1.5.3 BUILDING LOGBOOK

P21-017 – Kent Street Baths

Edmond de Rothchild

Building Logbook | December 2023

winvic

winvic.co.uk

Contents

1. Updates and Annual Reviews

The log book should be reviewed annually as part of the organisation's quality assurance system and an entry should be made for each review. Where the log book has been updated then the changed pages should be recorded.

Review date	Description of annual logbook review and updates made	Pages updated or added	Facilities manager's Signature	Date
08/01/24	Document for review			
	Document handed over			

1. Purpose and Responsibilities

Purpose of a building log book

This log book is an easily accessible focal point of current information for all those working in the building. It has four main functions:

- **Summary of the building:** it is a summary of all the key information about the building, including the original design, commissioning and handover details, and information on its management and performance. In being a summary, it does not wholly duplicate or replace the O&M manuals. The log book is necessary for compliance with Building Regulations Part L2.
- **Key reference point:** it is the single document in which key building energy information is logged. It may be regarded as the hub document linking many other relevant documents. The log book should provide key references to the detail held in less accessible O&M manuals, BMS manuals and commissioning records. It should therefore be kept in a readily accessible (designated) position in the main building operations room and should not be removed without the approval of the facilities manager.
- **Source of information/training:** it provides a key source of information for anyone involved in the daily management or operation of the building and to anyone carrying out work on the building and its services. It is relevant to new staff and external contractors/consultants and may play a role in staff training and induction.
- **Dynamic document:** it is a place to log changes to the building and its operation. It is also used to log building energy performance and continual fine-tuning commissioning. It is essential that it is kept up-to-date. Alterations should only be made with the approval of the facilities manager and should be signed and dated by that person.

Further guidance on using building log books is given in Action Energy Good Practice Guide GPG 348: *Building log books — a user's guide*, available from www.actionenergy.org.uk

This building logbook was prepared by:

Winvic Construction Ltd
Brampton House
Moulton Park
Northampton
NN3 6PZ

Dated: July 2022

Facilities manager responsible for logbook: Signed:…….

Contact No:……..

Signed:…… Date:…….

Key responsibilities of facilities manager:

— To ensure that the logbook is correct and up-to-date at building handover and when passing it on to a successor
— To ensure that the logbook is kept up to date on an ongoing basis including any changes to the building fabric, services, operation or management
— To ensure that building maintenance and energy performance are logged
— To ensure that all those working in the building are made aware of the information contained in the logbook
— To ensure that the logbook is always kept in its designated location.

2. Links to Other Key Documents

Document	Location
Emergency Procedures	Section 2.1 of the O & M Manual
Health and Safety	Section 2 of the O & M Manual
Schedule of Hazards Associated with Materials Used	Section 2.4 of the O & M Manual
Record Drawings	Section 7 of the O & M Manual
Equipment Logbooks (e.g., Boiler log book)	With Equipment
Testing & commissioning certificates & reports	Section 6 of the O & M Manual
Plant & Equipment data	Section 4 of the O & M Manual

3. Main Contacts

Emergency Contact Name 1	
Emergency Contact Name 2	
Electricity Emergency Contact	105
Gas Emergency Contact	National Gas Emergencies 0800 111 999
Water Emergency Contact	Severn Trent Water 0800 783 4444
Lead Designer Contact Name	Howells Ryanbd@howells.uk howells.uk +44 (0)121 666 7640
Building Services Design Contact Name	
Principle Contractor	**Winvic Construction Limited** Brampton House 19 Tenter Road Moulton Park NorthamptonNN3 6PZ Tel: 01604 678 960
Mechanical Services Installer	WMBS 657 Melton Rd, Thurmaston, Leicester LE4 8EB
Sprinkler Services Installer	Ecotect Fire Suppression Underbank Way Rossendale Lancashire BB4 5HR
Commissioning Managers Name	Peter Read **Winvic Construction Limited** Brampton House 19 Tenter Road Moulton Park NorthamptonNN3 6PZ Tel: 01604 678 960
Electrical Services Installer	Skerritts Electrical Limited 1087 Kingsbury Rd, Castle Vale, Birmingham B35 6AJ
Smoke Vent Installer	NSP Europa Building 35a Arthur Drive

	Hoo Farm Industrial Estate Kidderminster Worcestershire, DY11 7RA
Planning Supervisor Name	
O&M and Logbook Author Name	**Winvic Construction Limited** Brampton House 19 Tenter Road Moulton Park NorthamptonNN3 6PZ Tel: 01604 678 960
Mechanical & Electrical Consultant	
Facilities Management Contractor Name	
Maintenance Contractor Name	

4. Commissioning, Handover and Compliance

Commissioning overview

CIBSE Commissioning Code	Followed? (Yes/No)	Certificate included in appendix? (Yes/No)
Code M: Commissioning Management	Yes	No Section 6 of the O&M Manual
Code A: Air Distribution Systems	Yes	No Section 6 of the O&M Manual
Code C: Automatic Controls	Yes	No Section 6 of the O&M Manual
Code L: Lighting	Yes	No Section 6 of the O&M Manual
Code R: Refrigeration	Yes	No Section 6 of the O&M Manual
Code W: Water Distribution Systems	Yes	No Section 6 of the O&M Manual

Commissioning results

Commissioning period **24.10.22 to 28.10.22** **Signed:**	**1. Were the system and its controls installed as shown in the design drawings? (Yes/No)**	**2. Did operation meet the design specifications in all the required modes? (Yes/No)**	**3. Did the system operate efficiently in all modes? (Yes/No)**	**Comments/problems?** Where the answer is NO, indicate any commissioning problems or significant changes that have been made to the designs during (or as a result of) installation/commissioning, or any value engineering exercises, including any significant commissioning failures and remedial work that took place.
Water Chlorination Certificate	Yes	Yes	Yes	
External Services Test Sheet	Yes	Yes	Yes	
MCW Pipework Test Certificates	Yes	Yes	Yes	
HWS Pipework Test Certificates	Yes	Yes	Yes	
AGD Pipework Test Certificates	Yes	Yes	Yes	
TMV Test Sheets	Yes	Yes	Yes	
AC Commissioning Sheets	Yes	Yes	Yes	
Ventilation Air Balance Sheets	Yes	Yes	Yes	
WC Extract Air Balance Sheets	Yes	Yes	Yes	
Energy Monitoring & Leak Detection Commissioning Certificate	Yes	Yes	Yes	
Booster Set Commissioning Sheets	Yes	Yes	Yes	
Fire Damper Certificates	Yes	Yes	Yes	
Rainwater Harvesting Commissioning Sheets	Yes	Yes	Yes	

Air infiltration

A building air pressure test was carried out on the …….. and showed a measured air permeability of …….. which was within the specified target refer to building manuals for full rest report.

Handover

Handover took place on:	08/04/2024
End of defects liability period:	**/**/**
The handover procedure was managed by:	Ross Porter

The documents handed over are listed in section 3 – Key Documents

5. Overall Building Design

General description of building

Client requirements

The services to the building have been designed in accordance with all relevant building regulations
And the design criteria detailed below:

Special design features

Design assessment

In accordance with the requirements of the Building Regulations Part L2 carbon emissions were assessed using the carbon emissions method. This showed the annual carbon emissions of the building were proved to be no greater than that of from a notional building of the same size and shape designed to comply with the elemental method.

The assessment carried out on the building and issued to Building Control verified that the building fabric meets with the minimum performance levels stipulated and the plant and equipment selected for the M&E services systems were within maximum carbon emission limits. The submission to Building Control also demonstrated that the M&E systems were controlled in such a way the energy wasted was minimised.

Design Criteria

The design of the services is in accordance with the following reference standards, good industry practices and relevant documentation: -

- CIBSE Guides, Codes, Technical Memorandums and Practice Notes
- Institute of Plumbing IOP -
- Water Regulations Advisory Scheme WRAS
- BS 8558 - Guide to the design, installation, testing and maintenance of services supplying water for domestic use within buildings and their curtilages
- BS EN 806 - Specifications for installations inside buildings conveying water for human consumption. The Building Regulations - Approved Document G – Sanitation, hot water safety and water efficiency. The Building Regulations – Approved Document F - Ventilation
- The Building Regulations – Approved Document H – Drainage and Waste Disposal
- BS EN 12056 - Gravity Drainage Systems inside Buildings (Parts 1, 2, 4 & 5)
- COSHH Regulations

The following electrical services have been provided:

- Landlords lighting and small power
- Landlords fire alarm
- Containment to landlords' areas
- Submains cable to apartments from MSDBs
- Lighting, small power and fire alarm to apartments
- External lighting
- Door intercom
- Security/CCTV
- Lightning protection
- Secondary life safety supplies
- Photo Voltaic array

Electrical Design Criteria

The following design parameters have been employed when carrying out of all design works.

