



27 CROWN LANE

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HOMEOWNER'S GUIDE



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HOMEOWNER'S GUIDE

SAMPLE

HOMEOWNER'S GUIDE
27 CROWN LANE

JANUARY 2025

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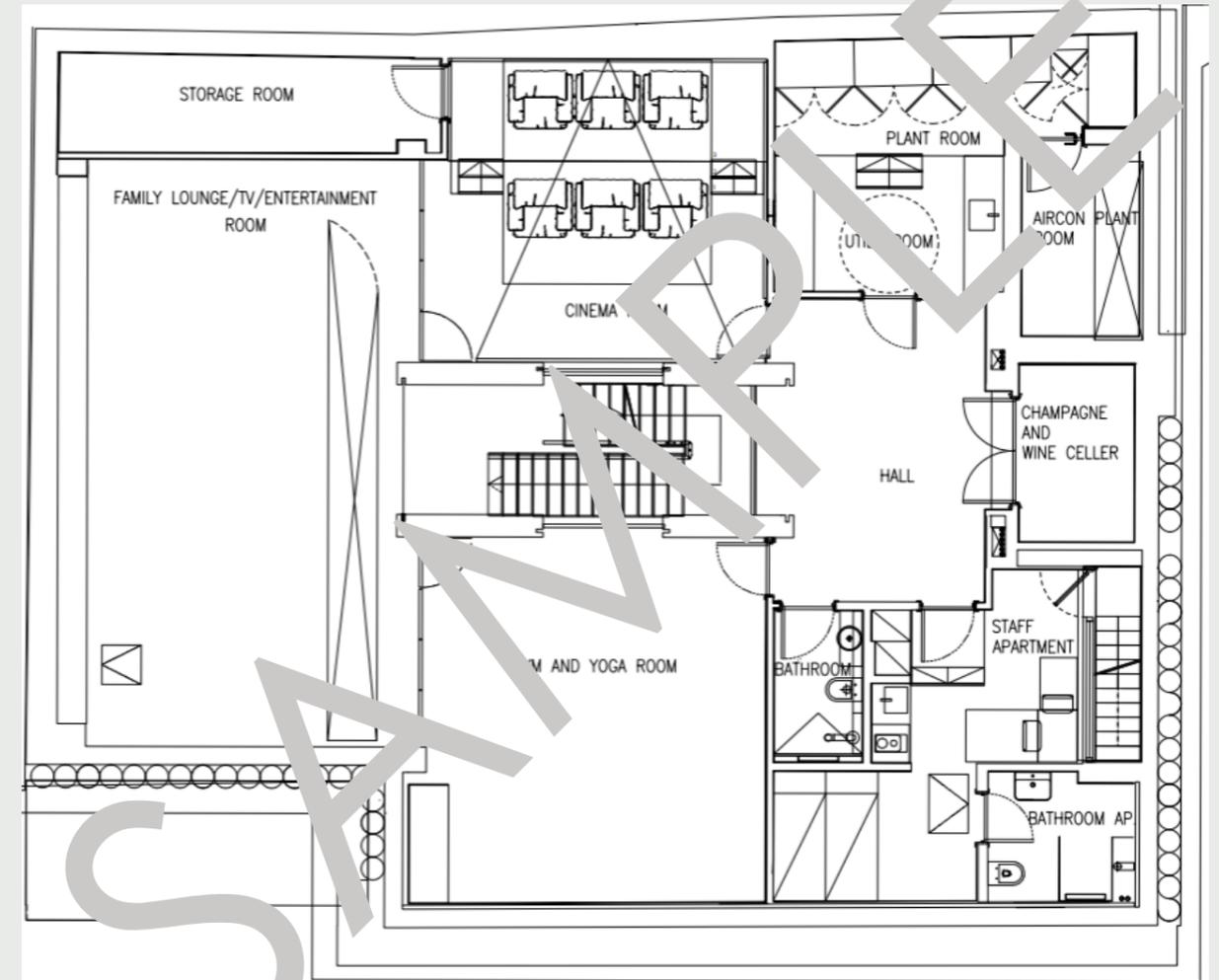
Legend & Used Symbols

| | | | | | |
|-------------------------------|-----------------------------|-----------------------|------------------------|---------------------|-------------------------------|
| | Gas | | TV / AV | | Access & Maintenance |
| | Electrical | | Mechanical | | Equipment Samples |
| | Fire & Security | | Exterior | | Other |
| Gas Boiler | Gas Equipment | Gas Fireplace | Gas Meter | Gas Valve | Condenser Unit |
| | | | | | |
| Distribution Board | Electric Heating Thermostat | Electric Meter | Electric Towel | Isolator Switch | Light or Electrical Equipment |
| | | | | | |
| Light or Electrical Equipment | Lighting - Driver | Lutron Lighting Panel | Spur Switch | Alarm | CCTV Camera |
| | | | | | |
| Entrance/Exit | Shower Curtain | Security Equipment | TV/AV & Data Equipment | A/C Controller | A/C Unit |
| | | | | | |
| MS Panel | Condenser Unit | Extraction | Heat Recovery Unit | Hot Water Cylinder | Inline Motor |
| | | | | | |
| Isolation Valves/ Garden Tap | Pumping Equipment | Pump | Water Meter | Wet/Dual Towel Rail | Wet UFH Manifold |
| | | | | | |
| Wet UFH Thermostat | Wet UFH Zone | Exterior Equipment | Access Panel | Other Equipment | |
| | | | | | |

1. LEGEND & USED SYMBOLS

Property Layout

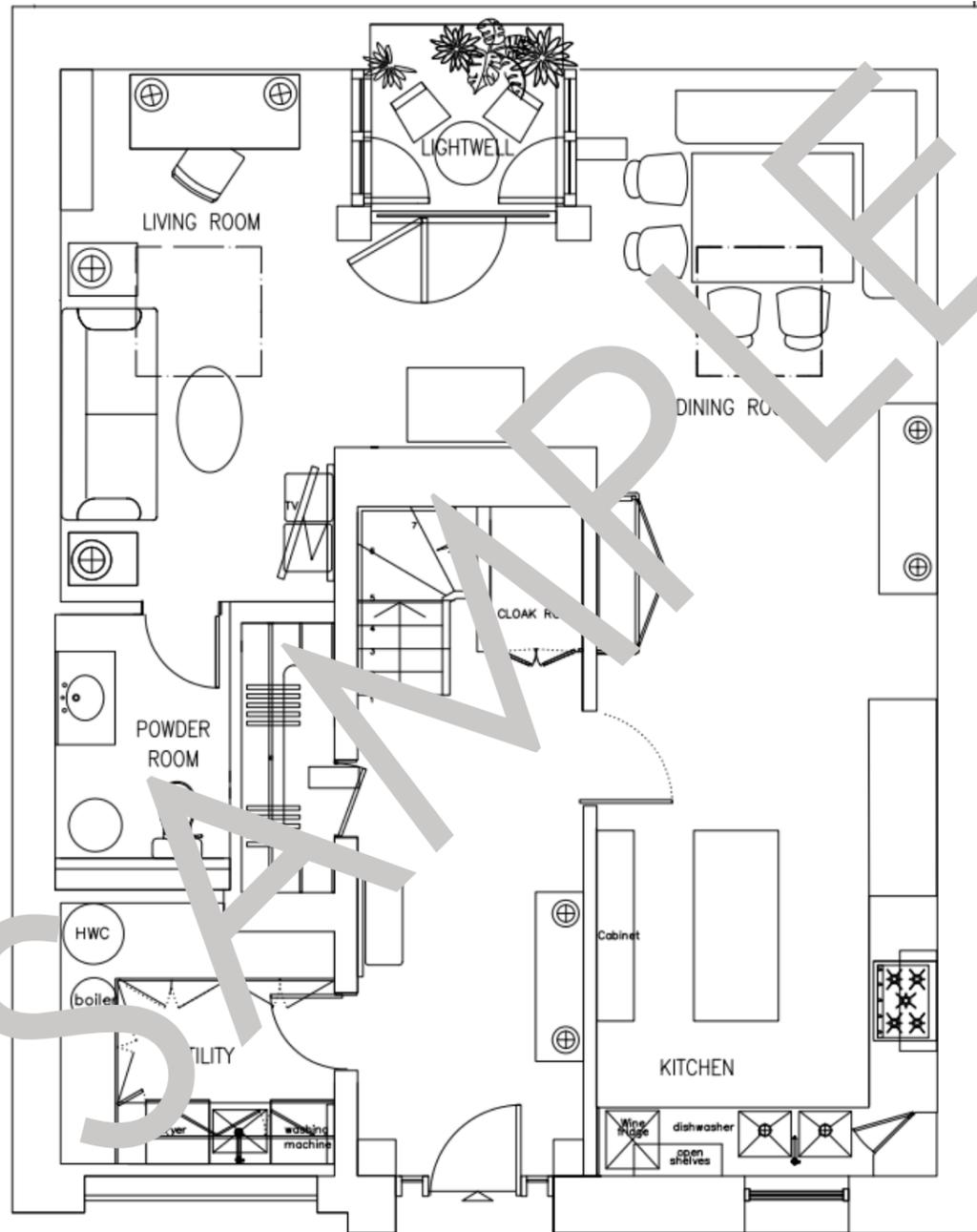
Basement



2. PROPERTY LAYOUT

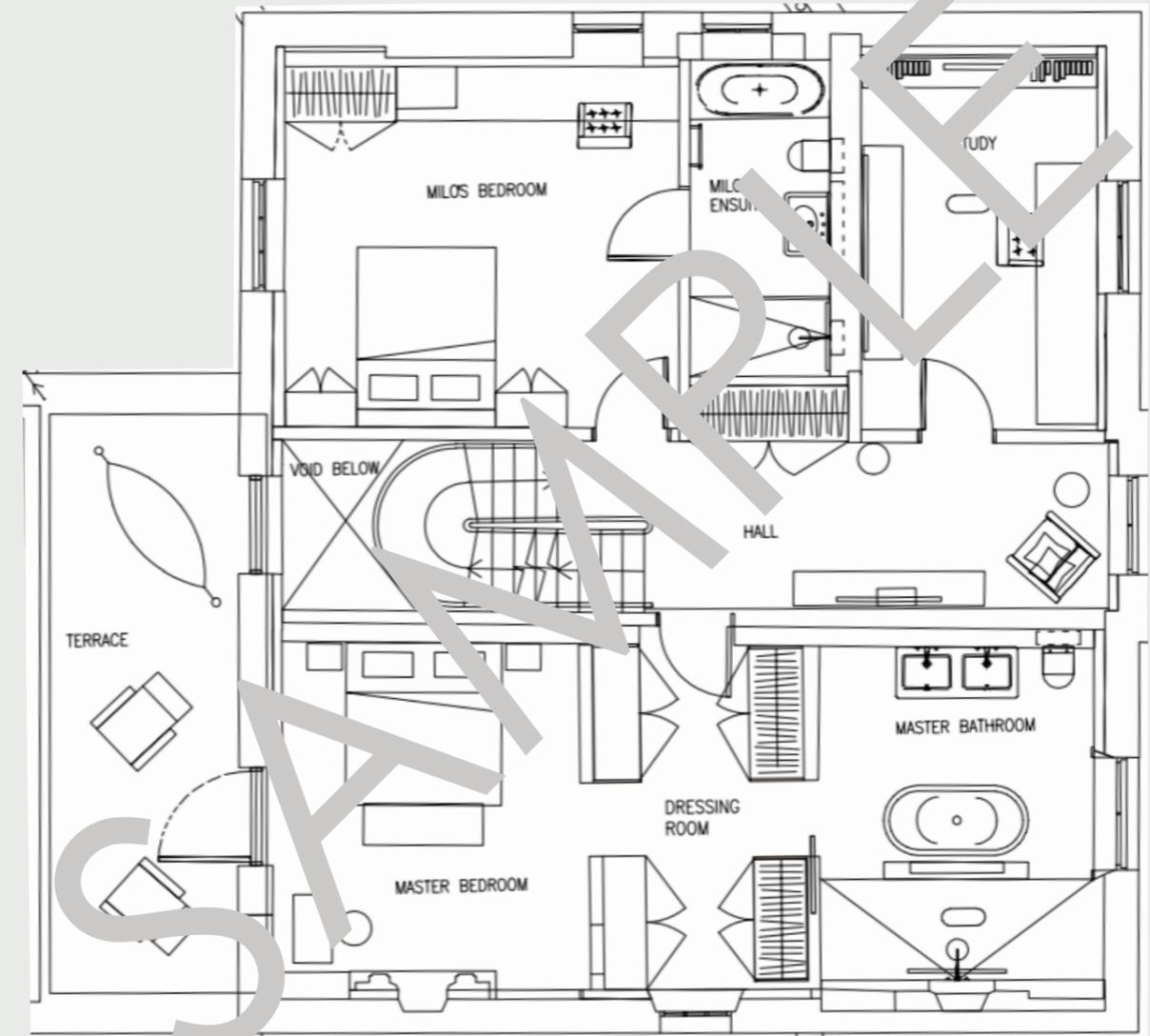
Property Layout

Ground Floor



Property Layout

First Floor



Project Directory

A comprehensive Project Directory, which also includes Suppliers and Manufacturers, can be found in the O&M Manuals under 1. Project Information / 1.3. Project Directory.

Main Contractor:

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Electrical Contractor, TV/AV:

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Air Conditioning, MVHR:

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Security Contractor:

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Drainage & Sewerage:

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Passenger Lift:

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Dumpwaiver Lift:

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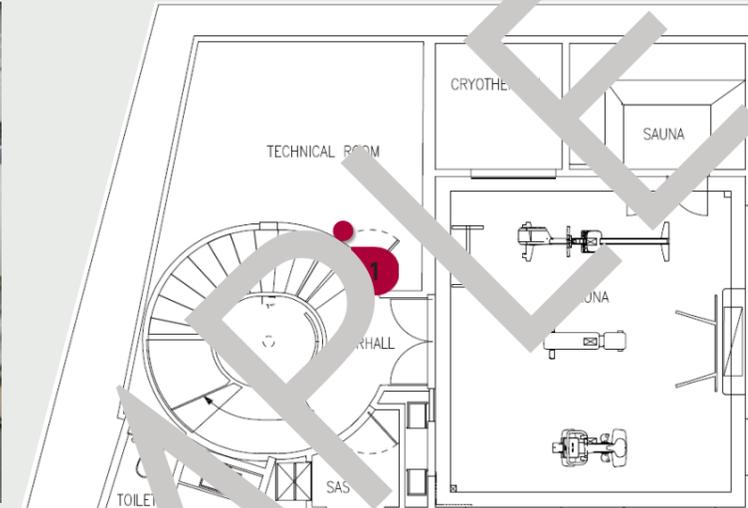
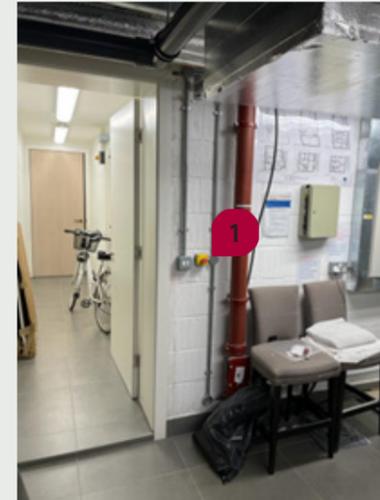
Safety Systems

Safety Circuit - Knock Off Button

A **Knock Off Button** ① has been installed in the **Small Hallway (B)**.

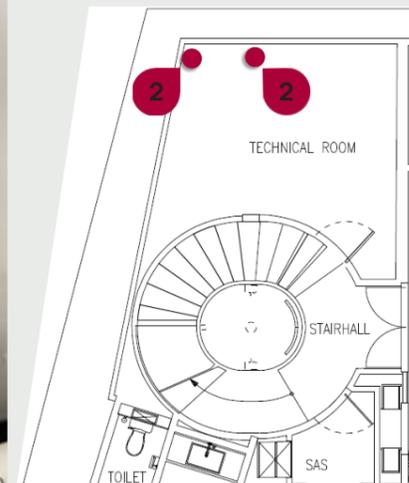
It is an emergency button interlinked with the Safety Circuit. If the button is activated, all the plant equipment will shut down immediately.

When the **Knock Off Button** is reset, the **Main Plant Room (B)** will re-activate automatically. It is an emergency button interlinked with the Safety Circuit. If the button is activated, all the plant equipment will shut down immediately.



Safety Circuit - Thermal Links

Thermal Links ② have been installed adjacent to the Boilers in the **Technical Room (B)** and are interlinked with the **Safety Circuit**. The thermal cutout is designed to detect excessive heat. If either of the thermal links is triggered, the whole **Technical Room (B)** will shut down.

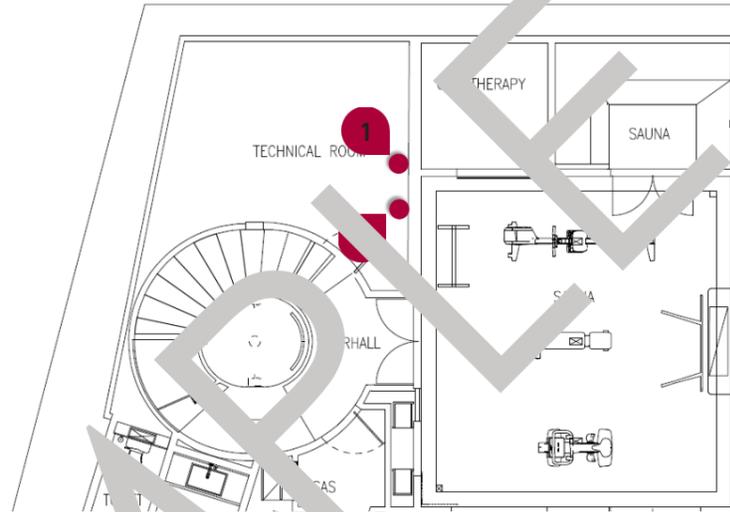


Safety Systems

Gas Detection

Two **Gas Detection Control Panels** have been installed in the **Technical Room (B)**. Each Panel serve different purpose:

- ▶ **Boiler Gas Detection Control Panel 1** - serving the gas services in the **Small Plant Room (LGF)** and **Technical Room (B)**
- ▶ **House Gas Detection Control Panel 2** - serving the **Fireplaces** in the **Dining Room (GF)** and the **Drawing Room (GF)**



The **Boiler Gas Detection Control Panel** monitors the **Small Plant Room (LGF)** and **Technical Room (B)** for gas leaks and high levels of carbon monoxide via a **CO & CO₂ Detector** that has been installed next to the Boilers.

If the safety system enters its alarm state:

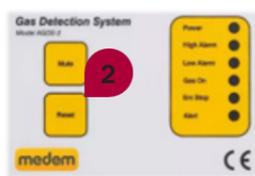
- ▶ the **Main Solenoid Valve** will be closed
- ▶ all the plant equipment will be shut down
- ▶ an **Alarm** will be triggered on the **BMS Panel**

In the case of an unexpected Boiler shutoff:

- ▶ press the **"Reset"** button on the **Boiler Gas Detection Control Panel**
- ▶ then go to the boilers and press the **"Ignite"** button (the one with the flame symbol on the control panel)



The Boilers should now start and the digital temperature gauge should increase to approximately **60°C** to **65°C** (unless there is an external problem).



Please Note: The instructions for using the **Medem Control Panels** may be found directly underneath them, in the **Main Plant Room (B)**.

Safety Systems

Solenoid Valves

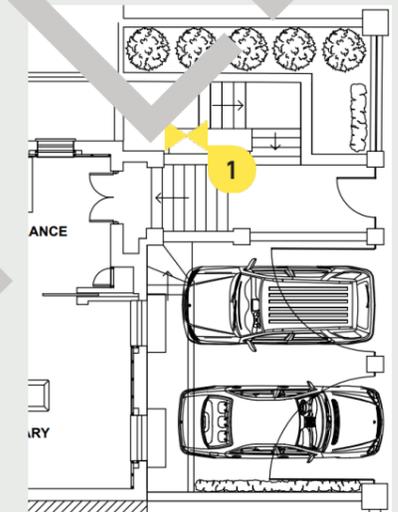
The **Main Solenoid Valve 1** will be triggered in the case of an alarm or a gas leak in the **Technical Room (LGF)** or in the **Small Plant Room (B)**. It is located inside enclosure in the **Side Alley**.

It is connected to **Breaker No. 26** labelled **"Gas Valve"** on the **Consumer Unit "DB 3"** located in the **Technical Room (B)**.



The **Main Solenoid Valve** will automatically close and shut down the gas supply to the **Main Plant Room (B)** if any of the following safety systems enter their alarm state:

- ▶ **Safety Circuit (Knock Off Button and Thermal Links)**
- ▶ **Boiler Gas Detection Panel**
- ▶ **Fire Alarm**



If the **Main Solenoid Valve** is in an alarm state, it will be indicated on the **BMS Panel** and a corresponding **LED 2** will be illuminated on the **Control Panel**.



