



M&E Maintenance Contract
for
Headquarters Site
at
Keyworth
Nottinghamshire
and satellite
sites below

Specification:
Required Outputs

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REQUIRED OUTPUTS SPECIFICATION

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The plant and equipment serving the buildings is controlled via a Trend BMS system.

The operating hours of the site are 0700 to 1900 hours, Monday to Friday (Weekends and Bank Holidays excluded).

1.3 BGS Representative

BGS's Representative for this Contract is Gaynor Delaney, Head of Estates.

1.4 Scope

The Facilities and Infrastructure team are responsible for managing the estate at the BGS Keyworth site.

At present maintenance of the site services is undertaken by a mixture of in-house staff and external contractors.

Following a recent review of service provision on site it has been decided to contract out the majority of the M&E services at the Keyworth site.

1.5 Services

The Contractor will maintain a range of services by providing a responsive, cost effective, efficient and quality service, which is in compliance with good practice and statutory health & safety requirements.

The Contractor's services under the Contract include, but are not limited to, the following:

- 1.5.1 The performance of planned preventative maintenance (PPM) tasks.
- 1.5.2 The provision of a reactive/call out service and associated repairs on the instructions of the BGS Help Desk. All jobs are delivered by the Help Desk via the BGS CAFM system, either by paper or electronically to a suitable device. All tasks performed to SFG20 or to statutory regulations and written schemes of examination (WSE).
- 1.5.3 The performance of alterations, upgrades and new works instructed by BGS.
- 1.5.4 Attendance on other Contractors during Statutory Inspections/Audits of the relevant installations.
- 1.5.5 Adjusting all plant time clocks, controls and external clocks on the Premises to comply with the two annual changes for British Summer Time.
- 1.5.6 The maintenance of energy consuming plant to optimize efficiency, carry out 12-monthly energy reviews.

- 1.5.7 Establishing documented disaster recovery plans for the key installations, e.g. H.V., L.V. and Data Suite cooling failures.
- 1.5.8 This Specification outlines the type of work envisaged by this contract carried out as planned preventative maintenance (PPM) and reactive maintenance works. These works are described in detail in the Service Requirements section of this Specification.
- 1.5.9 The works includes the maintenance, repair, and alteration to the mechanical and electrical installations listed in the attached Schedule including associated plant and equipment to the required outputs identified in this Specification and the provision of 24 hours/day, 365 days/year emergency response, in line with SFG 20.

1. CONTRACT REQUIREMENTS

1.1 General

1.1.1 In delivering, performing and providing the Services the Contractor will, at all times, in addition to complying with its obligations elsewhere in this Contract, comply with the requirements identified in this Specification. Specifically, and in addition to what follows, it will at all times:

1.1.1.1 meet the business needs of BGS and other third parties; and

1.1.1.2 maintain a safe, secure and comfortable working environment for staff whilst minimising adverse impact on the environment.

1.2 Site Presence and Out of Hours

1.2.1 The Contractor shall provide a site presence covering both the Mechanical and Electrical disciplines during the hours 0700 to 1900 hours (1700 hours on Fridays), excluding Bank Holidays. The Contractor office must be covered from 0800 to 1630 hours Monday to Friday, excluding Bank Holidays. The contract manager or contract supervisor must be on site from 0800 to 1600 hours Monday to Friday, excluding Bank Holidays.

1.2.2 In addition to the site presence the Contractor shall provide an out of hours on call service covering both the Mechanical and Electrical disciplines 24 hours per day/7 days per week/365 days per year.

1.3 Good Industry Practice

1.3.1 The Contractor will be technically proficient with and perform all services in accordance with Good Industry Practice, SFG20 and all relevant legislation, standards or codes of practice applicable to each part of the services including but not limited to those set out in this Specification and manufacturer's recommendations.

2.4 Working Practices

2.4.1 The Contractor will ensure all tasks follow those detailed within its detailed Method Statements at all times unless otherwise mutually agreed.

2.4.2 The Contractor will ensure all detailed Method Statements have been risk assessed and that preventative measures are being followed at all times.

2.4.3 The Contractor will ensure all tasks are subject to other required assessments at all times.

2.4.4 The Contractor will ensure all tasks are subject to suitable qualitative, commercial and general management control procedures at all times.

2.4.5 All working practices employed by the Contractor will not compromise the construction, fabric or finishes of any building, or its contents at any time.

2.5 Cleanliness and Tidiness

2.5.1 The Contractor will ensure that within their demarked areas of responsibility, and whilst undertaking all tasks, a high standard of cleanliness and tidiness is maintained.

2.5.2 The Contractor will ensure they remove all rubbish and surplus materials, both existing and as it accumulates on a daily basis such that all areas are left clean and tidy at all times.

2.6 Call-outs, Response Times and Corrective Action

2.6.1 The Contractor will provide an effective call out service at all times. Site engineers attending an out of hours call out are expected to be on site within a n hour of receiving the call. If an out of hours third party contractor call out is required, the contractor is expected to be on site within four hours of receiving the call.

2.6.2 The Contractor will meet service requests within the Specified Response and Corrective Action times in this Contract. The cost of this Service is deemed to be included within the Price.

2.6.3 Following a call out, the Contractor will be required to inform the Help Desk of the scheduled date and time for attending the building.

2.6.4 Once the call out event has been attended to (at the investigation stage, temporary fix, permanent fix or at any relevant other point of progress) the Contractor will report the status of the defect to the Help Desk.

2.7 Quality

2.7.1 The Contractor will manage and deliver all Services in such a manner as to comply with BGS's Quality Management System and the requirements of ISO: 9001.

2.7.2 For the avoidance of doubt the level and competence of workmanship will also be monitored by the Contractor in accordance with the standards set out elsewhere in this Contract. BGS will audit this process as part of its audit program.

2.8 Service Management System and HelpDesk

2.8.1 BGS will operate a Service Management System ("CAFM system") and Help Desk to support the Contract. The Contractor will ensure it follows the CAFM system and Help Desk interface and reporting requirements at all times.

2.8.2 The Contractor will also ensure its Contracting Associates and other third parties engaged by the Contractor conform to the CAFM system and Help Desk interface and reporting requirements at all times.

2.8.3 The Contractor will ensure all defects and requests are reported through the Help Desk and completed in an appropriate and timely manner in accordance with this Contract.

2.9 Statutory and Legal Requirements

2.9.1 The buildings and Services provided must comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.

2.10 Governmental, Civil Service, Departmental and BGS's Standards

2.10.1 The Contractor will be required to comply with all Governmental, Departmental and BGS's Standards under this Contract as detailed in this Specification.

2.11 Consents and Licences

2.11.1 The Contractor will obtain and maintain all licences, consents, permits and approvals required for the delivery, performance and provision of the Services, and comply with the terms thereof.

2.12 Environmental Issues

2.12.1 To avoid doubt, the Contractor will, at all times, comply with all Environmental Legislation.

2.12.2 The Contractor will comply at all times with the environmental policies of BGS and will ensure that the systems and procedures are in place to support such policies and requirements. In particular the Contractor will ensure that:

2.12.2.1 all records are maintained so that they are kept fully auditable and information is freely available to support ISO 14001;

2.12.2.2 all spent fluorescent tubes and rechargeable batteries are recycled;

2.12.2.3 there is a system to ensure legal compliance with all duty of care legislation for all waste streams. BGS waste streams may be used with prior approval to do so;

2.12.2.4 all procurement follows environmental procurement guidelines (PUG/as amended) and that subcontractors, contracting associates, suppliers and other third parties engaged by the Contractor comply equally; and

2.12.2.5 There is no venting of recoverable ozone-depleting or global warming substances from any equipment used on our behalf, and that these substances are recovered for recycling or destruction using appropriate technology.

2.12.3 At all times the Contractor will, so far as is reasonably practicable:

2.12.3.1 conserve light and power whilst undertaking work and ensure it remains commensurate with safe and secure working practices;

2.12.3.2 conserve resources;

2.12.3.3 reduce pollution;

2.12.3.4 protect biodiversity;

2.12.3.5 support the Government's vision of sustainable development; and

2.12.3.6 support the Government's Green Transport Policy.

2.13 Timing of Services and Avoidance of Disruption

2.13.1 The Contractor shall deliver the Services:

2.13.1.1 in an effective, timely and efficient manner; and

2.13.1.2 in a manner which will cause minimum disruption to BGS's Business which will include carrying out various Task/Services which would materially disrupt BGS's Business in the vicinity of those Services, as far as practicable, outside Normal Working Hours

2.13.2 To avoid doubt, the cost of all necessary out of hours working to perform or deliver the Services must be borne by the Contractor. Services will be performed or delivered in such a way to enable continued delivery of the Required Outputs. The Contractor will not itself and will ensure that all Contracting Associates and other third parties engaged by the Contractor do not, cause any nuisance or annoyance to BGS, Tenants or any third party.

2.13.3 The Contractor shall be fully responsible in performing the Services for the following:

2.13.3.1 any required movement and subsequent replacement of desks together with associated telephones, computer terminals, keyboards, screens, etc.;

2.13.3.2 third party costs consequential upon the Contractor fulfilling their obligations; and

2.13.3.3 the provision of any additional security required for the services to be carried out.

2.13.4 Other than in an emergency or responding to a Help Desk call-out, the Contractor will give to BGS via BGS's Representatives, not less than two weeks' notice of any works which will or could impact on the operations of BGS. Works that may affect the computer suite such as UPS and Generator maintenance, etc. requires a minimum of three weeks.

2.13.5 The Contractor will carry out all Services in a manner that, as far as possible, minimizes the disruption arising from noise, dust or vibrations associated with any works

2.14 Liaison with BGS's Representative and Local Users.

2.14.1 The Contractor will manage and co-ordinate effective liaison with BGS's Representative and local users as appropriate.

2.15 Liaison with third parties

2.15.1 Where necessary the Contractor will manage and co-ordinate effective liaison with BGS's contractors and suppliers via BGS's Representative and in relation to the M&E installations forming part of this Contract.

2.15.2 The Contractor shall ensure attendance at Initiation (Scope Definition), Feasibility, Pre-Start, Progress and Handover Meetings in relation to the delivery of and M&E Works, either delivered by them or through other contractors working at the Site.

2.15.3 The Contractor shall participate in the testing and witnessing of Commissioning of new or modified equipment.

2.15.4 The Contractor shall participate in the formal handover and acceptance of the works following BGS's Projects.

2.15.5 The Contractor will liaise and communicate as necessary with the contractor undertaking the project works.

2.15.6 The Contractor will liaise and communicate as necessary regarding the management of defects that occur during the Defects Liability Period.

2.15.7 From Practical Completion of any Project Works, up to and including the end of the Defects Liability Period, the Contractor will undertake all planned and reactive maintenance to the new or modified asset/equipment.

2.16 Mechanical and Electrical Disconnections

2.16.1 The Contractor will not disconnect or cause to be disconnected any item of equipment or services which will impact the normal operation of BGS, without the specific written approval of BGS's Representative unless in an emergency.

2.16.2 Where possible, the Contractor will co-ordinate to undertake planned activities that requires mechanical and electrical disconnection with other planned activities that may also require mechanical and electrical disconnection so as to minimize business disruption.

2.17 Access Outside Normal Working Hours

2.17.1 BGS will require the Contractor to provide access for all essential Required Accommodation Standards elements and Services outside of Normal Working Hours as necessary, to meet the business needs of BGS.

2.17.2 The Contractor should note that BGS does not normally work on Saturdays Sundays and Statutory Holidays except where identified in the Facility Output Requirement.

2.17.3 The Contractor shall notify BGS promptly of any instances where staff members request services, outside of the Normal Working Hours.

2.18 Management of Services

2.18.1 The Contractor will manage the delivery, performance and provision of the Services in a co-ordinated manner.

2.18.2 In so doing the Contractor will (without limiting the above):

2.18.2.1 establish, maintain and operate procedures for effective planning, organisation, control, monitoring and review of all Services;

2.18.2.2 manage and carry out the management of Services in an efficient manner and provide and operate appropriate quality assurance systems in accordance with this Contract;

2.18.2.3 monitor and report to BGS on the management of the Services and provide such other information regarding the Services at such frequencies as BGS requires;

2.18.2.4 use objective endeavors to ensure that all its staff are suitably incentivised and that staff attrition is minimised; and

2.18.2.5 provide all equipment and apparatus appropriate for the delivery, performance and provision of the Services and maintain it in a safe, serviceable and clean condition including all access systems where fixed installations are not provided.

