1 SAMPLE CONTENT USER GUIDE - BREAAM

This template is an **EXAMPLE** of the **OUTPUT** that can be achieved from Edocuments data management software.

DO NOT directly edit this document.
DO NOT distribute this document offline

Using **Edocuments software** allows you to:

- Make sure all data goes through a defined process such as (author / review / approve).
- Retain a golden thread audit trail of who did what and when.
- Validate assets, types, components and much more using automated level of information (LOI) rules.
- Forecast delivery of when all data is likely to be complete.
- Control data classification using a classification set of your choice.
- Export COBie and other data formats directly from the dataset.
- Comply with industry standards ISO19650 / BS1192.
- Allow all information providers to collaborate online via a simple to use web browser application.

Edocuments offer additional services such as data management and quality assurance for handover information.

Please contact sales@edocuments.co.uk to find out more.
https://www.edocuments.co.uk

1.1 USER GUIDE - BREAAM

1.1.1 INTRODUCTION & GUIDE

1.1.1.1 Scope

The Building User Guide provides guidance for the non technical building user, so they can understand the design objectives and therefore use and operate the building efficiently and appropriately.
The guide is aimed at the following users:

1. The building's staff (or where relevant residents)
2. The non technical facilities management team/building manager
3. Other building users e.g. visitors / community users

There is no requirement on what media format the Building User Guide should take.
This Building User Guide is based on the guidance provided by the MAN 4 Building User Guide for New Construction schemes (Non Domestic Buildings) Technical Manual SD5073 -1.0:2011, Man 04 Stakeholder Participation Section.

1.1.1.2 Contents

Section	Title	Description
1	Introduction	Overview of the building and its environmental strategy and how users should engage with/deliver the policy/strategy. Details of any shared facilities. Details of local amenities – shops, leisure centres, parks, health centres.
2	Visitor Information	Transport facilities including public transport, green transport (park & ride, car sharing, cycling walking), parking facilities. Access and security procedures – disabled access, signing in.
3	Safety & Emergency Information	Details of safety systems – fire, emergency, security, disabled and first aid. Details of any emergency procedures – evacuation, muster points etc,. Emergency Contact details – A&E, Police, Utilities, Monitoring Stations
4	Materials and Waste Policies	Details of waste management strategies, including recycling policies.
5	Building Services	Details of the how to control the services in the working environment including heating, cooling, ventilation, lighting, water, fire and security. Reference to any specific procedures related to specific areas (e.g. labs). References to the appropriate sections in the technical documents.
6	Energy & Environment	Details include energy saving features tips for good operation, metering and monitoring.
7	Repairs and Maintenance	Contact details for maintenance helpdesk , building manager , specialist contractors or suppliers. Details of essential inspection and testing for the building and services. Details on incident reporting and management system.
8	Refits and Modifications	Implications of layout change, plus, environmental recommendations for consideration in any refit. Potential impact of increasing occupancy and any provision made in the original design to accommodate future changes.
9	Training	Details of any training and/or demonstrations in the use of the building's services, features and facilities that were carried out or will be needed.

Section	Title	Description
10	Further guidance	Links to other information including websites, publications and organisations. References to any associated technical documents associated with the building.

1.1.1.2.1 Document History

It is recommended that this document reviewed whenever building operational changes are made or annually as part of the organisations quality assurance system, with an entry made for each review.

Review Date	Description of Changes	Sections Changed	Author
April 2018	Document Created	All Sections	Edocuments

1.1.1.3 Introduction

Building Concept/Design Scope

The scheme provides a Primary School building within the grounds of The Academy.

Building Use and Facilities Provided for Target Users

The Primary School is provided for pupils and members of staff and aims to provide an educational focused environment to enhance the learning experience of the attending pupils and staff.

The accommodation is generally formed of the following areas:

- Reception, General Teaching & Group Rooms
- Hall Area
- Manager,Staff and Administration areas
- Kitchen
- WC Facilities
- Circulation Spaces & Stairs
- Store Areas
- SEN (Special Educational Needs) Rooms
- LRC (Learning Resource Centre) Rooms

Details of any Shared Facilities

Not applicable.

Environmental Features

The following design facets are incorporated in the interests of the environment, reducing the building's carbon footprint:

- Heat is recovered from the extract air and reused in the supply air when heat is called for by

the areas served, thus reducing the need to generate heat.

- LED luminaires reduce the power consumption of the School and therefore its carbon footprint.
- In general, the lighting to the School is controlled automatically based on occupancy however in the teaching spaces and offices, lighting is manually switched ON and automatically switched OFF when an areas have sat vacant for a pre-set period.
- The flow of water in the WCs, Hygiene Room, etc. is controlled based on occupancy via the lighting controls such that the flow of water is only provided when occupancy is detected.

1.1.1.4 Local Amenities

Amenity / Facility	Contact Details	Distance (km, on foot)
Website	Street check	
Banks	Numerous banks can be found in and around Chase Side	Within 1 km
Chemist	Boots 78 Chase Side London N14 5PH 020 8886 2003 www.boots.com	0.9 km
Dentist	The Grove Dental Centre 370 Bowes Road Arnos Grove London N11 1AH 020 8361 2022 www.thegrovedentalcare.com	1.8 km
Leisure Centre	Southgate Leisure Centre Winchmore Hill Road London N14 6AD 020 8882 7963 www.southgateleisurecentre.com	1.3 km
Local Authority	Enfield Council Silver Street Enfiled London EN1 3XA 020 8379 1000	5.9 km
Parks and Open Spaces	Brunswick Park Hampden Way Southgate London N11 1LF www.enfield.gov.uk	0.5 km
Shops	Numerous local shops can be found in and around Chase Side	Within 1 km
Shopping Centre	Brent Cross Shopping Centre Prince Charles Drive London NW4 3FP 020 8202 8095 www.brentcross.co.uk	10 km

1.1.2 VISITOR INFORMATION

1.1.2.1 Building

1.1.2.2 Transport

Public Transport	Location/Services/Distance	Timetables/Links
Bus Services	Numerous destinations can be reached from the bus stops located in Chase Side, refer to the link for further details as well as the Southgate Bus Map below.	www.tfl.gov.uk
Trains	**Southgate Underground Station (1 km)** The School is located a short walk from Southgate Underground Station that is serviced by the Piccadilly Line that provides access to North, West and Central London as well as national destinations via interconnections with National Rail Stations, refer to the Piccadilly Line Map below for details.	www.tfl.gov.uk
Park and Ride	Not applicable.	n/a
Green Transport	The greenest forms of transport is to walk or use bicycles, refer to the links below for details. Failing this using public transport or sharing cars are reasonably green way of travelling.	n/a
Car Sharing	Sharing cars is another good way of reducing pollution and energy consumption, follow the link on the right for	www.carshare.liftshare.com/