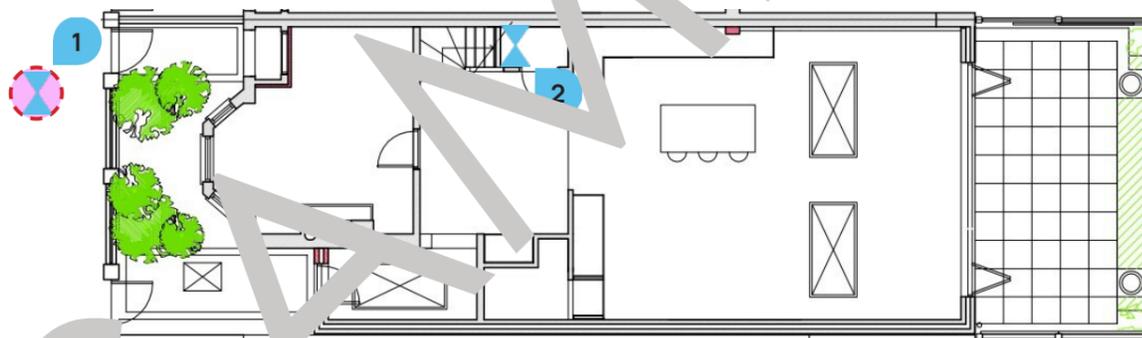
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Incoming Water Main

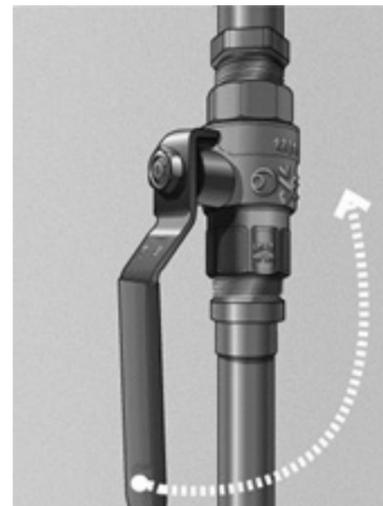
Water is supplied to the property via underground pipes from the regional water company. The **Incoming Water Main 1** is located in front of the house, on the street. It then leads to the **Main Stopcock 2** in the **Plant Room (LGF)**, from where the Mains Water continues either to the house or to the Water Softener in this room.

In the case of a leak in the house, the best solution is to close the **Main Stopcock 2**. To shut the water supply to the whole house, the **Incoming Water Main Valve 1**.



Lever Valves

General rule for all valves with handles:
Valve is open if the handle is aligned with the pipe. To close it, the handle needs to be switched 90° to the flow direction of the pipe. To open it again, the handle must be switched the opposite direction.
It is recommended that all Valves are opened and closed at least every six months, to avoid corrosion.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Valve Chart

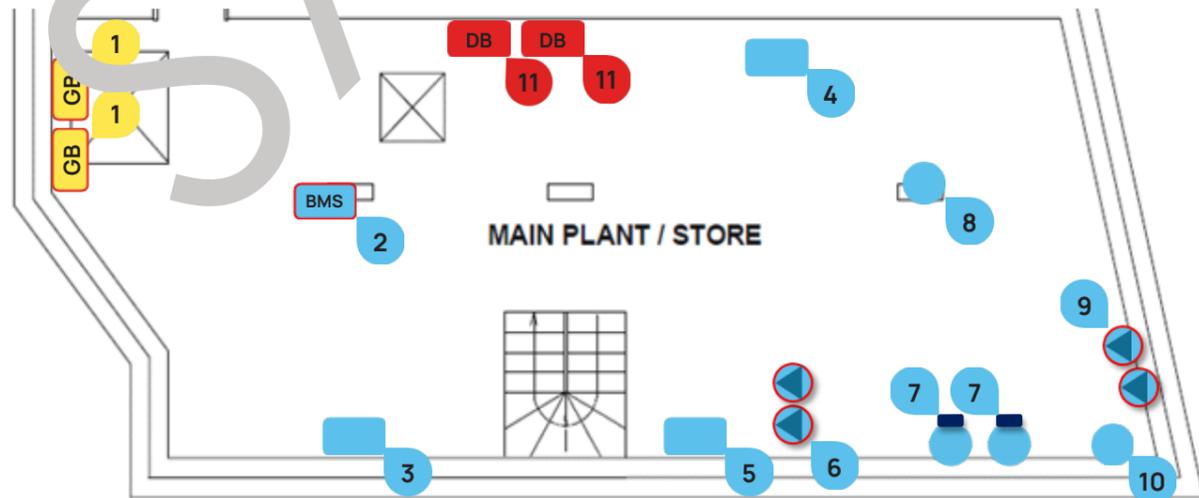
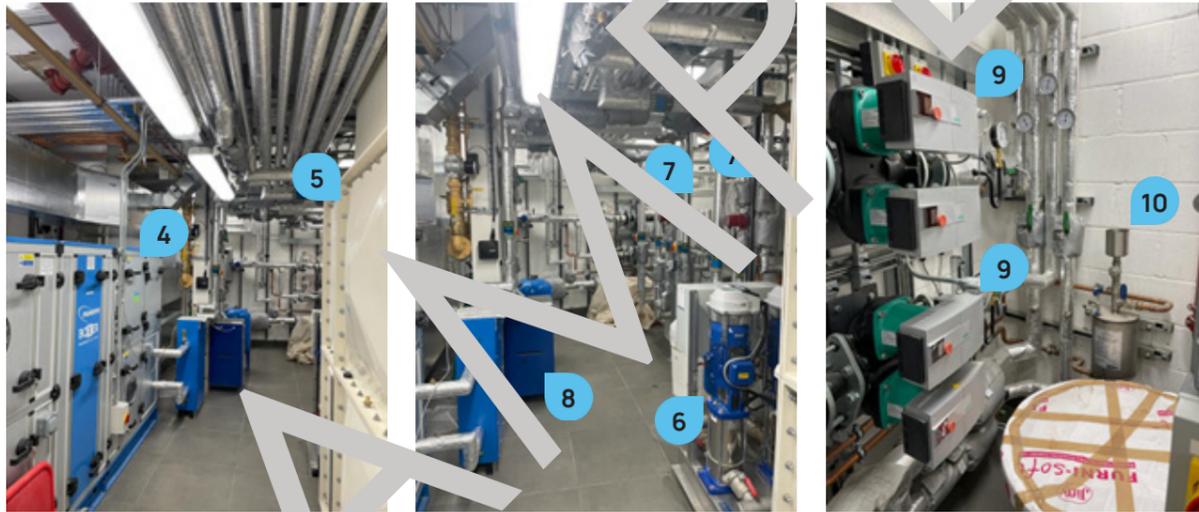
Valve Chart by Ludek Ltd:

| | | | |
|----|---------------------------------------|----|---|
| 1 | Ball Valve - Brine Fill Set | 19 | Heating Pump Valve Heat Pump 2 |
| 2 | Ball Valve - Brine Fill Set | 20 | Ball Valve - Swimming Pool |
| 3 | Ball Valve - Brine Fill Set | 21 | Ball Valve - Swimming Pool |
| 4 | Ball Valve - Brine Fill Set | 22 | Heat Pump Flow To Cylinder |
| 5 | Ball Valve - Brine Pump Valve | 23 | Heat Pump Return From Cylinder |
| 6 | Ball Valve - Brine Pump Valve | 24 | Heating Return From Buffer To Heat Pump |
| 7 | Brine Flow Pump 1 | 25 | Heating Flow From Buffer To Property |
| 8 | Brine Flow Pump 2 | 26 | Heating Return To Buffer From Property |
| 9 | Heating Pump Valve Pump 1 | 27 | Ball Valve - Heat Pump Flow To Buffer |
| 10 | Heating Pump Valve Pump 1 | 28 | Ball Valve - Main Cold Water Service |
| 11 | Heating Return Heat Pump 1 | 29 | Ball Valve - DHW Secondary Return |
| 12 | Commissioning - Heating Return Pump 1 | 30 | Ball Valve - DHW Flow |
| 13 | Heating Pump Valve Heat Pump 2 | 31 | Ball Valve - Flow From Boiler To DHW |
| 14 | Heating Pump Valve Heat Pump 2 | 32 | Ball Valve - Return To Boiler From DHW |
| 15 | Filter Valve - Heating Return Pump 2 | 33 | Return To Boiler From Heating |
| 16 | Commissioning - Heating Return Pump 2 | 34 | Heating Flow To Property |
| 17 | Commissioning - DHW Return Pump 2 | 35 | Flow From Boiler To Heating |
| 18 | DHW Pump Valve Heat Pump 2 | 36 | Heating Return From Property |

Main Plant Room - General View

The following equipment is installed in the Main Plant Room (B):

- ▶ Gas Boilers 1
- ▶ BMS Panel 2
- ▶ Harvesting Tank 3
- ▶ Air Handling Unit 4
- ▶ Cold Water Storage Tank 5
- ▶ Booster Pumps 6
- ▶ Hot Water Cylinders 7
- ▶ Pressurisation Unit 8
- ▶ Dual Circulation Pumps 9
- ▶ Dosing System 10
- ▶ Distribution Boards 11

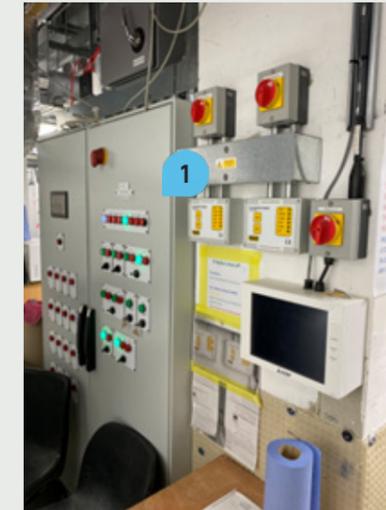


BMS Panel

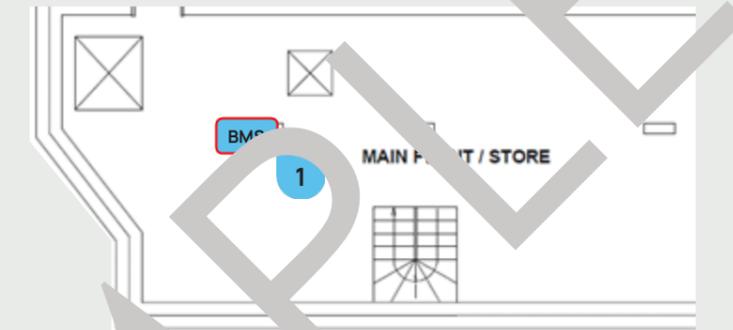
The BMS Panel (Building Management System) is located in the Main Plant Room (B).

It is a complete stand-alone control system that has been installed to control and monitor all mechanical items of plant and equipment. The system is made up of a Main Control Panel in the Main Plant Room (B) and its associated field items, such as sensors and switches. Using the data collected from the devices, processes are performed by the BMS to control the plant to provide the optimum output.

The BMS Control Panel houses the Distech Controllers, its associated input/output modules and a user interface, which performs all the necessary calculation and control functions as dictated by the building requirements.

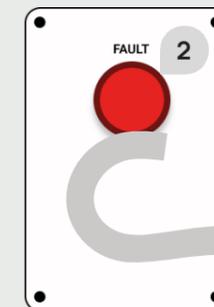


To switch off the BMS Panel completely, pull the Breaker No. 13 labelled "Panel MCC 1" on the Main Distribution Board "DB MP" in the Small Plant Room (LGF).

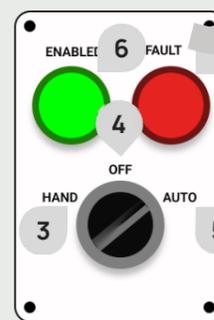


The BMS Panel is interlocked with the Fire Alarm to shut down plant in case of an emergency. If the fire alarm is activated, any associated plant will be shut down. The plant will restart automatically when the alarm is cleared.

LED Lamps and Panel Fascia Switches



FAULT Lamp 2 This lamp is illuminated directly from the fault status received from the unit and is an indication of the unit's internal fault status.



HAN Position 3 The unit will be constantly enabled, overriding any BMS input. The hardwired interlocks will still shut down the plant if they are activated.

FF Position 4 The unit will be disabled.

AUTO Position 5 The unit will be enabled and disabled as detailed within the control functions section below.

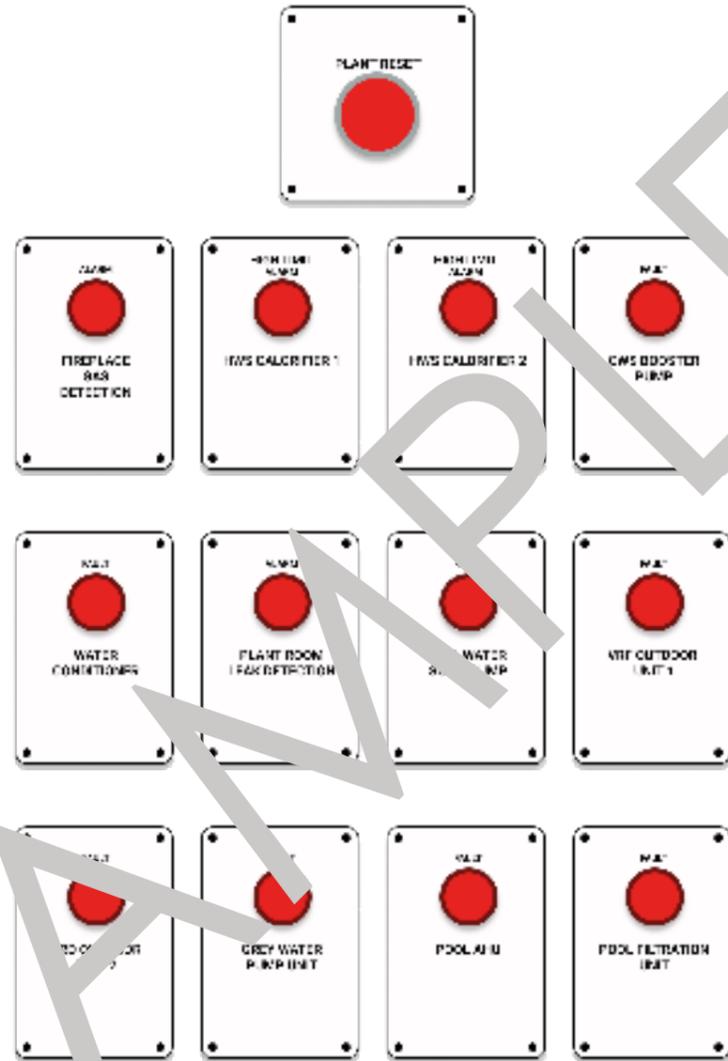
ENABLED Lamp 6 This lamp is illuminated when the unit is enabled from the BMS Panel and does not guarantee that the unit is running.

FAULT Lamp 7 This lamp is illuminated directly from the fault status received from the unit and is an indication of the unit's internal fault status.

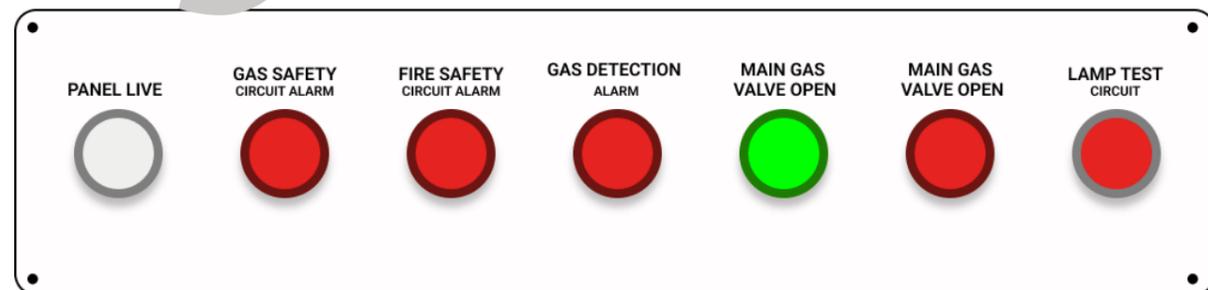
BMS Panel

The following mechanical equipment is controlled via the BMS Panel:

LHS - Fault Indicators



RHS - Safety Systems



Water Leak Detection

A **Water Leak Detection System** 1 is located in the **Plant Room (LGF)** to monitor the water supplies to the building. The system has been programmed to activate when the flow exceeds the preset maximum for the preset period of time. The system has been configured to identify different flow and leakage rates to suit the owner's water consumption requirements.

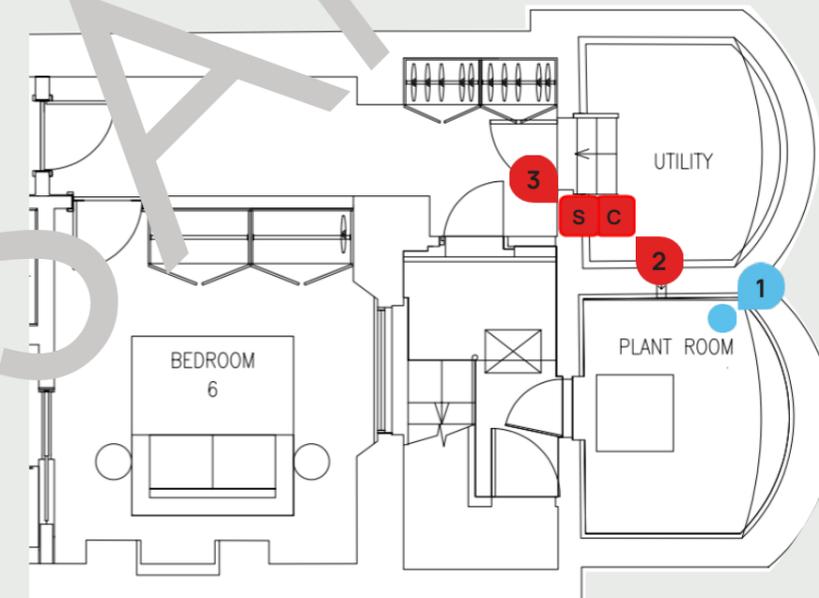
If the maximum allowable volume of water is exceeded, the controller will trigger audible and visual alarms that a leak has been detected. The status is available on the **Control Panel with LED Indicators**.

The status **Control Panel with LED Indicators** 2 and also the **Spur** 3 are located in the **Utility (LGF)**.

The Water Leak Detection is controlled and monitored by the **BMS Panel** in the **Plant Room (LGF)**. The Controls are labelled as "**Leak Detection System**".



It is recommended that any connected valves are dismantled and cleaned with a lime-scale remover every 12 months, as build up can cause the valve operation to fail.



Maintenance

For contact details and responsible personnel, please refer to section 3. **Project Directory - Ludek Ltd.**

Emergency Shut Off Procedures

Water Shutdown

- ▶ Locate the main **Stopcock**.
 - ▶ If the leak is not serious, place a suitable container to temporarily contain the leak and move or cover any materials, equipment, or furniture to minimise water damage. Switch off or otherwise protect any electrical equipment or lighting that may be in danger of getting wet and thus becoming potentially dangerous to life.
 - ▶ If the leak is serious and there is no visible means of stopping it or turning off the source, take necessary steps to minimise further damage as outlined above.
- ▶ There are **individual Isolation Valves** to the Bathroom Tub, Basin Taps; WC Cistern and to the Kitchen Sink Taps and Dishwasher. These can be isolated to stop the leak if possible past this point. If the leak is before these Isolation Valves, isolate the supply into the property using the Main Stopcock.
- ▶ If mains water supplies to the building fail, or supply pressure is severely reduced, check if the Main Shut-Off Valve to the building has not been closed, if not, investigate the reason.
 - ▶ If Stopcock is open, refer to the Water Authority call out number (0800 316 9800). Call the authority and explain that the water supply has failed and ask for the cause and expected duration of the failure.
 - ▶ If the failure is due to an occurrence on the other side of the Stopcock (not to do with you), close the Mains Cold Water System Stopcock to prevent the ingress of contaminated supplies.
 - ▶ When supply is restored, according to the quality of the water, i.e. if it contains debris or air, it may be necessary to flush the delivery pipe to the building.

IN CASE OF EMERGENCY, CALL THE 24 HOUR SERVICE THAMES WATER CUSTOMER SERVICE TEAM ON 0800 316 9800

For the specific location of the **Cold Water Supply Valve**, **Hot Water Supply Valve** and **local Isolation Valves**, please refer to the following page.

Emergency Shut Off Procedures

Drinking Cold Water Supply

To shut off the supply of drinking water to the **Kitchen (GF)** and **Kitchenette (LGF)**, close the **Main Stopcock 1** located in the **Technical Room (LGF)**.

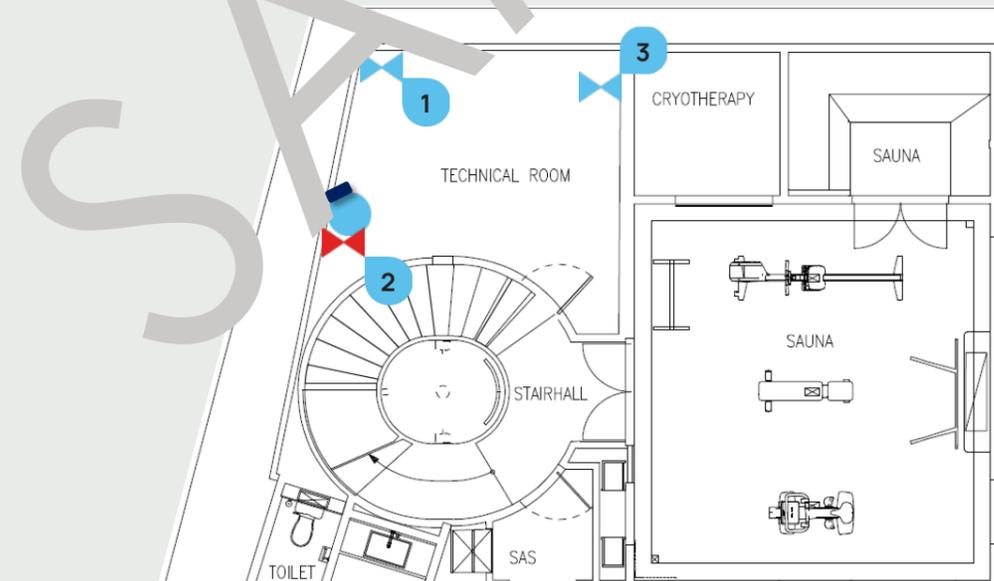
Hot Water Supply

To shut off the Hot Water Supply to the whole house, close the **Primary HW Valve 2** on the LHS from the HWC in the **Technical Room (LGF)**.