Electrical Installation	
Apartments	**Landlords**
BS7671:A1 2020 (18th Edition)	BS7671:A1 2020 (18th Edition)
Part L1A Building Regs	Part L2A Building Regs
Part M Volume 1 Building Regs	Part M Volume 2 Building Regs
BS9991	BS9999

Fire Alarm	
Apartments	**Landlords**
BS5839-6	BS5839-1

Emergency Lighting	
Apartments	**Landlords**
n/a	BS5266

Lightning Protection	
Apartments	**Landlords**
n/a	BS62305

Landlord Lighting	**Average Lux Level**
Circulation & Corridors	100
Staircases	100
Lifts	100
Rest Rooms	100
Washrooms / Bathrooms / Toilets	200
Plant rooms & switch rooms	200
Store rooms	100
Refuse	200
Entrance areas	200
Kitchen	500
Apartment	**Average Lux Level**
Main Areas – Living Room / Kitchen	Non-dimmable downlight adequate number of light fittings
Bedroom	1 Pendant,
External Lighting	**Average Lux Level**
Pathways, Main Access	10
Pathways, Secondary	

Benefits and limitations of the design

Key ‘dos and don’ts’

Do:

1. Monitor heating, cooling and ventilation to ensure good operation
2. Be aware of all risks
3. Monitor energy usage within the building, this will enable the facilities manager to adjust timed starts/holiday periods etc to avoid excessive energy waste.
4. Follow the manuals regarding regular maintenance
5. Consult the relevant person for advice and instruction if required

6. Employ specialists to service and maintain major plant items and systems including AC systems and controls, this will ensure their continued efficiency and use.
7. Consult with control specialist to request further training and demonstrations, if necessary, this will ensure that the building management system is operating to its best with regards to the specific building.

Don't:

1. Operate the plant 24 hours/day, seven days a week unless occupancy hours dictate this
2. Overheat the building
3. Leave heat generating equipment/machines left on unnecessarily and have energy saving features enabled as this will prevent your space from overheating and save energy
4. Open windows if cooling system operational.
5. Adjust set points or control logic from that set up without prior consultation with consultants or energy manager.

6. Summary of Areas and Occupancy

Occupancy and activities

The total number of occupants in the building is…… (Based on core hours of use)

Main occupied areas	Weekday hours	Saturday hours	Sunday hours	Total hours/week	Flextime (Yes/No?)	Late working sometimes (Yes/No?)	No. of occupants
Office Block							

Insert a summary of the main activities in each different zone of the building. Insert a summary of the likely occupancy patterns including numbers of people and occupancy periods.

Floor areas

The total floor area is m^2 (based on gross floor area)

	% Of total area by servicing system						Total %	Total area (m^2)
Area type	Untreated	Naturally ventilated	Mechanically ventilated	Heating Only	Heating & Cooling	Heated & Ventilated		
Total (%)								
Total area (m^2)								

Tenancies
Not applicable

Separately managed and special areas
Not applicable

Floor plans

Copies of thee electrical service drawings are available in the electrical section of the Building O&M manual provided under separate cover.

7. Summary of Main Building Services Plant

The main energy using plant (above 5Kw) installed at the site at handover is the

Main plant items are shown below. The operation & maintenance manuals provide further detail.

Main plant	Location	Input (kW)	Output (kW
Block A – Main Switch Panel	Block A1 - Lower Ground Floor – LV Switch Room 1		
Block A – Secondary Switch Panel	Block A2 – Ground Floor – LV Switch Room 2		
Block B – Main Switch Panel	Block B1 – Lower Ground Floor – LV Switch Room 1		
Block B – Secondary Switch Panel	Block B1 – Lower Ground Floor – LV Switch Room 2		
Block C - Main Switch Panel	Block C – Lower Ground Floor – LV Switch Room 1		
Block C – Secondary Switch Panel	Block C – Lower Ground Floor – LV Switch Room 2		
Block D – Main Switch Panel	Block D – Lower Ground Floor – LV Switch Room 1		
Block D – Secondary Switch Panel	Block D – Lower Ground Floor – LV Switch Room 2		
Sprinkler System Electric Pump Set			
Booster Set			
AOV Extract Fans	Car Park Plant Room	18KW	
AOV Extract Fans	Block A1 Roof	41KW	
AOV Extract Fans	Block A2 Roof	8.35KW	
AOV Extract Fans	Block B1 Roof	11.2KW	
AOV Extract Fans	Block B2 Roof	11.6KW	
AOV Extract Fans	Block C Roof	14.7KW	
AOV Extract Fans	Block D Roof	14.7KW	

SYSTEMS:

Mechanical Services

SYSTEMS:

Electrical Services

We have installed eight MCCB switch/panel boards

[A/MP1] – Block A Switch Board Landlords
[A/MP2] – Block A Switch Board Life Safety
[B/MP1] – Block B Switch Board Landlords
[B/MP2] – Block B Switch Board Life Safety
[C/MP1] – Block C Switch Board Landlords
[C/MP2] – Block C Switch Board Life Safety
[D/MP1] – Block D Switch Board Landlords
[D/MP2] – Block D Switch Board Life Safety

Main LV panel board [A/MP1] is a floor mounted panel serving general use and life safety circuits, located within Block A1 Lower ground floor LV switch room 1, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block A LV schematic for full details.

Main LV panel board [A/MP2] is a wall mounted panel serving life safety circuits, located within Block A2 ground floor LV switch room 2, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block A LV schematic for full details.

Main LV panel board [B/MP1] is a floor mounted panel serving general use and life safety circuits, located within Block B1 lower ground floor LV switch room 1, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block B LV schematic for full details.

Main LV panel board [B/MP2] is a wall mounted panel serving life safety circuits, located within Block B1 lower ground floor LV switch room 2, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block B LV schematic for full details.

Main LV panel board [C/MP1] is a wall mounted panel serving general use and life safety circuits, located within Block C lower ground floor LV switch room 1, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block C LV schematic for full details.

Main LV panel board [C/MP2] is a wall mounted panel serving life safety circuits, located within Block C lower ground floor LV switch room 2, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block C LV schematic for full details.

Main LV panel board [D/MP1] is a wall mounted panel serving general use and life safety circuits, located within Block D lower ground floor LV switch room 1, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block D LV schematic for full details.

Main LV panel board [D/MP2] is a wall mounted panel serving life safety circuits, located within Block D lower ground floor LV switch room 2, suitable for the supply capacity and complete with necessary outgoing MCCB's and a minimum of 25% allowance space capacity refer to Block D LV schematic for full details.

Consumer Units

Within each apartment we have installed an Scolmore Elucian Hi-integrity consumer unit and all the relevant RCBOs to serve the apartments small power and lighting requirements with 2 spare ways for future use. The consumer unit is surface mounted and located in the utility cupboard of the apartment.

All apartment meters, electricity cut-outs and associated multi-service distribution boards and cabling has been supplied, installed and tested by others.

Small Power – Communal Areas

Within the communal areas and landlord areas we have installed the following Click Scolmore accessories;

Metalclad – Riser cupboards, Store/Plantrooms and within Ceiling Voids to include emergency test Key switches, light switches, double socket outlets, switched fused connection units, and unswitched fused connection units.

Mode White Plastic – Corridors, Entrance Lobbies and Reception Areas, to include light switches, single socket outlets, double socket outlets, switched fused connection units, unswitched fused connection units.

