

4.44.103

All inspections shall accord with the requirements of relevant British and European Standards and with the recommendations of relevant good practice guidance pertaining to Building Services and specialist installations. In the case of conflict between this Technical Specification and such standards, this Technical Specification shall take precedence.

4.44.104

When Rail for London accepts that following preparations for the examination or inspection (See Section 3), that either (a) provision of temporary access to enable inspection to within touching distance may not enhance the examination quality, the identification of defects or the accuracy of condition assessments, or (b) safe access to examine the external face of roof coverings, glazing, gutters, flashings, rainwater goods, fascias and other high level non structural elements on Buildings, Canopies and Train Sheds is not reasonably practicable, when instructed by Rail for London the following Inspection / Examination shall be carried out:

- a Visual Examination of the Building from the nearest available safe vantage point, using as necessary binoculars, digital video recorders, snake cameras or hand held lighting may be carried out;
- a proportion of the external face shall be inspected to enable a judgement to be made of the overall condition of the group of elements based on an examination within touching distance of a sample and visual comparison with the remainder.

- load bearing parts;

1. whose condition could affect the safe operation of the railway or the safety of people, such as support walls, floors, roofs, other supporting elements, and exposed Substructures;

2. providing bracing or stability to a Train Shed or Canopy

- lift shafts, and structural elements that support escalators, lifting apparatus, hoists, runway cranes or ladders, but excluding the lifts, escalators and such plant or machinery;
- structural parts of stairs, treads and risers, landings, stringers and balustrades;
- safety aspects of finishes that could cause a Hazard, including slipping or tripping, to passengers, staff, occupiers or the public;
- external cladding in accordance with relevant Clause 'Additional requirements for Buildings with external cladding'.
- The inspection shall include identifying and recording:

3. the location of blocked drains, and the condition of down-pipes and gutters,

displaced flashings, damaged cladding or glazing, and evidence of water penetration;

4. the location and extent of rubbish or other materials likely to cause overloading of the roof.

- For occupied Buildings, the occupants shall be asked to identify defects of which they are aware.
- Where a surface is rendered or plastered, defects in such surfacing, for example cracking or spalling, which are or may be linked to an underlying structural defect, shall be recorded.
- Evidence of deteriorating or potentially hazardous materials (such as asbestos boarding or lagging) and of hazardous activity by the Tenant or occupier, which could pose a risk to the Building, occupants or others shall be reported immediately to the Building Manager
- The inspection of a Building shall include an inspection of roofing or cladding from both faces to report, as applicable, upon the:
 - type and condition of materials of construction;
 - any identified deterioration;
 - condition of any protective coatings;
 - adequacy, security and condition of fixings;
 - presence and adequacy of flashings and other ancillaries;
 - evidence of leakage;
 - adequacy and condition of rainwater outlets;
 - for flat roofs, any evidence of ponding or staining due to previous ponding;
 - fire rating of cladding (where the cladding is not fire rated or it cannot be ascertained Rail for London shall be notified immediately).
- The supporting Operational Property Structure(s) shall be inspected for deterioration caused by water penetration and all defects recorded.
- Doors, windows and glazing shall be inspected to determine:
 - their correct operation;

- their condition of the materials of construction and any protective coatings;
- the condition of the fixings including hinges and catches;
- the security of the glazing;
- any evidence of any leakage;
- The condition of floors and their coverings or finishes shall be inspected and in particular tripping and slipping Hazards shall be identified.
- The general conditions of ceilings shall be reported and evidence of water penetration recorded.
- The condition of all down pipes, including those to Operational Property Structures shall be inspected to record evidence of:
 - leakage;
 - splitting;
 - inadequate fixing;
 - deterioration of materials of construction;
 - deterioration of any protective finishes.
- Where down pipes are built into the fabric of a Building, the adjacent fabric of the Building shall be inspected for evidence of leakage.
- Evidence of backing up and overtopping shall be recorded, and the necessity for rodding, jetting or internal inspection by CCTV shall be identified.
- All sanitary ware shall be inspected for significant cracks and crazing. Taps and cisterns shall be checked for correct operation and flushing where reasonably practicable (i.e. except where a 'Cistern-miser' is fitted)
- Defects in hard surfaces shall be reported, including but not limited to:
 - pot holes;
 - tripping Hazards;
 - ponding or staining due to previous ponding;
 - cracking;

- open joints;
- missing and loose pointing;
- general surface deterioration.
- Walls and fences shall be inspected and any evidence of the following shall be reported:
 - instability;
 - movement;
 - looseness and instability of copers;
 - water penetration;
 - deterioration of the material of construction including mortar joints;
 - vegetation growth.
- The types of fencing or wall and the material of construction shall be recorded.
- The presence and effectiveness of movement joints in walls shall be reported.
- Particular attention shall be paid to fence posts at and below ground level, in respect of condition and security of fixings.
- The condition and security of the finishes to stairs and steps together with the adequacy of non-slip finishes and warning painting of treads and risers shall be inspected, and any excessive wear or unevenness shall be reported.
- Any non-compliance with the requirements of Department for Transport Code of Practice: Accessible Train and Station Design for Disabled People: A Code of Practice, in particular, the steepness and width of ramps, and the presence of appropriate handrails, nosings etc. shall be reported.

Additional requirements for examination of lighting support columns

- 4.44.105 The examination of lighting support columns shall include:
- a check for the verticality of the Structure;

- a sample of 20% of the 'raise & lower' columns shall be operated to check mechanism for corrosion and operating faults;

4.44.106 The samples shall be selected taking account of:

- the number and types of columns present;
- any variations in age that are apparent;
- externally visible defects, particularly any potential corrosion at or just below the surface;
- a minimum of one column per Platform or Car Park.

4.44.107 When instructed by Rail for London:

- the ground surface shall be excavated and the lighting support columns below ground level examined using if necessary drilling or ultrasonic techniques to establish the remaining section;
- a stress test of lighting support columns shall be carried out.

Surveys of drain systems

4.44.108 Prior to undertaking a survey of a below ground drain system, an investigation of available data from any previous surveys shall be made, and the effectiveness of the drain system discussed with Rail for London.

4.44.109 The scope of a survey of a drain system shall include all foul, storm and combined drains from the base of rainwater pipes from internal drainage where it passes below ground level or from ground level gullies to the point at which the system(s) cross the premises boundary(s).

4.44.110 A survey of a drain system shall be sufficient to enable a report identifying the defects with recommendations for remedial works to be provided to Rail for London.

4.44.111 Any signs of defects shall be recorded and any signs of blockage reported to Rail for London prior to the Contractor leaving the site.

4.44.112 When instructed by Rail for London, a non – intrusive survey of a drain system shall include:

- lifting of a minimum of 25% of manhole covers per system, to enable a visual inspection to be undertaken of the system, and an assessment of the condition, cleanliness and contamination to be made;

- recording the history of defects or flooding advised by Rail for London;

- reviewing the maintenance records for evidence of excessive reactive activity being required.

4.44.113 When instructed by Rail for London, an intrusive survey of a drain system may include but not be limited to:

- lifting all relevant manhole covers inspection chambers, sumps, rodding points, gully gratings and soak away covers etc.;
- assessing the condition of all manholes, inspection chambers etc, including benching, step irons, walls, cover slab and cover;
- measurement and recording invert and cover levels to all manholes;
- an air test of sections of the drain where defects are suspected;
- carrying out a CCTV survey of all accessible drain runs;
- high pressure water jetting and rodding to clear blocked drains;
- identification of the layout (using a dye test if necessary), and detail of the drain system, including information on all manhole numbering and drain run referencing sufficient to enable record drawings to be included in the report of the examination.

4.44.114 Should the survey determine that there are drain runs that have no access points suitable for CCTV equipment, the Contractor shall recommend the works necessary to provide access (e.g. the construction of new manholes, rodding eyes etc.).