Public Transport	Location/Services/Distance	Timetables/Links
	further details	
Walking	There are numerous walking routes in and around London, follow the link for further details, there is even an app you can download to your phone	www.walkit.com/cities/london
Cycling	London operates a cycle hire/sharing scheme sponsered by Santander where you can hire a cycle from a number of docking stations, refer to the link for further details. London has many cycle routes and "superhighways", for details of these routes refer to the link.	**Cycle hire/sharing scheme:** www.tfl.gov.uk/modes/cycling/santander-cycles **Routes**: www.tfl.gov.uk/modes/cycling/routes-and-maps

1.1.2.2.1 Transport Maps

Index	Reference	Description	Company	Link
5.7.2.2.1_001	-	Piccadilly Line Map	TRANSPORT FOR LONDON	View
5.7.2.2.1_002	-	Southgate Bus Map	TRANSPORT FOR LONDON	View

1.1.2.3 Access & Parking

Access to the School	Vehicular access is via separate in and out gates in Summit Way. A one-way drop-off system is provided within the School grounds. Pedestrian access is also from Summit Way and the main building entrance via the Arrival Plaza. Service access is via the Kitchen to the rear of the Hall.
Car Parking Spaces	There are 20 no. spaces for staff parking and 4 no. for visitors. A further 2 no. dedicated spaces are provided for disabled use.
Motorcycle/Scooter Spaces	There are a number of motorcycle/scooter spaces provided in the Arrival Plaza.
Cycling Facilities	There are 50 no. designated cycle spaces for pupils and staff, located adjacent to the Hall. A further 10 no. spaces are provided for visitor cycles.

1.1.3 SAFETY & EMERGENCY INFORMATION

1.1.3.1 Systems & Facilities

Item	Purpose	Location
Fire Alarm System Panel	In the event of a fire the system will raise an alarm to alert everyone to evacuate the building as well as sending a signal to the remote monitoring station to request the Fire Brigade.	Main Entrance Lobby.
Fire Alarm Breakglass Unit	Used to manually activate the fire alarm system and evacuate the Building.	All areas including floor landings and exit doors to external areas.
Fire extinguishers	To manually extinguish fires	Escape routes, doors leading to places of safety or adjacent to specific risk areas.
Fire Exit Sign	Provides a safe escape route from the building to an external safe area.	All areas including safe escape routes and exit doors from the building.
Automatic Fire Extinguishing	Automatically extinguish fires. These systems are automatic in operation and are interlinked to Fire Alarm Systems.	Server Rooms, Generator Rooms, Archives.

Item	Purpose	Location
Systems		
Assembly Point	In the event of an emergency it provides a safe assembly point.	Indicated by local signage.
First Aid	To provide First Aid	Main Office.
Emergency Lighting	In the event of normal lighting failure, the system provides a minimum level of lighting to safely evacuate the affected areas.	All areas including safe escape routes and exit doors from the building.
Access Control System	To provide controlled access to the premises or specified areas.	Selected areas internally and externally.
Access Control System Break Glass Unit	Used in an emergency to manually override the door lock. All doors with access controls fitted will have a GREEN break glass unit fitted to the secure side. In an emergency this can be pressed which will release the doors and enable uncontrolled access. In the event of A fire alarm the door locks will beoveridden to also allow uncontrolled access.	All secured doors.
Disabled Call system	To summon assistance in the event of difficulties arising within the room.	Disabled WCs.
Disabled Refuge Intercom Panel	To summon assistance in the event of an emergency.	First Floor Staircase Protected Lobby.
Intruder Alarm System	In the event of an unauthorised entry to the Building, the system raises a local alarm as well as sending a signal to the remote monitoring station to request Police.	Main Entrance Lobby (panel in Electrical Plantroom).
CCTV System	A closed circuit television (CCTV) system monitors and records images for safety and security purposes.	Selected areas internally and externally.

1.1.3.2 Identification, Signage & Equipment

The images below provide standard library images of signage and equipment installed within a Building. If required, these can be modified by the end user to reflect the actual installation within their building.

1.1.3.3 Emergency Information

1.1.3.3.1 Electricity Supply

Company Name	UK POWER NETWORKS		
Address	EMERGENCY CONTACT NUMBER		
..			
..			
..			
Postcode		Phone	0800 316 3105
Country	United Kingdom	Fax	
www	www.ukpowernetworks.co.uk		

1.1.3.3.2 Gas Supply

Company Name	NATIONAL GRID
Address	NATIONAL GRID HOUSE
..	WARWICK TECHNOLOGY PARK
..	GALLOWS HILL
..	WARWICK

Postcode	CV34 6DA	Phone	0800 111 999
Country	United Kingdom	Fax	
www	www.nationalgrid.com		

1.1.3.3.3 Water Supply

Company Name	THAMES WATER (EMERGENCY)		
Address	24-HOUR EMERGENCY		
..			
..			
..			
Postcode		Phone	0845 9200 800
Country	United Kingdom	Fax	
www	www.thames-water.com		

1.1.3.3.4 Hospital

Company Name	NORTH MIDDLESEX HOSPITAL		
Address	STERLING WAY		
..	LONDON		
..			
..			
Postcode	N18 1QX	Phone	0208 8872000
Country		Fax	
www	www.northmid.nhs.uk		

1.1.3.3.5 Police

Company Name	METROPOLITAN POLICE (SOUTHGATE)		
Address	25 CHASE SIDE		
..	SOUTHGATE		
..	LONDON		
..			
Postcode	N14 5BW	Phone	020 3623 1604
Country	United Kingdom	Fax	
www	www.content.met.police.uk		

1.1.3.3.6 Alarm Monitoring Station

Company Name	CHUBB FIRE & SECURITY		
Address	UNIT 1D NEWMARKET BUSINESS PARK		
..	STUDLANDS PARK AVENUE		
..	NEWMARKET		
..	CAMBRIDGESHIRE		
Postcode	CB8 7ER	Phone	0800 32 1666
Country	United Kingdom	Fax	01638 664276
www	www.chubb.co.uk		

1.1.4 MATERIALS & WASTE POLICY

.Normal Waste	There will be collections for general rubbish, recycling and food waste.
Waste Management Strategy	The school will have adequate space for storing segregated food waste and compostable organic material prior to collection and delivery to a composting facility.
Recycling	There will be a collection for recyclable waste including glass, plastics etc.
Special Waste	Items of special waste related to the Building and its services are as detailed within the Building Fabric Manual, Mechanical and Electrical Operating and Maintenance Manuals.
Further information	The school will also have their own mini composting area as they are keen to be environmentally

.Normal Waste	There will be collections for general rubbish, recycling and food waste.
	friendly. They will compost their own fruit and vegetables.
Contact Details	Chris Smith - 02098 362 0980

1.1.4.1 Further Guidance

Where recycling facilities are used then follow the guidance and separate the waste materials into the appropriate bins.