Water Supply to Ensuites & WCs

To shut off the water supply to all Ensuites and WCs, close the **Boosted Softened CW Supply Valve 3** and **Primary HW Valve 2** in the **Technical Room (LGF)**.

Please note that water in all Bathrooms, Ensuites and WCs is non-drinkable!



Isolation Valves

Basins & Sinks

Most **Basins** and **Sinks** 1 have their local **Isolation Valves** 2 visible behind them or beneath them, behind removable access panels.

The only three exceptions are the **Basins** in the **Powder Room** by the **Laundry (LGF)**, **Powder Room** by the **Playing Room (LGF)** and **Bar/Pantry (LGF)**. The only way to shut their water supply is to close the water supply to the whole house. For more information, please refer to the previous page.



WCs

All **WCs** 3 have their local **Isolation Valves** 4 behind a removable panel above them.

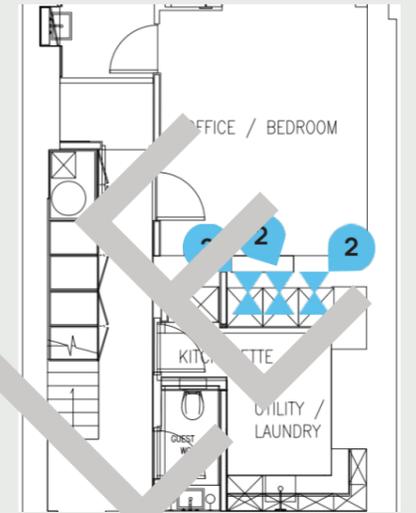
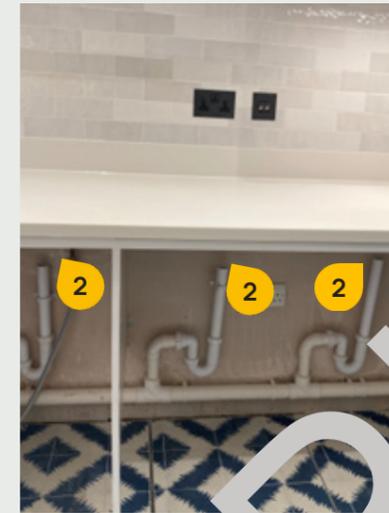
Showers & Bathtubs

The **Bathtubs** 5 and the **Showers** 6 have their local **Isolation Valves** 7 behind access panels within the room. For more information, please refer to the following pages.



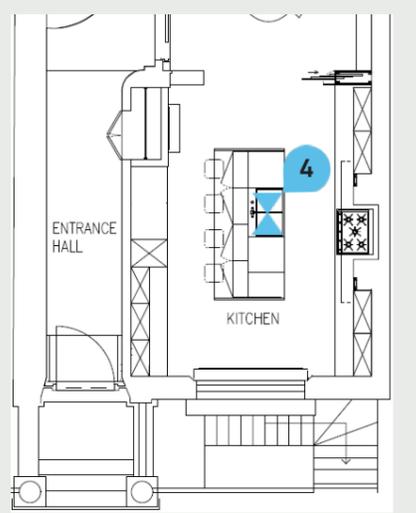
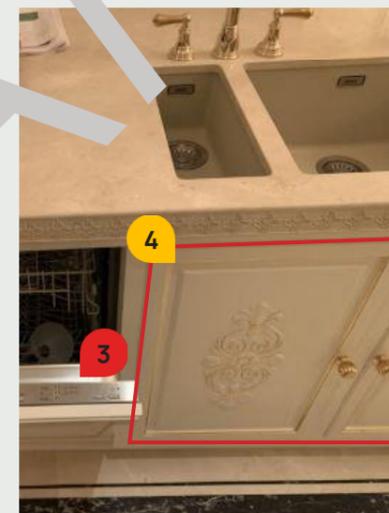
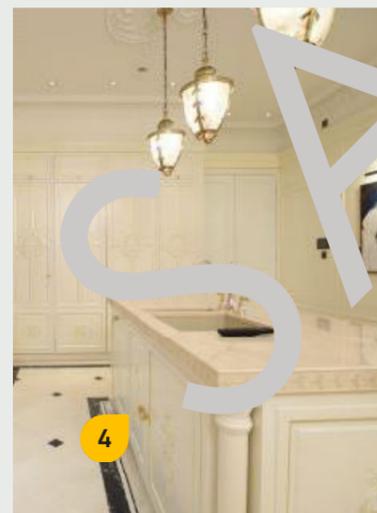
Laundry Room (GF)

Each **Washing Machine** 1 in the **Laundry Room (GF)** has its **Isolation Valve** 2 behind each appliance. **Extra care needs to be taken when accessing the Isolation Valves!**



Kitchen (GF)

The **Dishwasher** 3 in the **Kitchen** has its **Isolation Valve** 4 in the cupboard below the sink. **Extra care needs to be taken when accessing the Isolation Valves!**



Garden Taps

In total, there are three Garden Taps throughout the property. They are located in the following areas:

- ▶ mounted to the house facade in the **Back Garden** 1 2
- ▶ mounted to the house facade in the **Front Garden**

To close their water supply, the only solution is to close the water supply to the whole house - the **Main Stopcock** in the **Plant Room (LGF)** needs to be closed. For more information, please refer to page 12.

Please note: In the winter or during freezing temperatures, the water supply to the Garden Tap should be closed and any remaining water in the pipes should be drained to avoid any damage to the pipe.



Booster Set

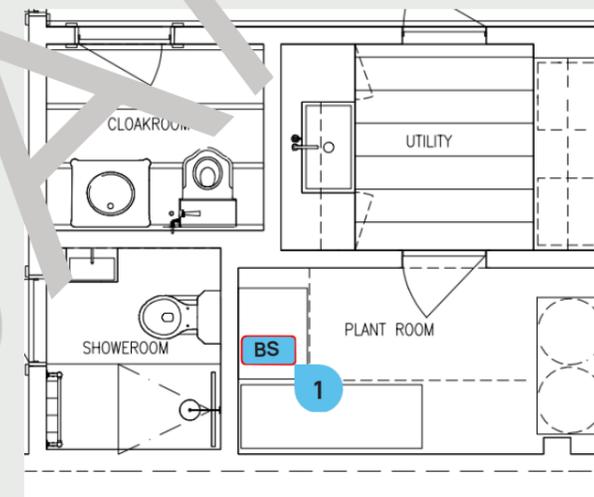
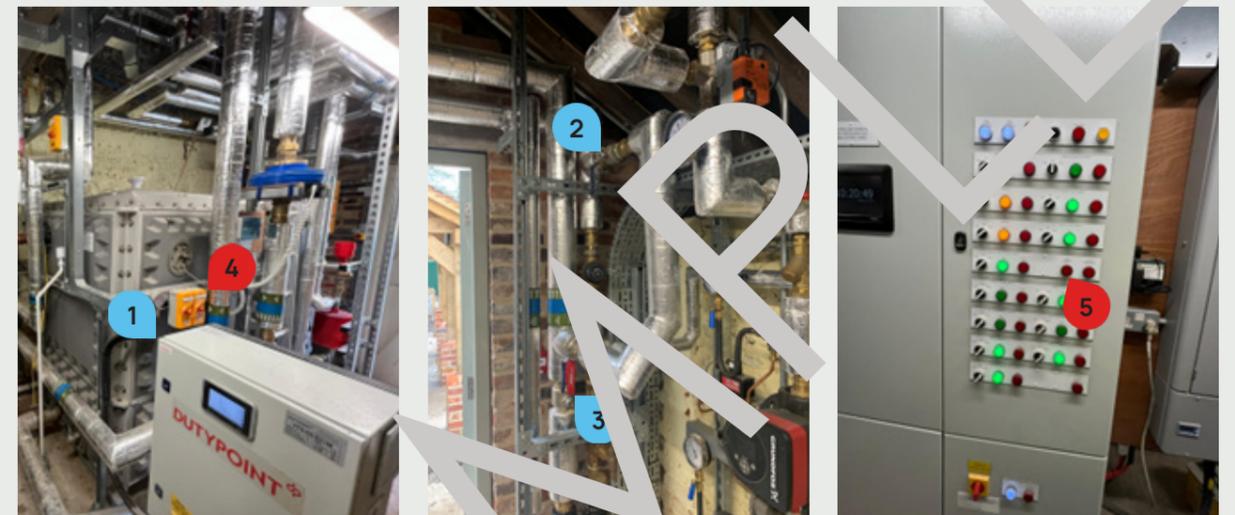
The **Booster Set** including the **Booster Pumps** 1 is located in the **Main Plant Room**.

The **Incoming Non-Boosted Water Mains** 2 leads into the **Booster Pumps**. The boosted water then goes from the **Booster Set** to the **whole house**.

In case there is a problem with the **Booster Set**, close the **Non-Boosted Water Mains Valve** 2, open the **By-pass Valve** 3 and switch off the **Booster Set Isolator Switch** 4.

It can be also monitored by the **BMS Panel** located in the **Main Plant Room**. If there is a fault on the unit, the corresponding **RED Warning light** 5 will be lit.

To completely switch off the **Booster Set**, shut the **Breaker No. L / L3**, labelled "**CW Booster Set**" on the **Distribution Board 3** located **Main Plant Room**.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Hot Water Cylinder

One **Hot Water Cylinder** 1 has been installed in the **Under Stair Cupboard (B)**. It has its control panel containing a pre-wired control and a limit **Thermostat** for effective control of the domestic hot water flow temperature.

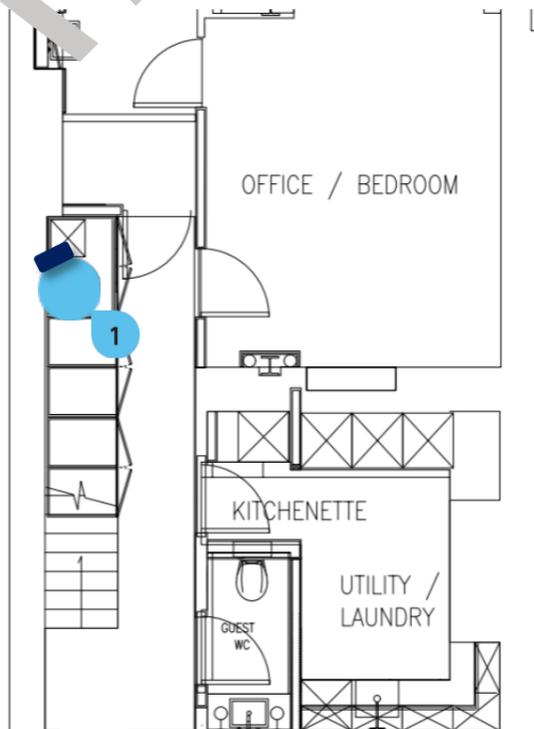
To isolate the Incoming Cold Water to the HWC, close the **Incoming CW Valve** 2 on top of the HWC. To isolate the Primary Hot Water Supply to the whole house, close the **Primary HW Valve** 3 on low level, on the RHS from the HWC.



BMS Panel Controls

The HW Cylinder is monitored and controlled by the **BMS Panel** in the **Main Plant Room (B)**. The control is labelled as 'DHWS Cylinder'. In case that the control for **Immersion Heater** ('Immersion') is set to 'Auto' and the **Boiler** is not heating the water quickly enough, it will automatically trigger the Immersion Heater to boost the whole system.

The **Hot Water Flow Valve** which is controlled and monitored by the **BMS Panel** in the **Main Plant Room (B)**. The control is labelled as 'Valve Cylinder 1'.



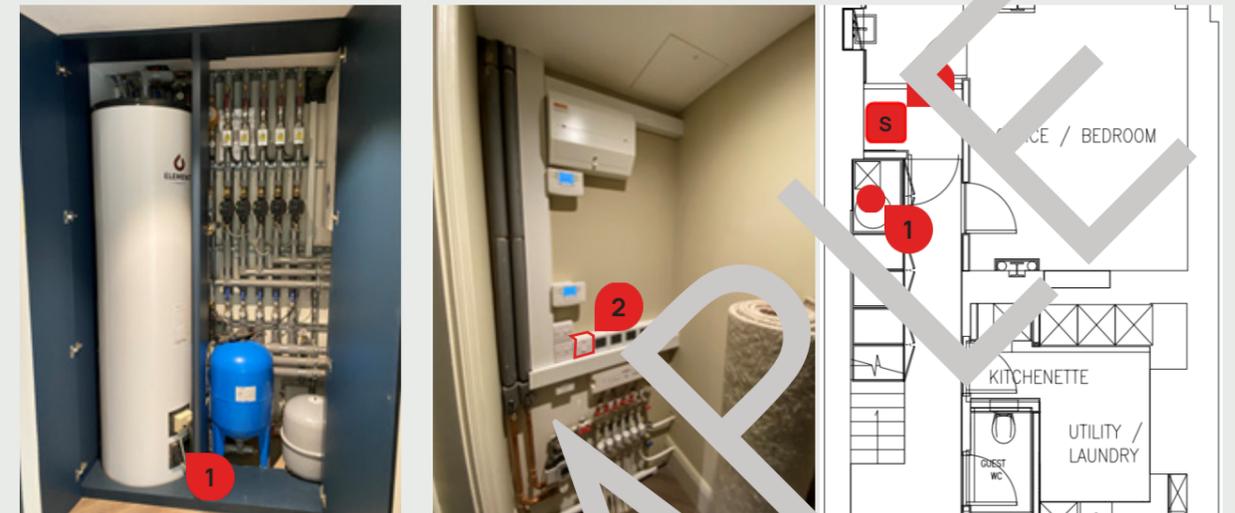
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Immersion Heater

The **Immersion Heaters** 1 has been installed on the Hot Water Cylinders in the **Main Plant Room (B)**. An Immersion Heater is a heating element which heats up the water in the Hot Water Cylinder in case of Boiler failure. Its **Spur Switch** 2 is mounted on the wall in the **Store (B)**.

To completely switch off the Immersion Heater, shut the **Breaker No. 19**, labelled as "Immersion" on the **Distribution Board "DB1"** in the **Main Plant Room (B)**.



BMS Panel Controls

The heater is controlled and monitored by the **BMS Panel** in the **Main Plant Room (B)**. The control is labelled as "Immersion". It has its own **Hand/Auto** switch and 'Enabled' indicator lamp. It is by default set to "Auto", so that it works as a boost for the heating of the hot water in case that Boiler is not providing enough HW.

In the case of boiler failure and there is a need for hot water, the **Immersion Heater Spur** 2 should be switched **OFF**. Please note that in such a case, you also need to manually change the settings on the **BMS Panel** from "Auto" to "Hand" for all three Immersion Heaters.

The **Immersion Heater** should be used **ONLY** for a necessary period of time and should be **ALWAYS** switched **OFF** when not needed. The Immersion Heater should heat up the tank in about 2-3 hours. If used for too long, the element might get damaged or burnt.

The Immersion Heater does not provide any source of heating, thus if the boiler is broken during the winter, it will provide ONLY hot water for taps and showers.

Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Secondary Hot Water Pump

A single **Secondary Hot Water Pump 1** in the **Under Stairs Cupboard (LGF)** circulates the water from the Hot Water Cylinder to the house hot water distribution system. The pump is operated as described below.

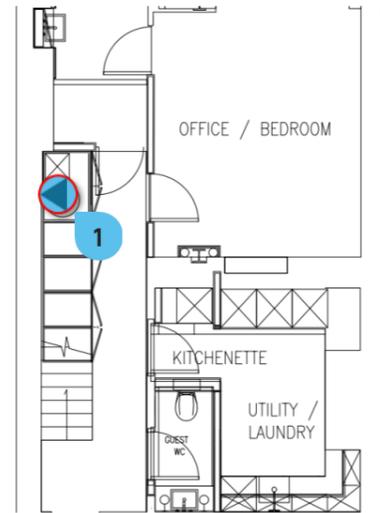


Power Supply

Its **Spur Switch** labelled “**Circulation Pump**” is located nearby. Alternatively, it can be monitored and operated via the **BMS Panel** located in the **Plant Room (B)**. The associated circuit breaker is located within the Power Section of the control panel.

Panel Fascia Switches and LEDs

- ▶ **Hand / OFF / Auto Switch** – The pump has a switch on the front of the BMS Panel with the following options:
 - ▶ **Hand Position** – The pump will be constantly enabled, overriding any BMS inputs. The hardwired interlocks detailed below will still shut down the plant if they are activated.
 - ▶ **OFF Position** – The pump will be disabled.
 - ▶ **Auto Position** – The pump will be enabled and disabled as detailed within the control functions section below.
- ▶ **Enable Lamp** – This lamp is illuminated when the Pump is enabled from the BMS Panel and does not guarantee that it is running.
- ▶ **Fault Lamp** – This lamp is illuminated directly from the fault status received from the Pump and is an indication of the pump's internal fault status.



Control Functions

The Secondary Hot Water Pump will run when the HWS time schedule is active and there is a heat demand from either of the Hot Water Cylinders and their control valves are open.

Maintenance

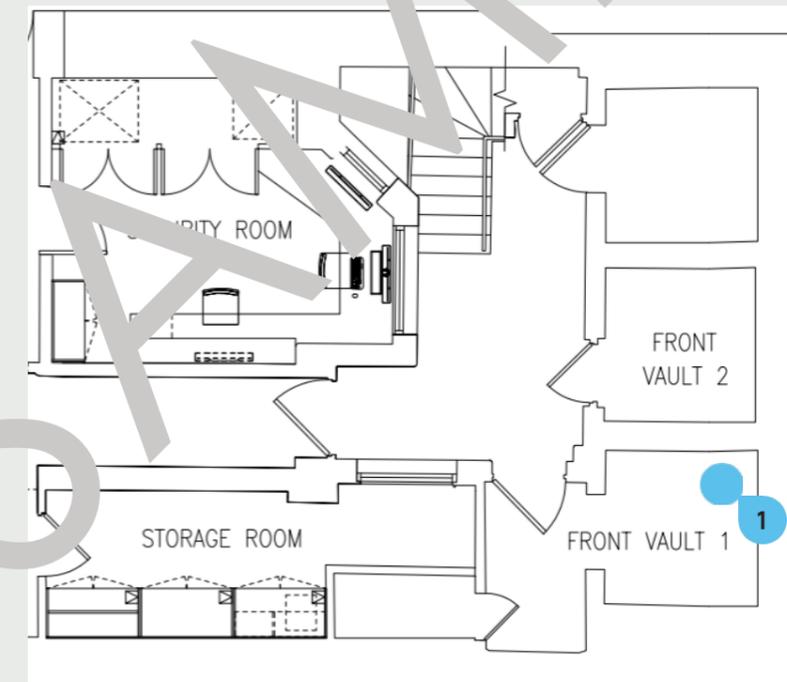
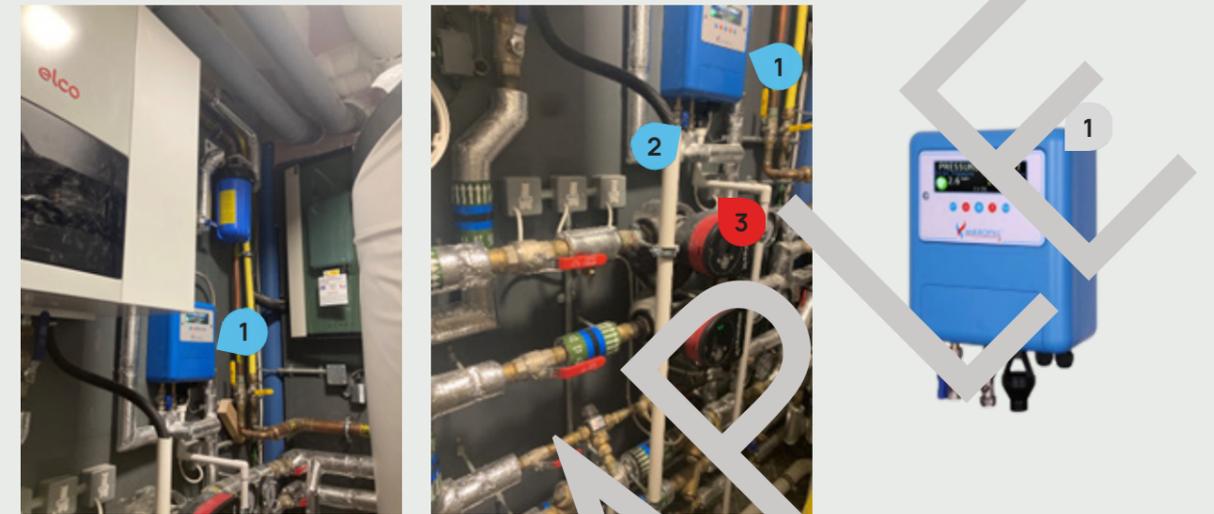
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Pressurisation Unit

A **Pressurisation Unit 1** has been installed in the **Front Vault 1 (LGF)**. It is a system that retains the pressure in the hot water circulation. If the pressure drops, the Pressurisation Unit will fill it automatically. Its **Isolation Valve 2** is located underneath the unit.

Its **Spur Switch 3** is also located underneath it. Alternatively, the Unit can be controlled and monitored by the **BMS Control Panel** also located in the **Storage Room (LGF)**

To shut the **Pressurisation Unit** off, close the **Isolation Valve** and switch off the **Spur Switch**.