2.19 Health and Safety

2.19.1 To avoid doubt, the Contractor will, at all times, comply with all Health and Safety Legislation.

2.19.2 The Contractor will comply with the Health and Safety policies of BGS and will ensure that the systems and procedures are in place to support such policies.

2.19.3 The Contractor will adopt best practice methods and procedures issued by BGS, other Government Departments and agencies that relate to buildings occupied by BGS.

2.19.4 The Contractor will ensure that all its personnel, and those of its Contracting Associates, engaged in the delivery of all Services, have received up to date health and safety training in respect of their roles and responsibilities.

2.19.5 The Contractor shall be responsible for undertaking refresher training where required and regular updates in response to changes in working practices and/or legislation.

2.19.6 The Contractor shall maintain such records to demonstrate that initial and refresher training has been undertaken.

2.20 Asbestos

2.20.1 The Contractor will ensure that its employees and subcontractors have undertaken an asbestos awareness training course to make them aware of asbestos material in buildings and of the actions to be taken if such materials are found. This is to prevent risk from inadvertent exposure to asbestos fiber.

2.20.2 The Contractor will be required to ensure that:

2.20.2.1 asbestos materials left in-situ are maintained in a safe condition so as to prevent asbestos fibers being released into the atmosphere;

2.20.2.2 any work on or effecting asbestos materials is carried out in accordance with current legislation;

2.20.3 Asbestos information is passed on to the BGS to ensure BGS's Asbestos database is updated

2.21 Security

2.21.1 The Contractor will comply with BGS's security policies and standards in the delivery, performance and provision of the Services and must ensure that all persons engaged in any activity under the terms of this Contract are aware of and comply with all security procedures in the buildings.

2.21.2 All Contractor personnel engaged in any activity under the terms of this Contract will be security cleared to 'Basic Check' requirements.

2.21.3 The Contractor will be responsible for all costs arising from attaining security clearance for its operatives including those arising from any delays in approval by the relevant authorities.

2.22 Business Continuity

2.22.1 The Contractor will, for each building, provide, manage and execute a Business Continuity Plan in respect of all Services using BGS's guidance.

2.23 Maintenance, Repairs and Replacement

2.23.1 If maintenance works and/or repairs are not possible for one of the reasons listed below, then the Contractor will make safe, ensure the prevention of further damage and provide a full report to BGS with a suggested remedy:

- Where this will not allow the uninterrupted delivery of outputs other than by repetitive reactive maintenance;
- Where this will mean that any part of the site (including any building, equipment, components, material, plant or machinery) is not operating economically;

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- Where repairs cannot be achieved without undue disruption or delay to BGS business, or
 - They will result in failure of a building or any part thereof (including any elements) to meet its design criteria or to match with the surrounding area.

2.23.2 Any redundant parts, equipment and/or appliances must be promptly and safely removed from the building and disposed of and the cost borne by the Contractor

2.23.3 Without diminishing the obligation to ensure consistency (see paragraph below), the Contractor will, in performing all repairs, maintenance, replacements, redecoration and other works, use the best current practices, methods and elements available, and applicable at the time the works are performed. The Contractor will use new elements when carrying out any such works, unless expressly agreed otherwise in writing with BGS.

2.23.4 For the avoidance of doubt, on completion of maintenance/works the Contractor will test and commission the works/systems as appropriate to ensure and demonstrate to BGS that the installation meets the design requirements. Handovers should include but not limited to, service sheets, commissioning records, O&Ms, etc. where applicable.

2.24 Authorisation and Escalation

2.24.1 The Contractor will at all times comply with BGS's authorisation practices and procedures (as updated from time to time) and will not act on any instruction unless it has been properly authorised.

2.24.2 The Contractor will present to BGS, prior to the commencement of this Contract, its internal escalation procedures for review and approval. This will be agreed with BGS's prior to the Date for Commencement and the Contractor will make and implement any changes to its procedures requested by BGS.

2.25 Employment of Trained Staff

- 2.25.1 The Contractor will ensure there are sufficient competent resources to deliver the Services.
- 2.25.2 To avoid doubt the Contractor will at all times employ staff who are trained, skilled and experienced in all aspects of their work and at all times properly supervised and managed in the manner described in the Contract.

2.26 Performance Improvement

- 2.26.1 The Contractor will identify opportunities for improving the standard of Service delivery and delivering the Services more cost effectively. As these opportunities arise the Contractor will as appropriate implement amendments, prepare detailed amendment proposals for BGS's authorisation, or discuss amendment alternatives with BGS.

2.27 IT Providers

- 2.27.1 The Contractor notes that BGS may from time to time use different IT providers, and consequently have different arrangements with those providers.
- 2.27.2 The Contractor will, in the provision, performance and delivery of the Services, liaise with the relevant IT provider so that the IT provider and the Contractor have reasonable notice and understanding of their respective roles and responsibilities so that they can co-ordinate their activity so far as practicable to avoid any conflicts.
- 2.27.3 The Contractor shall monitor any electrical loadings and additional heating, ventilation or air conditioning that BGS and its IT providers install, or propose to install, to ensure that the overall integrity of the building services are not adversely affected. If such adverse effects occur or are foreseen, then the Contractor shall immediately inform BGS's Representative.

2.28 Service Publicity

- 2.28.1 Where appropriate, the Contractor will publicise the services provided to users, ensuring information is widely available on the scope of services and how they can be accessed. The Contractor will propose for agreement with BGS and BGS's Representative a schedule for regularly reviewing service publicity.

2.29 Support to Building Strategy Plan

- 2.29.1 The Contractor will support BGS in its collaboration with BGS for the preparation of the annual Buildings Strategy plan, e.g. Long Term Maintenance plan (LTM).

3. REQUIRED MAINTENANCE STANDARDS

3.1 General

3.1.1 The Contractor will ensure that all buildings meet the Required Accommodation Standards described in this Specification at all times.

3.1.2 The Contractor will ensure that all plant, equipment and equipment rooms necessary for the delivery, performance and provision of the Services are kept in proper working order in accordance with their design.

3.2 Water Supply, Storage and Distribution Systems

3.2.1 The Contractor will maintain all water supplies, storage and distribution systems from the point at which the Utilities service is being delivered and ensure the adequate, continuous and direct supply of water to all points in each building where it is needed.

3.2.2 In addition, the Contractor will take reasonable steps to ensure that, where appropriate, the supply arrives in a condition suitable for direct consumption.

3.2.3 Water Treatment Risk Assessments will be undertaken by BGS's estates team and where necessary, cleaning, the installation and maintenance of dosing systems and chlorination will be undertaken.

3.2.4 Where there is a requirement for hot/cold water or potable water, the Contractor will maintain systems that can supply, store and deliver this at required temperatures and in sufficient quantity at all points of supply to meet likely predicted demand. If this requirement cannot be met, the Contractor should advise BGS if they consider that the existing systems are inadequate (refer to ACOP L8 and HSG274 for guidance).

3.3 Drainage and Waste Systems

3.3.1 The Contractor will maintain adequate drainage and waste systems including all sanitary ware, traps, sinks and gullies and the connections to the appropriate soil waste and drainage systems.

3.3.2 In addition, the Contractor will maintain adequate surface water drainage to obviate the risks of flooding and ensure uninterrupted use of the building.

3.3.3 Measures will be taken to prevent the transfer of odors from the drainage and waste systems into other areas of the buildings and will advise BGS's Representative if it considers that the existing systems are inadequate to fulfil this requirement.

3.3.4 In the event of a drain blockage the Contractor shall undertake all necessary CCTV surveys, jetting and remedial works when instructed by BGS.

3.4 Heating Systems

- 3.4.1 Taking into account all factors likely to affect the internal environment of the buildings, including business operations, and subject to any specific temperature requirements applicable to particular parts of the buildings (such as computer rooms), the heating systems in the buildings will, at all times, be capable of meeting the minimum temperature requirements referred to below.
- 3.4.2 The Contractor will maintain suitable controls to facilitate the heating systems proper and efficient operation.
- 3.4.3 The minimum temperature requirement is 18.5 °C within one hour after the commencement of Normal Working Hours, unless otherwise agreed in writing and incorporated into the Method Statement for the relevant Facility.
- 3.4.4 The Contractor shall also undertake such operations including inhibitor dosing, cleaning of strainers, and the like so as to protect the system from corrosion and other damage.

3.5 Ventilation Systems and Humidity Controls

- 3.5.1 At all buildings where there is mechanical ventilation, air conditioning and/or cooling systems and humidity controls, or other specialist ventilation/extraction systems, these will remain balanced and operate efficiently and effectively, in accordance with their design and maintenance parameters and the environmental criteria included in Schedule 5 and SFG20.
- 3.5.2 The Contractor shall report to BGS's Representative any actions and/or conditions which compromise the environmental criteria.

3.6 Electrical Power Distribution

- 3.6.1 The Contractor will ensure access from the point at which the Utilities service is provided (HV switches and transformers included) to a permanent, constant and consistent electrical power supply, adequate for BGS's requirements.
- 3.6.2 The Contractor will undertake regular load / phase monitoring to enable appropriate balancing of the system and identification of service failure risks. Where necessary the Contractor shall re-balance the system.
- 3.6.3 The Contractor will maintain electrical power and all associated equipment and plant to support the operation of IT and telecom systems including:
- 3.6.3.1 cabling distribution systems;
 - 3.6.3.2 non-standard socket outlets and outlet apertures; and
 - 3.6.3.3 temperature control.

3.7 Stand-by Electrical Supply

3.7.1 At all buildings where there is a standby electrical supply the Contractor will maintain it to ensure the continuous operation of electrical equipment during a mains failure and shall demonstrate this through routine load testing.

3.8 Uninterrupted Power Supplies(UPS)

3.8.1 The Contractor will maintain an uninterrupted power supply to ensure the operation of electrical equipment during a mains failure, dip, spike or surge.

3.9 Interior Lighting

3.9.1 The Contractor will maintain adequate lighting systems at all buildings capable of meeting the lux level and lighting category for the function of the area, all in accordance with HSE publication HSG38 'Lighting at Work'.

3.9.2 The Contractor will undertake routine testing of lighting levels, regular replacement of lamps, cleaning of grilles and diffusers.

3.9.3 Suitable controls shall be provided to allow proper, efficient and economical use of lighting.

3.10 External Lighting

3.10.1 The Contractor will maintain external lighting that will allow safe entry and egress for all buildings and safe movement within the buildings and to provide an effective security deterrent, all in accordance with HSE publication HSG38 'Lighting at Work'.

3.11 Emergency Lighting

3.11.1 The Contractor will maintain emergency lighting that will enable users to safely exit all buildings, to the lighting levels recommended in with HSE publication HSG38 'Lighting at Work'.

3.11.2 The Contractor shall test the emergency lights in accordance with BS 5266-1 Part 8.

3.12 Lifts and Hoists

3.12.1 The Contractor will maintain in the buildings all lifts and hoists and keep them in operational order and in accordance with design parameters, manufacturers' specifications and in line with current legislation.

3.13 Lightning Protection System

3.13.1 The Contractor will maintain a system, where fitted, to provide the buildings, systems and users protection from any lightning strikes.

3.14 Fire Detection and Alarm Systems

3.14.1 The Contractor will maintain all fire alarms and fire detection systems as appropriate and in line with current legislation and British Standards.

3.15 Induction Loops

3.15.1 The Contractor will maintain induction loops where fitted for the deaf and hard of hearing.

3.15 TV and Radio Cabling, Aerials and Sockets

3.16.1 Excluded from this Contract

3.17 Mechanically Operated Filing and Retrieval Systems

3.17.1 Contractor maintain in accordance with relevant legislations and best practice.

3.18 Intruder Detection Systems

3.18.1 The Contractor will ensure that the intruder detection systems comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification and to achieve the required level of security appropriate to the assessed risk at each building.

3.19 Panic Alarms Systems

3.19.1 The Contractor will maintain panic alarms activated by remote signals and ensure that they comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification, to achieve the required level of security appropriate to the assessed risk and internal requirements at each Facility.

3.20 Access Control

3.20.1 The Contractor will maintain access control systems and ensure that they comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification, to achieve the required level of security appropriate to the assessed risk and internal requirements at each Facility.

3.21 Closed Circuit Television Systems

3.21.1 The Contractor will maintain the CCTV systems to their current capability and ensure that they comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification to achieve the required level of security appropriate to the assessed risk at the site.

3.22 Gatehouses and Security Barriers

3.22.1 The Contractor will maintain gatehouse security equipment and/or security barriers.

3.23 Security CCTV, Intruder Alarm and Access Control Telephone Lines Monitoring

3.23.1 The Contractor will be responsible for ordering, inspection, installation, maintenance, operation of Security Telephone Lines, including where necessary security and intruder alarm engineering response in the event of system fault or alarm activation.