The building has no recyclable components.

1.1.5 BUILDING SERVICES

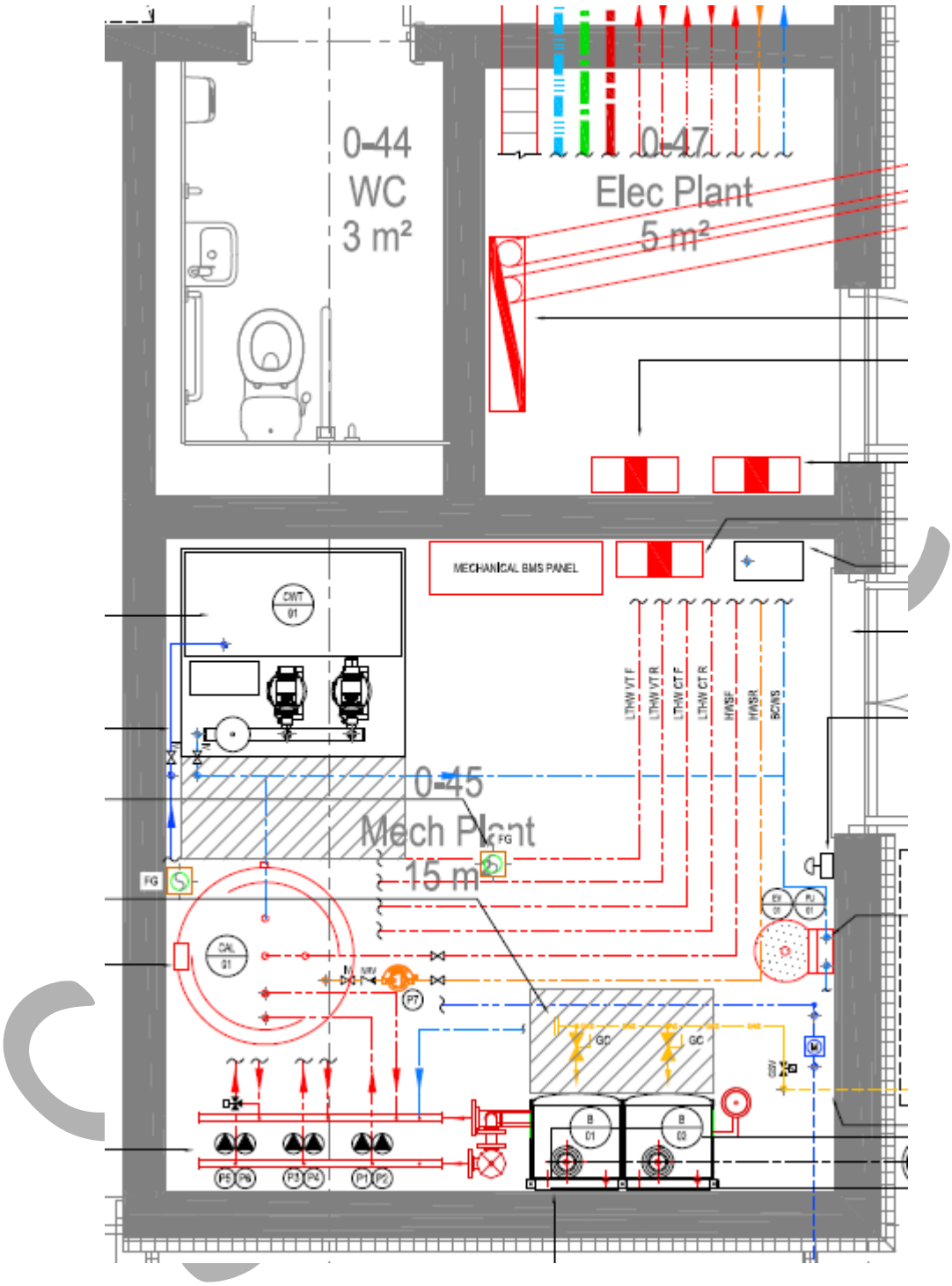
1.1.5.1 Your Working Enviroment

In order to achieve a good working environment it is important that you understand how to control the building services in your space.

The following sections advise where your main services and equipment are located in the building as well as providing information on how the services are provided to each of the work areas.

Plantrooms

The School is served by Mechanical and Electrical Plantrooms located on the ground floor to the North-East end of the School, these are appointed as follows:



1.1.5.2 Overview of Controls/BMS

The BMS for the School is provided by an MCC in the Mechanical Plantroom that houses a BMS controller and display as well as all necessary power distribution, switch gear, relay logic, etc. as required for the automatic control of the plant and environmental control devices installed. All components within the MCC are accessible, maintainable, adjustable and replaceable if necessary via the front of the panel. All items of plant fed from the MCC are provided with local, appropriately sized and IP rated isolators.

HAND/OFF/AUTO or OFF/AUTO switches are provided on the panel fascia where appropriate for all controlled items of plant as a method of pre-isolation or for manual override of control.
The Mechanical Plantroom's gas safety shut-off system described in the Natural Gas Supply System Section is also operated by the BMS. The manual emergency push button at the entrances/exits to/from the Plantroom also activates the system as does the rise in temperature over the boilers automatically as detected by heat detectors.
The MCC is responsible for the control and/or monitoring of the building's LTHW Heating System (boilers, pumps, etc.) and for the monitoring of the Boosted Cold Water Service (BCWS) tank/booster set, Category 5 break tank/booster sets, LTHW pressurisation unit, VRF and DX Air Conditioning Systems, heat recovery units (HRUs) as well as the monitoring of the incoming Mains Cold Water Services (MCWS), Gas and Electricity utility supplies

1.1.5.3 Electrical Services

BUGCould not find any resources appropriate for the specified culture or the neutral culture. Make sure "HtmlToOpenXml.Properties.PredefinedStyles.resources" was correctly embedded or linked into assembly "Edocs.Utils.HtmlToOpenXml" at compile time, or that all the satellite assemblies required are loadable and fully signed.