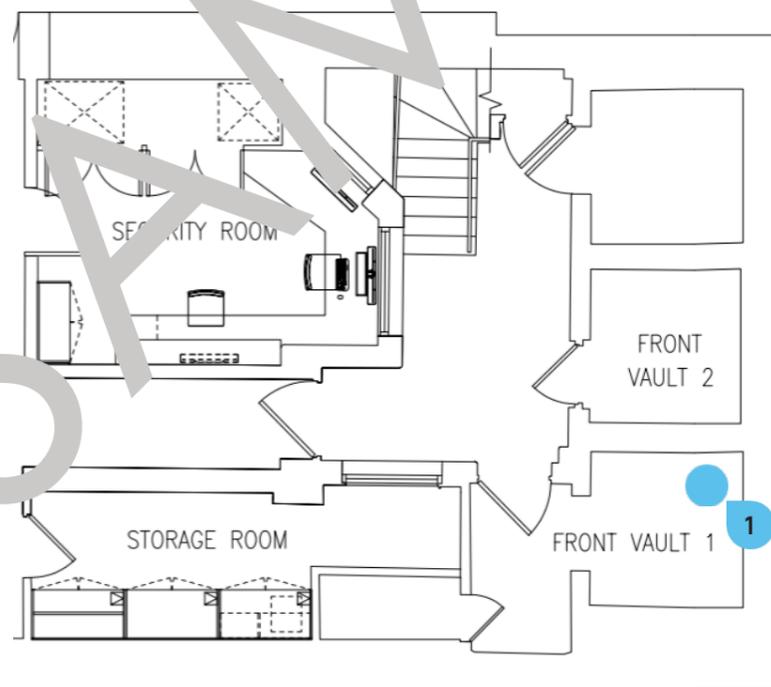
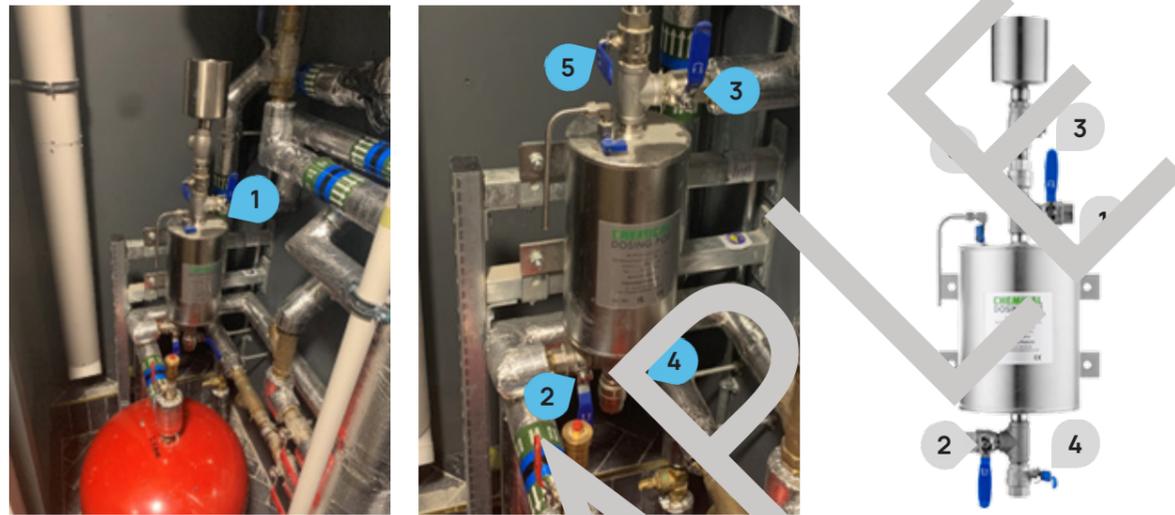
Maintenance

If there is any problem with the pressure, its maintenance should be done by the authorised maintenance contractor only. Unauthorised manipulation with the Pressurisation Unit can cause an undesired effect on the functioning of the system. For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Chemical Dosing System

The **Chemical Dosing System** 1 has been installed in the **Front Vault 1 (LGF)**. It is required in order to feed liquid chemicals such as corrosion inhibitors into the closed water systems.

When you want to introduce chemicals, close the **Primary Flow** 2 & **Primary Return** 3 **Valves** and open the **Dosing Tap** 4 & **Valve** connecting to the **Funnel** 5. Fill it with chemicals, close it, and open the Primary Flow & Primary Return Valves and let it run.

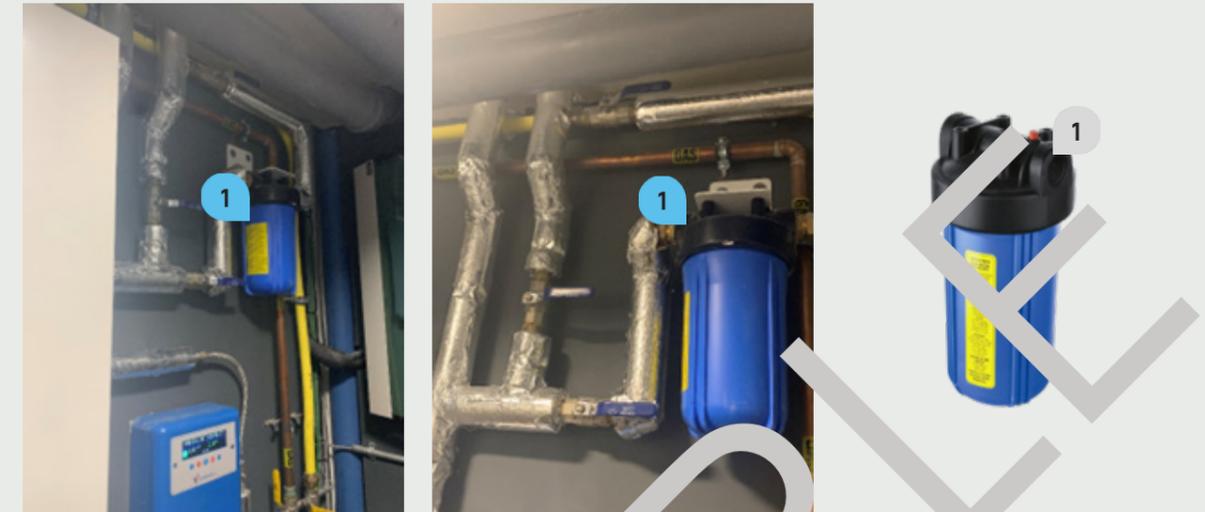


Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

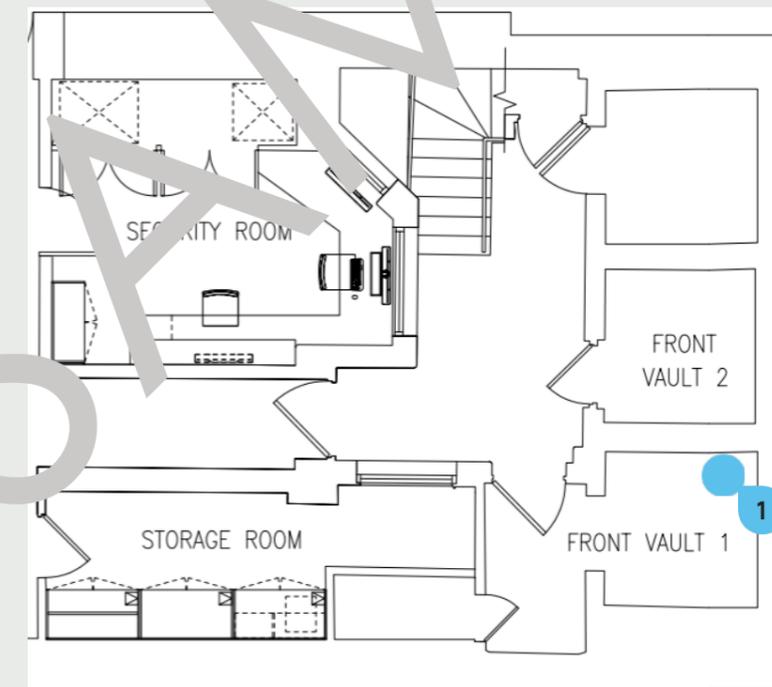
Magnetic Filter

A **Magnetic Filter** 1 is installed in the **Front Vault 1 (LGF)**, on the LHS from the HW Cylinder. It is a filtering system that has been installed on the Heating Return Pipe to catch sludge as it passes through the system.



The **Magnetic Filter** should be serviced by a qualified heating engineer once a year to maintain the system in a good condition.

For high system efficiency and protection, the dosing system should be regularly serviced by using the **MC1+ Protector** which prevents the formation of sludge and scale and contributes to a longer system life.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Heating - General Information

There are five types of Heating installed in the house.

- ▶ **Wet Underfloor Heating** provides heat to all habitable rooms on all floors
- ▶ **Trench Heaters** provide heat in **Living Room (1F)**, **Office (1F)** and **Studio (1F)**
- ▶ **Wet Towel Rails** provides heat in all **Ensuites** and **Bathrooms**
- ▶ **Electric Underfloor Heating** provides heat in **Staff Bathroom (LGF)**, **Guest Bathroom 1 (3F)**, **Guest Bathroom 2 (3F)**, **Guest Bathroom 3 (4F)** and **Hammam (4F)**.

All heating elements including the sensors are linked to the **BMS Panel**.

For more information, please refer to each corresponding page.

- ▶ **Wet Underfloor Heating** - page 33
- ▶ **Trench Heaters** - page 26
- ▶ **Wet Towel Rails** - page 40
- ▶ **Electric Underfloor Heating** - page 39

Temperature Control

In total, there are three ways to control the temperature.

- ▶ **Heatmiser Thermostats (V2) 1** - serving **Wet UFH**
- ▶ **Thermosphere Thermostats (BT21) 2** - serving **Electric UFH**
- ▶ **Smart Home Touch Screens 3** - serving **Dual Towel Rails** and **Trench Heaters**

Please note: each Heatmiser Thermostat1 is wirelessly linked to a **Neohub** in the **AV Rack** in the **Hallway (GF)**. The Neohub allows for smartphone control of all the Thermostats using **NeoApp**.



Temperature Sensors

The heated rooms are equipped with the **Thimble Air Sensors 4** or **Floor Sensors (Probes) 5**.



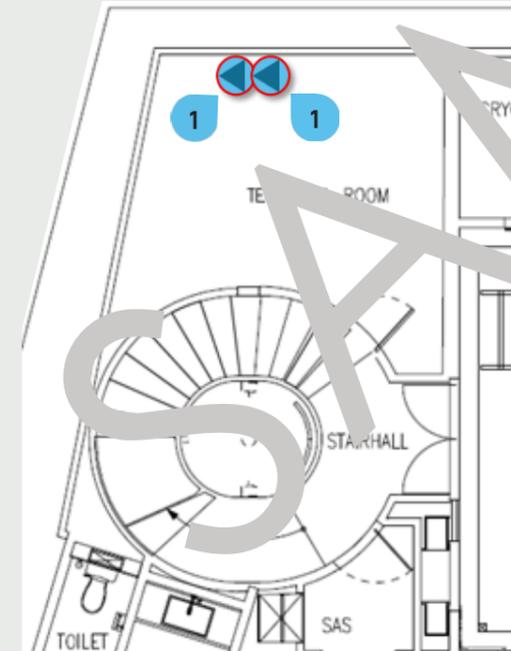
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Primary Heating Pumps

The set of **Dual Heating Pumps 1** has been installed in the **Main Plant Room (B)**, behind Hot Water Cylinders. The twin Pump Set circulates water from the primary heating system out to the secondary heating circuit.

Each Pump has its **Spur Switch 2** mounted next to it. Alternatively, it can be controlled and monitored by the **BMS Control Panel 3** also located in the **Main Plant Room (B)**.



BMS Panel Controls

- ▶ **"HAND" 4** enables you to run it either on Pump 1 or Pump 2
- ▶ **"AUTO" 5** switches automatically from Pump 1 to Pump 2

In case there is a fault in Pump 1, the controls must be changed to "HAND", then the Pump 2 must be turned ON and vice versa.



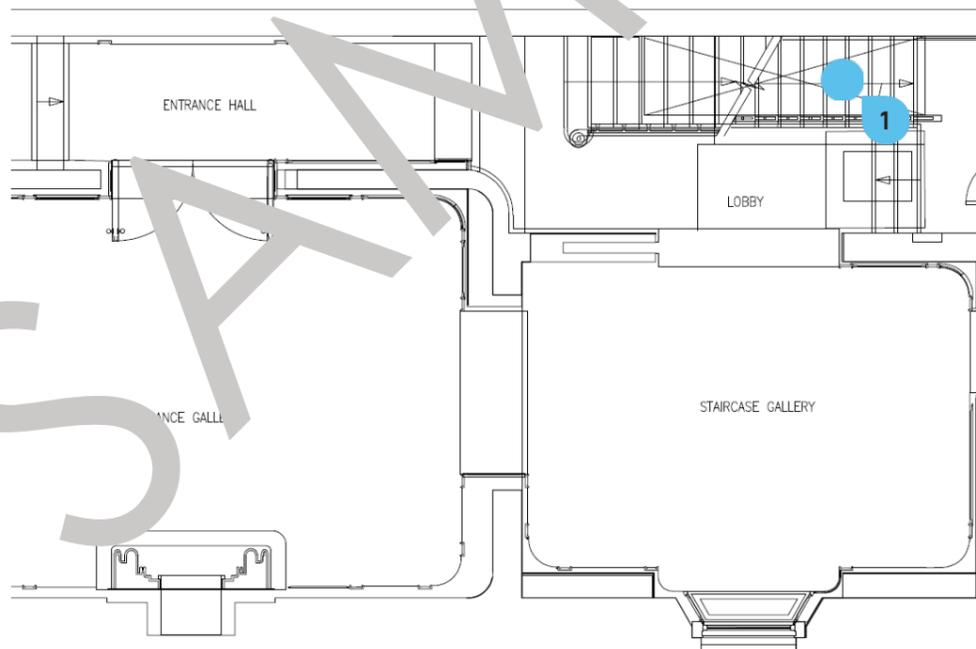
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Filling Loop

A **Filling Loop 1** has been installed in the **Service Cupboard (GF)**, above the Pressurization Unit. It is a Boiler component, which provides a temporary connection to the mains in order to fill and pressurise the **Central Heating System** with water. It also allows the system to be topped up where necessary.

Regularly topping up the system usually indicates a leak, and doing so will damage the system in the long-term. The pressure should be constantly around 1,5 bars.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Wet UFH - General Information

The majority of rooms is heated by the **Wet Underfloor Heating**. The UFH Pump can be operated and monitored via the BMS Panel located in the **Plant Room (B)**.

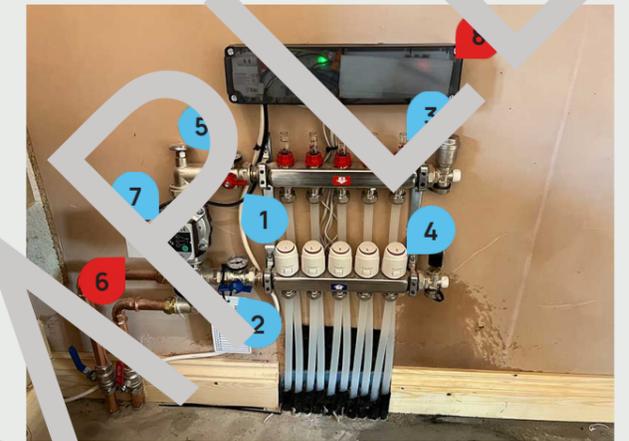
In total, there are five **Underfloor Heating Manifolds** serving the UFH throughout the house. They are located in the following areas:

- ▶ Pool Area (B)
- ▶ Library (LGF)
- ▶ Guest Dressing Room (GF)
- ▶ Master Bathroom (1F)
- ▶ Guest Dressing 3 (2F)

For a specific locations and more detailed information of each individual manifold, please refer to the following pages.

Each UFH Manifold has its own:

- ▶ Flow 1
- ▶ Return 2
- ▶ Flow Meters 3
- ▶ Caps for Actuator 4
- ▶ Pressure Gauge 5
- ▶ Spur Switch 6
- ▶ Pump 7
- ▶ Wiring Centre 8



Controlling the Temperature

The temperature provided by the Wet Underfloor Heating can be controlled via **Heatmiser Thermostats (Neostat V2) 9** located throughout the house, or via a Dedicated Mobile App if access granted. For quick user guide of the Heatmiser Thermostat, please refer to page 98.

Probes

The temperature is monitored by **Temperature Sensors / Probes 10** which send signal to the Touch Screen. Each probe is located on the wall in the corresponding heated room, usually near the door or below



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Wet UFH Manifolds

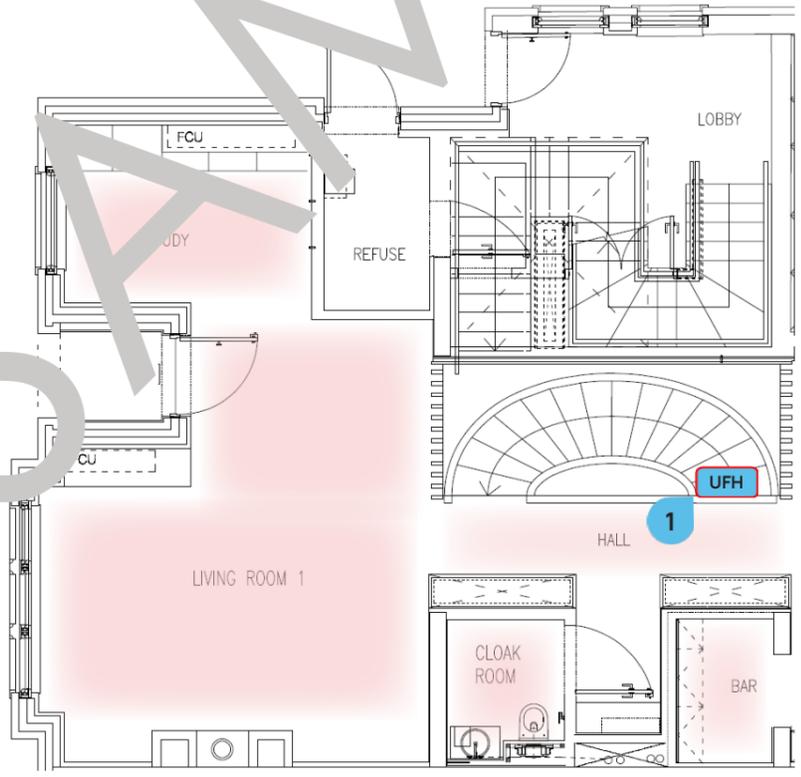
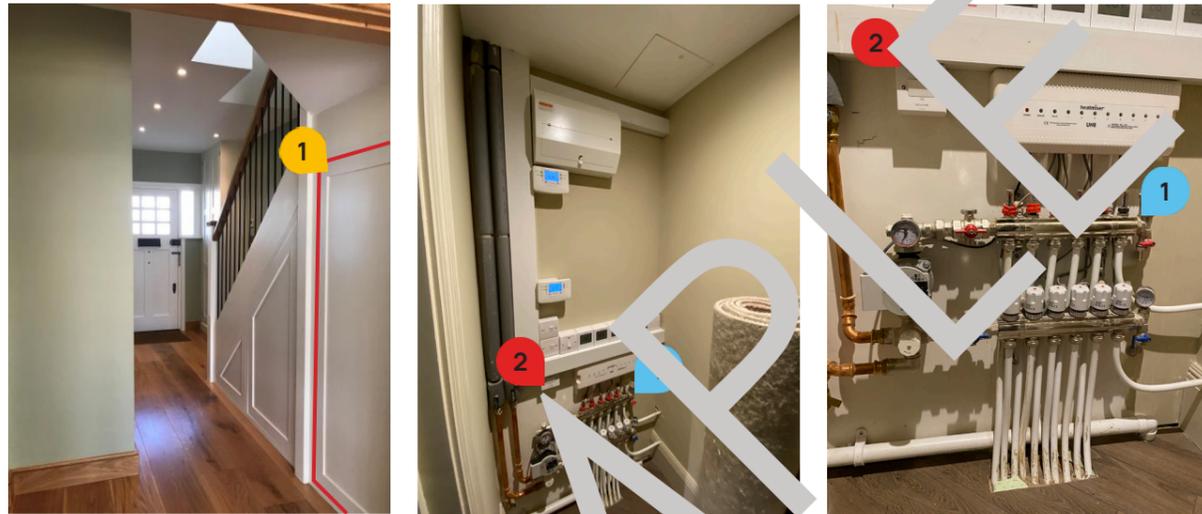
Plant Cupboard (GF)

One **Manifold 1** serving the ground floor is located under stairs, in the Plant Cupboard (GF).

Its **Spur Switch 2** is mounted on the wall above it.

It serves the following rooms:

To completely switch off this UFH Manifold, shut the **Breaker No. 10**, labelled "Manifold GF" on the **Distribution Board "DB1"** located in the **Main Plant Room (B)**.