3.24 Fume Cupboards

3.24.1 The Contractor shall maintain the fume cupboards, laminar flow cabinets and LEV's to ensure there is continuous operation in accordance with the appropriate British Standards and European legislation and the manufacturers recommendations, e.g. to BSEN14175:1, COSHH, HSG 258, CAR and SFG20.

3.25 Clean Room Maintenance

3.25.1 The Contractor shall maintain the Clean Room Suite to ensure its continuous operation in accordance with the appropriate British Standards and European legislation and BGS's Requirements. This work is to be carried out during a 3 week shut down usually in September.

4. SERVICE REQUIREMENTS

4.1 Introduction

4.1.1 The Contractor will, at all times, deliver the Services in accordance with the requirements set out in the Contract at all buildings.

4.2 Facilities, Equipment and Small Tools, etc.

4.2.1 BGS will provide free of charge the following facilities for the use of the Contractor. On handover and thereafter the Contractor shall assume full responsibility and liability for the fitness for purpose:

- Contractor maintenance area/workshop together with the associated furniture will be located in KDB-027.
- Changing room with lockers will be located in TECS-006.
- Contractor offices and meeting room located in GIH-142, GIH-143 and GIH-144 will have office furniture i.e. desk and chairs. The use of the meeting room will be shared between the Contractor and the BGS Estates Team.

4.2.1.1 Contractor shall seek authorisation from BGS before accommodating any additional space on site.

4.2.1.2 A desk located in the Contractor's Office will have a benchtop PC with one licence to access the BGS maintenance system (CAFM) for the Contractor's Contract Manager and Contract Supervisor to have access to CAFM.

4.2.1.3 The Contractor shall be provide mobile phones for their staff.

4.2.1.4 Any existing hand tools (of the personnel to be transferred to the Contractor) will be handed to the Contractor who will be responsible for subsequent maintenance and replacement;

4.2.1.5 use of the on site toilets and other welfare facilities; and

4.2.1.6 use of the on site electricity and gas and water supplies.

4.2.2 All other facilities, uniforms, PPE, data lines, vehicles, equipment, etc., required to deliver the Services shall be provided by the Contractor.

4.2.3 The Contractor shall provide a monthly report to BGS certifying the fitness for purpose of all PPE, vehicles, equipment, small tools, etc. used in delivering the Service.

4.2.4 On completion of the Contract the Contractor shall hand back to BGS all such equipment, etc., in an equivalent condition.

4.3 Records & Reporting**4.3.1 Format of Records and Reports**

4.3.1.1 All records and reports shall be provided to BGS in both hard and electronic copy.

4.3.2 Maintain technical records and information

4.3.2.1 The Contractor will securely and accurately provide, maintain and update technical records, information, operating and maintenance manuals, drawings and asset registers; and

4.3.2.2 The Contractor will update the data necessary for the efficient operation of the CAFM system and Help Desk as required.

4.3.3 Reporting and Communication

4.3.3.1 The Contractor will monitor and report to BGS and BGS's Representatives on the management of the Services and shall provide and validate such other information regarding the Services at such frequencies as BGS and BGS's Representative require;

4.3.3.2 The Contractor shall provide a monthly management report and review of all management issues for each building and in addition report against the contracted Key Performance Indicators (KPIs) as outlined in the Service Level Agreement (SLA); and

4.3.3.3 The Contractor shall review the overall delivery of the services on a 6-monthly basis and report to BGS on achievements and recommendations to improve the value for money.

4.3.4 The Contractor will carry out statutory inspections and assessments (as required) and will ensure that all accidents and incidents on site are reported in accordance with the relevant legislation.

4.3.5 Each party will, as far as is reasonably practicable, keep the other informed of all risks, potential hazards, accidents, incidents and dangerous occurrences within all buildings.

4.3.6 The Contractor will actively participate and co-operate in establishing and maintaining regular joint Health and Safety inspections.

4.3.7 The Contractor shall use BGS's standard forms to report any injury, incident or near miss occurring in the delivery of the Services.

4.3.8 Communication with the user and regular reporting will be carried out to the standards specified below.

4.4 Maintain Records

- 4.4.1 The Contractor will ensure that, in accordance with Statutory Requirements, records of all statutory inspections (unless exempt in Schedule 2), insurance records, testing sheets, independent testing, risk assessments, incidents, accidents, dangerous occurrences and emergency procedure training are maintained at each building and are available to BGS.
- 4.4.2 The Contractor will file in a suitable format all Health and Safety reports, certificates, risk assessments and other documents, on the CAFM system to the specified template.
- 4.4.3 The Contractor will also maintain all records in BGS's Reference Station on Site and in addition shall issue to BGS hard copies of all statutory compliance certificates and report and update the CAFM system.

4.5 Reports and Remedial Action

- 4.5.1 The Contractor will advise BGS's Representative immediately of all incidents, accidents and dangerous occurrences and provide BGS with a full written report containing details of any remedial action taken, or necessary within 1 Business Day.
- 4.5.2 Following statutory inspections and risk assessments, the Contractor will take all remedial action necessary to rectify areas of non-compliance and provide a written report to BGS within 3 Business Days.
- 4.5.3 Accident/incident reports received by the Contractor from BGS's will be actioned within 1 Business Day.

4.6 Health and Safety – Specific Requirements**4.6.1 Introduction**

- 4.6.1.1 The Contractor shall provide and manage the following Health & Safety processes, in relation to the M&E services included under this Contract, to protect users, visitors and contractors and minimise risk in respect of the buildings:
- 4.6.1.1.1 The Permit to Work system;
 - 4.6.1.1.2 Health and safety signage;
 - 4.6.1.1.3 Business Continuity and Disaster Recovery plans;
 - 4.6.1.1.4 Risk Assessments; and
 - 4.6.1.1.5 Method Statements

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- 4.6.1.2 The Contractor will comply with all relevant UK and EU Health and Safety legislation, standards, codes of practice and practice guidelines.
- 4.6.1.3 The Contractor will manage and operate according to a recognised and comprehensive Health, Safety and environmental system, as approved by BGS, at all times.
- 4.6.1.4 The Contractor will plan, organise, control, monitor and review its Health and Safety management system to ensure preventative and protective Health and Safety measures are taken.
- 4.6.1.5 A copy of the building Specific Health and Safety Plan will be maintained at the site in the appropriate reference station.
- 4.6.1.6 The Contractor will liaise with all other occupiers of the property where appropriate.
- 4.6.1.7 Permit to Work (PTW):
- 4.6.1.7.1 The Contractor will ensure their PTW system is adhered to at all times;
- 4.6.1.7.2 The Contractor's PTW System will be issued to BGS's Representative periodically for auditing purposes.
- 4.6.1.7.3 The Contractor will ensure that it, and third party contractors provide detailed Method Statements and Risk Assessments for all work activities to be undertaken to enable the transfer of information relative to known M&E specific hazards and risks. This will be a necessity in operating a compliant and effective PTW;
- 4.6.1.7.3 The Contractor will ensure its team members are trained as authorised persons for management, control and issue of PTW; and
- 4.6.1.7.4 The PTW system must also make provision for specialist hot works, excavation, confined space, high voltage and asbestos permit processes.
- 4.6.3 Fire Risk Assessments**
- 4.6.3.1 Excluded
- 4.6.4 Emergency Procedures**
- 4.6.4.1 The Contractor will make their staff aware of the emergency procedures relating to the relevant building and keep staff advised of all relevant changes.

4.6.5 First aid

- 4.6.5.1.1 BGS will nominate suitably qualified First Aiders in accordance with the provisions of all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.6.5.1.2 The Contractor will notify BGS's Representative, not less than 3 months in advance of the need for a nominated first aider to receive refresher training.

4.7 Statutory Requirements

- 4.7.1 The Contractor will ensure statutory inspections are undertaken in respect of all Services provided (within scope as Schedule 2); this will include, but not be limited to all statutory inspections, insurance records and testing sheets. Records will be maintained in a suitable format, on the CAFM system and in the BGS Reference Station.

4.8 Maintenance

- 4.8.1 Objective:
- 4.8.2 At each building, the provision by the Contractor of a maintenance service to ensure the Required Outputs are met at all times.
- 4.8.3 General Requirements:
- 4.8.4 The Contractor will provide the Services to the extent of the operational capability and capacity of the Plant, Equipment and systems installed at the building.
- 4.8.5 The Contractor will ensure that Maintenance Output Requirements are achieved by assessing the performance of assets and adjusting, planned maintenance and operating regimes to minimise reactive calls and maximise the reliability, energy efficiency and operation of plant
- 4.8.6 The Contractor will ensure maintenance staff are equipped with the following as a minimum:
 - 4.8.6.1 mechanical hand tools and specialist tools;
 - 4.8.6.2 lifting beams, block and tackle;
 - 4.8.6.3 access equipment;
 - 4.8.6.4 pressure gauges;
 - 4.8.6.5 hydraulic test equipment;

- 4.8.6.6 protective clothing;
- 4.8.6.7 efficiency test apparatus;
- 4.8.6.8 calorimeter - dryness fraction testing; and
- 4.8.6.9 test equipment.
- 4.8.7 The Contractor will be responsible for the undertaking of all Statutory Inspections (within scope) and for providing the necessary attendance at all insurance inspections.
- 4.8.8 Statutory compliance - the Contractor will assist BGS in reviewing the effect of legislative change and the implications for equipment installation, upgrade or removal and the impact upon the Operations overall. The Contractor will safeguard the interests of BGS and add to service quality.
- 4.8.9 All maintenance Specifications and Life Cycles Replacement Plans will be discussed and agreed with BGS to ensure that any adverse impact on the business needs of BGS is foreseen and minimised and that the plans accurately align with BGS's business strategies.
- 4.8.10 Value engineering techniques will be utilised by the Contractor to drive innovation, efficiency, and quality in the specification, procurement, supply and distribution of services to BGS.
- 4.8.11 The Contractor will minimise disruption to BGS by investigating and instigating alternative methods of works where practical and most cost effective as agreed with BGS.
- 4.8.12 The Contractor, in agreement with BGS, will ensure that the Annual Maintenance schedules have in-built flexibility measures that enable them to be adapted to meet the evolving requirements of BGS.

4.9 Planned Maintenance

- 4.9.1 The Contractor will plan maintenance activities to include:
 - 4.9.1.1 statutory certification and maintenance of all plant and equipment;
 - 4.9.1.2 routine maintenance of all items requiring regular attention, adjustment and inspection;
 - 4.9.1.3 advising BGS on maintaining stock lists;
 - 4.9.1.4 cleaning of light diffusers and air filters; and
 - 4.9.1.5 reporting requirements for Health and Safety and security systems.

4.9.2 The Contractor will be responsible for the preparation, control and validation of the maintenance task sheets against the specific assets at each building and where appropriate presenting to BGS, modified tasks to reflect building specific requirements. The Contractor will be responsible for undertaking regular reviews and updating the maintenance task sheets during the Term, and in response to changes in legislation, industry best practice codes, guidance notes and maintenance methods and manufacturers recommendations.

4.9.3 The Contractor will prepare new maintenance task sheets and maintenance programmes in response to plant replacement or upgrade. Revised maintenance task sheets will be provided to BGS for validation and approval, and subsequent incorporation onto the CAFM system.

4.10 Annual maintenance

4.10.1 The Contractor will be responsible for identifying and preparing the draft Forward Maintenance Registers (FMRs) for each building.

4.10.2 The Contractor's local knowledge of the buildings, their understanding of the occupiers' requirements and knowledge will aid in the preparation of the draft FMRs.

4.10.3 The FMRs will be kept under review by the Contractor and subject to formal review every six months.

4.11 Maintenance approach

4.11.1 A Planned Preventative Maintenance ("PPM") regime will be used by the Contractor which is based upon best industry practice including manufacturer's recommendations and requirements to maintain warranties by reference to SFG20.

4.11.2 Condition assessment and trend monitoring adopted by the Contractor will underpin a system that delivers the required standards and makes most efficient use of resources.

4.11.3 Periodic statutory works will be carried out according to a fixed schedule based on current legislation and written schemes. Assessment of condition will be used by the Contractor to develop a PPM regime that optimises performance and standards. As plant is replaced, BGS will work with the Contractor to install condition based monitoring equipment (where appropriate). An initial survey of existing plant by the Contractor will establish the benefits of installing condition monitoring equipment onto existing systems, particularly in critical areas.

4.11.4 All plant will be maintained under a Planned Preventative Maintenance regime. The regime will be developed by the Contractor in co-operation with BGS.