1.1.5.4 Lighting

System.	The School has been provided with a complete lighting installation which has designed and installed to provide general, functional, decorative and display lighting using luminaires with energy saving LED technology which are controlled by a Lighting Control System that automates control. The School has been provided with emergency lighting to meet the necessary requirements and to effect the safe evacuation in the event of loss of power to the building or local area circuits. External lighting has been installed to provide functional illumination to the School's entrances/exits.
Main ON/OFF Control	Main ON/OFF control for the general and emergency lighting is through isolation of the particular circuit via the particular serving MCB at the distribution board. **External Lighting** The building's external lighting is controlled by programmable time switches in the PE Store and external photocells. The photocells switch the particular external luminaires they control ON when the ambient lighting level drops below that of the minimum required and the programmable time switches switch OFF the luminaires at the following pre-set times (holding OFF until dusk): • Car Park and Roadways - ON at 15:00, OFF at 00:00 and ON at 05:00, OFF at 09:00 • Security (including staff and pupil cycle storage) - ON at 15:00, OFF at 09:00
Local Control	Within the circulating areas and WCs throughout the building, the lighting is controlled based on presence detection with passive infra-red (PIR) and microwave sensors that detect occupancy. The presence detectors switch the lighting ON automatically when detecting occupancy. The supply is maintained to the luminaires for a pre-determined, user defined period after the room is left unoccupied at which time the lights are switched OFF. The PIR occupancy detectors also provide the switching of the extract fans and the water shut-off valves in the WCs, Hygiene/Shower Room, etc. In the teaching rooms/spaces, offices, stores, etc., the lighting is controlled based on absence. The lighting is switched ON manually at retractive switches by the user and is switched OFF automatically after a pre-set period of inoccupancy as detected by the PIR detectors.

System.	The School has been provided with a complete lighting installation which has designed and installed to provide general, functional, decorative and display lighting using luminaires with energy saving LED technology which are controlled by a Lighting Control System that automates control. The School has been provided with emergency lighting to meet the necessary requirements and to effect the safe evacuation in the event of loss of power to the building or local area circuits. External lighting has been installed to provide functional illumination to the School's entrances/exits.
	The Hall lighting is controlled by a scene setting controller that allows the user to select pre-set light levels and to manually increase or reduce light levels. The lighting situated adjacent to windows is also controlled automatically to decrease/increase based on the amount of ambient lighting available. The evaluation of light levels is undertaken by the PIR detectors. Each area/room is provided with a manual key switch that overrides the automatic controls. In the Kitchen and Plantrooms, the lighting is manually controlled by local wall mounted switches. **External Lighting** Override controls are provided in the PE Store.
Emergency Action	In the event of a power failure emergency lighting will be automatically switched ON to provide sufficient light to enable safe escape from the building.
Environmental	Energy saving LED lamp technology has been adopted throughout that minimises the carbon footprint of the building, the control of the lighting described earlier also reduces energy consumption. In order to save as much energy as possible: 1. Do not switch ON the lighting unnecessarily if there is sufficient ambient lighting. 2. When leaving the area switch OFF the lighting. 3. If installed, ensure time clocks are set to the correct time. 4. The Environment Agency advocates that any fluorescent and other mercury containing lamps should be sent for recycling as this promotes best practice in waste management. Every user of fluorescent or other mercury containing lamps has a 'Duty of Care' under legislation to dispose of them correctly. It is recommended that a lamp recycling company or a waste contractor contacted regarding the recycling or the correct disposal to hazardous landfill of the lamps. www.sustainalite.co.uk
Metering / Measuring	Electricity meters are installed to monitor the usage and efficiency of the lighting, the meters can be interrogated by the BMS. Readings should be noted and trends understood in comparison with your electricity bill.
User Information	User information can be found in the Electrical Services Operating and Maintenance Manual (Volume 3C) as well as the apartment O&M Manuals.
Technical Documents	Technical documentation can be found in the Electrical Services Operating and Maintenance Manual (Volume 3C) as well as the apartment O&M Manuals.

1.1.5.5 Cold Water Services

Systems	The School is provided with a Mains Cold Water Service (MCWS) from the local supplying authority. This MCWS serves a tank and booster set that deliver a Booster Cold Water Service (BCWS) to the building for domestic use and hot water via an indirect calorifier served with heat energy by the School's LTHW Heating System. The BCWS also provides pressure and make-up water for the LTHW Heating System as well as Category 5 BCWS to the Hygiene/Shower Room and for washdown purposes.
Main ON/OFF Control	The main isolation valve for the Mains Cold Water Service to the building is located in the Plantroom.
Local Control	Taps are provided to all draw off points, some of these are temperature controlled as described in

Systems	The School is provided with a Mains Cold Water Service (MCWS) from the local supplying authority. This MCWS serves a tank and booster set that deliver a Booster Cold Water Service (BCWS) to the building for domestic use and hot water via an indirect calorifier served with heat energy by the School's LTHW Heating System. The BCWS also provides pressure and make-up water for the LTHW Heating System as well as Category 5 BCWS to the Hygiene/Shower Room and for washdown purposes.
	Section 5.6.
Emergency Action	Use the local isolation valves for individual appliances, remember, to isolate the building use the main isolation valves as described in Main ON/OFF Control above.
Environmental	Use the local isolation valves to shut off water services for individual appliances. If you notice water dripping from an overflow or warning pipe, you should contact your maintenance contractor without delay. It may indicate that a water tank valve, WC cistern, or unvented hot water storage system needs attention.
Metering / Measuring	The main meter monitors the usage of the Cold Water Services, this is connected to the BMS. The meter can be interrogated at the BMS, readings should be noted and trends understood in comparison with your water services bill.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.

1.1.5.6 Hot Water Services

System	The School has been provided with Hot Water Services (HWS) via an indirect calorifier that uses heat energy from the School's LTHW Heating System. Direct, electrical water heating is also provided for the Category 5 HWS in the Hygiene/Shower Room and facilities for a water boiler are provided in the Staff Room.
Main ON/OFF Control	The School's HWS and it's pump set are controlled by the BMS under a time schedule, refer to BMS Section of this Manual for further details. The electrical water heater for the Category 5 HWS is controlled by its integral on/off and temperature output controls.
Local Control	The taps and showers distribute hot water at a pre-set temperature, there are no other local controls to the Hot Water System.
Emergency Action	Use local valves for isolation of individual appliances and sanitary ware. To isolate the building, switch the BMS HWS controls to OFF and shut OFF the cold water feed to the system using the appropriate isolating valve.
Environmental	Ensure taps are properly closed and that dripping taps are fixed promptly.
Metering / Measuring	As noted in Section 5.5.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.

1.1.5.7 Gas

System	The School has been provided with a Natural Gas Service by the local supplying authority in order to directly provide the heat energy medium for its LTHW Heating System and Hot Water Service. A service is also installed to the Kitchen for catering purposes.
Main ON/OFF Control	The main isolation valves for the School are located in the Gas Meter Enclosure outside the Plantroom. Isolating valves are also provided in the Plantroom and Kitchen.
Local Control	Local isolation valves enable you to shut OFF the gas supplies to the boilers and Kitchen appliances without effecting the other.
Emergency Action	The incoming gas main to the Plantroom is provided with an emergency gas shut off system that comprises of a gas solenoid valve, heat detectors and emergency stop button (entrance/exit to/from the Plantroom). The gas valve will shut closed in any one or combination of the following eventualities. 1. Activation of manual emergency stop button 2. Activation of any one of the heat detectors 3. Activation of the Fire Detection and Alarm System The incoming gas main to the Kitchen is provided with an emergency gas shut off system that is interlocked with the ventilation system, comprising of a control panel, gas solenoid valve and emergency stop buttons. The gas valve will shut closed in any one or combination of the following eventualities. 1. Activation of manual emergency stop button 2. Failure of the ventilation systems (supply and/or extract) 3. Activation of the Fire Detection and Alarm System
Environmental	The Natural Gas Service is used to provide heating and hot water to the building, the more heating and hot water required by the building, the more gas is used. Be sure to minimise the use of heating and hot water as much as possible. The Natural Gas Service also provides heat energy for catering - similarly, the more catering undertkane the more gas is consumed.
Metering / Measuring	Gas meters are installed to the incoming service and should be read regularly, readings noted and compared with your services bill. The meters can be interrogated at the BMS, readings should be noted and trends understood in comparison with your gas services bill.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.