TOC maintenance regime

4.44.115 When instructed by Rail for London, the TOC specific maintenance regime shall be reviewed against, the following and evidence sought of:

- the use of asset log books, with correct and up-to-date entries;
- the use of Task Schedules, together with the application of correct service frequencies;
- the correct use of plant and equipment schedules and registers;
- relevant COSHH information being applied;
- site-specific risk assessments for tasks carried out;

- relevant design and construction files and as installed record documentation;
- records of work done, for both planned preventative maintenance and reactive maintenance.

4.44.116 Where necessary changes shall be recommended.

Additional Content of an Inspection / Examination of Building services

4.44.117 All elements of the Building services and mechanical and electrical plant and equipment not buried below ground shall be visually inspected.

4.44.118 All risers containing mechanical, electrical or public health related assets shall be inspected.

4.44.119 Any significant over or under capacity relative to the current use of plant or equipment, in particular any oil, or similar, storage facilities that are over sized or have insufficient bunding, with associated any recommendations for further investigations shall be reported.

4.44.120 The physical site conditions and access arrangements in which maintenance tasks are carried out shall be assessed and when appropriate improvements to meet Statutory requirements shall be recommended. These may include, but not be limited to provision of:

- maintenance access - space provision and safety equipment;
- escape routes and condition;
- emergency procedure equipment;
- lighting;
- health and safety signage.

4.44.121 All maintenance records and site logbooks for the systems to be inspected shall be reviewed, and an assessment made of performance and reliability of each of the systems to be inspected following a discussion with Rail for London, including but not limited to:

- the effectiveness of the maintenance regime;
- the quality of site records;

- compliance with relevant published standards and manufacturer's maintenance
- any evidence of excessive reactive maintenance activity taking place;
- signs of asset deterioration;
- age/date of manufacture;
- product or elemental failure trends.

4.44.122 When a current electrical test and inspection report is available, the following shall be reviewed to ascertain the current status, i.e. whether appropriate remedial works have been undertaken:

- all category A recommendations;
- a minimum of 10% of category B recommendations;
- a minimum of 5% of category C recommendations.

4.44.123 If a current electrical test and inspection report is not available for inspection, this shall be recorded as a defect.

4.44.124 The electrical supply and distribution systems shall be visually inspected for signs of physical external damage, corrosion, water ingress, security and adequacy and correctness of signage, and date of inspection for:

- incoming supply, changeover panels, earthing systems, electricity meters, electricity sub-meters;
- all enclosures, transformers, switchgear, distribution boards, trunking, conduits, busbars, circuit breakers, inverters, isolators, fused switches/switched fuses, cabinets, wiring, residual circuit breakers, and surge protection;
- lubricant heaters; battery chargers and the fuel transfer system;
- lightning protection systems and records of resistivity tests;

4.44.125 Meter numbers shall be recorded and whether the meter is a utility meter shall be determined.

4.44.126 The generator set, hoses, fuel lines, tanks, tank bunds and batteries shall be inspected to determine the condition and whether there are any signs of damage, leakage or deterioration.

- 4.44.127 The following shall be recorded for the uninterrupted power supply (UPS) system:
- the manufacturer and the model type;
 - capacity in kVA;
 - output in volts;
 - service date.
- 4.44.128 The visual inspection of lightning protection systems shall include the earth terminals and the condition of all terminations, straps and down conductors.
- 4.44.129 The visual inspection of lighting shall include the condition of luminaries, emergency luminaries including back up batteries, emergency escape signage and Platform lighting cabling.
- 4.44.130 Except where the emergency lighting system is less than three years old, the date of the last full duration test shall be recorded.
- 4.44.131 The inspection of the gas supply and distribution shall include:
- confirming if the schematic diagram is mounted adjacent to the incoming mains service, and a missing schematic diagram shall be recorded as a defect;
 - a check that the pipe work is colour coded and marked in accordance with legal obligations, and any non compliance shall be recorded as a defect;
 - a visual inspect of the installation and all the appliances including but not limited to the gas automatic shut off valve, gas booster set, gas distribution pipe work, gas meter including identification of meter number, gas supply pipe work, liquid petroleum gas storage, records of gas soundness tests;
 - identifying the previous gas test date.
- 4.44.132 The low temperature hot water, combination and pressurised boiler capacity (kW) of heating systems and whether flue dilution is installed, shall be recorded.
- 4.44.133 The boiler shall be inspected for damage and deterioration.
- 4.44.134 If the pressure vessel Regulations are applicable to the system, a record shall be made of whether the following records are available for inspection:
- a written scheme of examination in accordance with the pressure vessel Regulations.

- current statutory inspection certificates;
- date of last service.

4.44.135 The fire and emergency tank capacity shall be recorded, and the following inspected:

- the internal surfaces of cold water storage tanks for signs of corrosion, water
- stagnation, flaking paintwork and for foreign bodies;
- all heat exchangers, heating emitters (water/steam), heating pipe work, heating
- pipe work lagging, heating pressurisation units, heating pumps;
- circulating pumps including drives, belts and couplings;
- filter condition;
- pressurisation units;
- pipe work;
- condition of thermal insulation;
- all surfaces for signs of corrosion.

4.44.136 The inspection shall include listening for signs of turbulent flow within closed systems, excessive air in the system or excessive noise from any part of the system where practicable and any defects observed shall be recorded.

4.44.137 Any missing or damaged thermal insulation shall be reported.

4.44.138 The capacity (in kW) of electric and gas heating emitters shall be recorded.

4.44.139 All heating emitters shall be inspected for damage to surfaces or casings, corrosion, trapped air, excessive noise on bearings and fans, blocked or damaged inlet and outlet louvers, blocked dust filters, obstruction of air movement, damage or wear to supports, dust collection on fins and damage to tubes.

4.44.140 An estimate shall be made and recorded of the capacity of all storage cold water services tanks, and for each storage tank, an estimate made as to whether the throughput of water equates to daily, weekly, monthly or some other frequency of usage.

4.44.141

The following shall be inspected:

- the condition of the installation, including all storage tanks, fixed and flexible pipe work, gauges, pumps, dispensers, interceptors and drain connections;
- the internal surfaces of cold water storage tanks for signs of corrosion, water stagnation, flaking paintwork and foreign bodies;
- pipe work and fittings for signs of leakage;
- insulation for condition and security;
- cold water supply pumps, drives, belts and couplings and the capacity in kW
- recorded;
- the water meter for damage, leakage or deterioration.

4.44.142

The compliance of the cold water systems to meet the recommendations of Health and Safety Executive Approved Code of Practice: Legionnaires' Disease: The control of Legionella bacteria in water systems shall be assessed, and any non-compliance shall be recorded as a defect.

4.44.143

The inspection of mechanical ventilation systems shall include but not be limited to:

- a check of the condition of all filters and filter media;
- a check of the condition of fans for signs of damage, excessive noise or vibration;
- all heater batteries (by means of video cameras where appropriate) to determine overall condition and cleanliness;
- a check of the cleanliness of ductwork at the point of delivery including removing grills and diffusers where necessary, and noting the condition ceiling;
- an inspection of the condition of ductwork external surfaces and flexible connections including the thermal insulation, and recording where heating or cooling ductwork surfaces are not insulated;
- determining the condition of kitchen extract canopies, including grease filters;

- louvers to report any physical external damage, corrosion and blockages;
- volume control/shut off damper including linkages etc.
- The last service date(s) and any damage or other defects shall be reported.

4.44.144

The type of refrigerant gas used in air conditioning systems and an estimation of the refrigerant capacity (kg) of the system shall be reported.

4.44.145

If the pressure vessel Regulations are applicable to the system, a record shall be made of whether the following records are available for inspection:

- a written scheme of examination in accordance with the pressure vessel
- Regulations;
- current statutory inspection certificates;
- date of last service.

4.44.146

The inspection of air conditioning systems shall include but not be limited to following:

- chilled water A/C terminal units' plant drives, buffers, chillers, water heat rejection units, pipe work including lagging, water pumps and water pressurisation units and water trace heating;
- direct expansion package units;
- heat recovery units;
- humidifiers.