4.11.5 Maintenance will be undertaken by the Contractor to reflect the following priorities and response times detailed in Schedule 6 of this Specification.

4.11.6 Routine maintenance task requirements and frequencies will be determined between BGS and the Contractor in accordance with the following and including statutory regulations:

4.11.6.1 Health and safety requirements;

4.11.6.2 Operating and maintenance manuals for each building;

4.11.6.3 Manufacturers' recommendations; and

4.11.6.4 Industry best practice.

4.11.7 The issue of work sheets by the Contractor will be automated, and sheets will identify the Specification of planned work. Once the task has been completed, readings, observations and information from the technician's report will be entered onto the CAFM system. Any corrective jobs that are required will be raised as a new task on the CAFM system and the planned maintenance task will be closed.

4.12 Approach to undertaking reactive maintenance

4.12.1 The Contractor will be responsible for reactive maintenance work and the provision of a comprehensive out-of-hours service.

4.12.2 The Contractor will be required to be on call at all times and will provide appropriate staff coverage, supported by the necessary communication technology (pagers, mobile phones, PDAs) to ensure that they are contactable at all times.

4.13 Environmental improvement

4.13.1 The Contractor will address the following in its maintenance regimes:

4.13.1.1 pollution reduction measures and the Control of Pollution Regulations;

4.13.1.2 energy and water preservation initiatives;

4.13.1.3 optimal recycling of waste materials;

4.13.1.4 protection of natural resources by use of renewable and sustainable resources and those that are appropriate in both physical and ecological terms; and

4.13.1.5 protection and conservation of the environment both locally and globally.

4.13.2 The Contractor will:

4.13.2.1 review maintenance activities to identify and quantify adverse environmental impacts;

- 4.13.2.2 design management processes in co-operation with BGS in support of BGS's Environmental Management System to monitor environmental impact and set targets to eliminate or minimise any identified detrimental consequences;
- 4.13.2.3 ensure its Contracting Associates and Suppliers are informed of and are committed to BGS's environmental policies;
- 4.13.2.4 use energy, water and other natural resources efficiently by use of sensor controls, timed lighting systems and water flush reduction, where provided;
- 4.13.2.5 minimise the production of waste, and identify the best environmental option for its disposal in accordance with Governmental targets for recycling; and
- 4.13.2.6 train its staff in relevant environmental issues and of the role they must play in delivering the environmental program.

4.14 Repair and Replacement of Defective or Non-Serviceable Parts

- 4.14.1 The Contractor will carry out repair and replacement of defective or non-serviceable parts at the buildings to ensure the services are maintained in good operational order and that the Required Outputs are met at all times.
- 4.14.2 The Contractor will put in place a regime to avoid delay in the repair and/or replacement of defective items so that the services provision is maintained.

4.15 Consumables and Spare Parts

- 4.15.1 All consumables necessary for the maintenance and operation of all Services at all buildings will be provided free of charge by BGS, however, the Contractor will be responsible for keeping BGS informed of the consumable and the stock levels required
- 4.15.2 All spare parts will be provided by the Contractor but shall be reimbursed separately to the Contract Price following approval and based on the agreed costs.

4.16 Life Cycle Planning

- 4.16.1 The Contractor will assist BGS in the current annual Five Year Plan and FMR process. If it is agreed that the asset, or collection of assets, is due for life cycle replacement, it will be included in the life cycle plan. In the interim the Contractors responsibilities will remain unaltered.
- 4.16.2 If the Contractor reasonably believes that an asset or collection of assets is or is nearing the end of its economic life then the Contractor will continue the operation of and minimise further damage to or resulting from the existing conditions of the relevant asset or assets and advise BGS in writing of the proposed works that would be required to repair, renew, or replace the relevant item or items.

4.17 Underground building services – Drainage

- 4.17.1 The Contractor will maintain the services to ensure that surface water and sewage flow off in a manner that will ensure the prevention of foul odours and that the flow of all drainage material is constant and unimpeded.
- 4.17.2 The Contractor will maintain the entire drainage network in good condition, free from blockages with internal grease traps and external interceptors in a clean and satisfactory condition.
- 4.17.3 The Contractor will comply with the local water authorities' regulations for effluent discharges and will ensure the disposal of waste from the buildings conforms to the Environmental Protection Regulations, and great care will be exercised in ensuring that radioactive waste, chemical waste, solvent waste, asbestos waste and biological agents that cause harm to humans, animals, plants and the environment are excluded from the drainage system.
- 4.17.4 In addition to the routine maintenance of the drainage systems, the Contractor will provide a fast and responsive service to any blockages, overflow discharges and smells emanating from the drainage system including the undertaking of rodding, jetting and CCTV investigations.
- 4.17.5 The Contractor will have day to day responsibility for management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.17.6 Close liaison will be maintained between the Contractor and BGS to ensure all drainage issues are resolved quickly. A 24 hour call-out service will be provided.
- 4.17.7 Appropriate records and incident reporting systems will be maintained by the Contractor on the CAFM system to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action also logged. Existing drawings of the drainage system for the buildings will be collated by the Contractor and recorded on the CAFM system and retained at the relevant building. The drawings will identify drainage routing, manholes, invert levels and drainage diameters as well as outfall and external sewer connections.

4.18 Maintenance of Mechanical and Electrical Services, Plant, Systems and Equipment

- 4.18.1 The Contractor will ensure that all mechanical and electrical services, plant, systems and equipment and all rooms, facilities and equipment associated with the delivery of these services, and all equipment and appliances at the site required to meet the Required Outputs are maintained in good repair in accordance with the Required Accommodation Standards of this Specification, to meet the optimum performance of the plant and equipment and thereby provide an acceptable working environment.

4.18.2 The Contractor will provide all plant, equipment, necessary for the delivery, performance and provision of the Services and ensure they are in proper working order in accordance with their design.

4.18.3 The Contractor will ensure that defective, flickering and/or failing luminaries are replaced as a priority activity.

4.18.4 The Contractor will maintain all equipment and appliances so that they operate effectively and safely.

4.19 Building Management Systems (BMS)

4.19.1 The Contractor will undertake appropriate monitoring of BMS installations where located at a building to ensure the services are operating to their optimum and to the design and environmental criteria set by BGS.

4.19.2 Maintenance of the BMS system will be undertaken by the Contractor as part of the contract. BGS will retain access rights. Any adjustments made by the Contractor must be communicated to BGS.

4.19.3 The Contractor shall advise BGS of any recommended adjustments to the BMS system settings to optimise or improve performance.

4.20 Inspections

4.20.1 The following engineering services will be inspected, maintained and repaired on a regular basis by the Contractor, these shall include but not be limited to:

4.20.1.1 air conditioning and ventilation plant;

4.20.1.2 gas services;

4.20.1.3 industrial compressed air;

4.20.1.4 local industrial and domestic gas fired boilers;

4.20.1.5 cold water services;

4.20.1.6 domestic hot water services;

- 4.20.1.7 low pressure and medium pressure hot water heating services;
- 4.20.1.8 calorifiers and pumps;
- 4.20.1.9 catering equipment including refrigeration;
- 4.20.1.10 stand-by generators;
- 4.20.1.11 uninterrupted power supply (UPS);
- 4.20.1.12 lifts and other transportation systems;
- 4.20.1.13 high voltage equipment;
- 4.20.1.14 low voltage distribution, FET.
- 4.20.1.15 lightning conductors;
- 4.20.1.16 lighting;
- 4.20.1.17 emergency lighting including battery replacement;
- 4.20.1.18 fire alarm systems; and
- 4.20.1.19 Security access control, CCTV & intruder / perimeter detection systems
- 4.20.2 For the avoidance of doubt the following are excluded from the Contract and will be maintained under other contracts by BGS:
 - 4.20.2.1 television aerials; and
 - 4.20.2.2 sanitary fittings (taps are included);
- 4.21 Fuel systems**
 - 4.21.1 The Contractor will be responsible for ensuring:
 - 4.21.1.1 combustion conditions at correct temperature and pressure;
 - 4.21.1.2 adherence to the requirements of the Clean Air Act;
 - 4.21.1.3 compliance with Fire Regulations in respect of storage (where applicable);
 - 4.21.1.4 monitoring fuel levels and advising BGS on replacement deliveries when required.

- 4.21.2 All burners, injectors and other combustion devices will be regularly cleaned and adjusted by the Contractor to satisfy all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.21.3 Good maintenance of combustion items will reduce emissions, improve fuel consumption and provide a more environmentally friendly building. This will be achieved by frequent maintenance, regular checks on efficiency, and by measurement and monitoring.
- 4.21.4 Checks will also be made by the Contractor on calorific values, corrected for pressure and temperature. Related consumption and tariffs will be continually assessed.
- 4.21.5 The Contractor shall ensure that all pressure vessels comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.21.6 Appropriate information will be produced and collated by the Contractor to provide a general description of all services, including technical details on safe operating limits, drawings, a Specification of all equipment within individual plant rooms, including the marking and identification of all pressure vessels plus related information.
- 4.21.7 A full inspection and maintenance assessment will be carried out on fuel systems by the Contractor within one month of the Commencement Date and thereafter annually. All equipment that is part of the overall fuel system, including delivery pipe work, filters, dispensing, reducing valves plus other features, will be checked for damage and compliance with statutory obligations.
- 4.21.8 The Contractor will adopt the following management protocols:
- 4.21.8.1 full training will be given to those responsible for delivering maintenance and services to plant and equipment on all aspects of all central and localised boiler plant and standby generator sets;
- 4.21.8.2 all boilers and standby generators and major fittings will be suitably identified and labelled;
- 4.21.8.3 access to engineering plant will be confined to authorised personnel. The Contractor will be responsible for identifying such restrictions against the asset on the CAFM system within one month of the Commencement Date and an annually thereafter; and
- 4.21.8.4 regular systems checks for leaks.
- 4.21.9 Focus will be placed upon linking the overall philosophy of fuel efficiency, cost and utilisation to energy conservation.

4.22 Water supply, storage and distribution systems

- 4.22.1 The Contractor will maintain all water supplies, storage and distribution systems to ensure the adequate, continuous and direct supply of water to all points in each building where it is needed. In addition, the Contractor will take reasonable steps to ensure that, where appropriate, the supply arrives in a condition suitable for direct consumption. To include cleaning, chlorination and disinfection as required.
- 4.22.2 The Contractor shall carry out the daily & weekly flush of outlets, weekly calorifier temperature checks and the reactive tasks following low or elevated temperatures and or poor chlorine dioxide reserves.
- 4.22.3 Where there is a requirement for hot or cold water, the Contractor will maintain systems that can supply, store and deliver this at required temperatures and in sufficient quantity at all points of supply to meet likely predicted demand and viable recovery periods.
- 4.22.4 The Contractor will maintain standby and duty pumps in most situations to give continuity of service and also to aid cleaning. Where pumping systems are linked to a building management system, the Contractor will ensure that run times can be controlled and that maintenance regimes linked into this arrangement. Where pumps are not so linked a changeover between run and standby pumps will be undertaken manually on a periodic basis by the Contractor and details of such operations reported under the maintenance records for that asset.
- 4.22.5 The Contractor will ensure that expansion joints, anchor points, associated supporting brackets, insulation of all pipe work and fittings including valves will be maintained.
- 4.22.6 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.22.7 Appropriate records and incident reporting systems will be maintained by the Contractor to indicate that regular inspections, maintenance, repair and testing have taken place.
- 4.22.8 The Contractor shall ensure that all pressure vessels comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.22.9 Appropriate documentation will be maintained by the Contractor on the CAFM system and at the relevant CSO to provide a general description of all services including technical details on safe operating limits, drawings, a Specification of all equipment within individual plant rooms, including the marking and identification of all pressure vessels.
- 4.22.10 The maintenance regime will consist initially of a planned maintenance approach, in accordance with good industry standards based on run times but will be developed into a condition based approach during the Term of this Contract. Appropriate mechanical and electrical checks will take place on drive motors and pumps.

4.22.11 Integrity of all pipe work will be maintained by the Contractor at all times to prevent any possible contamination risk. Where pumping systems are linked to a BMS, run times will be set, controlled and maintenance regimes linked into this arrangement.

4.22.12 Temperature will be maintained in accordance with the Legionella Risk Assessment for each building and so that the room temperature will be reasonable in accordance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.

4.23 Condition of pumps and pipework

4.23.1 The Contractor will undertake an inspection in accordance with the timetable in the existing PM Specifications and FMR and annually thereafter of all pump and pipe work infrastructure to ensure that pipe work, fittings, vessels and other features are undamaged and conforming with statutory requirements.