1.1.5.8 Heating

System	The School is provided with a Low Temperature Hot Water (LTHW) Heating System via 2 no. gas fired boilers along with associated items of plant installed in the Mechanical Plantroom. The system generally distributes heat throughout the building via wall mounted radiators and ceiling mounted radiant heat panels although heat is also distributed to the Kitchen and Main Hall via the Mechanical Ventilation System through heater batteries located within air handling units. The system also provides the heat energy medium for the School's general Hot Water Service. An electrical overdoor heater is also installed at the main entrance.
Main ON/OFF Control	The LTHW Heating System is controlled via the BMS (see Overview of Controls/BMS Section), it can be isolated via the BMS.

System	The School is provided with a Low Temperature Hot Water (LTHW) Heating System via 2 no. gas fired boilers along with associated items of plant installed in the Mechanical Plantroom. The system generally distributes heat throughout the building via wall mounted radiators and ceiling mounted radiant heat panels although heat is also distributed to the Kitchen and Main Hall via the Mechanical Ventilation System through heater batteries located within air handling units. The system also provides the heat energy medium for the School's general Hot Water Service. An electrical overdoor heater is also installed at the main entrance.
Local Control	The School's LTHW Heating System is enabled overall by the BMS under a time schedule and is based on demand for temperature from the building, however the boilers are operated via their own controls The heating pumps are supplied with power, protected and controlled from the BMS (see Overview of Controls/BMS Section). The heater batteries distribute heat as per the dictates of the BMS and temperature sensors installed in the areas served. The radiators are controlled locally by thermostatic radiator valves. The radiant heat panels are also controlled locally by thermostatic radiator valves however these are fitted with remote adjustable heads. The electrical overdoor heater is controlled by its integral ON/OFF, speed and temperature controller.
Emergency Action	To isolate the LTHW Heating System: 1. Switch BMS controls to OFF 2. Isolate the gas supplies to the boilers using their gas valves 3. Switch OFF the electricity supplies to the boilers using the local isolators mounted adjacently 4. Shut OFF the cold water feed to the pressurisation unit 5. Shut OFF the calorifier for the Hot Water Service 6. Shut OFF all air handling plant 7. Switch OFF the electricity supplies to the over door heater The gas supply to the boilers can be shut down in an emergency by pressing the red STOP button.
Environmental	Set thermostats/sensors to the required temperature then leave them alone, do not use them as ON/OFF switches.
Metering / Measuring	Refer to the gas and water meter readings which should be noted and trends understood in comparison with your services bills. The BMS also monitors the consumption of water and gas.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.

1.1.5.9 Ventilation

System	The School is provided with Mechanical Ventilation Systems using supply and extract heat recovery units and an air handling unit (for the Main Hall) that recover heat/cooling from the air extracted from the areas served and re-introduce it into the supply air path should the building be calling for heat/cooling. Dedicated toilet extract systems are also installed to serve the WCs, Changing Rooms, Cleaner's Rooms, Hygiene/Shower Room, etc. and the Kitchen and Servery are provided with supply and extract systems that are interlocked with the catering appliances gas supply.
Main ON/OFF Control	The fans, heat recovery and air handling units can be isolated locally via their electrical isolators as well as by the BMS at the relevant control panel. Note that the pool air handling unit is controlled by its own control panel.

System	The School is provided with Mechanical Ventilation Systems using supply and extract heat recovery units and an air handling unit (for the Main Hall) that recover heat/cooling from the air extracted from the areas served and re-introduce it into the supply air path should the building be calling for heat/cooling. Dedicated toilet extract systems are also installed to serve the WCs, Changing Rooms, Cleaner's Rooms, Hygiene/Shower Room, etc. and the Kitchen and Servery are provided with supply and extract systems that are interlocked with the catering appliances gas supply.
Local Control	The heat recovery units are controlled by their integral controls and by remotely mounted controllers that allow the user to adjust fan speed and temperature settings, refer to the Manufacturer's Literature in Section 4 of this Manual for further details.The air handling unit for the Main Hall is controlled by its integral controller and is enabled and monitored by the BMS. Temperature control is via the BMS and local temperature sensors. The Kitchen supply and extract fans are controlled by the Kitchen's Gas Safety Shut-Off System panel such that the flow of gas cannot ensue if either fan is not operating or failing to deliver the required amount of fresh air/air movement, refer to the Natural Gas Section for further details. In general, the extract fans run constantly at trickle speed by their integral controls and run up to boost speed upon detection of occupancy via the lighting PIR detectors.
Emergency Action	To isolate the systems: 1. Switch the BMS controls to OFF for the heat recovery and air handling unit/s and fan/s 2. Switch OFF the electrical supply to the heat recovery and air handling unit/s and fan/s using the local isolator mounted adjacently
Environmental	The heat recovery and air handling units recover heat from the air extracted from the building for re-use to temper the air to the areas served when required, therefore reducing the carbon footprint of the building. Ensure the ventilation plant operating times are correctly set to reduce unwanted energy consumption.
Metering / Measuring	Because the Mechanical Ventilation Systems use the LTHW Heating System to provide warm air, monitor the usage of gas as referred in the gas and heating Sections earlier. Meters can be interrogated at the BMS. Readings should be noted and trends understood in comparison with your gas and electricity service bills.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B) as well as the apartment O&M Manuals.