4.44.147

The condition and any damage or other defects shall be reported.

4.44.148

The visual inspection of fire fighting systems shall include the following as applicable:

- fire fighting booster sets;
- fire fighting water tanks;
- foam suppression systems;
- fogging suppression systems;

- gas suppression systems;
- hose reels;
- hydrants;
- risers;
- sprinkler systems.

4.44.149 The following including but not limited to the condition of the installation, and any damage and defects shall be reported:

- the inspection date(s);
- signs of corrosion or leakage;
- the date of the last cylinder test (except when the cylinder is less than 10 years old);
- whether manual override facilities and protected space safety devices are fully operational;
- the gas type used to suppress fire;
- compliance of signage with applicable Regulations;
- whether a written scheme of examination in accordance with the pressure vessel Regulations is available.

4.44.150 The visual inspection of fire, access and security systems shall include the following as applicable:

- access control system;
- CCTV system;
- fire alarm system;
- fire damper(s);
- fire detection system;
- intelligent signage system;
- intruder alarm system;
- natural smoke extract;

- powered smoke extract;
- voice alarm system.

4.44.151 A visual examination to determine the condition, and any damage and defects to access and boundary controls shall include but not be limited to the following features and/or attributes:

- vehicular barriers;
- drop down bollards;
- floor plates;
- pedestrian gates;
- vehicular gates;
- passenger ticket barriers;
- turnstiles;
- ramps.

4.44.152 The inspection of Building services and plant controls shall be sufficient to enable a report on the condition of, and any damage and defects to the following to be reported:

- Building management system;
- plant control panel;
- fire control panel.

4.44.153 The inspection of customer signage and information systems shall be sufficient to enable a report on the condition of, and any damage and defects to the following to be reported:

- communication or public address system;
- customer information clock;
- customer information system.

4.44.154

The inspection of domestic hot water systems shall be sufficient to enable a report on the condition of, and any damage and defects to the following to be reported:

- expansion vessel;
- pipe work;
- pipe work lagging;
- pump;
- storage calorifier;
- shower;
- water heater.

4.44.155

The condition and effectiveness of the following mechanical and electrical components of drain systems including associated pipe work shall be inspected:

- drainage pumps, including drives, belts and couplings;
- foul drainage macerator;
- oil separator plant;
- sewage treatment plant;
- The capacity in kW, litres per second or holding volume in m³ as applicable shall be reported;
- Inspect the water treatment plant, record its capacity in litres and report on condition and capacity.

Emergency Procedure / Rapid Response

4.45

From time to time Structures, Earthworks and Buildings may encounter accidental loading or exceptional loading from natural forces which may impair their safety and integrity. Incidents affecting Structures, Earthworks and Buildings include but are not limited to:

- Bridge Strikes
- flooding;
- Earthwork failures;

- storm or other exceptional weather;
- fire and explosion;
- derailment, train collision or other accident;
- vandalism and terrorism;
- earthquake;
- exceptional items raised by the public, Building occupiers or Tenants and through routine observation.

4.46

To minimise disruption to the railway, Structures, Earthworks and Buildings that have or may have been affected by such Incidents shall be examined following the incident to ascertain the extent of any damage which may have been caused and whether their integrity or stability has been affected.

4.47

Rail for London will call out the Contractor as appropriate to undertake rapid response examinations and management of incidents will be undertaken in accordance with the incident management procedure and Standard (LO-MS-103-08-0014).

4.48

The priority of incident response is determined by the Rail for London Fault Reporting Centre in accordance with LO-IFM-314-03-0001 (Fault Reporting Centre - Operations Manual). The timeframe for acting upon a Rapid Response is specified below.

AMIS	Priority Description	Time Attendance
Y1	Priority 1 Urgent and Safety - A fault which is or likely to compromise primary safety systems or is having a serious impact on customers or services.	1 hour
Y1	Priority 2 Train services halted - Train services are at a stand due to the fault.	1 hour
Y1	Priority 3 Services delayed - Train services are being, or likely to be delayed by the fault. There will be varying degrees of delay within this category.	1 hour
Y2	Priority 5 High Priority - Fault that is impacting on the passenger/staff facilities (safe operation of the Station).	4 hours

Y2

Priority 7 Routine - the fault requires fixing but is unlikely to have any immediate service impact and should be dealt with without impacting on any higher priority fault. 24 hours

4.49

In instances where Rail for London determines an ad-hoc examination to be non-urgent, these should be incorporated in to the Contractor's programme in agreement with Rail for London.

4.50

In instances where Rail for London determines an ad-hoc examination as urgent, then this shall be categorised as a rapid response examinations and the response timescales shall apply.

4.51

The Rapid Response Examination Report will be prepared and issued to Rail for London.

4.52

An emergency procedure shall be prepared and set out in the Contractor's health and safety plan that specifies the action to be taken when a defect is found or an incident arises when going about work in accordance with this Contract, which may:

- affect the safe operation of the railway;
- affect the ability of a Structure, and Building to carry the loads which are applied or are likely to be applied to it;
- present an unacceptable risk to road, or members of the public and railway staff.

4.53

The procedure shall include procedures for notifying Rail for London by verbal and electronic means as soon as practicably possible when safety is affected and urgent action is taken or is likely to be required. Examples may include:

- a defect in the Structure which, in the opinion of the Examiner, gives rise to immediate concern for the continuing safety of a Structure, the operational railway, people, equipment or property including but not limited to;
- a fatigue crack in an underline Bridge is found or suspected;
- holes through the deck of an underline Bridge due to spalling, corrosion or timber deterioration;
- separation of spandrel wall and parapet to a masonry arch from the arch barrel;
- any loose or detached material or rubbish where this poses a danger to trains or passers - by and, in the opinion of the

Examiner, needs to be removed from site during an Inspection / Examination or prior to the end of the possession if applicable;

- the existence of deteriorating or potentially hazardous materials (such as asbestos boarding or lagging) and of hazardous activity by the tenant or occupier;
- when there is a fall of material from a Tunnel (lined or unlined) including a Tunnel Shaft and whether the Tunnels remains safe or measures need to be taken before the Tunnel is reopened.

4.54 The procedure shall be subject to acceptance by Rail for London.

Third Parties

4.55 There may be occasions when pre and post condition examinations may be required to support Development works adjacent to Rail for London Assets. Rail for London will have no objection to the Contractor agreeing a separate Contract with the Developer to carry out the examinations. The Contractor will need to ensure the overall delivery of the Rail for London Examination programme is not impacted.

5. Records and Asset Management

5.1 Record Documents

5.1.1 Prior to undertaking an Examination, Rail for London will make available to the Contractor previous Examination reports, Assessments, drawings and other information held. Documents will generally be in electronic format, however, some information will only be available in paper format which, with Rail for London agreement, the Contractor may obtain from archives and scan or otherwise convert to electronic format for use under the Contract. Paper documents and converted electronic files shall remain or become the property of Rail for London and be handed over at signoff of any associated report or other time agreed with Rail for London, but not later than the end of the Contract.

5.2 Asset Management System

5.2.1 Examination data (including details of the identity, location and other data necessary for the effective and efficient management of assets) shall be recorded and held on Rail for London Asset Management System which may include mobile devices.