All white plastic single socket outlets for cleaner's use are engraved 'CLEANERS ONLY'

Small Power – Apartments

Within the apartments we have installed Click Scolmore Mode electrical accessories with white plastic finish and include;

- 13A 1 Gang Switched Socket
- 13A 1 Gang Unswitched Socket
- 13A 2 Gang Switched Socket
- 45A Cooker Switch
- 45A Cooker Connection Plate
- Dual Voltage Shaver Socket [115v/230v]
- 3 Pole Fan Isolator
- 4 Way Multi Gang Grid c/w Dishwasher, Fan, Fridge Freezer & Cooker Modules
- 13A Switched Fused Connection Unit
- 10A 1 Gang 1 Way Light Switch
- 10A 2 Gang 2 Way Light Switch
- 1 Gang Blank Plate
- 2 Gang Blank Plate

Locations of electrical accessories as denoted on 'Typical Layout Drawings' within Section 9 of the Electrical O&M manual.

General Lighting – Communal Areas

Car Park, Storerooms & Plant Rooms

Within the car park, storerooms and plant rooms we have installed standard LED and emergency type Sylvania Resisto LED fittings with IP65 rating and 4000K colour temperature.

Stairwells

Within the stairwells we have installed emergency type Sylvania Giotto 305 LED circular bulkhead fittings with IP44 rating and 4000K colour temperature, each fitting has a built in microwave sensor to control the light.

Corridors, Lobbies,

Within the corridors, lobbies, we have installed standard and emergency type Sylvania Start downlight LED fittings with IP20 rating and 4000K colour temperature.

Riser Cupboards

Within the riser cupboards we have installed standard LED and emergency type Sylvania Resisto LED fittings with IP65 rating and 4000K colour temperature.

Emergency Lighting

Emergency lighting either is integrated into the main light fittings or a standalone emergency spot light has been provided to corridors. Throughout the site we have installed emergency exit fittings with running man legends to highlight points of egress. External to final exit doors we have installed LED emergency bulkhead fittings.

General Lighting Control – Communal Areas

Car Park

Within the car park we have installed IP65 microwave presence detectors installed to the underside of the lighting trunking designed to provide automatic control of the lighting. The detector works by emitting low power microwave sensors and measuring the reflections as the signal bounce off of moving objects over long distances. The internal light sensor provides additional energy saving by monitoring the natural light and only switching the lighting on when the natural light drops below a pre-set level.

Receptions, Lobbies, Plant Rooms Cleaner's Stores

We have installed ceiling mounted occupancy sensors to provide automatic control of the lighting. Functioning as a presence detector the units will turn the lights on when the room is occupied and off when the room is unoccupied.

Corridors

Within the corridors we have installed surfaced mounted long-range occupancy sensors with an adjustable head to provide automatic control of the lighting, ideal for corridor applications where a long narrow detection is required.

Emergency Lighting

Emergency lighting test key switches have been installed adjacent to each distribution board feeding the lighting circuits to allow the testing of the emergency lighting.

Emergency light fittings are fitted with a visible green LED charging indicator and the system is designed in accordance with BS 5266.

General Lightning and Lighting Control – Apartments

Within all lounges, we have installed JCC GU10 ceiling recessed LED downlights with IP20 ratings, user replaceable LED GU10 lamps have been installed with a 3000K colour temperature. The fittings are controlled via wall mounted light switches.

Within kitchens & bathrooms we have installed JCC GU10 ceiling recessed LED downlights with IP65 rating and 3000K colour temperature. The fittings are controlled via wall mounted manually operated rocker switches.

Within bedrooms we have installed Hager 6" Pendant sets and user replaceable B22 lamps, 3000K colour temperature. The fittings are controlled via wall mounted manually operated rocker switches.

For apartments with balconies we have installed wall mounted search light up/down wall light LED GU10 fittings with IP65 rating and 3000K colour temperature. The fittings are controlled via a wall mounted light switch adjacent to the balcony door.

External Lighting and Lighting Control

The lighting within the general access areas on the ground floor entrances and podium is illuminated with the use of floor mounted Lighting Project Solutions LED lighting columns, lighting bollards and inground LED uplighters and spike lights. The fittings are controlled via a timeclock located in the feeder pillar situated on the podium between Blocks B &C

In addition to this lighting, the private spaces outside of we have installed wall mounted search light up/down wall light LED GU10 fittings with IP65 rating and 3000K colour temperature. The fittings are controlled via a wall mounted light switch adjacent to the balcony door.

Fire Alarm – Communal

The communal areas are protected by an addressable fire alarm system. The system is a mixed category system, Category L5 has been used in corridors & stairwells serving residential areas as means of operating the AOV within residential corridors and stairwells. Category L2 protection has been used on amenity areas where simultaneous evacuation is required.

All panels have been programmed with zones and areas with a zone chart to match installed above each panel, All panels are networked back to the main panel located within Block A's concierge. Each block is capable of being removed from the network and operated separately if required in future.

Block A – Main Panel is situated in the ground floor reception / concierge,
Block A1 – Repeater Panel is situated in the ground floor entrance of Stair core A1
Block A1 – Repeater Panel is situated in the ground floor entrance of Stair core A2
Block B1 – Main Panel is situated in the lower ground floor entrance of Stair Core B1
Block B1 – Repeater Panel is situated in the ground floor entrance of Stair Core B2
Block C – Main Panel is situated in the ground floor entrance of Stair Core C
Block D – Main Panel is situated in the ground floor entrance of Stair Core D

All audible and visual output devices are configured to operate upon general alarm. An alarm generated from either a detector or manual call point will initiate an evacuation response. The audibility of the system has not been designed in accordance with BS 5839.

Interfaces have been installed and configured to operate in general alarm and are provide for the following;

- Lifts
- Door Access
- AOV Smoke Extraction
- Sprinkler Monitoring
- Mechanical Ventilation

The interfaces for the AOV and sprinkler system have been confirmed to meet the cause and effect requirements provided by the specialist contractors.

Manual call points have been installed to ground floor final exits doors of residential areas and to the L2 protected area. Testing of these devices can be completed using a special tool which is inserted to the underside of the unit, some of these tools have been left onsite. Clear lift flap covers have been installed to the units to prevent accidental operation.

Disabled Refuge (Emergency Voice Communication System)

A disabled refuge system has been installed as shown on as fitted drawings 0300s in section 11 of this manual.

Simple and effective 'full duplex' two-way communication is essential, firstly to assist rescue teams in determining where assistance is required and secondly to reassure people help is on the way.

A refuge system provides a means of calling for assistance in the event of an emergency. A designated "safe area" isolates exiting occupants from the effects of smoke and heat during a fire or emergency situation. The communication system allows the person in need to inform security of their location in the building and provides an area that are relatively safe places where people who cannot easily use fire escapes.

When a call is generated at the refuge area, the central control panel will sound and display the location of the incoming call. Lifting the handset and pressing the appropriate zone button at the central station will open the speech channel (loudspeaker) allowing a 'full duplex' conversation to take place. The disabled refuge outstation can be used to call for assistance and reassure the person until help arrives.

The system is compliant to BS9999 & BS5839 Pt9. 2010 and has Battery support of 24 + 3 hours (emergency). CE 2012 certified.

A main panel is installed in Block A reception / concierge c/w with handset and visual indicators for use and fault.
These are linked to the outstations located;
Block A, Stair core A1, level B0 serving the lower ground floor ancillary accommodation.
Block A, Stair core A1, level 1 serving level 1 amenity accommodation.
Block A, Stair core A1 level 2 Lobby serving level 2 amenity accommodation.
Block A, Stair core A2 level 1 Lobby serving level 1 amenity accommodation.
Block A, Stair core A2 level 2 Lobby serving level 2 amenity accommodation.

In addition to Block A's main refuge panel, Blocks C & D also have a main panel located at the ground floor entrance of each stair core. Block C & D's main panel is repeated to Block A's main panel in the reception / concierge.

Block C, main panel, c/w handset and visual indicators for use and fault. Are linked to Block C, Stair core level B0 - serving the lower ground floor ancillary accommodation.

Block D, main panel, c/w handset and visual indicators for use and fault. Are linked to Block D, Stair core level B0 - serving the lower ground floor ancillary accommodation.

Note that Block B's amenity and lower ground floor areas have escape routes at each level leading to the podium or street level.

The system outstations are wired in 1.5mm enhanced fire rated cable.