4.23.2 The following management protocols will be adopted:

4.23.2.1 full training will be given by the Contractor to all personnel undertaking maintenance on all aspects of all fluid systems, including localised boiler plant;

4.23.2.2 all new pipe work vessels and major fittings installed by the Contractor will be suitably identified and labelled;

4.23.2.3 access to engineering plant will be restricted to authorised personnel;

4.23.2.4 the Contractor will identify within one month of the Commencement Date all restricted assets;

4.23.2.5 there will be regular systems checks for leaks; and

4.23.2.6 engineering plant will be maintained to a high standard in accordance with good industry standards.

4.24 Cold water services

4.24.1 Water supply pressures will be maintained by the Contractor to ensure a correct level of supply at all points at the building, including fire hydrants.

4.24.2 Water will be stored on buildings where the necessary facilities exist:

4.24.2.1 to provide reserve supply during possible failure of the main cold water supply;

- 4.24.2.2 to reduce the maximum demand on the cold water main fluctuations;
- 4.24.2.3 to provide accommodation for the expansion of any water subject to heat;
- 4.24.2.4 to limit the pressure on the distribution system; and
- 4.24.2.5 the cold water pipe work distribution system will be compliant with water bylaws and all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification. Pipe work is to be insulated, particularly where it is in close proximity to other services. Cold water will be stored at a maximum temperature of 20°C to comply with L8 Approved Code of Practice.
- 4.24.3 At some buildings there may be need for additional chlorination or other appropriate treatment. The Contractor will check by the regular monitoring of chlorine residuals and microbiological quality around the building in accordance with the Legionella Risk Assessment and recommendations regarding water quality. BGS estates will manage the ClO₂ dosing plant, currently there are two on site.
- 4.24.4 The Contractor will have day to day responsibility for the management, operation, organisation of cold water services and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set- out in this Specification. With a high focus on the flushing of outlets and the removal of any dead legs discovered.
- 4.24.5 Appropriate records and incident reporting systems will be maintained by the Contractor to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action logged. The Contractor will ensure that all records are maintained on the CAFM system.

4.25 Hot water services

- 4.25.1 The Contractor will ensure that installations are compliant with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification and will ensure that:
 - 4.25.1.1 the entire storage volume will be operated to comply with L8 without permanent pockets of lukewarm water;
 - 4.25.1.2 storage capacities for hot water will be limited to minimise stagnation and stratification. Tank shell linings will be resistant to bacterial growth. Sufficient access will be given to facilitate cleaning with a drain fitted at the base to enable the vessel to be properly drained;
 - 4.25.1.3 circulation hot water temperatures will be maintained to comply with L8, with local temperatures at the point of delivery exceeding 50°C or as dictated by the Legionella Risk Assessment. There will be full circulation of hot water between the storage vessel and the

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- individual outlets, taps, mixing valves or other outlet devices served from the distribution system;
- 4.25.1.4 storage will be limited to the requirements of peak demand and the rate of heat input will be based on two peak demands during the hour period. Sufficient recovery time will be allowed. The Contractor will ensure that all controls are building set and regularly adjusted;
- 4.25.1.5 attention will be given to ensuring that the water is retained in a wholesome condition, and in particular the need to conform to the latest Legionella guidance; and
- 4.25.1.6 water supply pressures will be maintained to ensure a correct level of supply at all points on the building, including showers, if fitted. Pipe work will be insulated particularly where it is in close proximity to other services; and pasteurisation of all vessels will take place after statutory inspections and other draining down operations and as dictated by the maintenance regime recommended in the Legionella Risk Assessment for the building.
- 4.25.2 The Contractor will have day to day responsibility for the management, operation, organisation of the hot water service and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set- out in this Specification.
- 4.25.3 The Contractor will ensure that appropriate records and incident reporting systems will be maintained to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action logged. BGS estates will overview the water system management.
- 4.25.4 The Contractor will ensure that hot water is safe to use, of the designated quality, volume and pressure and be operated safely with suitable protective safeguards installed in respect of excess pressure and temperature control features. All individual water systems will be suitably identified and free from leakage, with emphasis given to the provision of quality water via strained, filtered and treated systems.
- 4.25.5 BGS will ensure all statutory inspection examinations and certificates are recorded and copies retained for inspection.
- 4.25.6 Legionella precautions will be practiced throughout the whole network to ensure conformity with laid down standards. Protocols, regimes, temperature monitoring and testing will all be carried out at regular intervals. The building management system, where fitted, will be used to monitor tank and other key water temperatures.
- 4.25.7 Visual inspections will take place at least annually to ensure that pipe work, fittings, vessels and other features are undamaged and conforming to statutory obligations. Temperature limits will be under the control of the BMS, where available, to provide safety and also control pumps and associated control valves.

4.25.8 The Contractor will adopt the following management processes:

4.25.8.1 full training on all aspects of hot water systems and controls;

4.25.8.2 all pipe work vessels and major fittings to be suitably identified and labelled;

4.25.8.3 access to engineering plant only by authorised personnel. Within three months of the Transfer Date, the Contractor will identify all work activities and plant and equipment by building, requiring authorised personnel;

4.25.8.4 regular systems checks for leaks;

4.25.8.5 to all approved standards;

4.25.8.6 carry out statutory inspections carried out to all pressure vessels in accordance with the written scheme;

4.25.8.7 operate a Permit to Work system as necessary; and

4.25.8.8 maintain engineering plant to the specified standard.

4.26 Water treatment

4.26.1 Water treatment and testing in the buildings is required as a minimum, but not limited to cold drinking water and hot water systems, in order to ensure that all water used complies with current legislation on water quality.

4.26.2 The quality of water will be governed by the quality delivered to the building, and any subsequent softening and chemical conditioning techniques system which will be used in conjunction with potable water systems.

4.26.3 Where any plant or equipment uses processed water, including any water circuits as part of a production process, the concentration of any chemical will be checked to ensure that it is not harmful if treated water comes into contact with operators or a product, and that safe conditions are maintained. Consideration will also be given to ensuring that the process kills organisms flowing through the equipment, leaving no disinfectant agents. All water treatment systems will be fail safe and have sufficient instrumentation to monitor operation and delivery.

4.26.4 Regular inspection and maintenance of water treatment regimes, including both equipment and water quality, will be instituted.

4.26.5 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.

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- 4.26.6 The task of maintaining clean and quality water systems requires the continual addressing of many issues including technical training of the engineers involved. All work will comply with all relevant legislation, standards or codes of practice applicable in respect of risk assessments, protocols, management, training, record keeping and monitoring.
- 4.26.7 BGS will provide all chemicals and filters to the CLO2. Dosing pumps, metering devices, tanks, fittings and filters will be regularly cleaned, with appropriate microbiological and other technical checks will be made to confirm a pure water supply free from contaminants. Regard will be taken of the levels of CLO2.
- 4.26.8 Legionella precautions will be practiced throughout the whole network to ensure conformity with laid down standards. The Contractor will abide by the Legionella Risk Assessments carried out by BGS and carry out a review of these every 2 years. The treatment, testing and maintenance regime will be dictated by the findings of this assessment. Protocols, regimes, temperature monitoring and testing will all be carried out at regular intervals. The BMS, where available, will be used to monitor tank and other key water temperatures or physical testing where this is not possible. Visual inspections will take place at regular intervals of time to ensure that pipe work, fittings, vessels and other features are undamaged and conforming to statutory obligations.
- 4.26.9 The Contractor will adopt the following management protocols:
- 4.26.9.1 full training on all aspects of water treatment systems will be provided by BGS to all personnel responsible for maintaining and operating the systems;
 - 4.26.9.2 all new pipe work to be suitably identified and labelled;
 - 4.26.9.3 good housekeeping discipline within plant room areas;
 - 4.26.9.4 access to engineering plant only by authorised personnel;
 - 4.26.9.5 regular systems checks for chemical and microbiological defects; and
 - 4.26.9.6 engineering plant maintained to a high standard.

4.27 Heating systems

- 4.27.1 Taking into account all factors likely to affect the internal environment of the buildings, including business operations, and subject to any specific temperature requirements applicable to particular parts of the buildings (such as computer rooms), the heating systems at the buildings will, subject to its design capacity, at all times, be capable of meeting the minimum temperature requirements.
- 4.27.2 The Contractor will maintain suitable controls to facilitate the heating system's proper and efficient operation.

4.27.3 The minimum temperature requirement is 18.5 °C within one hour after the commencement of normal working hours, unless otherwise agreed in writing and incorporated into the Method Statement for the relevant building.

4.28 Boiler plant

4.28.1 The Contractor will ensure all boiler plant is capable of delivering services 24 hours per day, 365 days per year dependent on external conditions. The Contractor will adjust boiler plant settings including optimised control, to meet the agreed occupancy hours of BGS and will advise BGSs' Representative if it considers that the existing systems are inadequate to fulfil this requirement.

4.28.2 In accordance with BGS's policy of environmental and energy management, the Contractor will ensure that best practice advice is provided to BGS to encourage a proactive approach to energy saving initiatives.

4.28.3 The Contractor will ensure that temperatures of all circulating systems throughout the building will be in strict conformity with the building's Legionella Risk Assessment and the design parameters. This applies to both heating and hot water temperatures.

4.28.4 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.

4.28.5 Similar arrangements in respect of excess pressure and isolation features to low pressure hot water systems will also apply:

4.28.5.1 localised boilers will be maintained in accordance with the manufacturers' recommendations, including with respect to water treatment regimes;

4.28.5.2 feed water will be free from contaminants;

4.28.5.3 the distribution system from the boiler will be resistant to corrosion; and

4.28.5.4 the distribution system will be free from dead legs.

4.28.6 Standard low temperature or domestic gas fired boilers will be regularly inspected and maintained with close attention being given to correct combustion conditions and satisfactory flue arrangements to prevent carbon monoxide poisoning.

4.28.7 The Contractor shall ensure that all pressure vessels relating to pressurised hot water systems comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.

4.28.8 Appropriate documentation will be created to provide a general description of all new service schemes including technical details on safe operating limits, schematic drawings, a Specification of all equipment within individual plant and rooms.

4.28.9 BGS will also maintain a register for each item of plant and equipment that is subject to statutory examinations, and ensure the register is incorporated onto the CAFM system. Items such as boilers and pressure vessels will be subject to detailed inspection and examination by a competent person. All examinations certificates will be recorded and copies retained for inspection.

4.29 Storage Tanks

4.29.1 Storage tanks are used to provide water supplies to various parts of a building for:

4.29.1.1 cold water services for domestic hot water;

4.29.1.2 tanked water; and

4.29.1.3 feed water - boiler plant make-up needs.

4.29.2 The Contractor will ensure that:

4.29.2.1 all storage cisterns will comply with all relevant legislation, standards or codes of practice;

4.29.2.2 cold water will be stored at temperatures of not more than that recommended in L8;

4.29.2.3 water supply pressures will be maintained to ensure a correct level of supply at all points on the building, including fire hydrants.

4.29.2.4 the cold water pipe work distribution system will be compliant with all relevant legislation, standards or codes of practice; and

4.29.2.5 pipework will be insulated where recommended by the Legionella Risk Assessment or as part of any remedial actions particularly where it is in close proximity to other services. The Contractor shall bring to the attention of BGS any such pipework not insulated.

4.29.3 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.

4.29.4 All tanks will be subjected to regular temperature checks and inspection to ensure that all equilibrium float valves function correctly and there is no build-up of algae. A regular program of tank cleaning will be undertaken, using purogene and chlorination, to ensure good standards of hygiene. The insulation of tanks will be maintained undertaken as dictated by the

Legionella Risk Assessment to ensure that tank temperatures are kept below the lower limit of 20°C. Frequencies will be dictated by the L8 approved code of practice (ACOP) and L8 Risk Assessment.

4.29.5 Underground storage tanks will be regularly checked to ensure that they are free from contamination, particularly if they are in close proximity to sewers and drains.

4.29.6 The Contractor will ensure that:

4.29.6.1 water supply pressures will be maintained to ensure a correct level of supply at all points on the building, including fire hydrants and any hose reels;

4.29.6.2 the cold water pipe work distribution system will be compliant with all relevant legislation, standards or codes of practice; and

4.29.6.3 pipework will be insulated where recommended by the Legionella Risk Assessment or as part of any remedial actions particularly where it is in close proximity to other services.

4.29.7 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.

4.29.8 Close liaison will be maintained between the Contractor and BGS to ensure that water quality at the point of delivery is acceptable.

4.29.9 There are many hazards associated with water systems such as pressure system safety and protection and Legionella. Hence effective control and discipline of all these areas is essential.