- 5.2.2 Examinations / Inspections / Examinations shall include gathering of asset data and the subsequent population the Rail for London Asset Management System.
- 5.2.3 The Contractor shall be issued with a work order generated from the Asset Management System for each examination / assessment in line with the agreed programme. In the event that an examination is required for an asset that is not currently recorded in the asset management system, this shall be brought to the attention of Rail for London who shall ensure that an asset record and the required maintenance plan(s) are created.
- 5.2.4 Should any discrepancies in asset data be identified by the Contractor during examination activity, an Asset Change Request Form (to be provided by Rail for London) must be completed and submitted to Rail for London for acceptance and updating of the system.
- 5.2.5 The Contractor is responsible for reporting completion of the work order and recording closure details to include (but not limited to) asset condition, work arising and cyclical maintenance.
- 5.2.6 The information supplied by the Contractor recorded on (but not limited to) the work order and/or condition data form shall be returned to Rail for London.
- 5.2.7 In addition to providing the Civils Asset Register, the Asset Management System shall also be used to provide functionality for inspection and maintenance scheduling, work ordering, closure and payment as well as fault recording and management.
- 5.2.8 It should be noted that Rail for London may introduce revised or a new asset database/ Asset Management System during the course of the Contract, which could include enhanced functionality and expanded to include more data, attributes and processes as it is developed. As a result, certain new mandatory information will need to be collected during future examinations.
- 5.3 Status Reporting
- 5.3.1 A status report (format to be agreed with Rail for London) shall be submitted on a periodic basis (dates to be agreed with Rail for London) that includes, but not limited to, the following:
- Status of reconnaissance surveys/ visits, examinations deliverables against programme to include progress to date
 - Status of instructed tasks
 - Status of any access requests, arrangements and contingency plans

- Performance against KPIs and updates on any associated action plans
 - Any risks or issues to be escalated and addressed with Rail for London.
- 5.3.2 The Parties will also meet at periodic intervals (or at more frequent intervals as required) to be agreed by Rail for London. The meeting shall be convened and chaired by Rail for London to discuss the status report. The Parties shall agree actions where required to resolve any open issues and means of improving performance.
- 5.4 Reporting
- 5.4.1 Following each Examination the Contractor shall prepare and submit an appropriate report to Rail for London for approval. The format and requirements of information to be contained in these reports are described in this and the reference documents. See standard NRL/3/CIV/006/11A & 11B for further information. The format of Examination reports shall be agreed with Rail for London prior to Examinations taking place, following formats appropriate to NRL/3/CIV/006 and currently adopted by Network Rail. Following update to Standards or RAIB reports, Rail for London may add some additional requirements to the template and will need to be collected by the Contractor.
- 5.4.2 For all Examination reports, sufficient well proportioned sketches and photographs shall be provided to show, define or clarify the overall Structure and its relationship to the track, other railway infrastructure and surrounding land, including road approaches and bridge identification. This is currently stated in NRL/3/CIV/006/11A & 11B for Detailed Examinations only but shall apply for all Examinations.
- 5.4.3 Where reasonably practicable, photographs in Examination reports shall be similar to views of the general Asset and defects as included in previous Examination reports, to show potential changes in condition. All photographs in Examination reports showing general views of the Asset shall be taken in daylight, regardless of the time of the actual Examination. When this needs a separate visit to take such photographs, this shall take place within one month of the Examination, using suitable positions of safety. The date a photograph was taken shall be clearly shown for each photograph in any report.
- 5.4.4 Notwithstanding the requirements of NRL/3/CIV/006/11A & 11B, any photographs or videos taken during the Examination should be of sufficient quality to clearly show the severity and extent of the defect. For photographs or videos taken at night, there should be sufficient lighting to illuminate the defects to produce a quality image. All photographs and videos shall be dated, numbered and annotated to identify the particular view, elevation, element or defect.

5.4.5 In addition to the general planned Examination reports, other reports may be necessary following certain events and findings. Such reports shall follow the specific requirements of the relevant standard, eg, Bridge Strike, Urgent

5.4.6 When the operational railway has been closed prior to a Rapid Response Examination being carried out, Rail for London shall be informed immediately when the Examiner considers that the railway can be re-opened. Such recommendations shall be confirmed in writing, and shall also be stated in the written report of the examination. This requirement shall not apply when a Bridge Strike Examiner or Bridge Strike Nominee permits train movements following a reported Bridge Strike. A written report shall be submitted to Rail for London as soon as reasonably practicable following the Additional Examination. The report shall include observations, records, measurements or other relevant information obtained during the examination. Significant damage or new or worsened defects shall be identified, described and quantified, with recommendations and cost estimates for remedial work that is considered necessary. Photographs and/or sketches of damage or worsened defects shall be included. All measurements of defects taken using instruments, gauges etc. shall be provided in tabular form and include all readings and dates of readings. The tables shall be prepared in Excel and graph(s) trending the development of the defect(s) shall be included. The report shall be prefaced by Visual Examination report sheet. The report of a Rapid Response Examination following notification of a Bridge Strike shall accord with the requirements.

5.4.7 Recommendations for Additional Examinations to be carried out shall be supported by: details of the extent of the examination undertaken; the findings of the examination; an explanation as to why an Additional Examination is considered necessary; the urgency of the Additional Examination(s); the scope and frequency of the Additional Examination(s); the works and cost estimate necessary to provide access to undertake the Additional Examination(s).

5.4.8 Hidden obscured or buried parts of the Buildings or elements not inspected shall be identified clearly and listed within each report and the reasons for not inspecting recorded. Recommendations shall be made for any further investigation required. Supporting photographs shall be provided to illustrate the location and difficulty of those parts or elements not inspected. A list of any items for which further investigation or testing is recommended shall be included in the report. This list shall exclude any items that should routinely be carried out as part of the maintenance process (for example periodic electrical installation testing). The report shall be cross-referenced to the Asset as described in the asset management system. Recommendations shall be made where opportunities exist to reduce future maintenance costs by:

- replacing assets with those sized to match current demand (e.g. limiting the maintained
- length of Platforms or the length of Platform Canopies to suit station usage or the size of plant to suit the current load;
- decommissioning redundant assets;
- using lower maintenance materials;
- selecting materials or the sighting of elements to reduce the need for track possessions or isolations for future maintenance works.

Video and photographic records of drains shall be supplied digitally in colour, and shall include identification of the drain run, chainage from the start point and the time and date. Surveys identifying drain runs with blockages preventing CCTV camera access are to be listed and reported to Network Rail immediately.

5.4.9 Reports of each Annual and 5 Yearly Inspection / Examination shall generally be submitted following input of the final results and notes (there may be Reconnaissance, Fabric, M&E and All types of surveys making up the site Inspection / Examination) into the system to Rail for London.

5.4.10 Reports of each Additional Examination (excepting Rapid Response Examinations) shall be submitted within 5 working days or as otherwise specified by Rail for London.

5.4.11 Reports of Rapid Response Examinations shall be provided the next working day following the examination to Rail for London.

5.5 Report Delivery

5.5.1 The Contractor shall complete Examinations and issue associated reports and/or other information to Rail for London by the agreed dates, following the requirements of NR/L3/CIV/006/1/C. Requirements for the issue of Examination Reports covering Bridge Strikes and Flood, Storm or Exceptional High Tide incidents shall be submitted as required by NR/L3/CIV/006, Part 11A.

5.5.2 Reports will be reviewed by Rail for London. Any comments against the reports will be formally shared with the Contractor via a Document Review Form.

5.6 Audit of the Inspection / Examination process and outputs

- 5.6.1 Due to the safety critical nature of the work, Rail for London reserves the right to carry out audits of the Contractor. The Office of the Rail Regulator may also carry out audits. The Contractor shall facilitate the audits.
- 5.6.2 Audits by Rail for London could, but not limited to, explore the following areas:
- a final product check of the quality, content, recommendations in Inspection / Examination reports including where necessary attendance at Inspections / Examinations;
 - competence;
 - use of condition marking systems and associated reporting to validate the data to be reported to the Office of Rail Regulation;
 - the Contractor's assurance documentation and associated programme.
6. Resource
- 6.1 The Contractor shall provide all necessary resources (personnel and equipment) to carry out the Examinations / Inspections, reports and updating asset management systems for all Assets included in the Schedule. Personnel carrying out Examinations shall have the required skills and experience as described in NR/SP/CTM/017 Competence and Training in Civil Engineering, plus any further competency needed for the specific Asset and/or Examination methodology (eg, confined space, roped access, etc). The competency of the personnel delivering the scope will be presented to Rail for London for Approval.
- 6.2 Persons appointed to positions with responsibilities or delegated duties in accordance under this Contract shall have the competency, skill, knowledge and experience necessary to undertake their duties commensurate with the type and complexity of the Structures or Buildings being Examined / Inspected.
- 6.3 The ROGS regulations define safety-critical work and require that people who carry it out must be demonstrably competent to do so.
- 6.4 In addition to the specific activities relating to Assets within the Schedule, the Contractor shall provide all resources necessary to manage and administer the Contract. This should include all personnel and equipment to support and assist staff engaged carrying out the Contract Services in this and other Contract documents.
- 6.5 Any changes in, or additions to key personnel shall be notified and agreed by Rail for London before they commence work under this Contract.