Smoke/Heat Detectors – Apartments

Within the apartment bedroom[s] and utility cupboards we have installed Aico mains powered, battery back-up interlinked smoke detectors, within the living room / kitchen we have installed Aico mains powered, battery back-up interlinked multi-sensor (heat/smoke) detectors. Each device has a "Test" button to test, silence the alarms. The alarms are certified to EN 14604:2005+AC:2008 and provide a sound level of 85db[A] at 3m [minimum]

CCTV System

A full 1080P HD Dahua CCTV system has been installed to internal and external areas. All internal cameras are 5MP full 1080P dome cameras with a fixed lens, all external cameras are 5MP full 1080P IP67 dome cameras with vari-focal fixed lens. All cameras are powered by the NVR a PoE switch located in the nearest coms room, each camera is connected to the network using CAT6 cable.

A 28" colour monitor has been installed in the main reception and Block A coms room for interrogating the system. The monitor has a HDMI extender to the NVRs and USB extender for mouse control of the NVR.

Access Control and Video Intercom

The resident and staff access control system is an NSP PC based system with proximity readers to control external doors, internal doors. The system was procured directly between NSP&Winvic, Refer to NSP as built drawings for location.

The door access controllers are located in risers, switch rooms or plant rooms as denoted on the 'as built' drawings. Each door has a proximity reader, request to exit button, green break glass and magnetic lock. Each door controller is supplied with battery backup.

The NSP access system is PC based [PC supplied by others] for the software to be installed on. The software will allow staff to add and remove user from the system via a desktop reader.

A NSP digital intercom system has been installed with an external keypad at the main reception entrance and to allow visitors to contact the apartments and the main reception to gain access into the building.

All cabling for the intercom system is CAT6 cabling.

TV System

The TV system has been designed and installed to provide Freeview and Sky Q satellite services on coaxial cables to each apartment from a central, roof mounted aerial array.

From the rooftop array, a 5-core coaxial cable has been installed down to numerous risers within the building and connected to amplifiers and multi-switches.

For one bed apartment, coaxial cables have been installed from the local riser to the lounge and terminated into a quadplexer. A return module has been installed adjacent with a single coax cable linked to the bedroom to enable the provision of TV signals within the bedroom.

For a two-bed apartment, a coaxial cables have been installed from the local riser to the lounge and terminated into a quadplexer. A single coaxial from the lounge to the utility cupboard has been installed and terminated into a splitter, a single coaxial cable has been installed from the splitter to each bedroom and terminated into single coax module to enable the provision of TV signals within the bedrooms.

If the tenant takes out a SkyQ contract, sky will provide the residents with a SkyQ box which can be connected into the lounge quadplexor plate, additional SkyQ Miniboxes can be added to the contract and used to watch Sky within the bedrooms.

All locally available Freeview digital services and Sky Q is available within each apartment, subject to installation and subscriptions of kit/services.

Lightning Protection

A level I lighting protection system has been installed conforming to BS EN 62305:2011.

	BS EN 62305:2011 Level IV Lightning Protection System
Air Termination Work	A faraday cage system compromising of an amalgam of 25x3mm bar

	aluminium roof conductors fixed to all roof areas with appropriate fixings
Down Conductor[s]	The structural steelwork has been utilised as the conductive discharge path to earth
Bonds	1No. Equipotential bond to incoming mains Various bonds at roof at roof level to extraneous metalwork/plant* Various structural steel at low level Various structural steel at high level
Joints	As necessary, bolted and clamped
Test Points	Clamps with within inspection housing
Earth Termination[s]	2.4m x 16mm copper bonded steel earth electrodes complete with concrete/polymer lockable inspection pit

* Roof Plant – Where bonding to roof mounted plant is required, unless otherwise specified we have assumed that the plant casing is sufficient thickness to withstand a direct lightning strike without puncture to the casing and thus be directly bonded to the system.

Electric Heating – Communal Areas

Within the ground floor communal areas, we have installed ATC Almeria electric panel heaters in 500/750/1000/1500w and 2000w ratings [selection dependant on room size] with built in digital thermostatic & time control.

Electric Heating – Apartments

Within the apartments we have installed ATC Almeria electric panel heaters in 500/750/1000/1500w and 2000w ratings [selection dependant on room size] with built in digital thermostatic & time control.

Within the bathroom and ensuites we have installed 300w electric towel rails with smart thermostatic elements regulated at 50 degrees.

Locations of as denoted on 'Typical Layout Drawings' within Section 9 of this manual.

SYSTEMS:

Sprinkler System

SYSTEM COVERAGE
Kent Street Baths features Blueflow® fire sprinkler protection. The corridors are not sprinkler protected.

The system has been installed to comply with a Fire Engineered Strategy by BB7 (BB-DFS-HIG00006-01-C).

DESCRIPTION & SPECIFICATION

The residential fire sprinkler system meets the minimum requirements as detailed for Category 2 systems within Code of Practice BS 9251:2014 Fire Sprinkler Systems for Domestic and Residential Occupancies

Any minor variations are set out on the fire sprinkler compliance certificate. It is designed for any two sprinklers to activate simultaneously, and to run for minimum 60 minutes duration of supply.
The system is fed from the dedicated sprinkler pump set (by Ecotect) and shared water storage tank (by others), with distribution throughout the property by Ecotect.

A valve control and flow switch per floor level are located within the mechanical riser cupboard, with access panels by others. There is also a valve set at the base of the system in the plantroom.

The commericial fire sprinkler system meets the minimum requirements as detailed for Ordinary Hazard 2 systems within Code of Practice BS EN:12845 (2015 +A1 2019) Fixed firefighting systems, Automatic sprinkler systems

Any minor variations are set out on the fire sprinkler compliance certificate. It is designed for any 180m^2 area of sprinklers to activate simultaneously, and to run for minimum 60 minutes duration of supply.
The system is fed from the dedicated sprinkler pump set and water storage tank (by Ecotect), with distribution throughout the property by Ecotect.

SPRINKLER ACTIVATION
The Blueflow® fire sprinkler system is designed on a dedicated pipe circuit. The heads operate independently whereby the nearest sprinkler will activate triggered by heat from the fire. For instance, a fire in a bedroom will only activate the sprinkler(s) in that room. Cooking fumes and smoke from cigarettes will not activate the sprinkler system.

Usually, individual sprinkler heads are unobtrusive and fitted flush to the ceiling or wall: they look similar to large drawing pin heads, about 80mm in diameter. Tamper-proof, they may be supplied to match the interior colour scheme.

On activation, sprinklers discharge a calculated, relatively small amount of water from the nearest sprinkler head. This is in a spray pattern designed to damp down the fire and control its growth. Usually this will be sufficient to extinguish the flames thus minimising smoke and fire damage: controlling the fire at this stage greatly reduces the damage caused by Fire Service action which would, typically, use 10-20 times as much water.

The odds against an accidental discharge by virtue of manufacturing defect is 1 in 14 million.

Do's and Don'ts of BLUEFLOW® Sprinkler Systems

Do		Don't	
✓	Keep the water & electricity supply turned on.	X	Turn off the system.
✓	Be aware of the location of the stop taps.	X	Tamper with the sprinkler heads.
✓	If there is a power failure for more than 24 hours, contact your electricity supplier.	X	Paint, seal or wallpaper over the sprinkler heads or cover plates.
✓	Ensure that no part of the sprinkler system is subject to extremes of temperature (no less than 5º Celsius and no greater than 38º Celsius).	X	Tamper with the alarm panel or sounders (where applicable).
✓	Ensure the system is inspected annually by authorised personnel.	X	Make changes to the property layout without consulting the system designer, as these may affect the coverage of the sprinkler system.
✓	Keep the valve controls accessible for future inspection visits.	X	Allow unauthorised personnel to make changes to the sprinklers, water supply or valve set.

What to do in the event of Activation

- Evacuate according to your management procedures.
- Call the Fire Service.
- Leave the system running even though it might look like the fire is out.
- Wait until the Fire Service arrives. They will shut down the system.
- Call the installation or maintenance company to re-commission the system.