Wet UFH Manifolds

Plant 1 (LGF)

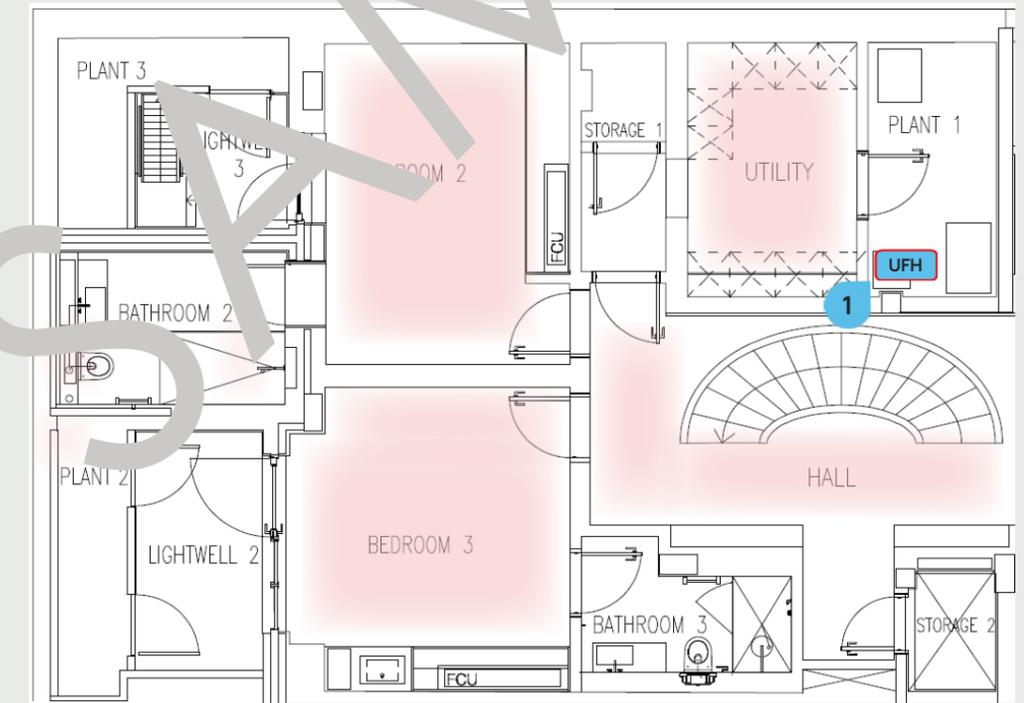
The **Manifold 1** serving the Wet UFH in the basement is located in the **Plant 1 (LGF)**.

Its **Spur Switch 2** is mounted on the wall above it, at high level.

It serves the following rooms: **Bedroom 2 (LGF)**, **Bedroom 3 (LGF)**, **Hall (LGF)** and **Utility (LGF)**.

Its **Spur** is located right next to it.

To completely switch off this UFH Manifold, shut the **Breaker No. 15**, labelled "Tech room UFH" on the **Distribution Board "DB3"** located in the **Storage / Panic Room (LGF)**.



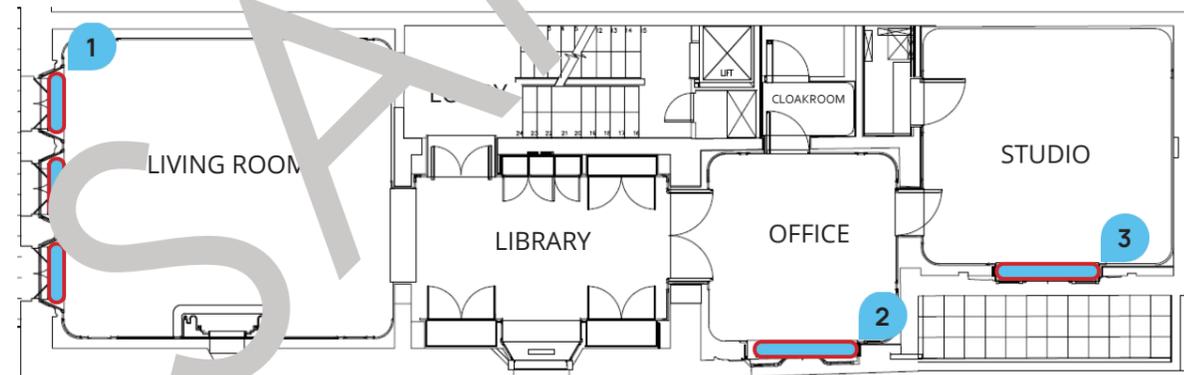
Trench Heaters

The house is provided with multiple **Trench Heaters**, all integrated into the central heating system. Each Trench Heater is wet and operates independently with its **Electric Controller**, which is connected to the overall house heating system and managed through the **BMS Panel**.

They are located in the following areas:

- ▶ Living Room (1F) 1
- ▶ Office (1F) 2
- ▶ Studio (1F) 3

The Trench Heaters can be completely switched off by shutting the **Breaker No. 6 / L3** labelled "Trench Heaters 1st-3rd" on the **Distribution Board 2** located in the **Corridor (B)**.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Dual Towel Rails

The **Dual Towel Rails** 1 provide additional heat in all **Ensuites** and **Bathrooms** throughout the house. Each Towel Rail has its Spur 2 in the nearby area within the room or in the nearby room. For specific locations, please refer to the following pages.

The **Primary Heating Pump** 3 for the Towel Rails is located in the **Store Room (LGF)**, on the LHS wall.

Clean Care

Each Towel Rail should be cleaned with warm soapy water, followed by rinsing with clean water and drying with a soft cloth.

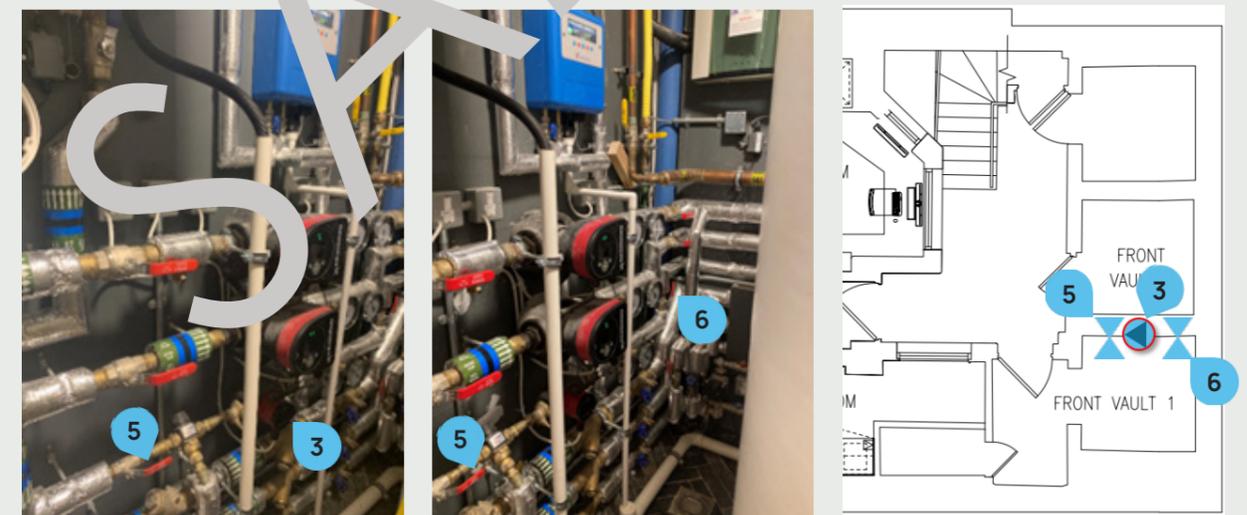
All finishes are vulnerable to acid attack and some strong substances, such as household cleaners or disinfectants, can cause surfaces to go black or peel.



Maintenance

During maintenance, close the **Towel Rail Valves** 4 on both sides.

Or, if needed, close the **Heating Flow Valve** 5 and **Heating Return Valve** 6 for the Towel Rails in the **Vault 1 (LGF)**.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Dual Towel Rails

Master Bathroom (1F)

The **Master Bathroom (1F)** is additionally heated by the **Dual Towel Rail 1**. Its **Spur 2** is located behind an access panel on the RHS wall.

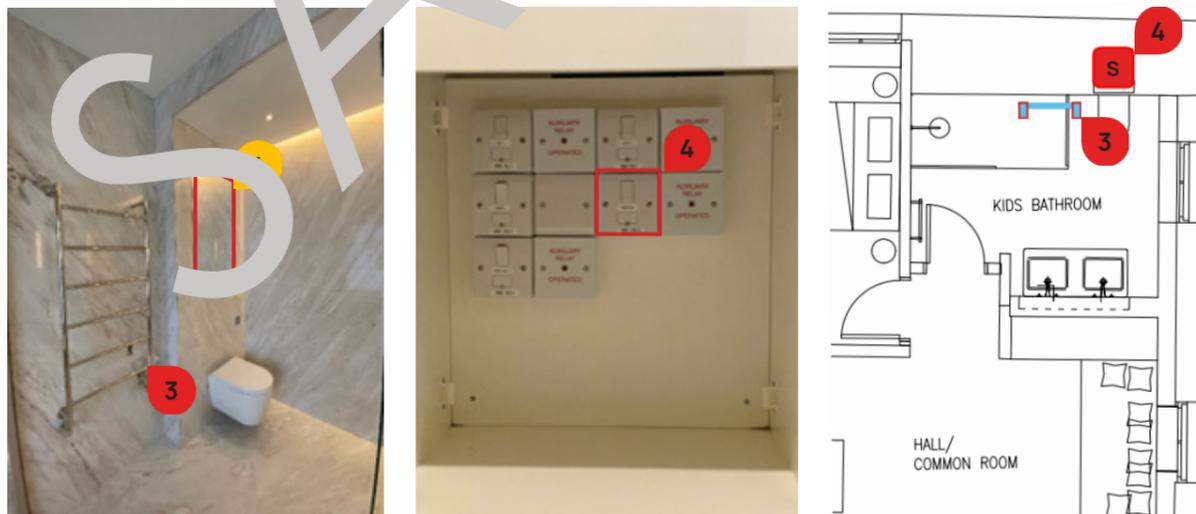
To switch off this Dual Towel Rail completely, shut the **Breaker No. 5/L1**, labelled "**Master Towel Rail**" on the **Distribution Board 2** in the **Corridor (B)**.



Kids Bathroom (2F)

The **Kids Bathroom (2F)** is additionally heated by the **Dual Towel Rail 3**. Its **Spur 4** is located behind an access panel adjacent to the toilet.

To switch off this Dual Towel Rail completely, shut the **Breaker No. 5/L2**, labelled "**Kids Towel Rail**" on the **Distribution Board 2** in the **Corridor (B)**.



Electric UFH

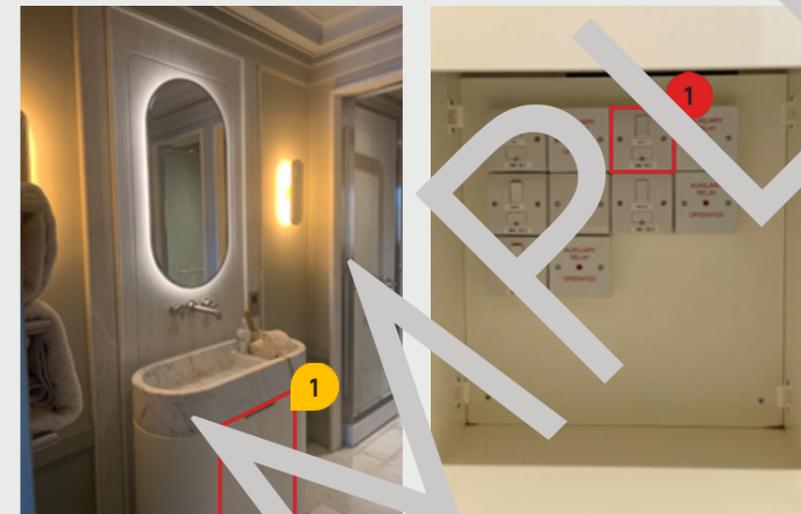
Most bathrooms are equipped with **Electric Underfloor Heating**. It is located in the **Staff Bathroom (LGF)**, **Guest Bathroom 1 (3F)**, **Guest Bathroom 2 (3F)**, **Guest Bathroom 3 (4F)** and **Guest Salon (4F)**.

They can be switched ON / OFF via **Spurs 1** that are usually located in the cupboard beneath the basin or in the nearby area.

Alternatively, the Electric UFH in each room can be switched off completely by shutting the corresponding DB Breaker.

Temperature Control

The Electric Underfloor Heating can be operated via the **Thermosphere Thermostats (BT2)** located throughout whole house or via a **Dedicated Mobile App** if access granted.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Electric UFH

Guest Bathroom 3 (4F)

This bathroom is heated by an **Electric Underfloor Heating**.

Its **Spur 1**, labelled as "UFH 1" is located in the cupboard beneath the basin.

To switch off the El. UFH completely, shut the **Breaker No. 9/L2**, labelled "Electric UFH 1st-4th" on the **Distribution Board 2** in the **Corridor (B)**.



Guest Bathroom 2 (3F)

This bathroom is heated by an **Electric Underfloor Heating**.

Its **Spurs 2** are located in the cupboard beneath the basin. They are labelled as "UFH 1" and "UFH 2".

To switch off the El. UFH completely, shut the **Breaker No. 9/L2**, labelled "Electric UFH 1st-4th" on the **Distribution Board 2** in the **Corridor (B)**.



A/C - General Information

The house is equipped with **Air Conditioning**. It is the main source of cooling in the house.

You can find the following A/C equipment installed in the house:

- ▶ **Concealed Ceiling**
- ▶ **Floor Unit**
- ▶ **Wall-Mounted Unit**
- ▶ **Compressor Unit**
- ▶ **Heat Exchange Unit**

Please note: Air Conditioning Unit is also known as FCU (Fan Coil Unit), especially in technical drawings.

There are five A/C Units in total, located in the following areas:

- ▶ **Gym (4F)**
- ▶ **Lobby (3F)**
- ▶ **Studio Room (1F)**
- ▶ **Entertainment Room (B)**
- ▶ **AV Room (B)**.

For more specific information, please refer to the following page

Air Conditioning can be monitored via the **BMS Panel** located in the **Plant Room (B)**.

Alternatively, each A/C Unit can be switched off via a **Spot** located nearby.

All A/C Units can be controlled via the **Touch Screens** installed throughout whole house or via the **App** on your smart device.

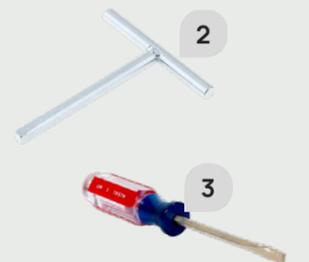


All A/C Units are **Gravity Drain** and are connected to **Drain Traps** located throughout the house, usually next to each A/C Unit. There are either **Slits** or **Grills** in each corresponding room. The **Compressor Unit** is located in the **AV Room (B)**.

Removing The Access Panels

Some of the A/C Units are located behind access panels. To remove the access panels, you should use a **T-key 1** or a **Flat Screwdriver 1**. Then carefully put the panel aside on a mat or soft cloth to avoid scratching the floor.

Please note that the access panels on the Second Floor are very heavy and removing them is a two-person job, also, before removing these panels, the spotlights need to be switched off.



Maintenance

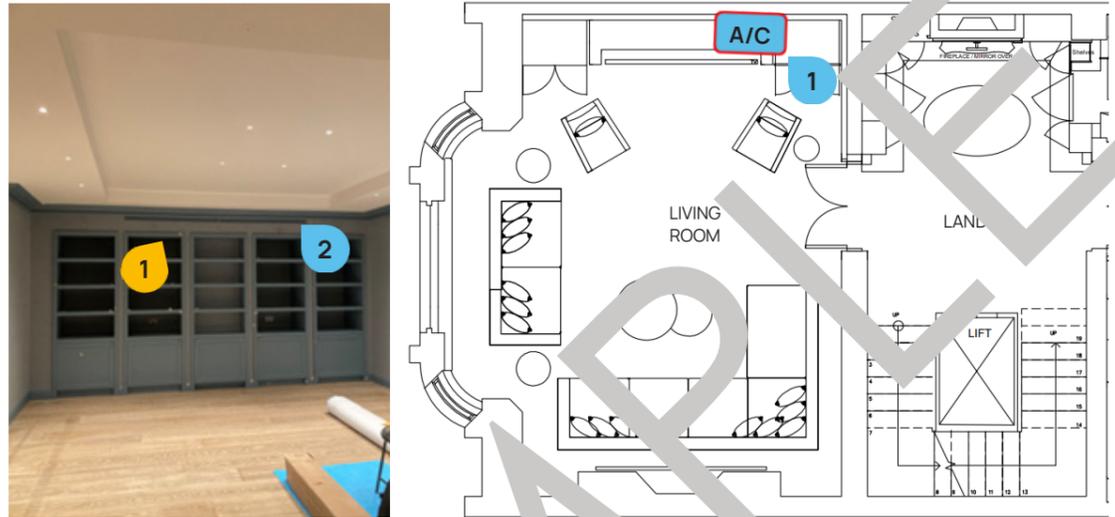
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

A/C Units - Locations

Living Room (GF)

The **Living Room (1F)** is equipped with **A/C Unit 1** located above the joinery, behind an access panel. Its **Spur Switch** are located right next to it. The **Combined Supply & Return Grill 2** is mounted above the joinery.

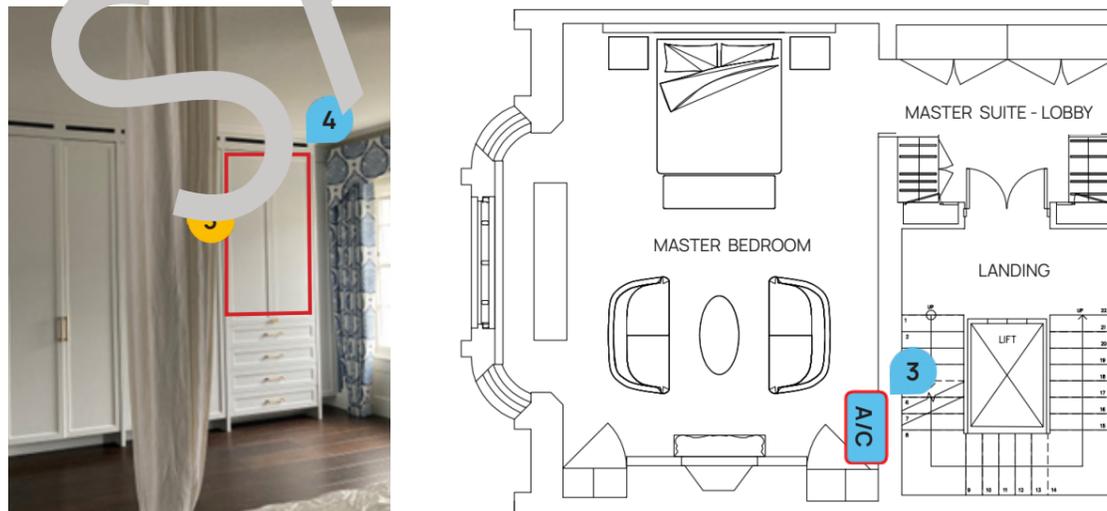
To completely switch off this A/C Units, shut the **Breakers No. 15**, labelled as 'AC Living Room' on the **Main Distribution Board** in the **Plant Room (GF)**.



Master Bedroom (1F)

The **Master Bedroom (1F)** is equipped with **A/C Unit 3**. They are located above the access panel in the RHS joinery. Their **Spur Switches** are located right next to it. The **Combined Supply & Return Grilles 4** are mounted above the joinery.

To completely switch off this A/C Units, shut the **Breakers No. 16 & 17**, labelled as 'AC Living Room 1' and 'AC Living Room 2' on the **Main Distribution Board** in the **Plant Room (GF)**.

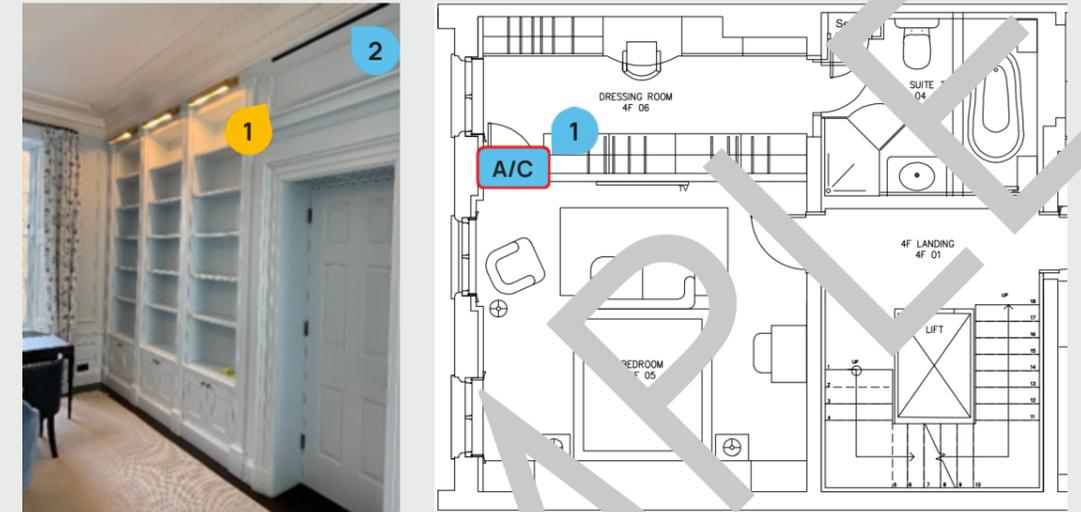


A/C Units - Locations

Library/Music Room (1F)

The **Library/Music Room (1F)** is equipped with **A/C Unit 1** located above the door, behind an access panel. Its **Spur Switch** are located right next to it. The **Combined Supply & Return Grill 2** is mounted above the door.

To completely switch off this A/C Units, shut the **Breakers No. 18**, labelled as 'AC Library' and 'AC Living Room 2' on the **Main Distribution Board** in the **Plant Room (GF)**.



Bedroom Suite 1 (3F)

The **Bedroom Suite 1 (3F)** is equipped with **A/C Unit 3**. It is located behind an access panel in the joinery. Its **Spur Switch** are located right next to it. The **Combined Supply & Return Grille 4** is mounted above the joinery, along the entire wall.

To completely switch off this A/C Units, shut the **Breakers No. 20**, labelled as 'AC Bedroom Suite 1' and 'AC Living Room 2' on the **Main Distribution Board** in the **Plant Room (GF)**.



Condenser Units

Two **Condenser Units** are located in the **Back Garden**.