- 6.6 The Contractor shall provide appropriate resources when instructed by Rail for London to carry out additional activities to the scheduled tasks, such as physical site works, provision of instrumentation (bespoke or proprietary) and monitoring of defects identified during the examination or inspection process. Additional Examinations and Special Examinations. This could involve engaging resources to undertake specialist activities, eg, asbestos surveys. An indicative list of activities which may be instructed is provided in Appendix D.
- 6.7 Resources shall be provided when instructed by Rail for London to support in the management and co-ordination of examination or inspection of assets.
- 6.8 The Contractor is responsible for ensuring that all his staff, agents and personnel are suitably trained and competent and carry the appropriate and requisite certification for performing the roles required of them in providing the Services.
- 6.9 The Contractor is responsible for arranging, booking, and paying for all requisite medicals, training and certification of his staff and / or personnel. Details to be provided by Rail for London upon request.
- 6.10 Training to demonstrate competence to the requirements shall be provided by the Contractor. The Contractor shall also arrange training, and any necessary updating as required associated with Examinations / Inspections for use of asset management computer systems; handheld computers for data collection; lap tops as standalone data entry systems. Written notification of those persons who are to carry out the role of mentors shall be provided to Rail for London.
- 6.11 Rail for London will provide training and briefing to the Contractor on the use of the RfL Asset Management System and implementation of new processes.
- 6.12 Notwithstanding the requirements of standard NR/L3/CIV/006 and NR/SP/CTM/017, personnel carrying out the roles of Examining Engineer and Lead Engineer for Examinations of Lined Tunnels, shall be approved by Rail for London. They shall hold STE 6 competence and need to be registered as chartered with the Engineering Council.
- 6.13 An appropriate (Level C) competency is required for the examination of Sub-Stations.
- 6.14 The Contractor must provide and maintain an appropriate Competency Management System and provide evidence to Rail for London that the requirements described within this section 7, namely:
- Experience
 - Training records (including expiry date of training or competency)

- Certification held
- Qualifications
- Professional Membership
- CDM Knowledge
- Limitations

6.15 The Contractor's Competency Management System may include 'Routes to Competence' detailing how Contractor's employees that fail to meet the criteria are managed.

6.16 Rail for London reserves the right to audit the Contractor's competency management system, assess individuals and request the removal or management of any individual deemed to fall short of the required competence requirements to provide the Works, at any time. The Contractor shall make the appropriate arrangements for all such audits and associated interviews to be held.

6.17 An Examiner who uses roped access during an Inspection / Examination shall also be competent to a minimum level 1 in accordance with the Guidelines for Working (issued by the Industrial Roped Access Trade Association), or to an equivalent level in any superseding Guidelines or standard.

6.18 A person who supervises roped access activities shall be competent to a minimum Level 3 of the Guidelines for Working, or to an equivalent level in any superseding Guidelines or Standard.

6.19 Inspection / Examination of GSM-R masts/towers shall be carried out by persons who have been trained and deemed competent to climb the masts. An Examiner utilising the fall arrest system shall be trained and certificated in accordance with the Industrial Rope Access Trade Association, (IRATA), International Powered Access Federation (IPAF) or similar to carry out the safety checks for the system.

6.20 All Examiners who carry out Inspections / Examination of asbestos shall be instructed in asbestos awareness in accordance with the Control of Asbestos Regulations 2006 Regulation 10.

APPENDIX C – REFERENCE DOCUMENT FOR NETWORK RAIL STANDARDS

The latest versions of the following documents should be referred to for more detailed descriptions of activities and requirements: It is the responsibility of the Contractor to ensure they are working to the latest versions of Rail for London Standards.

Please note this list is not exhaustive and all services provided as part of this contract should be in line with Rail for London Standards whether they are listed below or not. The Contractor should bring any queries or anomalies regarding the standards to the attention of Rail for London for review and agreement on resolution.

NR/L1/CIV/0032	The Management of Structures
NR/L2/TRK/3038 Maintenance	Longitudinal Timbers – Design, Installation and
NR/L3/CIV/0006	Handbook for the Examination of Structures
NR/L3/CIV/0006	Part 1A: Purpose, Scope and Definitions
NR/L3/CIV/0006	Part 1B: Examination Regime
NR/L3/CIV/0006	Part 1C: Risk Categories and Examination Intervals
NR/L3/CIV/0006 and other Common	Part 1D: Competency, Preparation for Examinations Requirements
NR/L3/CIV/0006	Part 2A: Bridges
NR/L3/CIV/0006	Part 2B: Tenanted Bridge Spans
NR/L3/CIV/0006	Part 2C: Condition Marking of Bridges
NR/L3/CIV/0006	Part 3A: Culverts
NR/L3/CIV/0006	Part 4A: Lined Tunnels
NR/L3/CIV/0006	Part 4B: Unlined Tunnels
NR/L3/CIV/0006 Part 4C: Marking Index Score	Reporting of Tunnel Examinations and Condition
NR/L3/CIV/0006 Assessment (UTGRA) Guidance	Part 4D: Unlined Tunnel Geotechnical Risk

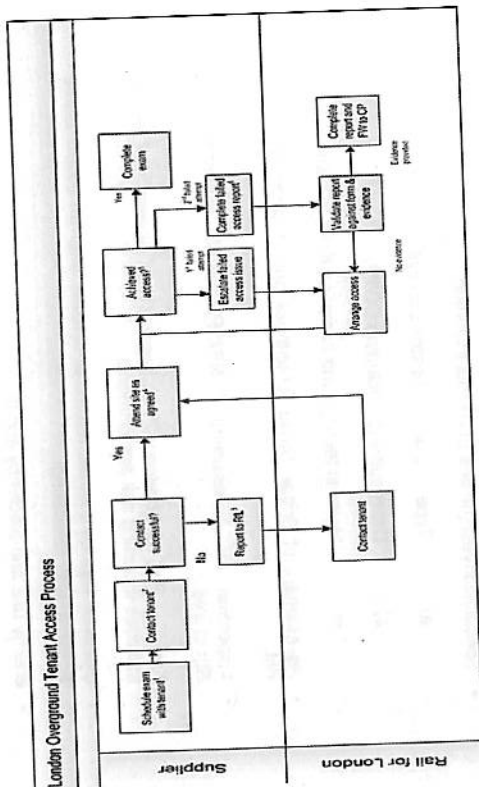
NR/L3/CIV/006	Part 5A: Retaining Walls
NR/L3/CIV/006	Part 6: Coastal, Estuarine and River Defences
NR/L3/CIV/006	Part 7A: Operational Property
NR/L3/CIV/006	Part 7B: Buildings
NR/L3/CIV/006	Part 8: Ancillary Structures
NR/L3/CIV/006	Part 11A: Reporting and Recording Examinations of
NR/L3/CIV/006	Structures in CARRS
NR/L3/CIV/006 Part 11B:	Reporting and recording examinations and
inspections of Operational Property in OPAS	
NR/L3/CIV/076	Management of the Risk of Bridge Strikes from
Road Vehicles and	Waterborne Vessels
NR/L3/CIV/176	Management of Reports on Bridge Strikes
NR/GN/CIV/00012	Road Vehicle Incursions: Risk Assessment of
Bridge and Neighbouring Sites	
NR/GN/CIV/025	The Structural Assessment of Underbridges
NR/GN/CIV/202	Management of the Risk of Bridge Strikes
NR/SP/CIV/035	Assessment of Structures
NR/SP/CIV/080	Management of Existing Bridges and Culverts
NR/SP/CIV/082	Management of Existing Retaining Walls
NR/SP/CIV/084	Management of Existing Tunnels
NR/SP/CIV/089	Management of Existing Coastal, Estuarine and
River Defences	
NR/SP/CIV/091	Management of Existing Ancillary Structures
NR/SP/CTM/017	Competence and Training in Civil Engineering
NR/BS/LI/167	Detailed Examinations: Requirements for the Exposure of
Hidden Critical Elements	
NR/BS/LI/168	Management of Existing Bridges and Culverts: Additional
Requirements for Evaluation	
NR/BS/LI/176	Structures and Earthworks: Urgent Defect Reports
NR/BS/LI/193	Examination of Previously Reported Defects