SYSTEMS:

Smoke Vent System

8. Occupant Information

Your working environment

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

Heating:

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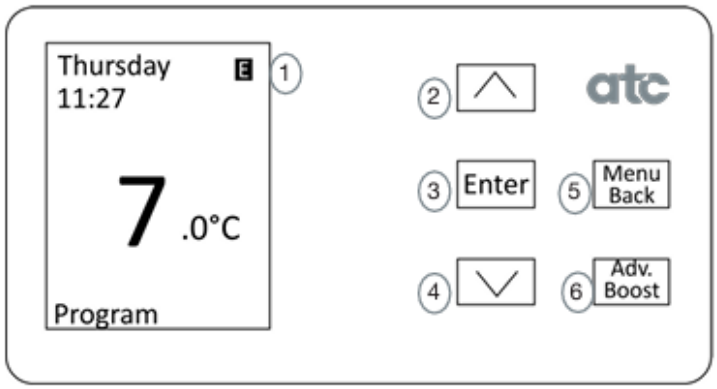
FIRST USE AND SETUP

The Almeria Eco digital panel is equipped with a TFT LCD screen and 5 touch sensitive buttons to allow easy programming.



1: Screen
2: Up Arrow
3 Enter Key
4: Down Arrow
5: Menu & Back Key
6: Advance & Boost key

Start Up: The first time the heater is turned on it will ask for the date, the current time and if you want to activate the Daylight Savings function. To input information into the heater use the ▲ and ▼ arrows to select the correct area on the screen that you would like to change and once the area is highlighted touch the enter key. This will allow you to change the data, once the correct information is showing touch enter to save.

Daylight Savings (DST Mode): The daylight savings feature will automatically adjust the time of your heater each year on the last Sunday in March and October. The user will be asked to check if they want this feature on or off when the heater is first turned on. It can also be changed from the time menu. When Daylight Savings is active there is an S (S) shown on the Screen beside the weekday.

Manual Mode: On *first start up* after the date and time are set the heater will default into manual mode. The screen will show the current set temperature and manual at the bottom of the screen. The temperature can be adjusted directly with the ▲ and ▼ keys.

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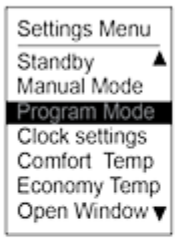
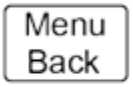
SETTINGS, STANDBY AND BOOST



Settings Menu

The Almeria Eco has been designed with an easy to ready English language menu system to allow the user to quickly understand the features of the heater and navigate around the menus.

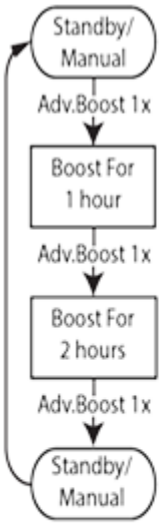


To access the settings menu on the heater touch the Menu/Back key and use the ▲ & ▼ keys to select the menu item needed and touch Enter.

To exit the menu touch the Menu/Back key again to return to the previous operation screen

Standby Mode

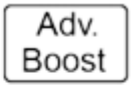
The Almeria Eco heater features a standby mode which will set the heater in a low power usage mode and stop all heating. To enable standby select it from the settings menu and touch enter. Once standby is activated the heater will immediately cancel any heating programs and turn the screen off.



Boost modes

There are 3 boost modes in the Almeria Eco heater; these correspond to the 3 operating modes, Standby, Manual and Program.

In both Standby and Manual mode you can boost the heater to the comfort setting for a period of 1 or 2 hours.



To activate the boost, touch the Advance/Boost key. The heater will boost to comfort temperature for a period of 1 hour and the screen will show "**Boost 1h**", if you touch the key again it will boost for 2 hours showing "**Boost 2h**".

If you touch Adv. Boost a third time then the feature will deactivate and the heater will return to the previous mode of operation. If the heater was in standby, it will return to stand by with the elements turned off.

Advance Boost

When running in program mode, touching the Advance/ Boost key will activate the next programmed heating period and show "Advance" on the screen, a 2nd touch activates 1hour boost, 3 times activates 2-hour boost and 4 times returns the heater back to program mode.

In all boost modes the temperature can be directly adjusted with the ▲ and ▼ keys.

Note: Program advance can be used to turn the heater on or off depending on the current operation of the heater.

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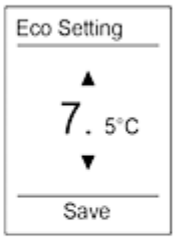
SETTING THE RUNNING TEMPERATURES

Temperature Set-points:

There are two adjustable temperature settings that can be individually set. These set points are used for the "on" and "off" settings for the heater.

The Comfort setting is used for the room temperature that you want to maintain when the heater is **on**.

The Economy setting is for when the heater is **off**.

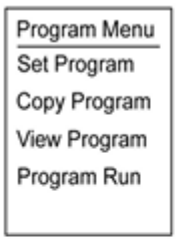


The Factory Default Setting for Comfort is 21°C and for Economy is 7°C, both of these settings are reset to the factory default when you reset the heater.
To indicate which temperature setting is active when the heater is in program run mode there is either a C (C) or an E (E) shown beside the Weekday .

Heating Indicator:

In any of the operation modes the Almeria Eco heater will display the indicator shown on the left on the bottom of the display to indicate that the elements are turned on.

PROGRAM MENU



The Almeria Eco heater is equipped with a 24 hour 7 day time-clock with 4 time periods per day. Each time period can be programmed with an hour and minute time setting.
Each entered setting is for comfort temperature, time periods outside of the set times are maintained at the economy setting.

The Program menu has 4 settings, Set Program, Copy Program, View Program and Program Run.

To enter a program into the Almeria Eco heater bring up the settings menu from any of the operation screens, select Program menu and touch enter.

When in the Program menu select Set Program and touch enter.

The Almeria Eco heater will ask the user to select the day that they want to program, use the ▲ & ▼ arrows to select the day and touch enter, this will bring up the blank programming screen.

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Each "- -" section can be individually selected and set. Select the first - -, touch enter and use the ▲ & ▼ to set an hour and touch enter to save, move to the minutes and set your required time.
When you move to the off time and select Enter, the heater will default to the following minute after the previous on time. E.g. If you had entered 07:00, the off time automatically changes to 07:01; it is not possible to set an off time prior to the current start time.

The user can set up to 4 on and off times per day; if a lesser number of periods is required then the user can skip the remaining "- -" and select Save at the bottom of the screen. The minimum number of periods required to set a program is one on period and one off period.
In order to run a program that you have saved return to the program menu and highlight the "Program Run" option and touch Enter to select. The heater will return to the main program run screen and show the current set point, program and if the Almeria Eco is heating or not

Copying a Program
Once you have a program stored on a particular day, that program can be copied from that day to any other day or group of days by selecting "Copy Program" from the Program menu and choosing the day that has the saved program and touching enter.

Once you have selected the day you want to copy from, the screen will change to show the days that you can copy to. Select the individual day or a number of days to copy the program to.
In the figure to the right the program shown above is copied to Monday, Tuesday and Friday. To save the copied days select Copy at the bottom of the screen and touch Enter to save.

View Program
The View Program menu is very similar to entering a program however it only allows you to see what you have entered; it doesn't allow any changes to be made the program itself.

To see your saved program, select View Program from the program menu, touch enter and then select the day you wish to review and touch enter.

The currently saved program will then be shown on the screen
To exit the review, touch Menu/Back until you return to the operation screen.

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KEY LOCK

The Almeria Eco heater has a built in lock screen to prevent any accidental changes to the heater.
The Key-lock is activated by holding the ▲ & ▼ keys down for 5 seconds. When the heater is locked the Key-lock screen with a padlock shows whenever a key is touched.
The heater is unlocked in the same way by holding the ▲ & ▼ keys down for 5 seconds

OPEN WINDOW DETECTION

The Almeria Eco Heater has an open window feature to conserve energy if there is a sudden temperature drop caused by opening a window in the room and the heating is on. The open window feature can be turned on or off in the settings menu.

If the heater detects a drop of 4 degrees in a short period of time, it will turn off the heating elements and display an icon of an open window in the bottom of the screen. (See right for example)

The heating can be brought back on by touching the enter button after the open window function has activated. If the open window function has activated and the heater has been running in program mode, when the next programmed heating time period begins the open window mode will be reset.

SOUND

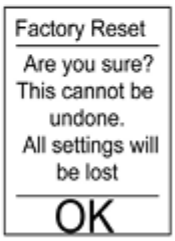
The Almeria Eco panel heater will beep each time a key is touched.

Enter & Adv. Boost

To turn to turn this sound off touch Enter and Adv. Boost at the same time.
Each time the buttons are touched together will turn the sound on or off.