1.1.5.10 Air Conditioning Systems

System	The School's larger teaching areas have been provided with cooling and heating via variable refrigerant flow (VRF) Air Conditioning Systems with external condensers that serve fan coil units in the rooms/areas served in conjunction with the Mechanical Ventilation Systems A further, direct expansion (DX) Air Conditioning System is also provided that provides cooling for the Server Room.
Main ON/OFF Control	For each of the systems, the condensers and the internal units can be electrically isolated via their local isolator. If the condenser and each of the internal units are switched OFF the system is fully isolated.
Local Control	The systems are provided with local controllers that provide the user with temperature and fan speed settings, ON/OFF and timer functions, etc.
Emergency Action	To isolate the system/s: 1. Switch the air conditioning system/s controls to OFF. 2. Switch off the electricity supply to the internal and external air conditioning units using the local

System	The School's larger teaching areas have been provided with cooling and heating via variable refrigerant flow (VRF) Air Conditioning Systems with external condensers that serve fan coil units in the rooms/areas served in conjunction with the Mechanical Ventilation Systems A further, direct expansion (DX) Air Conditioning System is also provided that provides cooling for the Server Room.
	isolators mounted adjacently.
Environmental	Ensure the air conditioning system operating temperatures are correctly set to reduce unwanted energy consumption. **Note** that the Server Room system operating times are likely to be 24-hours a day, 7-days a week.
Metering / Measuring	The electricity supply provides the energy source for the systems, there are a number of electricity meters installed to monitor the usage and efficiency of the systems. The meters can be interrogated at the BMS head end. Readings should be noted and trends understood in comparison with your services bill.
User Information	User information can be found in the Mechanical Services Operating and Maintenance Manual.
Technical Documents	Technical documents can be found in the Mechanical Service Operating and Maintenance Manual (Volume 3B).

1.1.5.11 Fire

System	The School has been provided with an analogue addressable open protocol Fire Detection and Alarm System to meet requirements, providing automatic and manual detection and alarm in the event of a fire alarm condition for the purpose of giving early warning of the presence of fire in order to protect the life of the occupants of the building as well as the property, affecting a single evacuation strategy. The system is designed as an L2 type system.
Main ON/OFF Control	The Fire Detection and Alarm System is provided for protection of life and property and is **not meant or** designed to be shut OFF.
Local Control	The Fire Detection and Alarm System is controlled automatically via smoke and heat detectors and can be manually activated by red emergency break glass units installed around the School in strategic locations. Fire extinguishers are also located throughout the premises to provide manual extinguishing capabilities, these usually at all exit doors and by staircases, defined as follows: **Red -** Water - Use - Paper, wood, textiles & solid materials fires, DON'T USE - Liquid, electrical or metal fires **Black -** Carbon Dioxide (CO_2) - Use - Liquid & electrical fires, DON'T USE - Metal fires **Cream -** AFFF Foam - Use - Liquid, paper, wood & textile fires, DON'T USE - Electrical or metal fires **Blue -** Powder - Use - Liquid, electrical wood, paper & textile fires, DON'T USE - Metal fires
Emergency Action	In the event of an alarm, the Fire Detection and Alarm System undertakes the following (not exhaustive list, refer to the building's cause and effect documentation for further details): 1. The BMS is notified (both via common Fire Alarm and Fire Fault signals) 2. Mechanical plant is shut down (fans, boilers, pumps, Air Conditioning System condensers, heat recovery/air handling units, etc.) via the Motor Control Centre panel 3. The gas supplies to the Kitchen and Mechanical Plantroom are shut OFF via the gas solenoid valves 4. The Door Entry and Access Control System releases normally secured doors points 5. The Lift returns to the ground floor and is shut down

System	The School has been provided with an analogue addressable open protocol Fire Detection and Alarm System to meet requirements, providing automatic and manual detection and alarm in the event of a fire alarm condition for the purpose of giving early warning of the presence of fire in order to protect the life of the occupants of the building as well as the property, affecting a single evacuation strategy. The system is designed as an L2 type system.
	6. Fire and smoke dampers close
Environmental	Not applicable.
Metering / Measuring	Not applicable.
User Information	A Log Book is provided located by the main Fire Detection and Alarm System panel to enable system records to be kept.
Technical Documents	Technical documents can be found in the Electrical Service Operating and Maintenance Manual (Volume 3C) as well as the apartment O&M Manuals.

1.1.5.12 Security

System	An **Intruder Alarm System** is provided to the School to protect for protection and security purposes. An **Access Control System** is provided to secure the School from unauthorised visitors and to provide controlled access and egress to various areas of the building. **Intercom Systems** are installed to the School to advise staff when callers are seeking access at various entrances. A **CCTV System** is provided to allow surveillance of the building and to record video footage.
Main ON/OFF Control	None of the Security Systems are designed to be isolated, works of this kind this should **only** be undertaken by an approved, Specialist Maintainer. Control of the systems is via the following: **Intruder Alarm System -** The controls for the system are located at the panel in the Electrical Plantroom and the keypad in the main Entrance Lobby (where the system is armed and disarmed). **Access Control System -** The Access Control System is controlled from the central PC/workstation in the This is also where users are provisioned to the system by suitably authorised personnel. **Intercom System** - The Intercom System is controlled by the external call units and the receive unit in the Office. **CCTV System -** Head end keypad, mouse and monitor controls are located in the Office.
Local Control	As described above although the door controllers (Access Control) and some cameras (CCTV) can be isolated individually. **NOTE -** the door controllers have back-up battery supplies.
Emergency Action	**Access Control and Intercom Systems -** The doors are released when the building is in fire alarm mode. The green break-glass units can be activated in an emergency to release the secured doors.
Environmental	Not applicable.
Metering / Measuring	Not applicable.
User Information	A Security Systems Log Book is provided by Facilities Management to enable system records to be kept.
Technical Documents	Technical documents can be found in the Electrical Service Operating and Maintenance Manual (Volume 3C) as well as the apartment O&M Manuals.

1.1.5.13 Windows and Shading

System	Windows and are provided to maximise the use of daylight and for manual ventilation. Where windows can be opened they are manually opened and closed.
Main ON/OFF Control	Not applicable.
Local Control	Not applicable.
Emergency Action	Not applicable.
Environmental	Not applicable.
Metering / Measuring	Not applicable.
User Information	Refer to the Building O&M Manual.
Technical Documents	Not applicable.

1.1.6 ENERGY & ENVIRONMENT

The building has been provided with the following meters to enable energy consumption to be recorded, monitored and reviewed to ensure that the building is operating efficiently and economically.
The information below includes the estimated design and benchmark consumption figures for the building. This enables you to compare the actual consumption data against these figures and analyse the results.
The results will enable you to target any problem areas or identify areas where energy reductions can be made. When making comparisons to design and benchmark data remember to take into account such factors as weather conditions, occupancy changes, operational changes, equipment changes and maintenance.
Further help and assistance:-

CIBSE

The Chartered Institution of Building Services Engineer (CIBSE) provides the following guidance documents:-
CIBSE TM22 : Energy Assessment and Reporting Methodology provides a method for assessing the energy performance of an occupied building based on metered energy use, and includes a software implementation of the method.
CIBSE TM39 : Building Energy Metering provides best practice in the design of energy metering and sub-metering. It provides assistance for facilities managers to introduce metering and sub-metering in their existing buildings. It has been written for designers, owner-occupiers, landlords and the letting agents who act on their behalf, managing agents, tenants, office managers, facilities managers, and anyone else who can benefit from the energy data that meters and sub meters can provide.
www.cibse.org

The Carbon Trust

CTG008 Monitoring and Targeting: Management guide provides guidance on monitoring and targeting techniques, and shows how organisations can adopt an appropriate level of monitoring and targeting to help save energy and cut costs.
CVT034 Better Business Guide to Saving Energy: how to identify measures where energy and cost savings can be easily made with little or no cost.