4.29.10 The Contractor will maintain the internal water storage and distribution system to ensure that water is safe to use, supplied to the designated quality, volume and pressure standards. The system is to be operated safely with suitable protective safeguards in respect of external incidents affecting quality or quantity to the building. All individual water systems will be suitably identified and free from leakage.

4.30 Fume Cupboards

4.30.1 The Contractor shall maintain the fume cupboards to ensure their continuous operation in accordance with the appropriate British Standards and European legislation and the manufacturer's recommendations, and tested in line with BSEN 14175-1, COSHH, HSG258 and CAR.

4.30.2 Further information on the secuflow auxiliary air fume cupboards is included in the Schedules accompanying this Specification.

4.31 Clean Room Maintenance

- 4.31.1 The Contractor shall maintain the clean room suite to ensure its continuous operation in accordance with the appropriate British Standards and European legislation and BGS's Requirements.
- 4.31.2 Further information on the current annual maintenance is included in the Schedules accompanying this Specification.
- 4.31.3 An annual shutdown period will be agreed between the Contractor and BGS to enable BGS to effectively plan and manage workflow through the facility.

4.32 Ventilation systems and humidity controls

- 4.32.1 In all buildings where there is mechanical ventilation, air conditioning, cooling systems and humidity controls, or other specialist ventilation/extract systems, these will remain balanced and operate efficiently and effectively, in accordance with their design and maintenance parameters. In all other buildings, natural ventilation will be maintained.
- 4.32.2 Where fitted the Contractor will utilize the BMS to provide continuous operational monitoring to each individual system and initiate an alarm indication when any feature moves beyond an acceptable parameter.
- 4.32.3 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.32.4 The Contractor will maintain appropriate records to indicate that inspections have taken place, remedial action taken and the correct level of on-going technical training has been undertaken with the personnel involved.
- 4.32.5 Visual inspections of the installation will ensure that the structural fabric, ancillary equipment and attendant controls remains in sound and safe condition, without corrosion, and that all guards and fixings are secured.
- 4.32.6 The Contractor will adopt the following management systems to ensure that:
 - 4.32.6.1 access to plant is by authorized personnel. The Contractor will identify plant with a restricted access requirement;
 - 4.32.6.2 the plant environment is safely maintained, with easy access for inspection purposes;
 - 4.32.6.3 good housekeeping to maintain the area free of debris, obstructions or other hazards;

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- 4.32.6.4 all access doors are secured and free from leaks;
- 4.32.6.5 internally the plant is clean and free from accumulations of visible moisture;
- 4.32.6.6 maintained free from vegetation, rubbish and mold growth;
- 4.32.6.7 louvres clean and smooth and insect and vermin screens are clear and intact;
- 4.32.6.8 automatic isolation and fire dampers functional and free to operate;
- 4.32.6.9 intake areas maintained free of roosting and nesting activities of gulls, pigeons or other species;
- 4.32.6.10 validation of exhaust ventilation in respect of COSHH regulations; and
- 4.32.6.11 where necessary to maintain the system the Contractor will undertake ductwork cleaning and disinfection.
- 4.32.7 All heat exchange surface areas will be maintained in a clean condition. Operating parameters will be set to ensure plant protection.
- 4.32.8 Noise and vibration will be maintained within acceptable operational limits. Drive arrangements, belts and bearings will be maintained in effective operational condition. The operational temperatures of motors will be kept within safe limits.
- 4.32.9 Visual inspections to confirm that media is intact and dry. Filter units fit securely within their housings, forming an effective seal with no leakage. Manometer readings are between preset pressure limits. Inspection lights are operating correctly. Filters will be replaced as required to ensure the systems operate within the design parameters of the units.
- 4.32.10 Water level in the traps provides an effective seal, when the system is operational and at rest. Water in the glass trap is in a clean condition. The air break dimensions are correct. Pipe work is supported correctly to maintain the correct dimensions and prevent distortion. Drainage tray is clean, mounted at the correct attitude to direct water to the drainage point, avoid standing water, free from corrosion and mould growth. Inspection lights are operational. Fins, tubes and heat exchange surfaces - clean and clear from obstruction. Condensation discharges to drain with no standing water. Condensate is effectively trapped away from batteries. Cooling coils drainage is effective. Inspection lights are operating. No evidence of condensation collecting permanently on adjacent ductwork, or moisture contamination of filters; no standing water. Condensate is effectively trapped away from humidifiers. Inspection lights are operating.
- 4.32.11 If spray humidifiers are in use, BGS will replace them as a matter of urgency, in the meantime the Contractor will ensure BGS is aware of their existence and ensure they are checked daily or disconnected until replacement is possible.
- 4.32.12 At appropriate intervals of time, ductwork and sound attenuators will be inspected internally for the accumulation of fine particles and corrosion. Remedial action will be implemented according

to the degree of contamination and accumulated debris. All parts of the plant that become damp in normal use will be disinfected at least every six months or in accordance with the Legionella Risk Assessment. This will include humidifiers, cooler batteries, cooling coils, ductwork, drainage systems and energy recovery devices, in compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.

4.33 Refrigeration including coldrooms

- 4.33.1 The Contractor will ensure the refrigerant cycle is used in conjunction with the building management system, where available, to control, change and monitor specific environmental conditions to maintain comfortable temperatures in accordance with design to ensure a satisfactory condition.
- 4.33.2 In respect of air conditioning plant, cooling batteries may be provided with chilled water. The Contractor will maintain the system to allow refrigeration capacity to be split between multiple water chilling units, direct condensers or a variable refrigerant volume system, which in turn will be provided with controls. Matching of air handling equipment and refrigeration machines will be co-ordinated by the Contractor, to provide energy and cost efficient solutions to the area.
- 4.33.3 The refrigerant performance in cold rooms storing food will be continuously monitored and maintained by the Contractor to controlled temperatures within closely defined limits to satisfy Environmental Health Requirements.
- 4.33.4 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant current legislation, e.g. FGas regulations.
- 4.33.5 Appropriate records and incident reporting systems will be constructed and maintained by the Contractor to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action logged. Refrigerant replenishment and changes will be noted. The task of maintaining refrigeration systems requires the continual addressing of issues, including technical training of the personnel involved, particularly in respect of plant performance and controls.
- 4.33.6 The Contractor will ensure the safe operation of all compressors, condensers, evaporators, chilled water and other related systems. All plant rooms will be checked for temperature attainment, gas leakage and satisfactory ventilation.
- 4.33.7 Refrigerant media will be safe to use, the designated quality supplied, volume and pressure operated safely, with suitable protective safeguards installed in respect of excess pressure, isolation and alarm features. All individual systems will be suitably identified and labelled, by the Contractor to meet Statutory Requirements.

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- 4.33.8 The Contractor shall ensure that all pressure vessels comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.33.9 Appropriate documentation will be maintained by the Contractor to provide a general description of all services, including technical details on safe operating limits, drawings, a Specification of all equipment within individual plant rooms, including the marking and identification of all pressure systems and vessels.
- 4.33.10 The maintenance regime will consist of a planned preventative maintenance approach. Appropriate mechanical and electrical checks will take place on drive motors, compressors and circulating pumps.
- 4.33.11 The Contractor will create within three months of the Transfer Date and maintain thereafter a register for each item of plant and equipment that is subject to statutory examinations. All examination certificates will be recorded and copies retained for inspection, the register and amendments of all inspections will be recorded on the CAFM system.
- 4.33.12 When plant is replaced a selection of refrigerants will be considered on the basis of Ozone Depletion, Global Warming Potentials and energy efficiency, in order to ensure that the environmental considerations are taken into account and achieved.
- 4.33.13 Regular calibration of chilled food cabinets and temperature gauges will be undertaken by the Contractor.
- 4.33.14 The Contractor will undertake regular inspection and maintenance will occur on all systems and pipe work infrastructure. These visual inspections will take place yearly to ensure that evaporators, condensers, expansion valves, pipe work, fittings, vessels and other features are undamaged and conform to statutory obligations.
- 4.33.15 The following management protocols will be adopted:
- 4.33.15.1 full training on all aspects of all fluid systems, refrigeration systems and containment of refrigerant gas will be provided by the Contractor to all personnel engaged to maintain the equipment;
 - 4.33.15.2 all pipe work, vessels and major fittings suitably identified and labelled;
 - 4.33.15.3 good housekeeping discipline within plant room areas;
 - 4.33.15.4 access to engineering plant only by authorised personnel.
 - 4.33.15.5 the Contractor will identify those assets requiring authorised access and maintain a list of authorised and competent persons;
 - 4.33.15.6 regular systems checks for leaks; and

4.33.15.7 engineering plant maintained to a high standard.

4.33.16 Focus will also be given to linking the overall philosophy of refrigeration maintenance to the BMS and energy conservation, where appropriate.

4.33.17 The Contractor will ensure maintenance staff are equipped with the following as a minimum:

4.33.17.1 mechanical hand tools and specialist tools;

4.33.17.2 lifting beams, block and tackle;

4.33.17.3 access equipment;

4.33.17.4 leakage testing devices;

4.33.17.5 pressure gauges;

4.33.17.6 hydraulic test equipment;

4.33.17.7 protective clothing; and

4.33.17.8 refrigerant.

4.34 Electrical Power Distribution

4.34.1 The Contractor will maintain the internal electrical distribution system to provide a permanent, constant and consistent electrical power supply, adequate for BGS's requirements.

4.34.2 The Contractor shall ensure the electrical systems are maintained in accordance with the relevant legislation and best practice.

4.35 Building Management Systems ("BMS")

4.35.1 The Contractor will operate and maintain BMS in accordance with the following instructions:

4.35.2 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.

4.35.3 Environmental standards in terms of temperature and other requirements will be set by the Contractor in accordance with the design of the buildings, and in accordance with the Workplace Regulations, to ensure statutory compliance.

- 4.35.4 Given the complexity of a building management system installation, all staff involved in the operation of this activity will be provided with higher standards of training by the Contractor together with an understanding of the interactions between the systems and their functions. Specialists will only work on systems for which they have been trained.
- 4.35.5 The Contractor will use any BMS installation in a comprehensive manner, such that a live data bank of information and knowledge can be applied to the effective management of all engineering functions.
- 4.35.6 Operational Specifications will be produced by the Contractor within three months of the Transfer Date, based on the original design, that indicate the way in which the buildings and plant are to be controlled. The Contractor will determine the required BMS monitoring and control routines, its logical configuration and some of its physical characteristics.
- 4.35.7 Only trained and competent persons will be appointed by the Contractor to carry out the operation and control of this function.
- 4.35.1 All changes to set points and other parameters within the BMS must be agreed with BGS and written notification of these changes provided to the Estates Manager.

4.36 Standby Electrical Supply

- 4.36.1 At all buildings where there is a standby electrical supply the Contractor will maintain it in condition to the standards set out below to ensure the operation of electrical equipment during a mains failure.
- 4.36.2 Given the time to affect a changeover from mains electrical supplies to generator electrical supplies of 7.5 to 15 seconds, the Contractor will ensure that critical equipment continues to be served by UPS units that provide an instant electrical facility particularly to computer rooms.
- 4.36.3 The prime function of emergency standby generators is to provide electricity to sections of a building when failure of the mains or combined heat and power (if fitted) occurs. The Contractor will ensure that electrical supply is delivered, having a satisfactory sinusoidal wave form will be free from harmonic distortion, with voltage, frequency and other characteristics will be compatible with the local Regional Electricity Company and the permitted limits of all relevant legislation, standards or codes of practice. The output capacity of the generating plant will be matched to building requirements.
- 4.36.4 If the loading levels of existing plant are considered by the Contractor to exceed its design capacity then the Contractor will notify BGS immediately clearly identifying the operational risks and immediate activities that may be put in place to mitigate such risks.
- 4.36.5 Full control procedures will be derived by the Contractor to safeguard the working of all generating plant and to comply with safety standards and maintenance personnel. These instructions will relate to the starting, stopping, operating and routine testing of all

generating sets. This log book will also record details of generator run times, mains failures and maintenance checks. Battery and charger histories will also be recorded by the Contractor onto the CAFM system.