FACTORY RESET

Occasionally it may be necessary to reset the Almeria Eco heater, for example if you want to clear out the program completely and start from the beginning.
To complete this process touch the Menu/Back button, select factory reset from the menu and touch enter. The Factory reset screen will appear (Shown right). As this process completely removes any user information you will be asked to confirm the reset and then confirm a second time.
Once you press Enter a second time the heater will remove all user data and return to the initial time, date and DST menu. **Please note, this process cannot be undone**.



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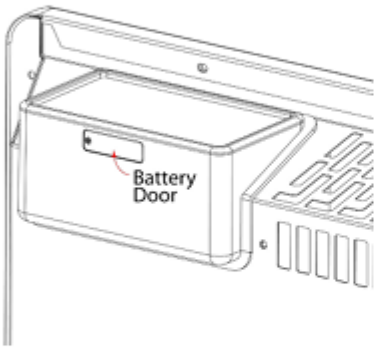
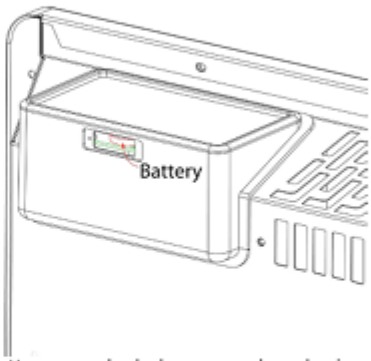
BATTERY REPLACEMENT

The Almeria Eco panel heaters have a replaceable battery to store the program and time when the heater is powered off.
Over time and with use the battery will discharge and eventually require replacement. To replace the battery, the heater should be powered off and then removed from the wall.

On the back of the control box is a battery door (See below), remove the door with a small screwdriver and the coin cell battery is able to be removed. Slide the battery out of the heater and replace with a new Lithium CR2032 coin cell. Replace the Battery door and Reinstall the heater on the wall.





Please note: Removing the battery when the low battery symbol shows and replacing it within 3 minutes of removal will keep the time and program, after 3 minutes the time date and program will be lost.

MAINTENANCE

The Almeria Eco Electric Panel heaters contain no user serviceable parts and therefore require very little maintenance. Ensure that there is no excessive build-up of dust/dirt on the heater element as this can cause overheating and premature element failure.

IMPORTANT

Failure to keep the Almeria Eco heater clean may result in dust becoming burnt and depositing on the wall above the heater in the form of dark streaks or patches. This type of marking is expressly due to failure to keep the heater and surrounding area clean. ATC take no responsibility for any such damage caused

To clean the outside of the appliance, wipe off dirt with a damp cloth.

Do not use any aggressive cleaning agents. Do not immerse the heater in water or any other liquids.

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ATC Almeria Eco
Landlord Mode Instructions (Runback)

The DPH Eco Heater comes with a runback mode for use when the heater will be installed in areas where restricted end user control is required.
Runback Mode allows the user to set up the heater with limited controls to conserve energy.

The heater will only work using the parameters set on installation, working in a similar fashion to a boost function.

Once set up the Almeria Eco Heater can then be code locked and only a person with access to the code can edit the settings. This is an ideal setting for Landlords who wish to guarantee efficient use of the heaters.

When Runback mode is active it allows the end user to set the radiator to run for a specific preset amount of time and temperature.
It is also possible to set a maximum temperature (Max Temp) above the Runback setting to allow the end user to increase the temperature within the limits allowed; or to setup a lower temperature (Setback) to prevent the room falling below a certain limit.

Runback mode is activated by touching and holding the Enter and Menu/Back keys together until the screen asks for a code.
(The end user will have no access to the runback settings without the code.)

ENTERING RUNBACK MODE SETTINGS

Input 0000 and touch Enter to access the menu.

The first time entering runback mode it is strongly recommended that an alternative code to the manufacturer default of 0000 be saved.

To change the password, select change code from the menu, input the current password and touch enter. Select a new desired code and touch enter again. Finally enter the new code a second time as confirmation. If the two codes entered are different, the heater will reject the change and revert to the previous code.

Please Note: It is not possible to reset the heater if you forget your password.

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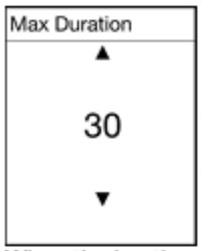
MAIN MENU SCREEN

On entering the correct password, the main screen with all the options for the Runback operation is shown:

Runback Lock
Change Code
Max Duration
Max Temp
Runback Temp
Runback Enable
Setback Temp
Setback Enable

Change code = Allows the access code to be customised. *(see above)*
Max Duration = Setting the time that the heater runs for when in Runback heating mode.
Max Temp = Maximum room temperature that the end user will be able set.
Runback temp = Temperature that the heater starts at when the end user activates the Runback heat mode.
Runback enable= Menu to turn runback mode on or off.
Setback temp = Lower temperature that the heater will maintain when it is "off" i.e. when it is not in the Runback heat mode.
Setback enable = Setback mode on or off.

MAX DURATION MENU



The runback mode allows a maximum operating time of 480 minutes (8 hours), set in the following increments:
0→30→60→90→120→240→360→480→0

This setting determines how long the heater will run for when the user starts the heating cycle.
To set the Max Duration, use the ▲and ▼keys to select the time and then touch enter/back to save the setting required.

When the heating is set, the user can choose any time setting up to the limit set in this menu, subsequent activation of the heating will start at the same time as set previously.

E.G.: Max Duration is set to 120min, heating requested for 90mins, the next time the heating is requested it will start at 90 min.

TEMPERATURE SET POINTS

There are three temperature settings that can be set in Runback mode. They have been designed to allow various different operation situations.

These temperature settings can be broadly characterized by "on", "off" and "adjustment" settings.

ON = Runback temp, this is the set point used to choose the temperature the heater comes on each time it is activated.

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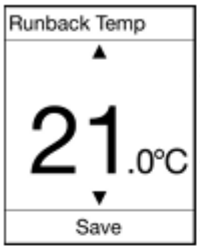
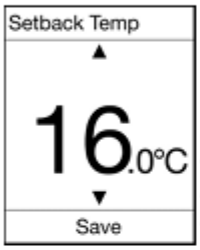
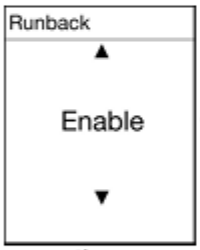


OFF = Setback temp, this set point will be used to set a temperature for when the heating is not required by the user, it will prevent the temperature falling below the value set. It is used to maintain the "off setting".
Setback can be turned off, in this case, when the heater is not activated the temperature will fall to the minimum allowed by the heater (5°C).

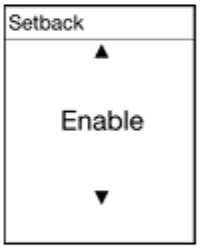


ADJUSTMENT = Max Temp, this setting allows a higher set point than runback to be set allowing the end user to change the temperature above the "ON" value. This gives the user a limited degree of control. Max temp also allows the heat to be limited to the same value as runback. When Max temp is set to the same value as Runback, the user will only be able to adjust the temperature down from the "ON" value.
To adjust any of the set points, enter the appropriate menu and select the desired temperature with the ▲ and ▼ keys, once the required temperature is shown, touch enter to exit and save the value.

ACTIVATING RUNBACK MODE



In order to activate the Runback mode, enter the "Runback Enable" menu, select Enable and touch Enter. Setback - if required- is also activated in the same way.
To exit runback mode and enable ordinary heater operation, select disable in the Runback Enable menu.



NOTE: In order for Runback mode to engage correctly, you must touch "Menu/Back" until see either the Runback or Setback Operation screens are shown. [P in upper right corner]

USING THE HEATER IN RUNBACK MODE

When the heater is in operation mode it will show a "P" in the upper right corner of the screen, to activate the heating touch "Enter" to choose a time setting that the heater should be active for.

Depending on the settings chosen during set up the temperature can be adjusted up or down with the ▲ and ▼ keys.

Once the heater is functioning in the Runback mode, the menu can be accessed with the "Menu/Back" key and then entering the correct code.

NOTE: The "Adv/Boost" key has no function and does not operate in Runback Mode.

