduled maintenance requirements;
  - (C) monitor and record the usage of Spares and make such information available to the Purchaser as reasonably directed by them from time to time;
  - (D) responsibility for the effective handling, management, control, storage and stewardship of Spares at all times when they are not in the custody or control of the Purchaser or incorporated into the P-CRID Units;
  - (E) carry out, or procure the carrying out of, any servicing, maintenance, overhaul, repair or refurbishment required by the Spares in accordance with the Manuals to ensure that such Spares remain at all times Fit for Purpose. The Supplier shall, and shall procure that each Subcontractor shall, while the Spares are in its possession (including when they are on its premises) protect the same from theft, injury, breakage or damage by exposure to the weather and take every reasonable precaution against theft, accident, injury or breakage or damage from any cause.
- 5.1.2 investigate all service casualties for the P-CRID Units;
  - 5.1.3 undertake technical investigations on failures of the P-CRID Units;
  - 5.1.4 assist in the assessment of defects;
  - 5.1.5 produce technical reports on Fault or failure investigation;
  - 5.1.6 assist with the provision of technical support at incidents on and off London Underground premises;
  - 5.1.7 perform audits on technical issues;
  - 5.1.8 provide proactive condition monitoring and trend tracking to produce preventative recall opportunities;
  - 5.1.9 develop a condition monitoring process for the P-CRID Units;
  - 5.1.10 provide on-site technical assistance regarding fault identification and fault finding;
  - 5.1.11 provide off site technical resource to carry out technical investigation;
  - 5.1.12 additional Training Services following any modifications to the P-CRID Units or other necessary changes, including replacement of Parts due to obsolescence;
  - 5.1.13 update the Manuals within twenty (20) Working Days of any modifications to the P-CRID Units or other necessary changes, including replacement of Parts due to obsolescence; and
  - 5.1.14 work collaboratively with third parties and other suppliers in the delivery of any Optional Services pursuant to this Schedule 20 (*Continuing Support*),

together with any other technical support services and/or spares supply that the Purchaser may reasonably require in relation to the Goods and Services.

- 5.2 Whenever there is a requirement for Optional Services the Supplier shall liaise with the Purchaser in order to establish a solution which, so far as practicable, best meets the Purchaser's requirements.
- 5.3 Where the Purchaser requests the Supplier to carry out Optional Services in accordance with this Paragraph 4, the Supplier shall, as soon as reasonably practicable, advise the Purchaser of all relevant reasonable information relating to the carrying out of the proposed Optional Services including a proposal addressing, without limitation:
- 5.3.1 the nature and extent of the requirement for the Optional Services;
- 5.3.2 the Supplier's outline proposals for how it will carry out and satisfy the Optional Services required, including:
- (A) the key activities that the Supplier will undertake;
  - (B) any deliverable that the Supplier will provide including any relevant reports, analysis and amendments to Documentation;
  - (C) a timetable for completion of the relevant Optional Services including key milestones and dates for provision of any key activities or deliverables;
  - (D) any information or other support required by the Supplier from the Purchaser or its Subcontractors in order to complete the relevant Optional Services;
  - (E) the individuals (including brief details of their roles, experience and competency for the proposed activity) that the Supplier will utilise in order to provide the Optional Services;
  - (F) the price of the Optional Services calculated by reference to the prices and rates agreed for the individual Supplier roles as described in Part 6 (*Schedule of Rates and Prices*) of 0 (*Contract Price*);
  - (G) how the Supplier will manage the provision of the Optional Services which shall include (as a minimum) periodic updates (to be daily or weekly as required by the Purchaser) setting out:
    - (i) progress of the Supplier against any agreed deliverables and milestones; and
    - (ii) costs incurred to date against the price proposed in accordance with paragraph (F) and future costs to be incurred in order to complete the relevant Optional Services;
  - (H) any Parts to be replaced or refurbished;
  - (I) any effects on the Spares following the carrying out of the Optional Services;
  - (J) any other information required by the Purchaser or that the Supplier deems relevant to the Optional Services.
- 5.4 If the Purchaser requests any further information or variation to the Supplier's proposal the Supplier shall use reasonable endeavours to accommodate such request as soon as reasonably practicable.

- 5.5 Where the Purchaser approves a proposal for carrying out Optional Services the Purchaser shall so notify the Supplier by email and as soon as reasonably practicable following receipt of such notification the Supplier shall carry out and complete that Optional Service in accordance with the approved proposal (including in respect of the timing agreed in the relevant approved proposal for such Optional Services).
- 5.6 Payment for any Optional Services shall be in accordance with the prices and rates set out in Part 6 (*Schedule of Rates and Prices*) of 0 (*Contract Price*).
- 5.7 If the Purchaser notifies the Supplier that it should suspend the provision of any Optional Services then the Supplier shall stop performing the relevant Optional Services as notified by the Purchaser and payment of any costs incurred by the Supplier and agreed in accordance with this Paragraph 5 shall be addressed in accordance with the prices and rates set out in Part 6 (*Schedule of Rates and Prices*) of 0 (*Contract Price*).