APPENDIX D – Indicative List of Activities which may be instructed by Rail for London

- Additional or Unique Examinations.
- Unplanned Emergency Examinations (including Rapid Response).
- Visual Examinations of Structures within Depots.
- Clearance of vegetation and obstructions, or other opening up, to enable Examinations to be undertaken.
- Physical works prior to or during a Detailed Examination to enable the Examination to be undertaken.
- Works to Assets simultaneous with Detailed Examinations to maintain the safety of the Asset and/or railway infrastructure – see NR/L3/CIV/006, Part 1B.
- Supply and/or installation of Bridge Identification Signs.
- Providing and installing instrumentation (including date tabs) for monitoring defects.
- Support to Rail for London in the management and co-ordination of Examinations.
- "Back analysis" of a Detailed Examination to generate Structure CMI scoring
- Specialist investigations of Assets including:
 - a) Type 1, 2 or 3 asbestos surveys.
 - b) Drain surveys, including CCTV.
 - c) Material testing (and sampling if not in-situ)
- Assessment of Bridge Strike robustness and/or categorisation of risk.
- Inspection for Assessment / NR/SP/CIV/035 Assessment of Structures
- Assisting Rail for London with management of Assessment related activities including risk assessments.
- Updating Rail for London database records after an Examination, including CMI re-scoring.
- energy use and efficiency audits;

- feasibility studies for the reduction in capacity or removal of redundant assets;
- interim review of asset condition;
- dilapidation surveys;
- assistance with the management of examination/ inspection records, including updating of the asset management system.
- clearance of blockages in drains, down pipes, gutters, valleys, weep holes or catch pits from Structures which are damaged, blocked or not freely draining;
- provision and fixing of mortar "tabs" over cracks, with the date inscribed and position of the tabs referenced clearly;
- excavation of loose spoil, ballast or surfacing covering a baseplate or other buried metallic supports to expose the support for examination;
- installation of temporary openings/gates, etc. to permit access to the Structure;
- coring timber components and making good
- removal and reinstatement of Obstructions including Arch Furniture to tenanted masonry arch Spans, cladding to subways and Footbridges etc;
- exposure of hidden parts (HCE), including but not limited to exposure of metallic parts in contact with timber;
- provision and fixing, reading and measuring fixed reference or plumbing points, or movement gauges; a datum set of readings and a sketch showing the positioning and date of the plumbing, referenced to a salient feature on the Structure; the format of the results shall enable comparison of successive plumbings or readings;
- provision of instrumentation (bespoke or proprietary) and monitoring of defects in Structures and Buildings;
- partial dismantling or exposure of parts of the Structure;

APPENDIX E – Tenant Property Access Process



Notes on flowchart:

1. Contractor books examinations with tenants directly based on a detailed tenant contact list provided by RfL. The contractor should provide tenants with examination schedules at the beginning of the year, and notify tenants by telephone with a follow up email where there are any changes to schedule.
2. The contractor shall provide tenant with advanced notice in the lead up to exams and provide advanced notice as an examination approaches.
3. Where tenant is uncontactable supplier should email RfL detailing the contact failure.
4. If for any reason the examiner cannot attend the site, they should contact the tenant and agree alternative access.
5. Where the examiner arrives on site and cannot achieve access to carry out the exam they should call RfL Property Management in the first for advice. If the supplier is unable to contact RfL, or if upon contact RfL are unable to provide assistance, they should leave the site and follow up the reported failed access with an email detailing the access attempts.
6. The Failed Access report should include at a minimum date, location, asset number, examiner name, outcome, and evidence of following the agreed process



SCHEDULE 4 – CHARGES

The rates for the services are attached at the end of this document. The Authority and the Contractor (each acting reasonably) shall agree appropriate, reasonable and appropriate adjustments to the attached programme to account for the Contract being entered into on the date of the Contract and not on 1 November 2017.

Frustrated Access:

As detailed in Schedule 10 – Access, the Services Provider makes every effort to mitigate the effects (such as re-deployment of resources or re-sequencing of the works) of frustrated access to the working areas.

In instances where it is agreed with the Authority that frustrated access applies, the Contractor submits details of the associated charges for agreement with the Authority with the maximum charges to be payable of:

Cancellation timeframe	Charges
Access cancellation within 24 hours of the works commencing and after 16:00 on the Thursday prior to a weekend	
Access cancellation within 24-48 hours of the works commencing	

SCHEDULE 5 - PROJECT PLAN

The programme for planned examinations for year 1 (FY 2017/18) shall be inserted once agreed by the Authority.

As per the contract specification, the programme will be reviewed on a quarterly basis, or as required by the Authority. Any new requirements will be incorporated in to the programme in agreement with the Authority.

SCHEDULE 6 - FORM FOR VARIATION

Contract Parties: *[to be inserted]*

Contract Number: *[to be inserted]*

Variation Number: *[to be inserted]*

Authority Contact Telephone *[to be inserted]*

Fax *[to be inserted]*

Date: *[to be inserted]*

AUTHORITY FOR VARIATION TO CONTRACT (AVC)

Pursuant to Clause 31 of the Contract, authority is given for the variation to the Services and the Charges as detailed below. The duplicate copy of this form must be signed by or on behalf of the Contractor and returned to the Procurement Manager as an acceptance by the Contractor of the variation shown below.

	•	DETAILS OF VARIATION	•	AMOUNT (£)
			•	•
			•	
•		ALLOWANCE TO THE AUTHORITY		•
•		EXTRA COST TO THE AUTHORITY		•
		•	TOTAL	•

.....
For the Authority (signed) (print name)

•	ACCEPTANCE BY THE CONTRACTOR	•
•	•	•
•	•	•
•	•	•
•	Date	Signed
•	•	•

SCHEDULE 7 - CONTRACT QUALITY, ENVIRONMENTAL & SAFETY CONSIDERATIONS

H&S Contract Requirements

- 1.1 Health, Safety and Environment Requirements
- 1.2 Legislation and Standards

The Contractor shall comply with all current safety, health, welfare and environmental legislation and with all current approved Codes of Practice.

The Contractor shall comply with all notified TFL and other Standards as outlined in the LO Standards Catalogue [insert reference].

1.3 HSE Charter

To improve health, safety and environment performance the Employer has introduced a Health, Safety and Environment Charter. The Charter sets out the health, safety and environment commitments to be applied to this contract by the Service Provider and the Contractor together. The Contractor shall adopt these commitments, share them with sub-contractors and employees, and ensure they are incorporated into the Contractor's health, safety and environmental management arrangements.

The HSE Charter shall be signed at contract award by representatives of the Service Provider and the Contractor.

The Contractor shall ensure the HSE Charter is visible to the Contractor's employees and sub-contractors, either as posted on the site notice board, included in the site file or similar.

The HSE Charter can be found in HSE Appendix 1

1.4 Performance Assessment

The Contractor's health, safety and environmental performance will be monitored by the Service Provider using an HSE Supplier Assessment tool. The frequency for assessment shall be determined by the Service Provider in light of the level of activity or performance. The Contractor shall participate in the assessment through the provision of information and evidence requested by the Service Provider in respect of the criteria. The results of the assessment will be discussed with the Contractor upon completion. If required, the

Contractor will be asked to prepare an Action Plan in response; progress against which is monitored as part of subsequent assessments. The full assessment criteria and monitoring schedule will be shared with the Contractor at the time of tendering [insert reference].