Cooling:

Ventilation:

Simple energy 'dos and don'ts'

- Avoid blocking electric panel heaters or ventilation grilles with furniture and books as this will result in a lack of heating/ventilation.
- Set thermostats to the required temperature then leave them alone. Do not use them as ON/OFF switches.
- Do not overheat your space as these increases running costs and causes extra emissions of CO_2 into the external atmosphere, contributing to global warming.
- Only switch the lights ON as and when necessary as they result in significant emissions of CO_2 into the external atmosphere, contributing to global warming.
- 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.
- Switch off all manually controlled fans and equipment when not in use; designate a person to ensure this is carried out.
- Ensure that P.C.'s, printers etc. are not left on unnecessarily and have energy saving features enabled as this will prevent your space from overheating and save energy, thereby reducing CO_2 emissions to the external atmosphere.

9. Metering, Monitoring and Targeting Strategy

Metering schedule

The following provides a list of meters and design estimates of the likely end use consumptions. See Action Energy General Information Leaflet GIL 65: *Metering energy use in new non-domestic buildings,* for an example, including how to arrive at a good metering schedule. A copy is provided on the CD-ROM associated with CIBSE TM31 and printed copies are available from (www.actionenergy.org.uk). CIBSE TM22 also provides a means of assessing energy use in buildings.

Total estimated incoming fuel			Electricity: kHz/yr. Other: Litres					
Energy			**Meters**		**Method**		**Meter location**	
Type of incoming energy	Main end-use	Estimated end-use consumption (kHz/yr.)	Meter no./code	End use/ area/system/ circuit or tenancy to be measured	Measurement method and calculation where appropriate	Estimated consumption through each meter (kHz/yr.)	List of meters	Location
Gas								
Water								
Water								
Water								
Water								
Water								
Water								
Electric	Block A Main Landlord Supply							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Mechanical							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Lower Ground Floor Lighting & Power Level 00							Block A1 LGF LV Switch Room
Electric	Block A Lighting & Power (level 00-02)							Block A1 Level 01 Riser Cupboard
Electric	Block A Lighting & Power (level 03-							Block A1 Level 04 Riser Cupboard

	06)							
Electric	Block A Lighting & Power (level 07-10)							Block A1 Level 07 Riser Cupboard
Electric	Block A Lighting & Power (level 11-14)							Block A1 Level 12 Riser Cupboard
Electric	Block A Lighting & Power (level 15-18)							Block A1 Level 15 Riser Cupboard
Electric	Block A A1 Mechanical AOV Fan							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A A2 Mechanical AOV Fan							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Building Cold Water Service							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Sprinkler System							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Wet Riser							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Fire Fighting Lift							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A General Lift							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A General Lift							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Solar PV							Main Panel A Block A1 LGF Switch Room 1
Electric	Comms							Main Panel A Block A1 LGF Switch Room 1

Electric	Block A Fire Fighting Stair Lighting							Main Panel A Block A1 LGF Switch Room 1
Electric	Block A Life Safety Landlord Supply							Secondary Main Panel A GF Switch Room 2
Electric	Block B Main Landlord Supply							Main Panel B Block B1 LGF Switch Room 1
Electric	Block B Mechanical							Main Panel B Block B1 LGF Switch Room 1
	Block B Lower Ground Floor Lighting & Power							Main Panel B Block B1 LV Switch Room
	Block B Lighting & Power Level 00-02							Block B1 Level 01 Riser Cupboard
	Block B Lighting & Power Level 03-05							Block B1 Level 03 Riser Cupboard
	Block B Lighting & Power Level 06-09							Block B1 Level 06 Riser Cupboard
	Block B Comms							Main Panel B Block B1 LV Switch Room
	Block B EV Charging							Main Panel B Block B1 LV Switch Room
	Block B1 Mechanical AOV							Main Panel B Block B1 LV Switch Room
	Block B Solar PV							Main Panel B Block B1 LV Switch Room
	Block Building Cold Water Service							Main Panel B Block B1 LV Switch Room

	Block B Sprinkler System							Main Panel B Block B1 LV Switch Room
	Car Park Smoke Extract							Main Panel B Block B1 LV Switch Room
	Block B Fire Fighting Lift							Main Panel B Block B1 LV Switch Room
	Block B General Lift							Main Panel B Block B1 LV Switch Room
	Block B1 Fire Fighting Stair Lighting							Main Panel B Block B1 LV Switch Room
	Podium Lighting							Main Panel B Block B1 LV Switch Room
	Block B2 Mechanical AOV							Main Panel B Block B1 LV Switch Room
	Block B1-00 Mechanical AOV							Main Panel B Block B1 LV Switch Room
Electric	Block B Life Safety Landlord Supply							Secondary Main Panel B GF Switch Room 2
Electric	Block C Main Landlord Supply							Main Panel C Block C LGF Switch Room 1
Electric	Block C Mechanical							Main Panel C Block C LGF Switch Room 1
Electric	Block C Lower Ground Floor Lighting & Power							LGF Switch Room 1
Electric	Block C Lighting & Power level 00-02							Block C, Level 00 Riser Cupboard
Electric	Block C Lighting & Power level 04-							Block C, Level 03 Riser Cupboard

	06							
Electric	Block C – Mechanical							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Solar PV							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Building Cold Water Service							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Sprinkler System							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Fire Fighting Lift							Main Panel C Block C LGF Switch Room 1
Electric	Block C – General Lift							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Comms							Main Panel C Block C LGF Switch Room 1
Electric	Block C – Fire Fighting Stair Lighting							Main Panel C Block C LGF Switch Room 1
Electric	Block C Life Safety Landlord Supply							Secondary Main Panel C GF Switch Room 2
Electric	Block D Main Landlord Supply							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Mechanical							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Lighting & Power LGF							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Lighting & Power Level 00-							Block D Level 00 Riser

	02							
Electric	Block D – Lighting & Power Level 03-06							Block D Level 03 Riser
Electric	Block D – Mechanical AOV							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Solar PV							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Building Cold Water Supply							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Sprinkler System							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Fire Fighting Lift							Main Panel D Block D LGF Switch Room 1
Electric	Block D – General Lift							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Comms							Main Panel D Block D LGF Switch Room 1
Electric	Block D – Fire Fighting Stair Lighting							Main Panel D Block D LGF Switch Room 1
Electric	Block D Life Safety Landlord Supply							Secondary Main Panel D GF Switch Room 2

Each apartment benefits from its own electrical supply which is individual metered from within the apartment. The meter has been supplied and installed by a regional energy provider who will be responsible for billing each electrical supply.

10. Building Performance Records

(Not more than three pages)

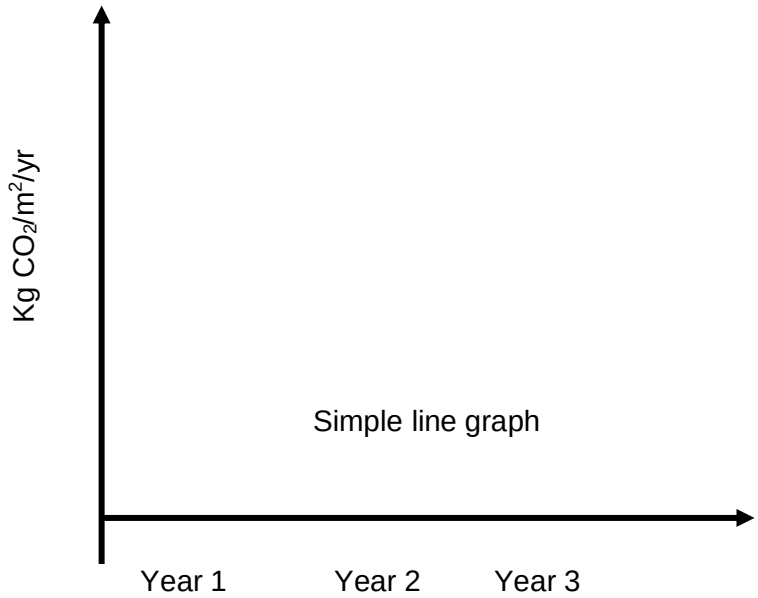
Overall annual energy performance

Summary of overall annual electricity, fossil fuel consumption and CO_2 against simple benchmarks. Examples of these calculations and tables are shown in Good Practice Guide GPG 348: *Building logbooks – a user's guide*. A copy is included on the CD-ROM associated with CIBSE TM31; printed copies are available from (www.energyaction.org.uk).