- 4.36.6 Routine servicing instructions will be scheduled by the Contractor together with plant history of all work that is carried out, including details of any parts that are replaced.
- 4.36.7 Visual inspections of all installations will ensure that the fuel tanks, engines and electrical components remain in a sound condition, without corrosion, and that all guards, fixings and protective devices are secured.
- 4.36.8 The standby electrical supplies will be maintained with the same output supply voltages provided by the site 'Voltage Optimisation Systems'.
- 4.36.9 Management systems are applied which ensure that:
 - 4.36.9.1 access to plant and spaces is by authorised personnel only. The Contractor will identify such assets requiring authorised access within three months of the Transfer Date;
 - 4.36.9.2 fuel oil supplies and protective devices are controlled and maintained in accordance with fire requirements;
 - 4.36.9.3 engine deficiencies are addressed as they occur - coolant, anti-freeze will be checked on a regular basis and replenished as appropriate;
 - 4.36.9.4 noise and vibration are within acceptable operational limits;
 - 4.36.9.5 output technical characteristics are maintained;
 - 4.36.9.6 regular records concerning basic running and maintenance protocols are maintained, checked and reviewed;
 - 4.36.9.7 safety protective clothing is worn such as Ear Defenders whilst tests are undertaken and during any occupation within the space;
 - 4.36.9.8 air intake and discharges maintained free from vegetation, rubbish and mould growth; and
 - 4.36.9.9 louvres are clean and smooth, and that insects and vermin screens are clear and intact; and intake areas are maintained free from roosting and nesting activity of gulls or other species of birds.
- 4.36.10 Regular checks will be made by the Contractor on batteries and trickle chargers to ensure that all engines start and run. When possible, emergency generator engine running will be carried out under load conditions - with at least 70% of full load. Start-up will be made by simulated

loss of supply. Technical records will be kept by the Contractor of all testing, including faults found and associated remedial action. Regular load testing shall be undertaken.

4.36.11 Regular servicing of battery equipment by the Contractor's competent personnel will be carried out. Battery chargers will be checked to ensure satisfactory charging rate at the correct trickle charging current, and with a constant specific gravity. All batteries will be recharged at the current and time values recommended by the manufacturer.

4.36.12 Generator voltage will be maintained to within plus or minus 2.5% of the rated voltage with a power factor of 0.8 (lagging).

4.36.13 Sensors are securely fixed in position. Control circuits and drop-out contactors, associated relays and interlocks are regularly checked and physically examined.

4.37 High Voltage

4.37.1 The Contractor will maintain the high voltage equipment systems to achieve continuity of operation and maintain essential services. Site based High Voltage Authorised Person is to form part of the contractors team.

4.37.2 High voltage equipment consists of transformers, switchgear, protective devices and cabling.

4.37.3 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.

4.37.4 There will be close liaison maintained with the energy supplier.

4.37.5 Appropriate Permit to Work records will be maintained to indicate that control of work, testing and inspections have taken place, with repairs and other remedial action details noted.

4.37.6 Only Approved Persons shall be permitted to work on electrical installations.

4.37.7 High voltage equipment is only to be accessible and operated by the engineers authorised for that purpose.

4.38 Electrical Services - power and lighting

4.38.1 The Contractor will undertake maintenance of electrical services, including power, lighting and miscellaneous related services. Including Portable Appliance Testing (PAT).

4.38.2 The scope of this service covers low voltage distribution systems, power outlets and lighting installations including light sources both external and internal as well as associated protective devices.

- 4.38.3 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.38.4 Maintenance and testing including PAT testing will be carried out in complete accordance with BS 7671 2008, 17th Edition (including amendments) of the IEE regulations, and at required intervals of time.
- 4.38.5 At the end of any electrical testing, test certificates will be recorded and copies retained for inspection. Copies of records will be provided by the Contractor for inclusion onto the CAFM system.
- 4.38.6 Lighting fittings will be regularly cleaned, with lamp replacement as required.

4.39 Luminaires

- 4.39.1 The Contractor will undertake the repair, maintenance and testing of all lights, lamps, signs and switches. The objective of the testing and inspection is that all this equipment is safe and will remain safe to operate and be free from risk.
- 4.39.2 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.39.3 Illumination levels are crucial, and spot testing of lighting levels will be carried out by the Contractor where there is doubt about lighting performance.
- 4.39.4 Emergency and other related lighting have to function at all times, particularly in times of mains failure. Hence, batteries and contactors will be checked regularly to ensure lighting maintainability with battery replacement undertaken as required.
- 4.39.5 The Contractor will ensure that a program for the inspection of checking and testing of all lights, lamps, signs and switches is implemented at each building with all equipment initially assessed for Health and Safety risks. Full functional and safety checks will be carried out on all equipment.
- 4.39.6 Lamp replacement and the cleaning of shades, diffusers and signs will be carried out on a programmed basis, supplemented by the replacement of individual lamps that fail in key areas on either a break down or a day to day repair basis.
- 4.39.7 Regard will be given to the correct colour rendering and matching of all lighting, in whatever form. This will include fluorescent, tungsten, halogen and industrial discharge lighting located in workshops, plus external road lighting and extra low voltage lighting. Care will also be given to the continued use of energy efficient lighting.

- 4.39.8 Lamp holders, capacitors and chokes will be examined to check for performance and adequate ventilation to minimise heat.
- 4.39.9 Emergency lighting on fire escapes routes and other areas will be regularly examined and tested to ensure continuity of supply and compliance with all relevant legislation, standards or codes of practice.
- 4.39.10 The Contractor will determine the extent of the corrective maintenance, and thus the economic viability of the repair. If, for whatever reason, corrective maintenance or repair is not immediately undertaken, the appliance must be disabled and a taped notice affixed stating "DANGER DO NOT USE THIS APPLIANCE".
- 4.39.11 All maintenance will be undertaken in accordance with British Standards, codes of practice and manufacturers' recommendations.
- 4.39.12 These tasks will consist of the following:
- 4.39.12.1 maintenance routines and testing carried out in accordance with agreed documented procedures;
- 4.39.12.2 records kept of technical events; and
- 4.39.12.3 the whole of the work will be undertaken by trained, knowledgeable, accredited personnel.
- 4.39.13 The majority of this equipment will be tested and inspected as part of the ongoing program of the inspection and testing of the whole electrical installation. Procedures will comply with the latest edition of the Electricity Regulations and tests rendered accordingly.
- 4.39.14 Only approved meters specifically designed for maintenance appliance testing are to be used by the Contractor (to GS 38 regulations). Currently this includes those manufactured by:
- 4.39.14.1 Megger;
- 4.39.14.2 Robin;
- 4.39.14.3 Edgecombe Peebles (Metrohm); and
- 4.39.14.4 Seaward.
- 4.39.15 Any equal and approved alternative will be considered on its merits, any meter used must be supported by a current certificate of operational accuracy. (Calibration Certificate).
- 4.39.16 The Contractor will ensure that defective, flickering and/or failing luminaries are replaced immediately.

4.40 Interior Lighting

- 4.40.1 The Contractor will maintain lighting systems at all buildings.
- 4.40.2 Suitable controls will allow proper, efficient and economical use of lighting.

4.41 External Lighting

- 4.41.1 The Contractor will maintain external lighting that will allow safe entry to and egress from buildings and safe movement within the buildings.

4.42 Emergency Lighting

- 4.42.1 The Contractor will maintain emergency lighting that will enable users to exit all buildings safely in accordance with all relevant legislation, standards or codes of practice. Including replacing batteries where required.

4.43 Lightning Protection System

- 4.43.1 The Contractor will maintain a system where installed to ensure that the buildings, systems and users will be protected from any lightning strikes.

4.44 Uninterrupted Power Supply (UPS)

- 4.44.1 The Contractor will maintain an uninterrupted power supply where installed to ensure the operation of electrical equipment during a mains failure, dip, spike or surge.
- 4.44.2 Interruptions in electrical power supplies will usually be met by some form of battery contained within an existing Uninterruptible Power Supplies system ("UPS"). These units will be maintained by the Contractor.
- 4.44.3 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.44.4 The Contractor will ensure that it maintains appropriate records, log books and incident reporting systems will be maintained to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action also logged.
- 4.44.5 Regular servicing of battery equipment by competent personnel will be carried out.
- 4.44.6 Recharging of batteries will be done either at a constant current or a constant voltage and recharged at current and time values recommended by the manufacturer. Equipment will be charged to conform to approved standards and manufacturers.

- 4.44.7 Instrumentation should be adequate and maintain mains and battery voltages as well as charging and output currents. Lead-acid and alkaline batteries will be topped up with approved levels of distilled water, or distilled water at the correct levels to prevent battery plate damage.
- 4.44.8 All batteries for luminaries and engine starting will be recharged immediately after use. In UPS, the battery recharging load will be delayed or kept disconnected from the UPS charger by selective switch control and the energy left available for priority services until a more settled supply prevails. This is also to avoid additional load on standby generators.
- 4.44.9 Routine maintenance of emergency lighting will be carried out on a regular basis to check out relay operation, luminaire output and battery condition in accordance with all relevant legislation, standards or codes of practice.
- 4.44.10 Appropriate repairs and replacements to be undertaken as required.
- 4.44.11 Records will be maintained of all inspections of batteries (including output voltages, cell condition and electrolyte top ups), associated charging equipment, relays and luminaire outputs. The Contractor will provide and maintain an adequate supply and selection of long life dry cell batteries for utilisation in the various equipment in use.
- 4.44.12 Regular ongoing maintenance and testing of all batteries will take place in accordance with a formalised planned preventive maintenance program. This activity will embrace a thorough physical inspection of all mechanical and electrical components and controls to ensure that all these items remain in a sound condition.
- 4.44.1 The Contractor will provide continuous off site monitoring of the UPS systems and report any supply variations outside pre-defined parameters i.e. power failures to BGS; a monthly report will be submitted to the Estates Manager.

4.45 Kitchen Equipment

- 4.45.1 The Contractor will:
- 4.45.1.1 maintain all equipment to keep it in a safe and operable condition and satisfy the requirements of the Environmental Health and associated Food Hygiene Regulations;
 - 4.45.1.2 manage energy conservation where energy is used and emitted from all these appliances;
 - 4.45.1.3 maintain cold rooms for the storage of food, and
 - 4.45.1.4 continuously monitor the refrigerant performance and maintain to closely defined limits. Instrumentation will be calibrated at regular intervals. Any incidents of failure to maintain the correct temperatures will be brought to the immediate attention of the Catering Manager.

- 4.45.2 The Contractor will have responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.45.3 Close liaison will be maintained between the Contractor, and BGS's representatives and catering suppliers, to ensure that technical performance at the point of delivery remains satisfactory, and that production Specifications and catering policies are upheld.
- 4.45.4 Appropriate records and incident reporting systems will be maintained by the Contractor and held on the CAFM system to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action logged. All operatives undertaking maintenance work on gas appliances will be registered on the 'Gas Safety Register'.
- 4.45.5 The task of maintaining catering equipment requires the continual addressing of many issues, including technical training of the personnel involved.
- 4.45.6 The Contractor shall ensure that all pressure vessels comply with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.45.7 Appropriate documentation will be maintained by the Contractor to provide a general description of all Services, including technical details on safe operating limits, drawings, a specification of all equipment within the kitchen areas, including the marking and identification of all pressure vessels. The maintenance regime will consist of a planned approach with appropriate mechanical and electrical checks taking place on drive motors and other operating parts.
- 4.45.8 Grease traps and filters will be regularly cleaned to maintain adequate discharge to the drainage system and to prevent blockage.
- 4.45.9 The Contractor will develop and maintain a register for each item of plant and equipment that is subject to statutory examinations, details will be recorded on the CAFM system. All examination certificates will be recorded and copies retained for inspection.
- 4.45.10 At the outset, a full asset register will be compiled by the Contractor that details each piece of equipment to be maintained. This will be supplemented by plant history sheets recording failures and repairs.
- 4.45.11 The Contractor will complete an annual review of the equipment condition, by visual inspection, to ensure that pipe work, fittings, vessels, electrical safety and other features are undamaged and conforming to statutory obligations.

4.46 Lifts and Hoists

- 4.46.1 The Contractor will maintain in the buildings all lifts and hoists and keep them in operational order and in accordance with design parameters and the manufacturers' specifications.
- 4.46.2 The Contractor will have day to day responsibility for the management, operation, organisation and compliance with all relevant legislation, standards or codes of practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.46.3 The legal responsibility for ensuring that lifts are properly maintained rests with the Contractor. All passenger lifts are to be examined by a competent person at least once in a period of six months, and a report of the outcome will be prepared, signed and dated by the person carrying out the examination. The Contractor will be responsible for all Statutory and best practice inspections and tests including those required on an annual, 3-yearly, 5-yearly, or 10-yearly, as appropriate.
- 4.46.4 Fire regulations require that certain lift controls be operated by the Fire Service, so that fire personnel can take immediate control of the lift for safety and fire-fighting purposes. All lifts will be provided with emergency communications, in the form of a telephone linked to a reception or security desks or the Help Desk point. The Contractor is to identify and manage such links.
- 4.46.5 Compliance to the requirements of all relevant legislation, standards or codes of practice will be achieved by ensuring that only appropriately trained and competent staff have access to the electrical supplies and equipment.
- 4.46.6 The Contractor will be responsible for responding to incidents of people trapped in a lift within 15 minutes of the call to the Help Desk.
- 4.46.7 If it is established that this will take longer than 15 minutes, BGS can immediately, by agreement, call the Fire Service.
- 4.46.8 Only by agreement between the Help Desk and The Contractor can the 15 minute period be extended. The only grounds for this is if BGS is satisfied from information given by the Help Desk that the person able to release the lift occupants will arrive before the Fire Service would.
- 4.46.9 Records and incident reporting systems be maintained to indicate that regular inspections, maintenance, repair and testing have taken place, with any remedial action logged. Emergency call-out procedures will be implemented to ensure a continual and regular service.
- 4.46.10 Protective barriers or other approved segregation (plus the posting of warning notices) will be temporarily installed when maintenance or other works take place at landing floor levels.