1.5 HSE Meetings

The Contractor shall attend regular HSE progress meetings with the Service Provider at a frequency to be determined by the Service Provider, to review HSE performance and consider progress with HSE improvement plans.

The Contractor shall attend the Service Provider's regular HSE committee meetings to promote HSE performance through the supply chain.

2.1 Health Safety and Environment Management System

2.2 HSE Management System

The Contractor's H&S Management System arrangements shall comply with the following requirements:

- The Contractor shall operate a health and safety management system that, as a minimum, meets the requirements contained in the latest versions of OHSAS 18001 & ISO9001
- The Contractor shall operate a health and safety management system that is capable of demonstrating by self certification that all the HSE requirements as set out in applicable Standards, Safety Authorisations, Safety Certificates, Regulatory requirements, Consents and Limitations are being met.
- The Contractor shall operate a health & safety management system that ensures that any sub contractors appointed by the Contractor meet these minimum HSE requirements, as set out by the Service Provider.

2.3 Environmental Management

The Contractor's arrangements for managing environmental matters shall be set out in either an Environmental Management Plan (EMP) or included within a Construction Plan (CP). The arrangements shall be submitted to the Project Manager for acceptance within 14 days of appointment. If the arrangements are not accepted by the Project Manager, the Contractor shall revise and resubmit them to the Project Manager until such time as acceptance is granted. Works shall not start on site until the Project Manager has accepted the environmental arrangements, and the Contractor shall comply with the accepted arrangements at all times.

The arrangements shall define how the environmental aspects of the Works will be managed and shall clearly set out the identified environmental aspects and impacts and the mitigation measures that the Contractor will employ to minimise any potential risks.

2.4 HSE KPI reporting

The Contractor shall report its own and its subcontractors HSE performance to the Service Provider on a periodic basis. The data shall be provided in the format prescribed by the Service Provider (details of the current requirements can be found in [insert reference]). The data is to be submitted within 3 business days of the TFL accounting period ending.

2.5 Audit

The Contractor shall provide a risk-based Health, Safety and Environmental audit schedule. The reports completed after all audits shall be forwarded to the TFL Head of Infrastructure Management, for information, within 2 weeks of the audit being completed. The report shall include details of any identified issues and any proposed corrective actions. The report shall be reviewed during HSE progress meetings.

The Contractor allows the Service Provider to observe or participate in these audits and to conduct additional independent audits, acting reasonably with the cooperation of the Contractor, to provide Assurance that the works are being conducted in accordance with the contract requirements. The Contractor shall provide the facilities and access necessary for these audits to be carried out.

2.4 Inspections

The Contractor shall undertake regular Health, Safety and Environmental inspections of the Site at a frequency agreed with the Project Manager to monitor performance in respect of health, safety and the environment. Completed inspection reports shall be submitted to the Project Manager for information no later than 5 business days following the date of inspection.

The Contractor allows the Service Provider to observe or participate in these inspections and to conduct additional independent inspections, as they consider appropriate, to provide assurance that the works are being carried out in accordance with the contract requirements.

2.5 Incident Reporting and Investigation

The Contractor shall report all HSE incidents, accidents and near miss events which occur during the Contract via the TFL Incident Line before the end of the shift in which the incident occurred. (Details of how to report an incident to the TFL Incident Line are provided in [insert reference here]).

The Contractor shall, within forty eight (48) hours submit an initial written report and after 14 days a full report detailing as a minimum the following:

- Description of the incident
- Immediate actions taken
- Immediate causes
- Root causes
- Actions taken to prevent a recurrence;

With the agreement of the Head of Infrastructure Management a longer timescale to complete the final report may be agreed.

All investigation reports will be completed to establish root causes and to a level of detail acceptable at the time to the Service Provider. Any comments provided by the Service Provider shall be addressed by the Contractor and an updated report submitted if required.

Where serious accidents occur – Major injuries and Dangerous Occurrence (as defined in RIDDOR) - these shall be subject to a thorough formal investigation. The Service Provider reserves the right to take part in any investigation led by the Contractor and/or in certain instances lead their own investigation.

If the incident is serious enough to warrant press attention – all communications with the press will be via the Service Provider.

Nothing in this document supersedes the Contractor's responsibility for statutory reporting of incidents/accidents.

3.1 Health, Safety and Environmental Competence and Training

3.2 HSE Advice

The Contractor shall at all times have access to competent Health, Safety and Environmental support to fully implement all the applicable HSE requirements and to ensure a presence on Site at regular periods for inspections, advice and instruction.

3.3 HSE Training

All operatives and management on site employed directly or indirectly by the Contractor shall have received such HS&E training the work they are required to undertake and are to be made fully aware of the techniques and procedures to be used during the works with regard to their own health and safety and the health and safety of others and the protection of the environment.

3.4 Licenses

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The following licenses are required when working for London Underground:

- PTS (when working on or near the track)
- COSS (when controlling works on or near the track)

3.5 Briefings

The Contractor shall attend any HSE briefings specified by the Service Provider and include all relevant information from these in their own briefings.

The Contractor shall ensure that all visitors to the Site (including Service Providers staff) are provided with HSE briefing and induction, which will include as a minimum an overview of the activities taking place on Site, the likely hazards on site, the areas where they are permitted to walk, emergency evacuation routes, PPE and First Aid. These briefings/inductions must be aligned with the Service Provider's local inductions where applicable.

The Contractor shall make available to the Service Provider a record of training and the relevant certification for all of their site operatives under their control in order to demonstrate that the operatives are suitably qualified for the operations they are carrying out.

The Contractor shall arrange regular relevant toolbox talks for his staff, and maintains a register of attendees of these sessions for the Project Manager to inspect. The Contractor shall take a pro-active stance on promoting health, safety and environmental awareness on the site and may be asked to participate acting reasonably in any Service Provider led HSE forums and campaigns.

3.6 Induction

The Contractor shall ensure that all visitors to the Site (including Service Providers staff) are provided with HSE briefing and induction, which will include as a minimum:

- an overview of the RIL Management Infrastructure;
- rules of the route
- arrangements for controlling access;
- the likely hazards on site,
- any restrictions and limitations on movement or activity,
- arrangements for the reporting of incidents or near-misses
- emergency arrangements,
- PPE and First Aid arrangements

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London Underground) is only carried out by personnel who meet the competence requirements of the relevant body.

4.0 CDM

In the event that any services being delivered constitute construction work as defined by CDM 2015, the employer is the Client, the Design & Management R egulation (C DM) 2015, the employer is the Client, and the S ervice P rovider is appointed as P rincipal Designer & P rincipal Contractor, insofar that the regulations require those appointments.

4.1 F10

The F10 will be provided by the Service Provider and shall be displayed in the site offices by the Contractor.

4.4 Health and Safety File

A Health and Safety File shall be produced for all projects, even where there is only one contractor involved. The Contractor shall work with the Service Provider and/or Principal Designer to compile the Health and Safety File in a format specified by the Service Provider.

5.1 PPE

The Contractor shall assess and provide the appropriate PPE for his personnel, subcontractors, suppliers and visitors.

The Service Provider requires that high visibility clothing compliant with Railway Group Standard GO/RT3279.

This high visibility clothing shall carry the Contractor's Service Provider name. The Contractor's staff shall not wear London Underground branded high visibility clothing, unless working under a 'labour only' contract and requested to by the Head of Infrastructure Management.

Contractors shall not wear any garment or article that impedes their vision or hearing when working for London Underground, unless required as part of a safe system of work e.g. hearing protection.

The wearing of hats, clothing with hoods and any other headwear is prohibited when working for London Underground with the exception of:

- Hoods or headwear required as PPE in response to a risk assessment

These briefings/inductions must be aligned with the Service Provider's and Network Rail's inductions where applicable.

The Contractor shall implement effective means to ensure that all those accessing the RFL Managed Infrastructure have received and passed the relevant induction, and hold the appropriate licences for the activities they are undertaking.