CTV023 Practical energy management overview: an overview of practical short and long term measures to reduce the amount of energy they use, including a range of low and no-cost changes employees can make straight away.
Energy Analyser Tool Software: helps you analyse your energy consumption, energy cost and carbon emissions. The tool allows you to analyse variations in half hourly energy use, and to identify periods of maximum, minimum and average energy consumption and cost.
www.carbontrust.com

1.1.6.1 Metering Monitoring and Targeting Strategy

1.1.6.1.1 Metering Schedule

The following provides a list of meters and design estimates of the likely end use consumptions. See CIBSE TM39 : Building energy metering, for an example, including how to arrive at a good metering schedule. CIBSE TM22 : Energy assessment and reporting method also provides a means of assessing energy use in buildings.

1.1.6.1.1.1 Consumption

Total estimated yearly consumption of Water, Gas and Electricity. Gas and Electricity estimates are as follows:

Category	Annual Energy Consumption (MWh)
Gas	35.59
Electricity	69.33

These can be broken down into the following sub-categories:

Category	Annual Energy Consumption (MWh)
Heating	18.32
Cooling	3.35
Auxiliary	3.18
Lighting	17.57
DHW	21.17
Equipment	41.33

1.1.6.1.1.2 Metering

Type of Incoming Energy	Main End-Use	Estimated End-Use Consumption	Meter no./ code	End Use/Area /System/ Circuit Or Tenancy To Be Measured	Measurement Method And Calculation Where Appropriate	Estimated Consumption Through Each Meter	List Of Meters	Location
Electricity	Incoming	69.33 MWh	n/a	Incoming	Meter	69.33 MWh	Main	Electrical Plantroom
Water	Incoming		n/a	Incoming	Meter		Main	Mechanical Plantroom
Gas	Incoming	35.59 MWh	n/a	Incoming	Meter	35.59 MWh	Main	Gas Meter Enclosure outside Plantroom

1.1.6.1.2 Metering Strategy

Read the meters yearly and log the readings on the meter reading pro forma in a separate file. From

these readings add up the energy consumption for each end use for the year and log these in the building performance section. (A meter reading pro forma template is provided on the CD-ROM associated with CIBSE TM31).

1.1.6.2 Simple Energy Do's and Dont's

1. Ensure windows and doors are closed when heating or cooling systems are in use and only operate one system at a time, do not heat and cool simultaneously.
2. Avoid blocking ventilation grilles with furniture and books as this will result in a lack of heating/ventilation.
3. Set thermostats to the required temperature then leave them alone. Do not use them as ON/OFF switches.
4. Do not overheat or over-cool your space as this increases running costs and causes extra emissions of CO2into the external atmosphere, contributing to global warming.
5. Only switch the lights ON as and when necessary as they result in significant emissions of CO2 into the external atmosphere, contributing to global warming.
6. Shut windows at night for security purposes and to prevent heat loss that could make your space cold when you come in the next day
7. Ensure that PCs, printers etc. are not left ON unnecessarily and have any energy saving features enabled as this will prevent your space from overheating and save energy, thereby reducing CO2 emissions to the external atmosphere that lead to global warming.

1.1.7 REPAIRS & MAINTENANCE

The Maintenance of the Building will need to be carried out suitable trained and competent personnel. Instructions and manuals have been provided to enable the operation and maintenance of the premises and its services and appliances, these includes their contact details.
Read these carefully to find out the extent of your responsibilities and keep them safely for future reference.

1.1.7.1 Contact Details

For the actioning of maintenance issues contact the School/Academy's Caretaker Mr J Blogs on 0123 456789 extension 123.
Mr Bloggs resides on site

1.1.7.2 Essential Inspection & Testing

Instructions and manuals have been provided to enable the operation and maintenance of the premises and its services and appliances. Read these carefully to find out the extent of your responsibilities and keep them safely for future reference.
Be careful when connecting appliances to the water supply and drainage. Check that hoses are properly connected and tightened before turning the water on. Check the connections once the

appliances have been in use.

1.1.7.2.1 Core Information

Item	Location	Notes /Cross Reference
Incoming electricity isolation point	Main switch to the main LV panel in the Electrical Plantroom	This will isolate the electricity supply to the whole building.
Incoming water main isolation point	Main valve in the Mechanical Plantroom	This will isolate the water supply to the whole building.
Incoming Mechanical Plantroom gas main isolation point	Mechanical Plantroom	This will isolate the gas supply to the Mechanical Plantroom.
Incoming Kitchen gas main isolation point	Kitchen	This will isolate the gas supply to the Kitchen.
Incoming telephone lines location	Server Room	n/a
Main fire alarm panel location	Main Entrance Lobby	n/a
Fire evacuation assembly point	School Field to the North Elevation	n/a

1.1.7.2.2 Inspection & Testing Check List

1.1.7.2.2.1 Building & Structural

Step	Detail
1	Asbestos - register & documentation system maintained & reviewed
2	Fall arrest - maintain & test by specialist - refer to building O&M manual
3	Roof & gutters - clean & maintain at least every 6 months
4	External drainage - inspect drains are free of blockages and clean
5	Parking areas - clean any oil, fluid leaks with an approved cleaning agent
6	Flooring - clean to manufacturers recommendations - refer to building O&M manual
7	Sanitaryware - clean to manufacturers recommendations - refer to building O&M manual
8	Below ground bypass oil/fuel separator - check to ensure it is maintained correctly

1.1.7.2.2.2 Mechanical Services

Step	Detail
1	Water hygiene and legionella checks.
2	Gas fired boiler & heating plant serviced & maintained
3	Chimneys and stacks tested for leaks and structural integrity
4	Pressurised system inspected and tested as required.
5	Air conditioning systems serviced and maintained
6	Fans and air handling plant is maintained including filters.
7	Kitchen equipment maintained including grease filters on extract systems
8	Kitchen extract and gas interlocks are checked

1.1.7.2.2.3 Electrical Services

Step	Detail
1	Electrical periodic inspection & test.
2	Emergency lighting - test to BS 5266.
3	Lighting protection - annual maintenance.
4	Lifts - inspected & maintained by specialist company
5	Portable appliance testing (PAT) - tested annually
6	Residual current devices (RCD) - test regularly & prior to plugging in appliances
7	Lighting - clean & maintain for optimum performance