- 4.46.11 No work involving a complete cessation of service in excess of 30 minutes will be undertaken without prior arrangement with BGS's Representative and adequate warning notices posted.
- 4.46.12 All lift motor rooms and lift pits will be kept clean and tidy including keeping free from hydraulic fluids, oils and greases on equipment and floors where not appropriate, with adherence to fire regulations in respect of housekeeping. Access to these areas will be by approved personnel only.
- 4.46.13 Emergency procedures for the hand winding of electric traction lifts and the hand lowering of hydraulic lifts will be displayed within the lift motor room. Door release keys and hand wheel facilities will be provided and maintained by the Contractor and will be retained in the same area. The Contractor will ensure appropriate training for its staff and relevant subcontractor's staff will be undertaken to ensure familiarity with the practical process of releasing people from lifts, should this become necessary.
- 4.46.14 Appropriate written documentation will be maintained by the Contractor to provide a general description of all lift services including:
- 4.46.14.1 schematic drawings;
 - 4.46.14.2 a Specification of all equipment within individual lift motor rooms;
 - 4.46.14.3 marking and identification of all electrical equipment and control cabling;
 - 4.46.14.4 identification of emergency procedures; and
 - 4.46.14.5 easy interface with the inspections register.
- 4.46.15 Maintenance and testing of electrical systems will be carried out in complete accordance with all relevant legislation, standards or codes of practice applicable to each part of the services including but not limited to those set out in this Specification.
- 4.46.16 Thermal testing of key distribution point areas will also be implemented. At the end of any electrical testing, test certificates will be recorded and copies retained for inspection.
- 4.46.17 Light fittings in the lifts will be regularly cleaned by the Contractor.
- 4.46.18 The Contractor will undertake checks on lift telecommunications arrangements.
- 4.46.19 The Contractor will undertake regular inspection and maintenance on all items to ensure that electrical connections are secure, mechanical supports or fixtures are sound and the main components comprising car, gearbox, motors, rams, safety gear, balance weights, control devices plus cable distribution points and local wiring connections are positive. Any overheating or deformation of individual components will be rectified.

4.46.20 The Contractor will undertake routine inspections and check the quality of ride and will undertake routine adjustments to door mechanisms and levelling controls to ensure a good, reliable level of service and comfort of ride, provided that such adjustments are not covered by a manufacturer's warranty in which case the Contractor shall use subjective endeavours to enforce the terms of such warranty.

4.46.21 In the event of lift failure the Contractor will undertake all necessary diagnostic tests to identify faults and to prevent future failure.

4.46.22 This task will be done by visual inspection and appraisal at annual intervals to ensure that the above and other features are undamaged and conform to statutory obligations.

4.46.23 The Contractor will install the following management protocols:

4.46.23.1 all equipment is included on an asset register so that it can be easily located;

4.46.23.2 an on-going program of testing will be established from the Transfer Date as an integral part of the planned maintenance program. This will ensure statutory compliance and continual updating of asset registers;

4.46.23.3 all tested equipment will be clearly labelled by a discrete number, and with the latest date;

4.46.23.4 all defective equipment will be taken out of use and minor repairs undertaken; and

4.46.23.5 full procedures will be produced for basic maintenance on all types of equipment.

4.47 Alarm Systems

4.47.1 Alarm systems in the buildings are installed to give early warning of failure, potential danger or in the case of security, unauthorised access to a building or to summon assistance.

4.47.2 All alarm systems will be maintained by the Contractor according to the following management protocols. New systems will be selected to provide the appropriate level of security consistent with the latest proven technology available.

4.47.3 The Contractor will have day to day responsibility for the management, organisation and compliance with the appropriate codes of practice and standards namely British and European Standards when UK adopted.

4.47.4 Appropriate written documentation will be maintained to and copies included in the building Reference Station providing a general description of all services including:

4.47.4.1 schematic drawings of individual systems and wiring;

4.47.4.2 a Specification of all detectors, sensing and other devices, including panels;

- 4.47.4.3 marking and identification of all electrical equipment and cabling; and
- 4.47.4.4 easy interface with the inspections register.
- 4.47.5 Maintenance and testing will be carried out in complete accordance with all relevant legislation, British and BGS's Standards or Policy and industry Codes of Practice.
- 4.47.6 At the end of any electrical testing, test certificates will be recorded and copies retained for inspection.
- 4.47.7 Light fittings and lamps will be regularly cleaned with lamp replacement occurring as appropriate. Where local lamp failures occur, these will be dealt with quickly on an ad hoc basis.
- 4.47.8 Regular inspection and maintenance will occur on all items to ensure that connections are secure, fittings and fixtures are sound and that cable distribution points and local wiring connections are positive.
- 4.47.9 This task will be done by visual inspection and appraisal at yearly intervals of time to ensure that the above and other features are undamaged and conform to statutory obligations.
- 4.47.10 The following management protocols will be adopted:
 - 4.47.10.1 all equipment will be included on an asset register so that it can easily be located;
 - 4.47.10.2 an on-going program of testing will be established as an integral part of the planned maintenance program. This will ensure statutory compliance and continual updating of asset registers;
 - 4.47.10.3 all tested equipment will be clearly labelled by a discrete number, and with the last test date;
 - 4.47.10.4 all defective equipment will be taken out of use, and minor repairs undertaken where possible; and
 - 4.47.10.5 full procedures will be produced for basic maintenance on all types of equipment.

4.48 Maintenance of Intruder Alarms

- 4.48.1 The Contractor will at all times maintain in operation the intruder detection systems and comply where appropriate with all relevant legislation, British and BGS Standards or Policy and industry Codes of Practice applicable to each part of the Services including but not limited to those set out in this Specification.
- 4.48.2 Where a failure occurs, the Contractor will be responsible for providing contingency arrangements that meet the required security standards.

4.48.3 The Contractor will ensure that the intruder detection systems are maintained to comply with all relevant legislation, current British and BGS Standards or Policy and industry Codes of Practice applicable to each part of the Services including but not limited to those set- out in this Specification to achieve the required level of security appropriate to the assessed risk at each building.

4.48.4 The Contractor will ensure that any failure is rectified within two hours of the fault first being reported

4.49 Maintenance of Closed Circuit Television Systems (CCTV)

4.49.1 The Contractor will at all times maintain in operation CCTV systems to comply with all relevant legislation, current British and BGS's Standards or Policy and industry Codes of Practice applicable to each part of the Services including but not limited to those set out in this Specification.

4.49.2 The Contractor will ensure that any failure is rectified within four hours of the fault first being reported.

4.49.3 In the interim, the Contractor will be responsible for providing contingency arrangements that meet the required security standard.

4.49.4 The Contractor will achieve the required level of security appropriate to the assessed risk at each building. This includes all monitoring, recording and playback equipment necessary for the correct operation of the system.

4.49.5 The Contractor will supply and install Data Protection Signage to BGS's agreed design.

4.49.6 Images should be securely retained for not less than thirty days. Images not required for evidential purposes should be deleted after the thirtieth day. Copies of images required for evidential purposes whether these are held in tape, disc or other format should be subject of a record system and securely retained. Where CCTV tapes are in use these should be destroyed after use. Tapes & Discs should be destroyed through a confidential waste system. Each tape or disc should have an individual identifying serial number.

4.49.7 The Contractor will ensure that all computerised system operating settings are backed up and securely retained.

4.50 Maintenance of Access Control Systems

- 4.50.1 The Contractor will at all times maintain in operation access control systems to comply with all relevant legislation, current British and BGS's Standards or Policy and industry Codes of Practice applicable to each part of the Services including but not limited to those set-out in this Specification.
- 4.50.2 Where a failure occurs, the Contractor will be responsible for providing contingency arrangements that meet the required security standard.
- 4.50.3 The Contractor will achieve the required level of security appropriate to the assessed risk and internal requirements at each building.
- 4.50.4 The Contractor will ensure that any failure is rectified within four hours of the fault first being reported.
- 4.50.5 The Contractor will ensure that all computerised access control system's operating settings and the database of access card holders are regularly backed up to an external data storage device and securely retained. The Contractor will provide and ensure that all manufacturers' software is updated regularly to maintain an effective operational access control system. Code operated mechanical and electronic access control systems will have their codes changed by the Contractor as part of normal maintenance in compliance with the frequency as set by BGS's Standards.

4.51 Reporting Requirements for Health and Safety and Security Systems

- 4.51.1 The Contractor will provide reports on Health and Safety and security systems at all buildings, including reporting on fire alarms, smoke alarms, suppression systems, access control systems, CCTV equipment and intruder detection systems.
- 4.51.2 building specific risk assessments will be undertaken by the Contractor in all buildings to cover all activities relating to the Services detailed under the Specification. Where particular instructions are required for an activity, the Contractor will incorporate in the instructions for the Planned Preventative Maintenance task, or against the system to ensure that any requirements are conveyed for reactive tasks. When new systems are installed the risk assessments will be revised accordingly. These risk assessments will determine whether Permit to Work systems will be required at a building, and then implemented by the Contractor if required.
- 4.51.3 All testing, maintenance and inspections required due to Health and Safety or legislative requirements will be programed into the Planned Maintenance System by the Contractor as a priority one task. Where priority one tasks are not undertaken at the scheduled time, an escalation procedure will be activated. Initially this escalation will involve BGS's Health and Safety Manager.

- 4.51.4 The Contractor will ensure all building specific risk assessments are adhered to, undertake and partake in an audit program on Health and Safety driven by BGS, organise Health and Safety training ensuring this is kept up to date.
- 4.51.5 The Contractor will provide to BGS reports demonstrating a systematic, rigorous and thorough program of testing and inspection of the systems and equipment. Paper reports relating to Health and Safety tests, maintenance and inspection will be cross referenced with the CAFM system. This will enable ease of auditing, since an initial check can be made using the CAFM system that can then be corroborated by cross referencing with the paper record.
- 4.51.6 The Contractor will immediately advise BGS's Representative of any action taken in the event of any failure of the system and, where necessary, of any interim measures taken to protect the staff and property.
- 4.51.7 Within two Business Days, the Contractor will provide BGS's Representative with a full written report with the outcome of the remedial action and details of any further work required.

4.52 Catering Equipment

- 4.52.1 The Contractor will maintain the catering equipment to allow the efficient delivery of food, goods and disposal of waste.
- 4.52.2 The Contractor will ensure that the relevant equipment where owned by BGS is maintained operated in accordance with its design to prevent the transfer of cooking odours into business areas.

4.53 Tea points

- 4.53.1 The Contractor will maintain equipment and maintain facilities within tea points.
- 4.53.2 The Contractor will maintain dishwashers.

4.54 Redundant Catering and Tea Point Equipment

- 4.54.1 With regard to any redundant catering/tea point equipment The Contractor will disconnect and make safe service connections and remove equipment to storage as directed by BGS.

4.55 Utilities and Environment

- 4.55.1 The Contractor will co-operate with BGS's Estates Team to ensure the availability of electricity, gas, water and sewerage services and all equipment required for measuring, recording, analysing, managing and reporting the use of these
- 4.55.2 The Contractor will use its subjective endeavours to meet, and will assist BGS, in meeting Governmental environmental commitments and targets applicable to the site.
- 4.55.3 The Contractor will identify to BGS potential improvements to existing systems or where the installation of new systems will create economic advantage.
- 4.55.4 The Contractor will assist BGS to meet its environmental commitments and performance targets.
- 4.55.5 The Contractor will provide comprehensive and accurate monthly reports showing performance against Governmental and Departmental commitments and targets.

4.56 Water and sewage

- 4.56.1 The Contractor will assist BGS in the implementation and identification of mechanisms for reducing consumption and for water re-use.