3.7 Non English Speaking Workers

The Contractor shall have adequate arrangements in place to communicate health and safety information to non-fluent English speakers on site such that:

- They receive the required HSE training/briefing (including any emergency procedures before commencing the work);
- Instructions are effectively communicated to, and understood by, all such team members

These arrangements shall be described in the Construction Phase Plan.

3.8 Safety Critical Work

The Contractor shall identify all Safety Critical tasks (as defined by Railways and Other Guided Transport Systems (Safety) Regulations 2006 and amendments) associated with the Contract and agree these with the Service Provider.

The Contractor shall demonstrate that they have suitable and sufficient arrangements in place to monitor the competence and fitness of those carrying out safety critical tasks. These arrangements are to be described in the safety management system.

The Contractor shall provide a means of identification for all staff employed on safety critical tasks.

3.9 Competence Management

The Contractor shall from the Contract Date operate a formal competence management system to ensure that any person(s) performing tasks for it or on its behalf are fully competent to fulfil their intended roles. The competence management system should cover all roles related to the Works and not be limited to staff performing safety critical tasks.

The Contractor shall ensure that any work by the Contractor on the Service Provider's infrastructure or infrastructure controlled by any other party (including Network Rail and

- Headwear specifically designed:
- o To be compatible with PPE and
- o Not to impede vision or hearing

6.1 Hazardous Materials

6.2 Control of Substances Hazardous to Health (COSHH)

The Contractor is obliged to notify the Service Provider of any substances to be used in the works that are, or may be, classified as hazardous and which could impact on others in the vicinity of the work where the material is to be used. The Contractor shall provide full details of such substances, including storage details and the Risk Assessment for the works to be undertaken. These details shall be submitted to the Head of Infrastructure Management prior to the work involving these materials commencing.

6.3 Asbestos

The Service Provider will supply all information in his possession in respect of the presence of asbestos within the site. The information will be included in the Health and Safety Pre-Construction Information. Based on this information, the Contractor shall liaise with the Service Provider to determine where additional surveys will be required and the type of survey to be undertaken.

Where the Contractor believes that they have disturbed asbestos as a consequence of their works, they shall stop works immediately, inform the Head of Infrastructure Management and report the incident as a Near Miss via the TfL reporting line

7.1 Site Rules

7.2 Agreement of Site Rules

The Contractor shall propose site rules for agreement by the Service Provider and shall ensure that all persons for whom the Contractor is responsible abide by the same.

7.3 Drugs and Alcohol

The Contractor shall operate a drugs and alcohol policy at least as stringent as the requirements outlined in the London Underground Misuse of Drugs Procedure, the London Underground Alcohol at Work Procedure, and Railway Group Standard GE/RT8070 where safety critical work is to be undertaken on Network Rail infrastructure.

The Contractor shall implement suitable arrangements to verify compliance with its policy including undertaking the necessary alcohol and drug testing. In addition the Contractor shall co-operate with the Service Provider who may require the execution of random and/or for cause alcohol and drug tests. The Contractor shall provide records of testing if requested by the Service Provider.

7.4 Smoking

Smoking (including e-cigarettes) within the working areas is prohibited with the exception of designated smoking areas. The Contractor shall provide suitably signed designated smoking areas within the working areas close to welfare facilities but away from the work locations, site access routes and sensitive neighbouring properties. The Contractor shall take all reasonable measures to prevent personnel under his control from smoking on the streets adjacent to worksites.

8.1 Documentation

8.2 Emergency Preparedness Plan

The Emergency Preparedness Plan (EPP) shall be submitted to the Service Provider for acceptance prior to commencement of Works. In addition to describing the emergency arrangements for the works on site, the plan shall consider potential impacts beyond the site boundary, especially where there are interfaces with neighbours, operational assets etc. Any existing site specific EPPs will be provided as part of the pre-construction information, and should be incorporated in the Contractor's EPP as appropriate. For smaller scale works, and with the agreement of the Service Provider, the EPP can be incorporated into the CPP.

Immediately following an emergency, or following a simulated emergency exercise, the Contractor shall review the actions taken, against the requirements set out in the EPP, and revise the EPP accordingly. The output of these reviews shall be shared with the Service Provider.

8.3 Method Statements/Work Package Plans

The Contractor is responsible for producing and approving all Method Statements (also known as Safe Systems of Work and Work Package Plans) in a format agreed with the Service Provider. The Contractor shall submit a schedule of Method Statements to the Service Provider for acceptance at contract start date. The Service Provider shall determine which Method Statements they will review for acceptance.

The Contractor shall submit all Method Statements to the Service Provider with adequate time allowed for any required acceptances to be gained prior to that element of the works starting on site. The time allowed for review will be agreed with the Service Provider. No

element of the work shall commence without a Method Statement being produced and approved by the Contractor and being accepted by the Service Provider where required.

All Method Statements and supporting documentation, including any relevant approvals from others, shall represent and detail the Contractors planned works and address construction sequences, co-ordination with third parties and the relevant control and mitigation measures for identified risks.

Within each Method Statement the Contractor shall include a risk assessment that demonstrates how potential HSE risks resulting from the works have been mitigated to ALARP status.

Where sub-contractors are used, the Contractor shall ensure that they have reviewed and approved all Method Statements produced by the sub-contractor before they are submitted to the Service Provider.

9.1 Fire

9.2 General Requirements

The Contractor shall ensure that all works are compliant with the relevant legislation, Standards, TfL guidance and industry best practice in terms of fire compliance.

The Contractor shall make himself aware of any existing fire evacuation arrangements for the site, and co-ordinate their own arrangements with those of the site Landlord.

The Contractor shall develop a fire evacuation procedure for agreement with the Service Provider. The Contractor shall ensure that all persons working on Site or who may have authority to visit site form time to time are aware of this procedure and receive any instruction that might be appropriate. These arrangements shall be recorded in the Emergency Preparedness Plan.

The Contractor shall abide by the current rules and restrictions relating to the use of flammable materials on or near RfL Managed Infrastructure.

The Contractor shall obtain the consent in writing from the Service Provider before storing or using plant, equipment or materials involving risk of fire or posing any hazard to any person and property.

The Contractor shall provide any additional fire extinguishers or other fire suppression systems on site as may be required to deal with the Contractor's method of working and/or any materials, packaging and equipment brought or stored on site by the Contractor.

The Contractor shall take all precautions to prevent the outbreak of fire arising from the works.

9.3 Isolations of Fire Detection and Suppression Systems

The Contractor shall agree the proposed isolation plan to suit his method of working with the Service Provider, and shall liaise with the Service Provider to make the necessary arrangements for these isolations.

11.1 Work Related Road Risk

11.2 Work Related Road Risk

For the purposes of clauses 11.1 to 11.9 (inclusive), the following expressions shall have the following meanings:

"Bronze Accreditation" means the minimum level of accreditation within the FORS Standard, the requirements of which are more particularly described on the FORS website

"Car-derived Vans" means a vehicle based on a car, but with an interior that has been altered for the purpose of carrying larger amounts of goods and/or equipment

"Collision Report" means a report detailing all collisions during the previous 12 months involving injuries to persons or fatalities

"Delivery and Servicing Vehicle" means a Lorry, a Van or a Car-derived Van

"Driver" means any employee of the Contractor and his Subcontractors (including an agency driver), who operates Delivery and Servicing Vehicles on behalf of the Contractor while providing the Works

"DVLA" means the Driver and Vehicle Licensing Agency

"FORS" means the Fleet Operator Recognition Scheme, which is an accreditation scheme for businesses operating van and lorry fleets. It offers impartial, independent advice and guidance to motivate companies to improve their compliance with relevant laws and their environmental, social and economic performance

"FORS Standard" means the standard setting out the accreditation requirements for the Fleet Operator Recognition Scheme, a copy of which can be found on the FORS website

"Gold Accreditation" means the highest level of accreditation within the FORS Standard, the requirements of which are more particularly described on the FORS website