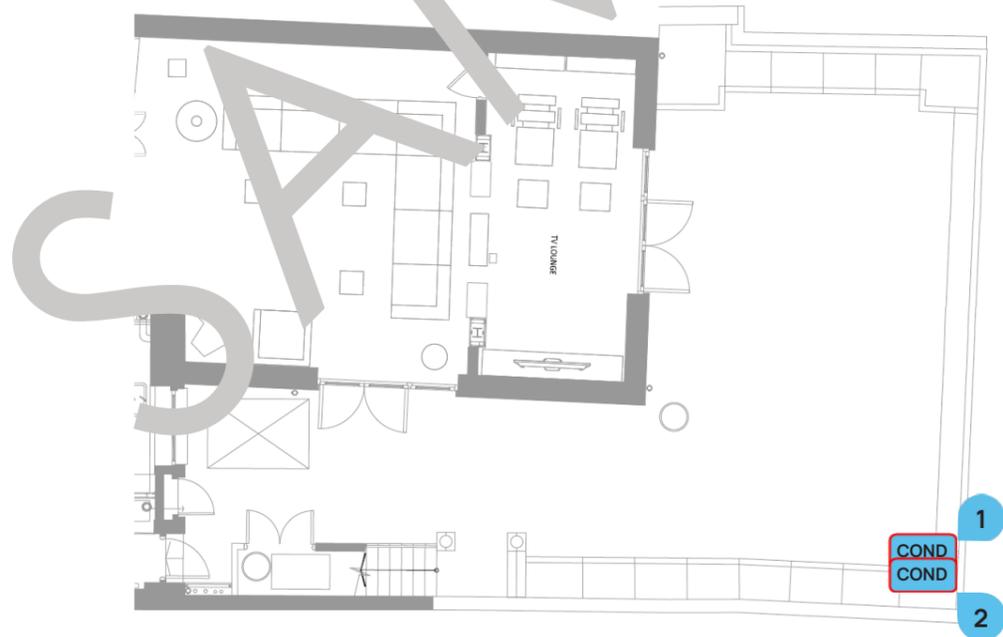
The **Condenser Unit 1** on RHS in an enclosure in the of the Back Garden serves the **A/C Unit** in the **Cryotherapy (B)** and **Massage Room (B)**.

The **Condenser Unit 2** on LHS in an enclosure in the Back Garden serves the **A/C Units** in the **Basement, Lower Ground Floor** and **Ground Floor**.

Both Units have their **Isolator Switch 3** on the wall next to them.

To completely switch off these Condenser Units, shut the following Breakers on the **Main Distribution Board "MDB"** located in the **Plant Room (B)**:

- ▶ **Breaker No. 13TP** labelled "**Cryotherapy Condenser**"
- ▶ **Breaker No. 14TP** labelled "**Courtyard Condenser**"



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

MVHR

The **MVHR (Mechanical Ventilation with Heat Recovery) System** has been installed in the house. It is a ventilation system that supplies fresh filtered air to the habitable rooms in the **Basement** and parts of the **Lower Ground Floor**.

Two **MVHR Units 1 2** have been installed inside cupboard in the **Plant Room (B)**.

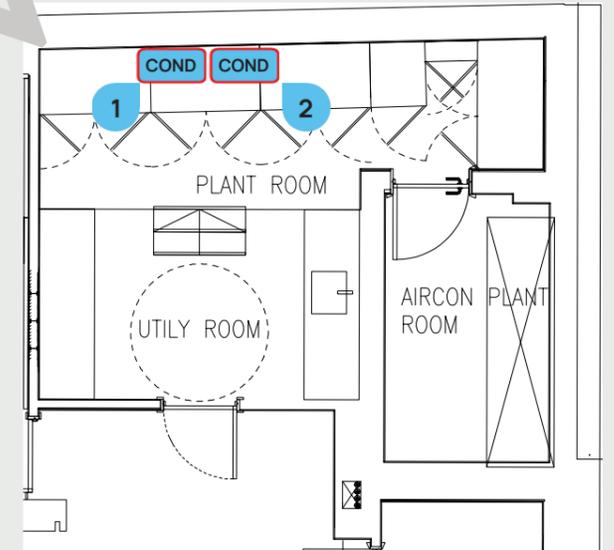
Their **Spur Switch 2** are located in between these two units.

To switch off the MVHR Units completely, shut the **Breaker No. 7L1** labelled "**Ventilation Spurs**" on the **Main Distribution Board** in the **Plant Room (B)**.



It is required to clean and eventually replace the **Filters 3** on the front of the Unit every **12-18 months**. The heat exchanger and motor should also be checked. To order new filters scan the QR code on the front of the Unit.

For more information, please refer to the following page



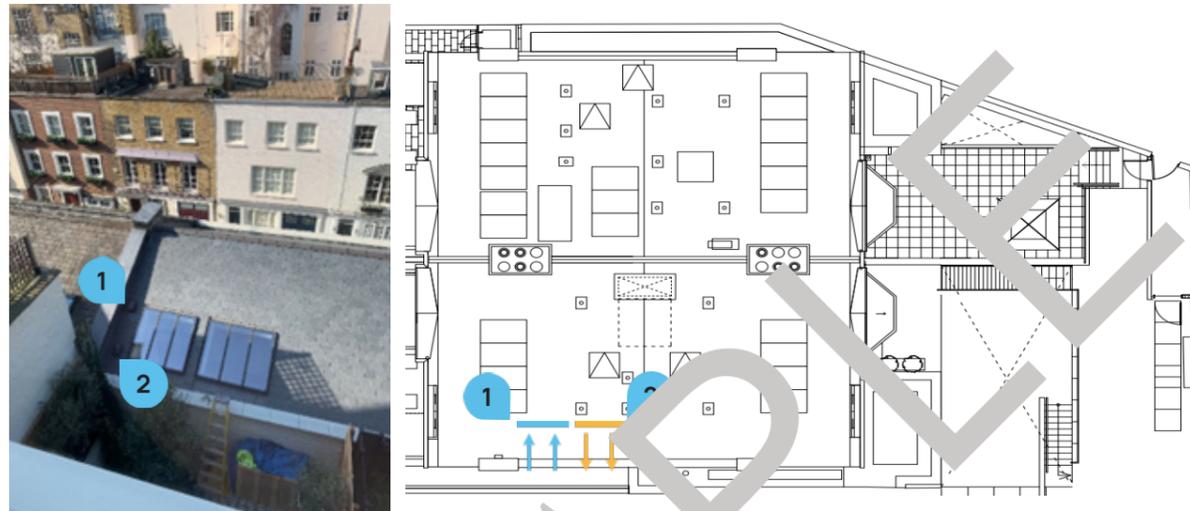
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

MVHR

Fresh Air Intake & Exhaust

The MVHR Fresh Air Intake **1** and Exhaust Air **2** are located on the Roof above the Roof Terrace (1F). The fresh air intake duct brings the fresh air into MVHR Unit, where it passes through the heat exchanger before being distributed to the supply air duct. The exhaust air duct expels the stale air extracted from the building to the outside.



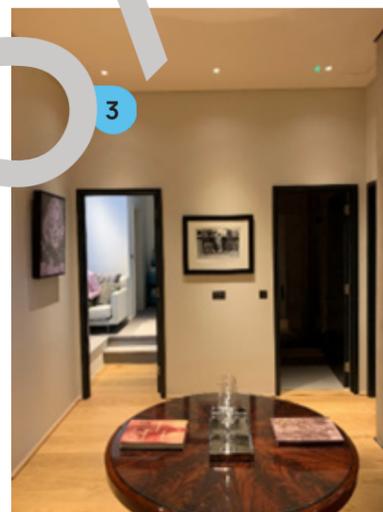
Supply Air & Extract Air Valves

The MVHR Unit provides 24-hour exhaust ventilation through the Supply **3** and Extract Air **4** Valves.

The Fresh Air Supply goes to the following areas: The Extract Air is taken from the following areas:

- | | |
|--------------------|--------------------|
| ▶ Cinema Room (B) | ▶ Plant Room (B) |
| ▶ Plant Room (B) | ▶ Utility Room (B) |
| ▶ Utility Room (B) | ▶ Storage (B) |
| ▶ Family Room (B) | ▶ Family Room (B) |
| ▶ Gym (B) | ▶ Cinema Room (B) |
| ▶ Living Room (G) | ▶ Gym (B) |

Please note that the Air Valves for the MVHR Unit should not be obstructed by any object.



Bathroom Extraction

The house is equipped with a Extract System (Nuair MEV-DC) which consists of three In-line Motors throughout the house. In-line Motors act as a Boosters for the corresponding Extract Fans. For more information, please refer to the following pages.

Extract Fans & Slots

The Extract System is equipped with a standard Extract Fans **1** and Extract Slots **2**. The only two exceptions are the Shower Room (LGF) and Mews House.

The Extractors are connected to the Lights. As soon as the Lights switch ON, the Extractor fans also turn ON automatically.



Access Panels

Some of the In-line Motors are located above ceiling access panels. To open the access panels, (preferably plastic) T-key **3** is required. Simply putting this key into the hole of the access panel and turning will unlock it and enable the panel to swing open. Be sure to hold the panel while turning the last lock. Also, a step ladder **4** will be required for easy access to the panel and especially the unit itself.)



Maintenance

For contact details and responsible personnel, please refer to section 3. Project Directory - Ludek Ltd.

Bathroom Extraction

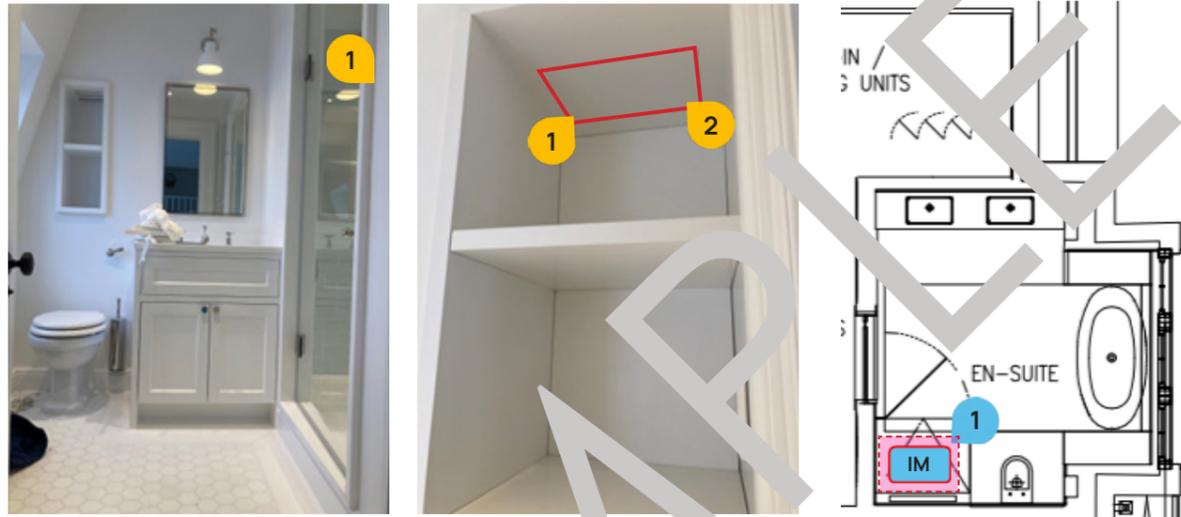
Ensuite (5F)

A single **Inline Motor 1** has been installed in the **Ensuite 5 (5F)**. It is accessible via the removable access panel, inside the joinery.

Its **Isolator Switch 2** is located next to it.

It serves the Extract Fans in the following rooms – **Ensuite 5 (5F)** and **Ensuite 4 (4F)**.

To completely switch off this Extractor, shut the **Breaker No. 6**, labelled as “**Extractor Ensuite**” on the **Distribution Board 3** in the **Service Cupboard (GF)**.



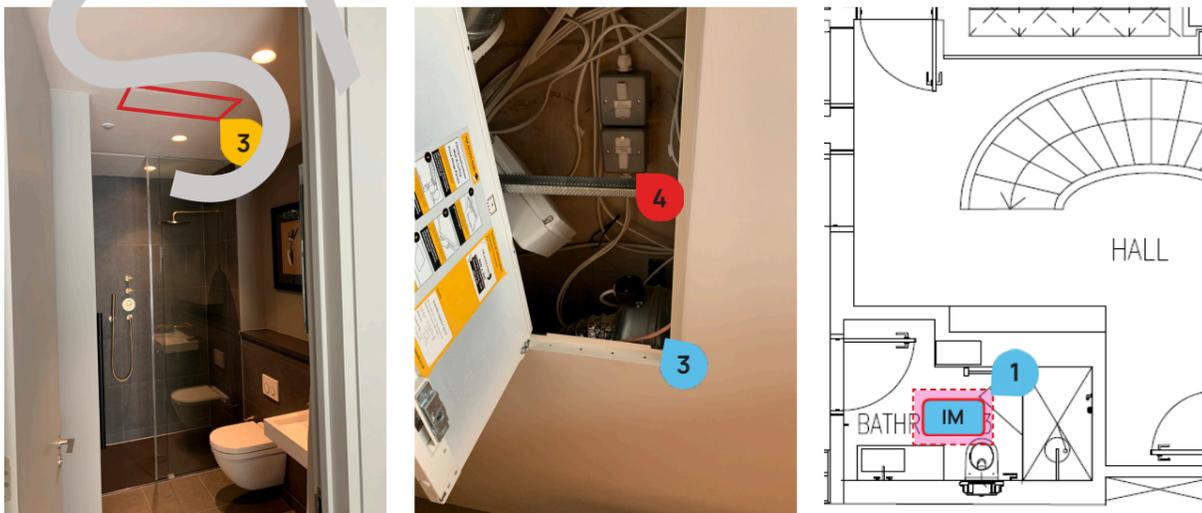
Lift Riser (3F)

One **Inline Motor 3** has been installed behind a joinery removable access panel, in the **Landing (2F)**.

Its **Isolator Switch 4** is located next to it.

It serves the Extract Fans in the following rooms – **Shower Room (3F)** and **Master Ensuite (2F)**.

To completely switch off this extractor, shut the **Breaker No. 5**, labelled as “**Extractor Riser**” on the **Distribution Board 3** in the **Service Cupboard (GF)**.



Kitchen Extraction

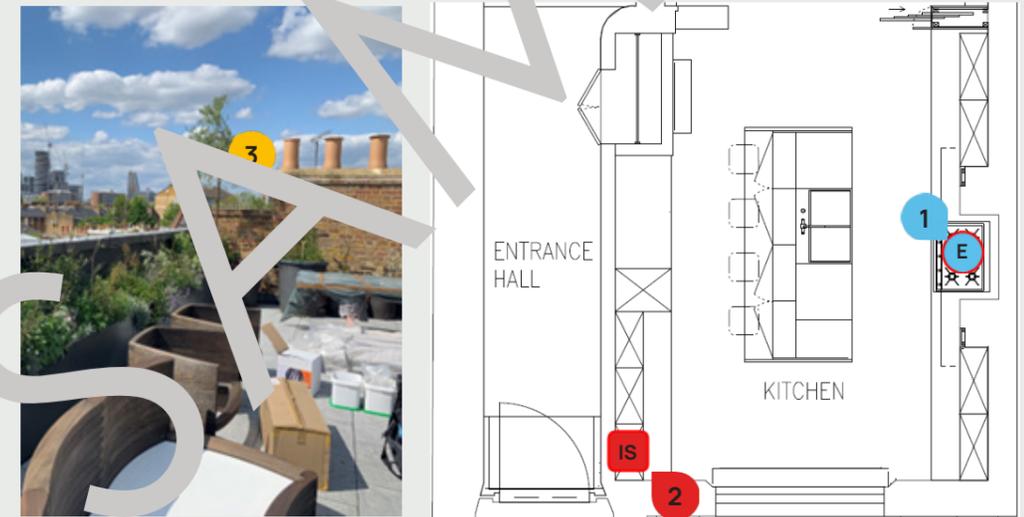
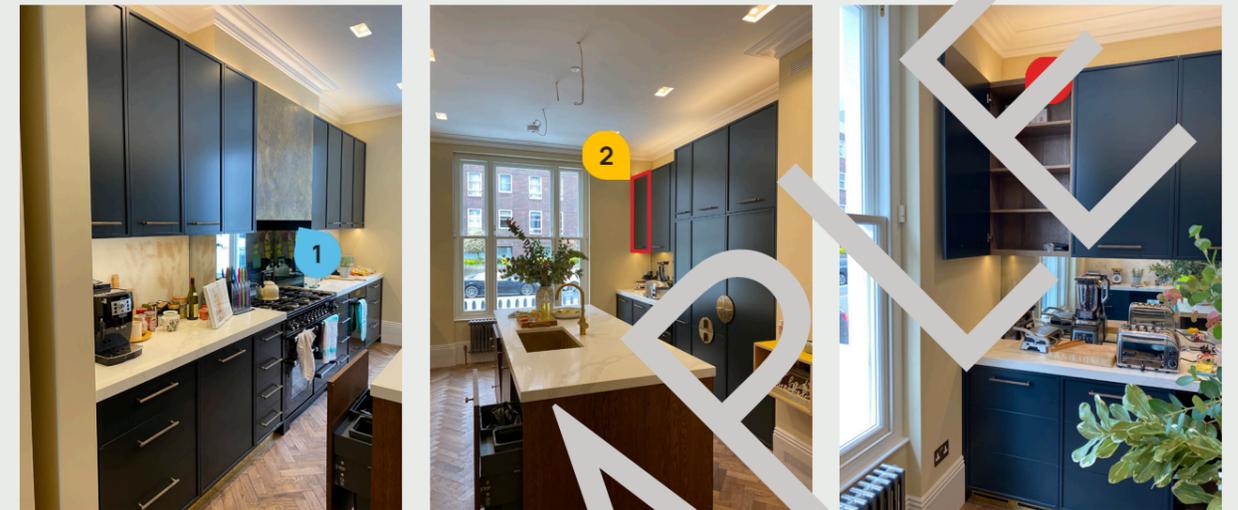
Kitchen (GF)

The **Kitchen (GF)** is equipped with a standard **Cooker Hood 1**.

It has its **Spur 2** located with the rest of the Spurs for kitchen appliances in the cupboard by the window.

The **Exhaust 3** leads to the **Roof**.

To completely switch off the Cooker Hood, shut the **Breaker No. 2**, labelled as “**Extractor Kitchen**” on the **Consumer Unit “DBK”** in the **Plant Room (LGF)**.



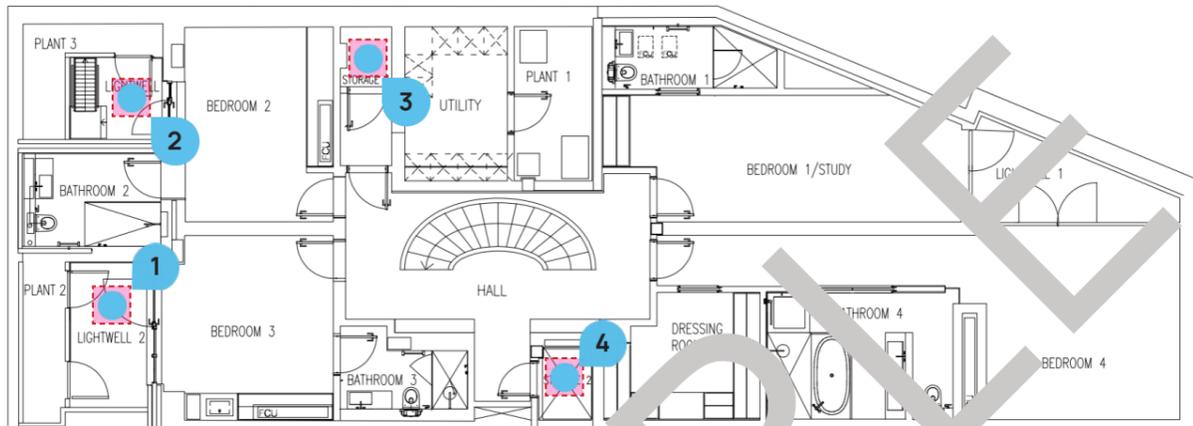
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Sump Pumps

In total, there are four **Sump Pumps** throughout the property. They are located in the following areas:

- ▶ **Lightwell 2 (LGF)** 1
- ▶ **Lightwell 3 (LGF)** 2
- ▶ **Storage 1 (LGF)** 3
- ▶ **Storage 2 (LGF)** 4



Each set of **Sump Pumps** 5 has its own **Spur** 6 and **Water Level Alarm** 7 located nearby and its own dedicated Distribution Board Breaker.



To switch them off completely, switch the following Breakers on DB in the **Main Plant Room (LGF)**:

- ▶ **Breaker No. 3**, labelled as "**Sump Pump 1**"
- ▶ **Breaker No. 4**, labelled as "**Sump Pump 2**"
- ▶ **Breaker No. 6**, labelled as "**Sump Pump 3**"
- ▶ **Breaker No. 12**, labelled as "**Sump Pump 4**"

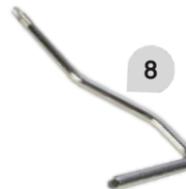
Accessing the Sump Pumps

All Sump Pumps are located behind a **Manhole**. Removing it is a 2-person job and it requires a special 5mm Lifting Key 8, which is stored in each Sump Pump location. When putting the Manholes aside, they should be placed on a soft cloth or mat to avoid scratching the floor.

When removing the Manholes, extra care should be taken to avoid any possible injury or damage to the surrounding areas!

Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**



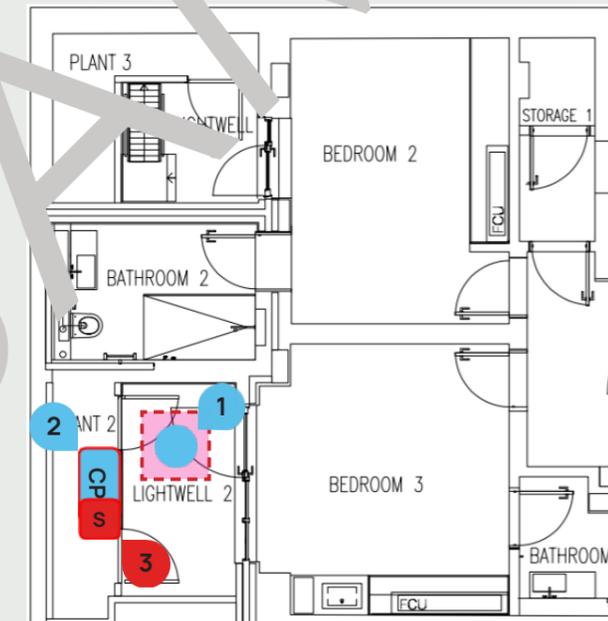
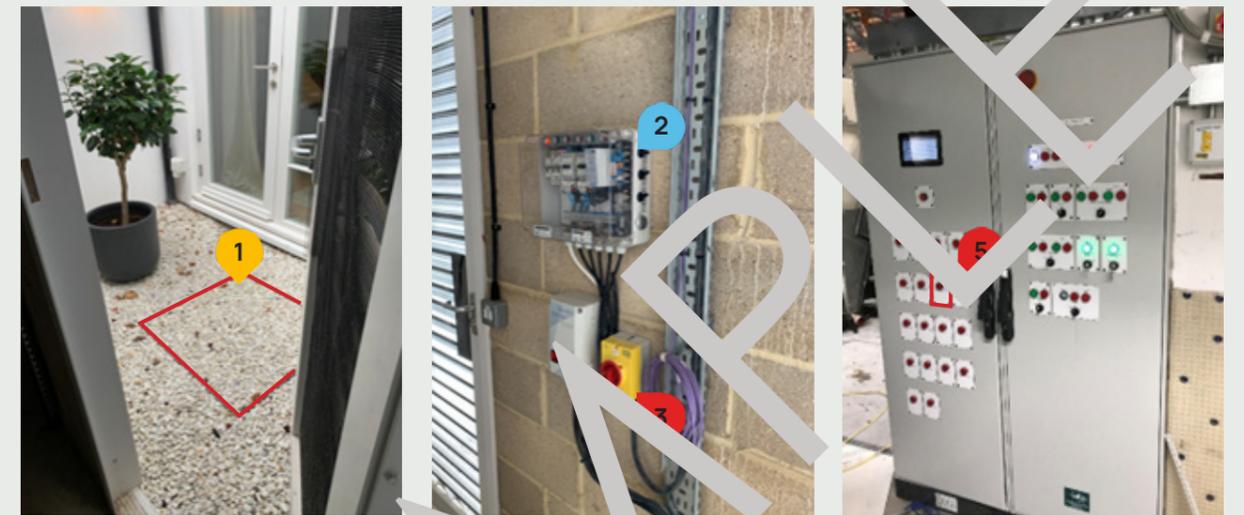
Sump Pumps

Lightwell 2 (LGF)

There is a twin **Foul Water Pump Station** 1 installed in the **Lightwell 2 (LGF)**. Its **Control Panel** 2 and **Isolator Switch** 3 are in the **Plant 2 (LGF)**.

The Foul Water Pump has its own indicator on the **BMS Panel** 5. If there is a fault within the Foul Water Pump, it will be shown on the BMS Panel.

To switch off the Foul Water Pump completely, switch off the **Breaker No. 3** labelled "**Sump Pump 1**" on the **Distribution Board "DB MECH"** in the **Main Plant Room (LGF)**.

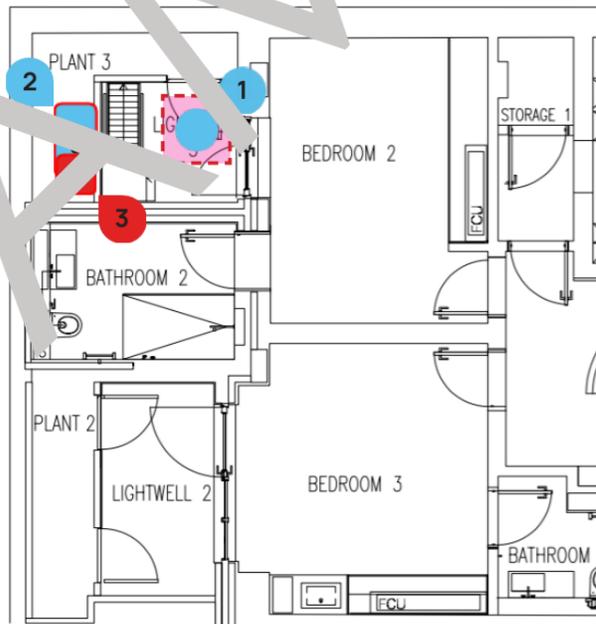
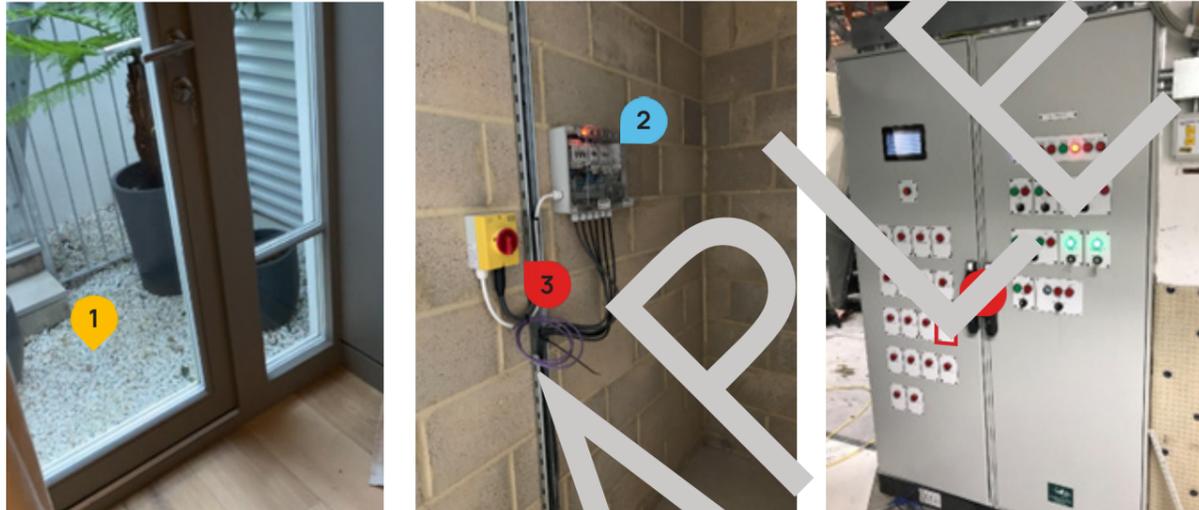


Sump Pumps

Lightwell 3 (LGF)

The **Cavity Drain Sump Pump Station 1** is located in the **Lightwell 3 (LGF)**, behind a Manhole. Its **Control Panel 2** and **Main Switch 3** are in the **Plant 3 (LGF)**. The Sump Pumps have their own indicator on the **BMS Panel 4**. If there is a fault within the Foul Water Pump, it will be shown on the BMS Panel.

To switch off the Cavity Drain Water Pumps completely, switch off the **Breaker No. 4**, labelled as "**Sump Pump 2**" on the **Distribution Board "DB MECH"** in the **Main Plant Room (LGF)**.

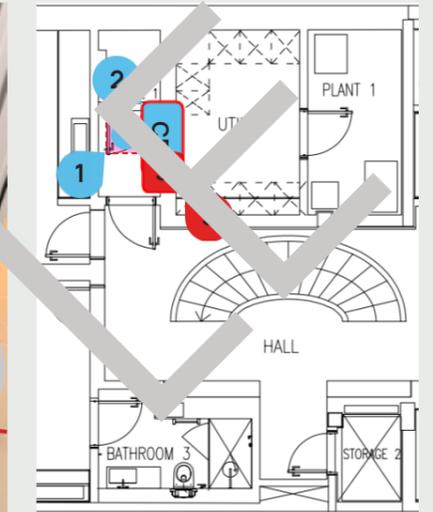


Sump Pumps

Storage 1 (LGF)

The **Sump Pump 3 1** is located in the **Storage 1 (LGF)**. Its **Control Panel 2** and **Main Switch 3** are above the Manhole.

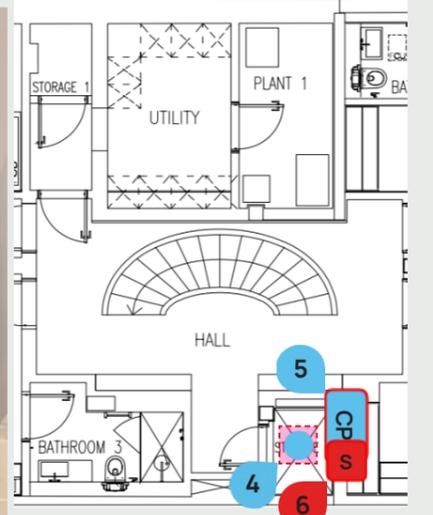
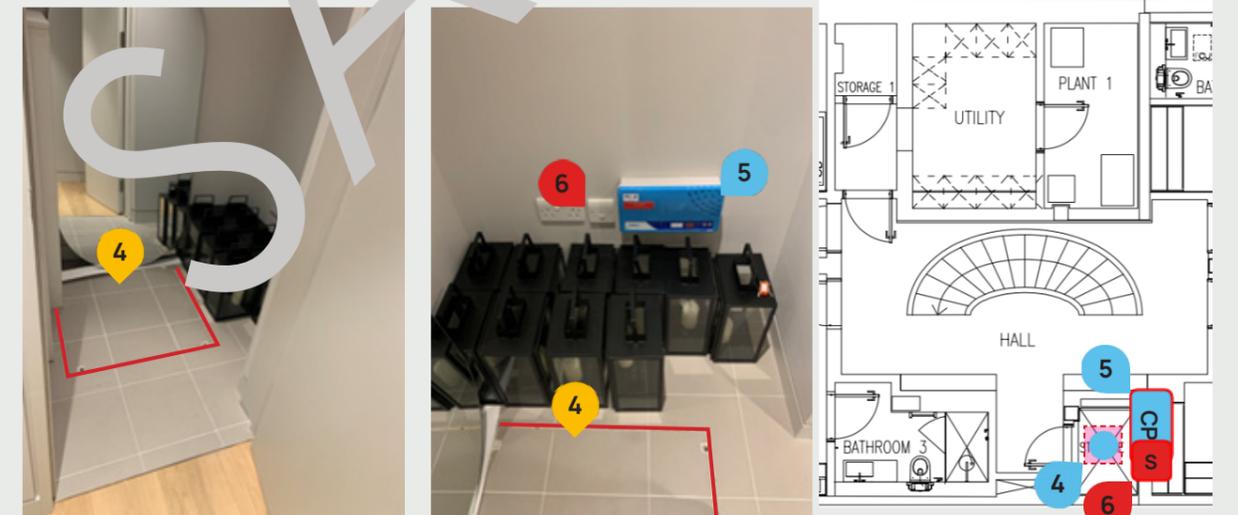
To switch off the Sump Pump 3 completely, switch off the **Breaker No. 6**, labelled as "**Sump Pump 3**" on the **Distribution Board "DB MECH"** in the **Main Plant Room (LGF)**.



Storage 2 (LGF)

The **Sump Pump 4 4** is located in the **Storage 2 (LGF)**. Its **Control Panel 5** and **Main Switch 6** are in the **Plant 3 (LGF)**.

To switch off the Sump Pump 4 completely, switch off the **Breaker No. 12**, labelled as "**Sump Pump 4**" on the **Distribution Board "DB MECH"** in the **Main Plant Room (LGF)**.



Manholes

There are several **Foul Water Manhole Chamber** located throughout the property. The waste is then combined into the **Main Manhole** located outside, behind the Main House. There are also several **Surface Water Manholes** located throughout the property and the surface water then goes to the **Soakaway Tanks** located in the garden.



- Surface Water Manhole Chamber
- Foul Water Manhole Chamber

Accessing the Manholes

Removing the manholes is a person job and it requires a special **Lifting Key 1** which is stored in the **Main Plant Room (LGF)**. When putting the manholes aside, they should be placed on a soft cloth or mat to avoid scratching the floor.

When removing the manholes, extra care should be taken to avoid any possible injury or damage to the surrounding areas!



Maintenance

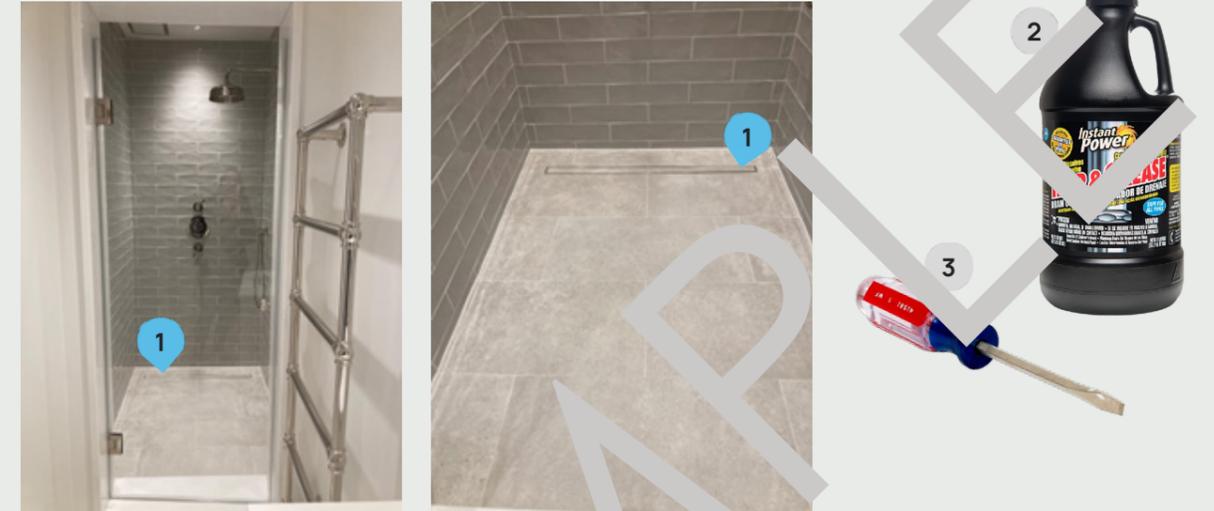
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Shower Drains & Wastes

Shower Drains

The **Shower Drain 1** is located in each **Ensuite** and **Shower Room** equipped with a Shower. Each Shower Drain should be regularly checked, and any hair should be removed to prevent a blockage and potential water spilling. The shower waste and the surrounding area should be cleaned with a suitable cleaner **2**. To access the shower drain, you need to lift the lid using a **Flat Screwdriver 3**.

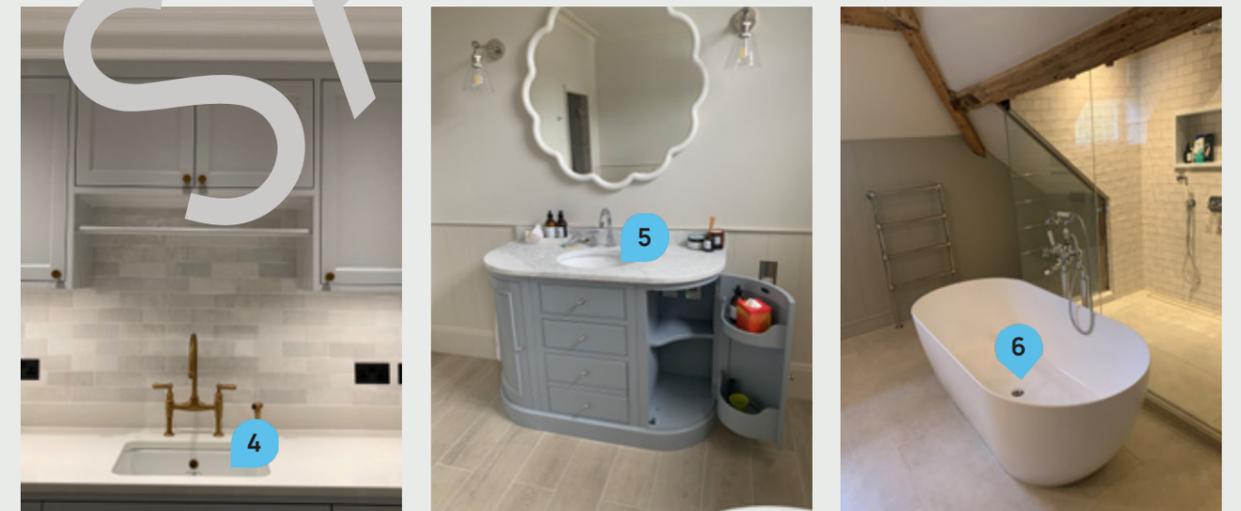
Extra care needs to be taken when accessing it to avoid damage to the stone!



Sinks & Basins

For the waste on **Sinks 4**, **Washbasins 5** and **Bathtubs 6** it is recommended to use a proprietary cleaner. Diluted household bleach may be used but it cannot be left to dry on the surface. On these, there is usually **Click Clack** waste in place – pushing the stopper down will close off the waste to allow to fill with water and vice versa.

Extra care needs to be taken around these areas, to avoid any damage.



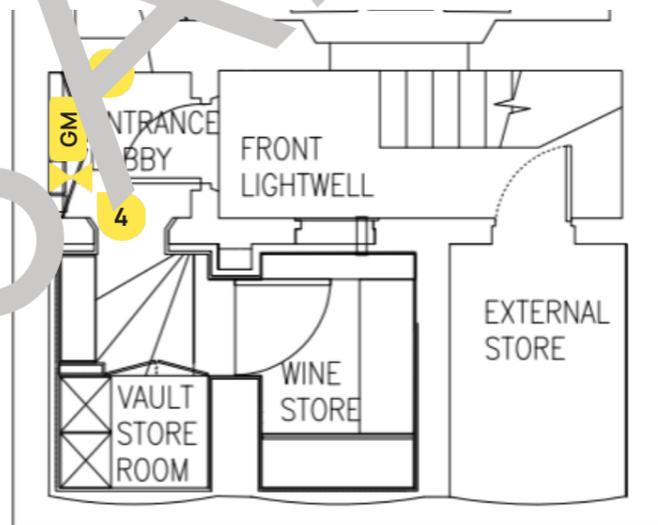
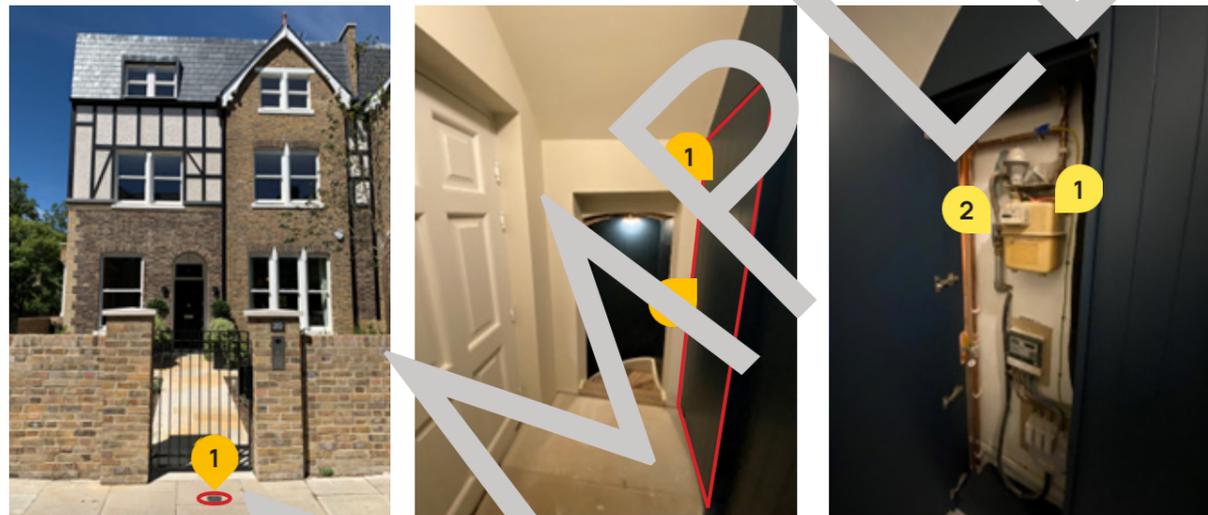
- Mechanical
- Equipment Sample

Gas Meter & Main Gas Shut-Off Valve

The Incoming Gas Shut Off Valve **1** is located below the manhole on the street, near the passenger gate.
 The gas then leads to the Gas Meter **2** in the Entrance Lobby (B), behind an access panel.
 The Main Gas Shut Off Valve **3** is right next to it.

To close the Gas Supply to the whole house, close the Main Gas Shut-Off Valve **3**.
 If there is a leak within the Gas Meter, shut the Incoming Gas Shut-Off Valve **1**.