Building energy performance for period from *[date]* to *[date]* **Based on a treated floor area of *4027* m²**							
Fuel	**Quantity**	**(A)** (kW·h)	**(B)** **CO_2 ratio**	**(C)** (Kg CO_2)	**(D)** **Actual** (Kg CO_2/m^2)	**(E)** **Design estimates** (Kg CO_2/m^2)	**(F)** **Good practice benchmark** (Kg CO_2/m^2)
Gas							
Electricity							
TOTAL							

Ensure that actual consumption figures do not include estimated bills and ensure they relate to a full exact 12-month period. (If not then record actual and adjust by number of days missing/extra). Use the total gross floor area shown in section 5. Multiply column (A) by column (B) to get (C) then divide by treated total building floor area to get (D) for comparison with benchmarks in columns (E) and (F). One overall performance indicator can be established by totalling column (D). Avoid adding column (A) as the fuels have different costs and CO_2 factors.

Historical Building Performance Graph



CIBSE TM22: *Energy assessment and reporting methodology* provides software to help assess building energy performance using either a simple or a detailed approach. This includes benchmarks for a variety of buildings. A wider range of benchmarks is available in the series of Energy Consumption Guides produced by Action Energy

(www.actionenergy.org.uk), e.g. ECG19: *Energy use in offices*, and CIBSE Guide F: *Energy efficiency in buildings*

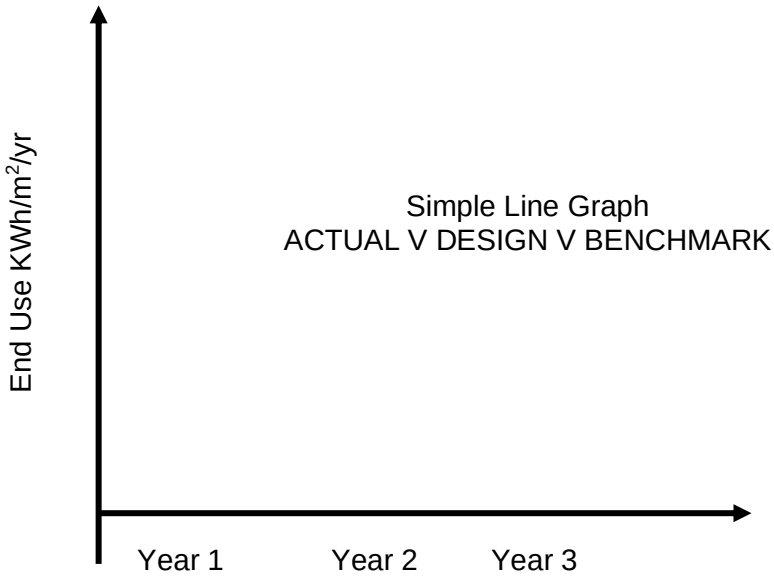
Energy end use comparison

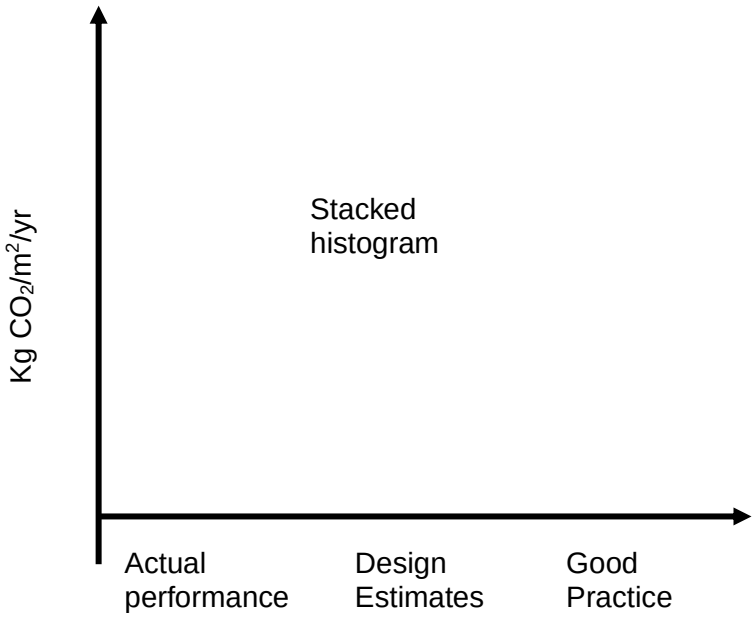
Annual summary of actual metered consumption per square metre and the design team's estimates versus benchmarks broken down by main end-uses. Examples of these calculations and tables are shown in Good Practice Guide GPG 348: *Building logbooks – a user's guide*. A copy is included on the CD-ROM associated with CIBSE TM31; printed copies are available from (www.energyaction.org.uk).

Building energy performance for period from *[date]* to *[date]* **Based on a treated floor area of *38015* m²**					
Fuel type	**Main end use**	**Actual** Metered incoming consumption ((Kw·h)/yr)	**Actual** Sub-metered main end use energy consumption ((Kw·h/m²)/yr)	**Design estimates** Main end use energy consumption (Kw·h/yr	**Good practice benchmark** Main end use energy consumption ((Kw·h/yr)
Electricity	Incoming				
	Lighting				
	Machines				
	General Power				
	Pumps & Fans				
	AC Heat & Cool				

Keep the fuels separate as they have different costs and CO_2 emissions

Historical Graph of End-Use Performance





References

a. *Energy efficiency in offices* Energy Consumption Guide ECG19 (Action Energy) (2000) (www.actionenergy.org.uk)

(2) *Energy Assessment and Reporting Methodology – Office Assessment Method* CIBSE TM22 (London: Chartered Institution of Building Services Engineers) (2003)

(3) *Building logbooks — a user's guide* GPG 348 (Action Energy) (2000) (www.actionenergy.org.uk)

11. System of Maintenance

Emergency maintenance action

Emergency Contact No. 1 **Emergency Contact No. 2**

Maintenance overview

The building is managed by a specialist maintenance contractor and they are responsible in ensuring the correct periodic and preventative maintenance regimes are followed to ensure correct plant and system operation.

Maintenance review

Review period …… **Signed:** ……	**1. Are you reasonably satisfied with the maintenance on this system? (Yes/No)**	**2. Is this system capable of working in all the required modes? (Yes/No)**	**3. If not, is this due to poor maintenance? (Yes/No)**	**Comments/problems?** e.g. maintenance not carried out (give reason) Indicate any major changes to the general arrangement for maintenance including any changes in maintenance regimes or contracts
Above Ground Drainage				
Electric Panel Heaters				
Air Conditioning Unit				
External Condenser Unit				
Dampers (VCD's and Fire)				
Air Terminals & Louvres				
Water Management Procedures				
Break Tank & Booster Set				
Cat 5 Break Tank & Booster Set				
Hot Water Heaters				

Energy Monitoring Control System inc Water Leak Detection System				
Gas Installation				
Electrical Installation				
Fire Alarm				
Emergency Lighting				
EV Chargers				
Lightning Protection				
Lifts				

Maintenance/plant failures

Facilities manager to insert a summary of any major plant failures and how these relate to the maintenance regimes or contracts. This should describe what happened, when, why and what action was taken to overcome the problem.

12. Major Alterations

Any major alterations made to the building, its services, its operation or management should be logged below, e.g. boiler replacement, BMS upgrade, changes in use, new management regime etc. Each change should be signed and dated by the facilities manager alongside the other page numbers of the logbook that have been updated/added to reflect the alteration.

Description of alteration	Other logbook pages updated or added	Signed	Date

13. Results of In-use Investigations

Defects liability work

Facilities manager to insert a summary of any major remedial work in the period between practical completion (handover) and the end of the defect's liability period

Post occupancy evaluations

Facilities manager to insert a summary of any post occupancy evaluations, e.g. investigations of energy performance and/or occupant satisfaction.

Surveys

Facilities manager to insert a summary of results from any maintenance, condition or energy surveys.

Appendix: Relevant Compliance and Test Certificates

This appendix should act as a focal point to hold copies of all relevant key certificates/test reports etc, including:

Please refer to mechanical and electrical operation and maintenance manuals Section 6 for all relevant commissioning and test results applicable to the main contract.