1.1.7.2.2.4 Fire Systems

Step	Detail
1	Fire alarm systems - test to BS5839 - maintain annually by maintenance contractor
2	Fire extinguishers - inspect & maintain annually by maintenance contractor
4	Flammable liquids - check storage areas are secure & for leaks
5	Fire risk assessments - maintain documents & re-evaluate risks based on any alteration works that may effect fire alarm system, evacuation routes or comparmentation
6	Emergency fire plan - check plan is in place & up to date
7	Fire training /evacuation - ensure regular drills are carried out

1.1.7.2.2.5 Security

Step	Detail
1	CCTV system - inspect & maintain by specialist maintenance contractor
2	Intruder alarm system - inspect & maintain by specialist maintenance contractor
3	Access control system - inspect & maintain by specialist maintenance contractor

1.1.7.2.2.6 Disabled Systems

Step	Detail
1	Induction loop hearing systems - carry out functional tests
2	Disabled WC call system - carry out functional tests
3	Disabled Refuge call point - carry out functional tests

1.1.7.2.2.7 Energy Performance

Step	Detail
1	Review log book sections of this guide & update annually
2	Energy ensure consumption data completed and compared to historical data
3	Time clocks set correctly & to automatic mode & seasonal time adjustments BST, GMT)
4	Heating & cooling plant is maintained & reports maintained
5	Ensure lighting controls are correctly set & not overriden
6	Water control /saving devices are checked for correct operation
7	Ensure the ventilation system is running at the normal rate and not constantly running at a higher rate than required

1.1.7.2.2.8 Insurances

Step	Detail
1	Public entertainment licenses
2	Public broadcast licenses
3	Insurances - public, employees, buildings, contents

1.1.7.3 Legionella & Water Hygiene Control

The COSHH Regulations 2004 require employers carry out suitable risk assessment and management to any hazardous substances which maybe harmful to employees or members of the public.

One main area particular to Building Services involves implementing suitable controls to minimise or prevent exposure to the bacteria, which can cause legionnaires disease.

Typical water systems, which carry this potential risk, include:

1. Water systems emitting water droplets in a spray or aerosol form where water temperature is greater than 20 deg C.

If the site has a cooling tower or evaporative condenser you are required by the Notification of Cooling Towers and Evaporative Condensers Regulations to inform the Local Authority in writing with full details.

The employer or responsible person for the premises will need to carry out relevant assessment and controls such as

1. Identification
2. Risk assessments
3. Control and prevention measures
4. Checking and verification
5. Record documents

For more detailed guidance refer to
ACOP The control of legionellae bacteria in water systems L8 2000 Parts 1 and 2

Responsible Person

Name	Contact Details

1.1.8 REFITS & MODIFICATIONS GUIDELINES

Structural alterations and extensions

Before altering or extending your premises, consult a construction professional. You are likely to need permission before carrying out any work. Any structural alteration, extension or conversion of the building will have to comply with Building Regulations - in which case you will need formal permission from your local authority. Planning permission may also be necessary. Building Regulation and Planning permission are different, so approval for one does not signify approval for the other.

Refits and modifications

Prior to making alterations and modifications due consideration must be made to the location of equipment, structures as well as increase in occupation due to additional people or changes to operating hours.

All these changes will affect the way the building and its systems were intended to work, for example:

1. Covering heating / cooling equipment and ventilation grilles will reduce the effectiveness of the systems
2. Installation of screens will alter the air flow through the room and may affect the effectiveness of the heating, cooling and ventilation systems

3. Increasing the occupation density will lead to additional heat gains which will need to be counteracted by increasing the amount of ventilation and cooling available

The BRE Green Guide to Specification provides guidance for specifiers, designers and their clients on the relative environmental impacts of over 250 elemental specifications for roofs, walls, floors etc. For further information refer to www.bre.co.uk/greenguide .

Electrical

Work should be carried out by a professional electrician. The National Inspection Council for Electrical Installation Contracting (NICEIC) and the Electrical Contractors' Association (ECA) keep a register of approved firms.

1.1.9 TRAINING

Equipment and System operating routines should only be carried out by trained and competent personnel who have an understanding of the systems being energised and its implication on other related systems.

When operating and setting equipment and systems a systematic approach must be taken. Therefore it is essential that the operative understand the system controls and settings at each stage of operation, so that they can properly react to any unexpected or unforeseen condition and take the appropriate action.

The manufacturer's manuals and literature must be consulted and referenced to ensure that routines are followed particularly if there is an unexpected loss or supply or service.

For Specialist systems detailed in this Section as a minimum the authorised user should ensure the following operations and system information is available, noted and followed:

1. User Pass Codes
2. Engineer Pass codes.
3. Reporting of any faults, incidents or system alterations.
4. Ensuring system is tested and maintained in compliance with the relevant legislation, Codes of Practice, Fire Authority or Insurance Company requirements.
5. Record keeping of any events.
6. Emergency Contact Numbers

Access to mechanical and electrical plant rooms should be restricted to authorised, trained and competent personnel who are likely to be engineering staff or qualified personnel working under the control of the engineering staff. Works in the Switchrooms to be only carried out by authorized and competent persons appointed by a qualified engineers.

The Authorised Persons are deemed to be technically qualified and competent, who have been trained and understand the systems and their operation. The authorized persons must know how to operate plant and systems and deal with emergency and other out of control situations.

A Competent Person is once who has technical knowledge, experience and competency in the systems and be aware of the associated risks and dangers.

Both the Authorised and Competent persons should be familiar with First Aid including resuscitation.

1.1.9.1 Systems & Services Training Record

Item / System	Details of Training	Trainer Details	Date of Training
Environmental Controls - HVAC and Lighting			
Environmental Systems (HVAC)			
Security Systems			
Fire and Security Systems			
Emergency Procedures			
Operational Procedures - waste management, visitor management, fire risk assessments, first aid etc.			

1.1.9.1.1 Training Schedules

Index	Reference	Description	Company	Link
5.7.9.1.1_001	N/A	Catering Equipment Staff Training Schedule	SHINE FOOD MACHINERY LTD	Awaiting

1.1.10 FURTHER GUIDANCE

The following documents contain technical operating and maintenance information related to this project.

1.1.10.1 Links to Other Key Documents

Document	Volume / Book
Health and Safety File	Volume 1
Building Log Book	Volume 2
Building Fabric Manual	Volume 3A
Mechanical Services O&M Manual	Volume 3B
Electrical Services O&M Manual	Volume 3C

1.1.10.2 Useful Websites

The Carbon Trust
Providing specialist support to business and the public sector to help cut carbon emissions, save energy and commercialise low carbon technologies.
www.carbontrust.co.uk
Energy Saving Trust
An independent, UK-based organisation focused on promoting action that leads to the reduction of carbon dioxide emissions - a key contributor to man-made climate change.
www.energysavingtrust.org.uk
Other recommended websites :-
www.energysavingadvice.co.uk