IN CASE YOU SMELL GAS, SHUT OFF THE MAIN GAS VALVE AND CALL IMMEDIATELY
 0800 111 999
 (NATIONAL GRID)



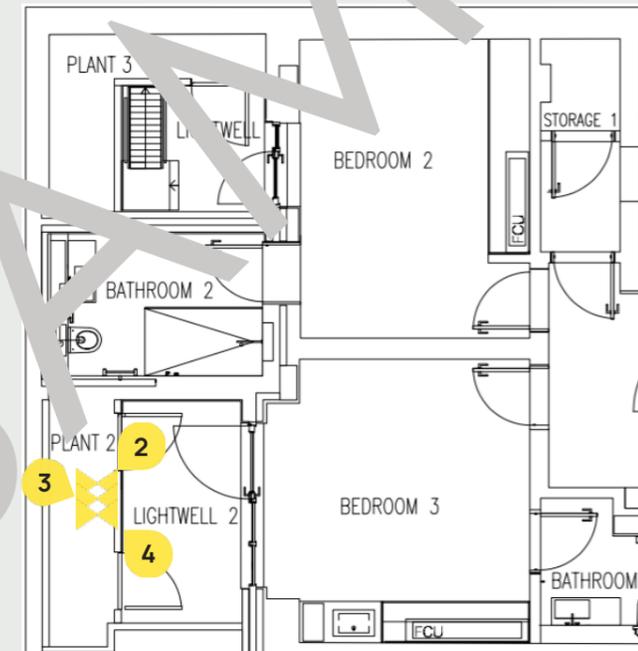
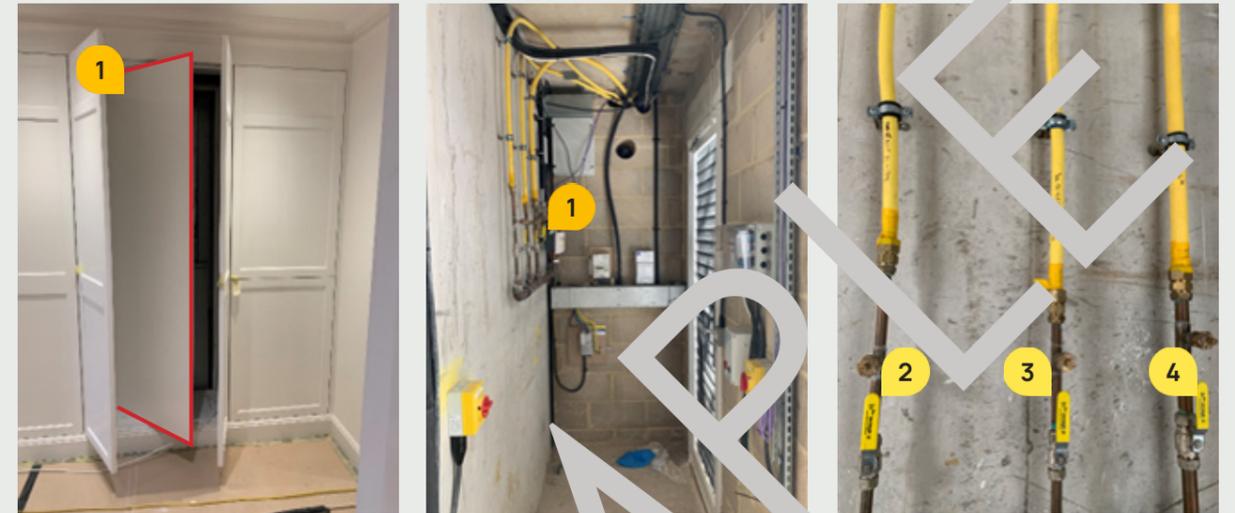
Additional Gas Shut-Off Valves

Storage (B)

In the Plant 2 (B), there are three additional Gas Shut-Off Valves **1**.

They serve the following (LHS to RHS):

- ▶ Gas Fireplace in the Living Room 1 (GF) **2**
- ▶ Gas Fireplace in the Living Room 2 (GF) **3**
- ▶ Range Cooker in the Kitchen (GF) **4**



Gas Boilers

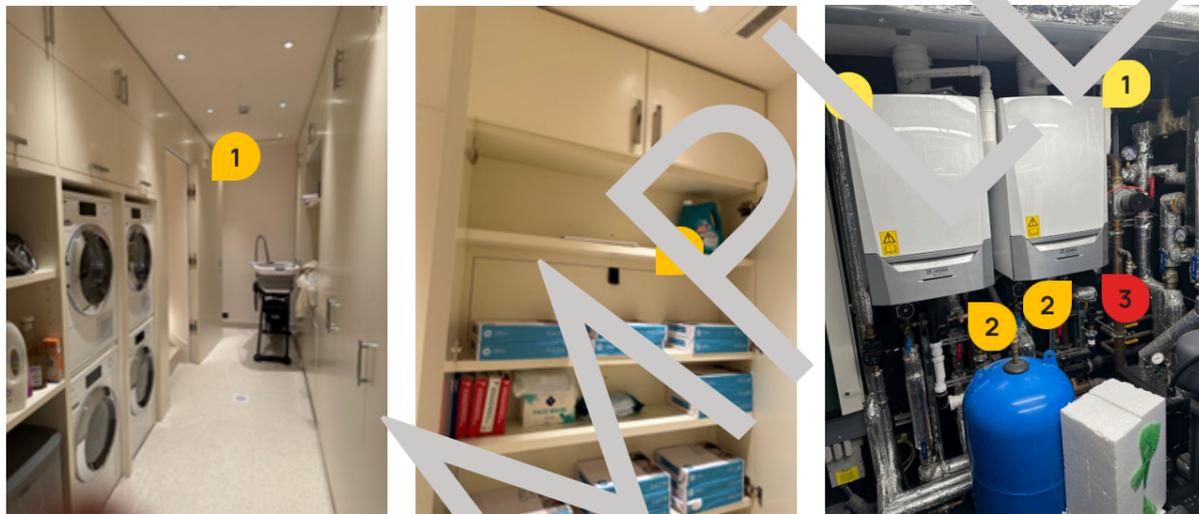
Two **Gas Boilers** 1 are located in the **Laundry (LGF)**, behind a removable access panel, and they are the primary heating source. Their **Gas Shut-Off Valves** 2 are located beneath them. Alternatively, the gas supply can be closed by shutting the **Main Gas Shut-Off Valve** in the **Main Plant Room (B)** – for more information, please refer to page 56.

Their **Spur Switches** 3 are located next to them, on the RHS.

Both **Boilers** are powered by the **BMS Panel** located in the **Main Plant Room (B)**.

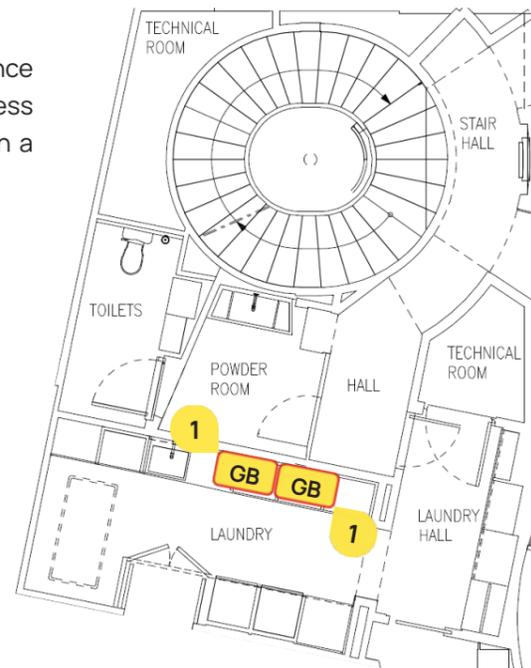
To switch off the **Gas Boilers** completely, shut the **Breaker No. 2** labelled “Laundry Storage ring” on the **Consumer Unit** labelled “DB3” located in the **Storage by Laundry (LGF)**.

Please note that switching off the Boilers will only switch off the Boilers, it will not close the gas supply. This needs to be closed manually.



Accessing the Boilers

To access the boilers, a visit must be booked before the maintenance is due as the shelves must be emptied and removed. The access panel should then be carefully removed and put aside on a soft cloth or mat to avoid damage.



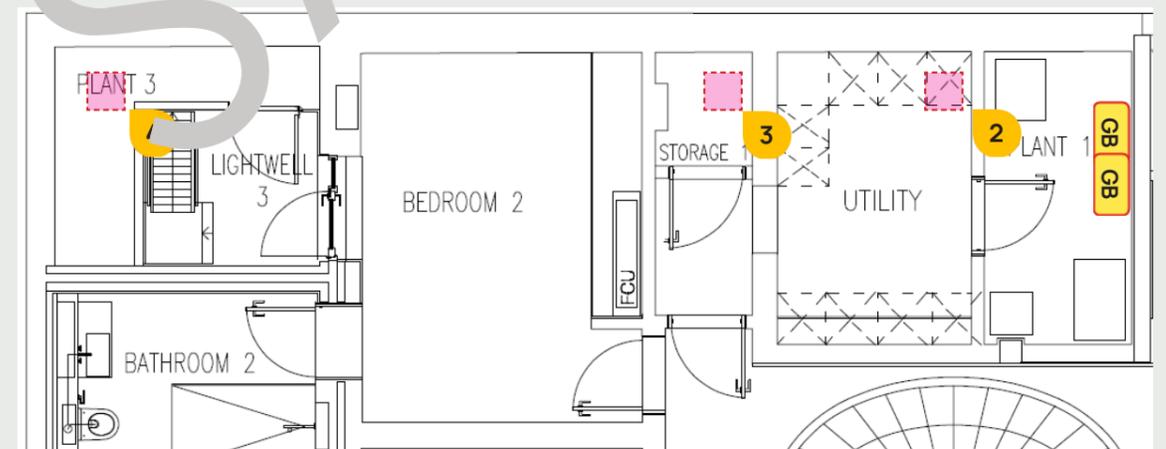
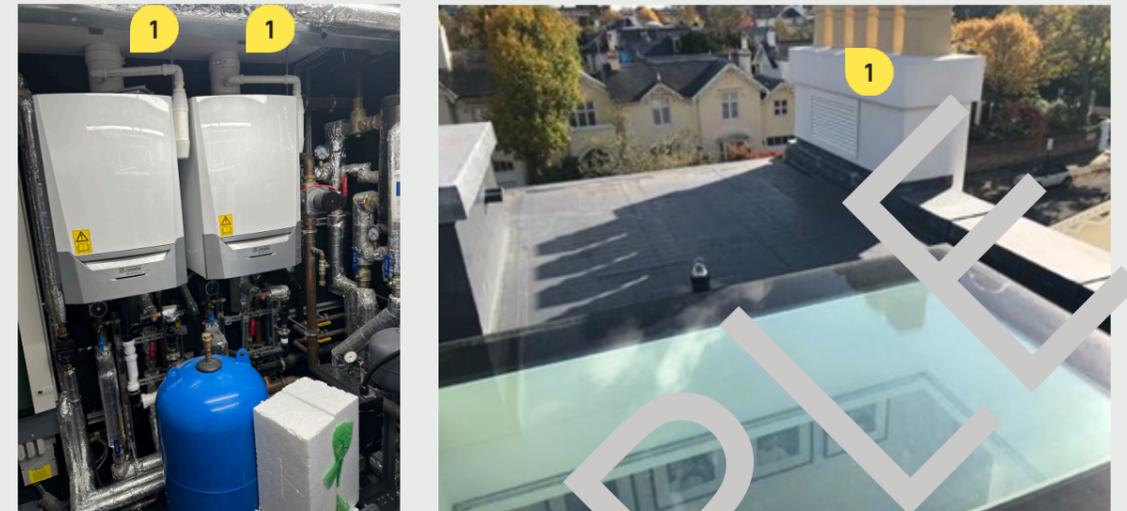
Maintenance

For contact details and responsible personnel, please refer to section 3. Project Directory - Ludek Ltd.

Gas Boiler Flues

The **Boiler Flues** 1 run horizontally from the Boilers to the base of a new chimney. There, the flue rises to discharge through the Roof, via a proprietary flue terminal.

The **Boiler Joints** for the Boiler Flue are accessible through three access panels in the following rooms: **Storage** 2, **Store** 3 and **Shower Room** 4.



Gas Fireplaces

Drawing Room (GF)

There is a **Gas Fireplace 1** in the **Drawing Room (GF)**.

Its **Gas Shut-Off Valve 2** is behind the skirting board on the LHS.

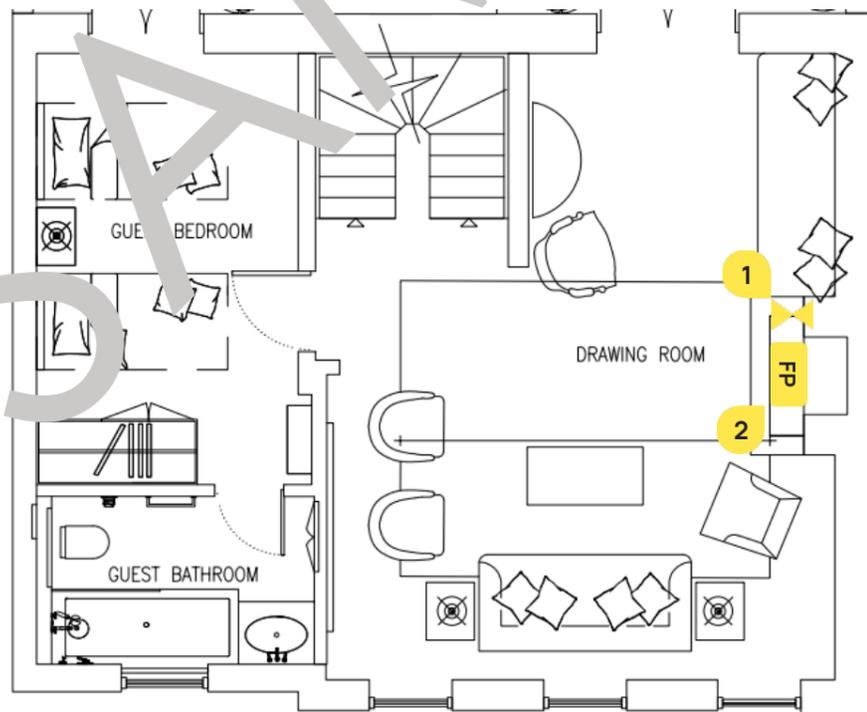
It can be operated by the **Remote Controller 3** always placed in the nearby area.

In case of an emergency, close the **Main Gas Shut-Off Valve** in the **Plant Room (B)**. For more information, please refer to page 56.



The Gas Fireplace does not have electrical connections, it is battery-operated. The battery should be located inside the fireplace.

Extra care needs to be taken when removing covers as it could scratch the surrounding areas!



Gas Fireplaces

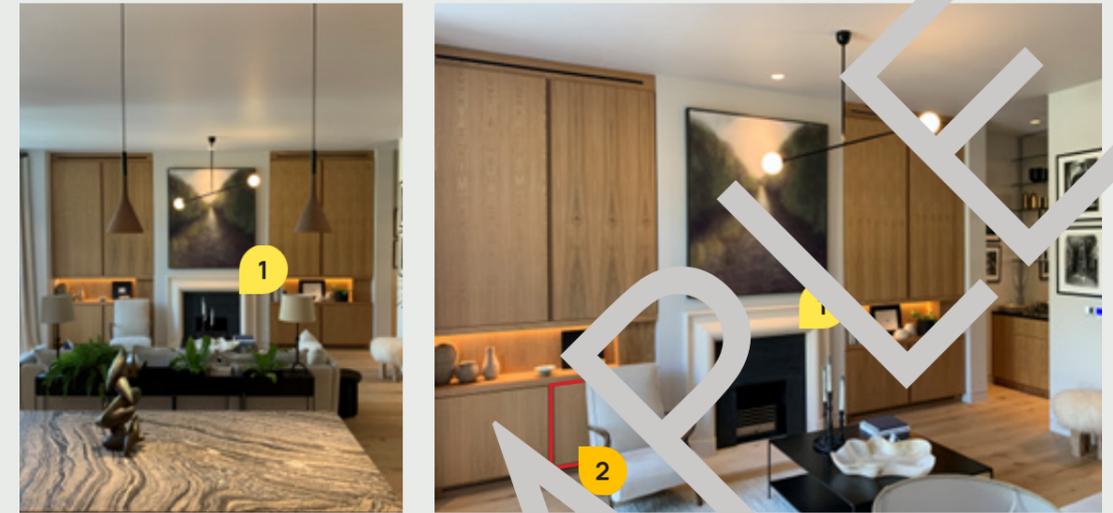
Dining Room (GF)

There is a **Gas Fireplace 1** in the **Dining Room (GF)**.

Its **Gas Shut-Off Valve 2** is behind an access panel inside the LHS cupboard.

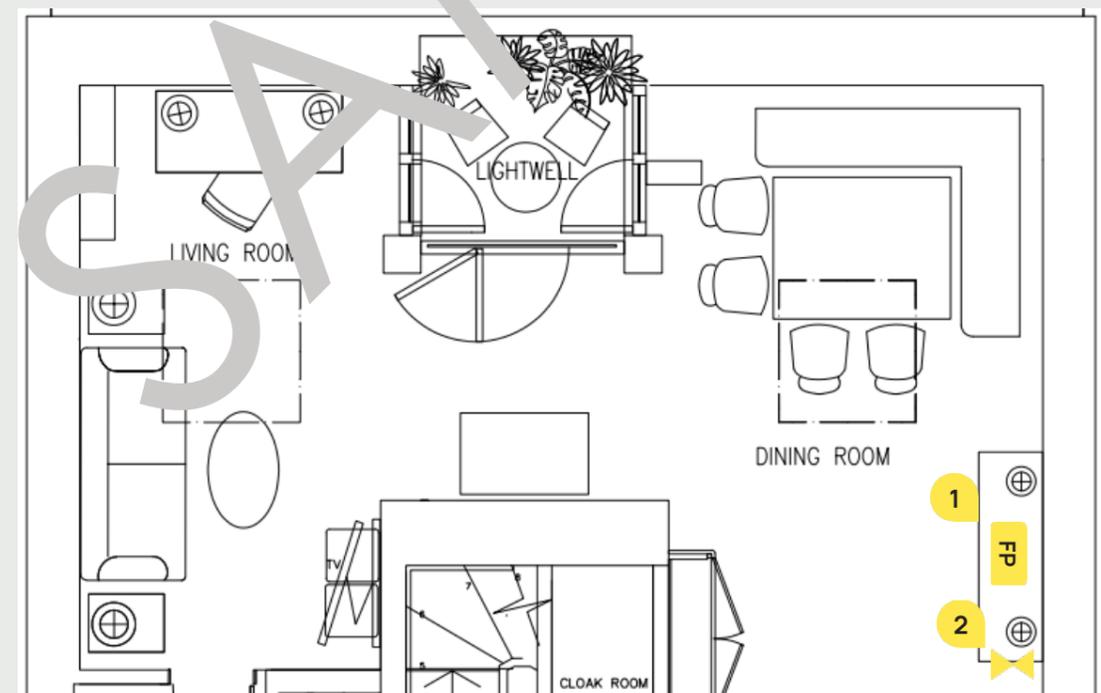
It can be operated by the **Remote Controller 3** always placed in the nearby area.

Due to an uncomfortable access to the local Gas Shut Off Valve, in case of an emergency, close the **Main Gas Shut-Off Valve** in the **Plant Room (B)**. For more information, please refer to page 56.



The Gas Fireplace does not have electrical connections, it is battery-operated. The battery should be located inside the fireplace.

Extra care needs to be taken when removing covers as it could scratch the surrounding areas!



Chimneys

The **Chimney** has been lined with a **FuranFlex® 1**. It is a lining material and technology for high thermal resistance, developed by Kompozitor.



Chimney Cleaning

- ▶ Mechanical chimney cleaning should be carried out with nylon or non-metallic bristle brushes. Rotary, mechanically propelled flails with wide lines may be used. Brushes with metal bristles or metal/steel scrapers must not be used.
- ▶ Chemical chimney cleaning can be done with any acidic chemicals without limitations. Alkaline chemicals may be used up to a concentration of pH12 only.

It is recommended that to clean your chimney in the following period intervals:

- ▶ Flues – a minimum of once every 12 months for normal use and more often for continuous use.

Please note that solvents such as acetone, benzene, alcohol must not be used because of the danger of fire and explosion and because of the toxicity of the fumes. Materials containing abrading granular materials must not be used.

It is recommended that your chimney and flues are swept annually, by a member of the National Association of Chimney Sweeps (NACS).

Maintenance

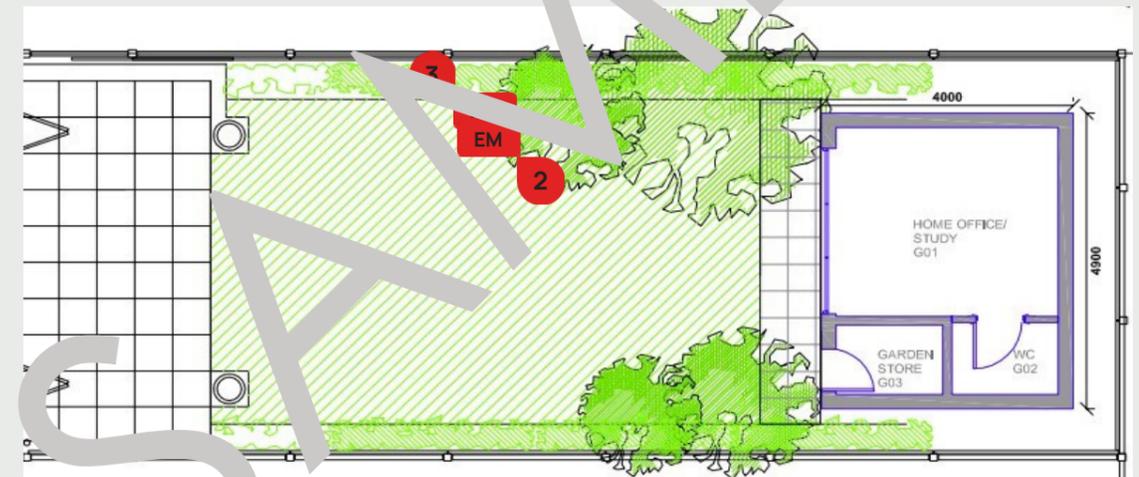
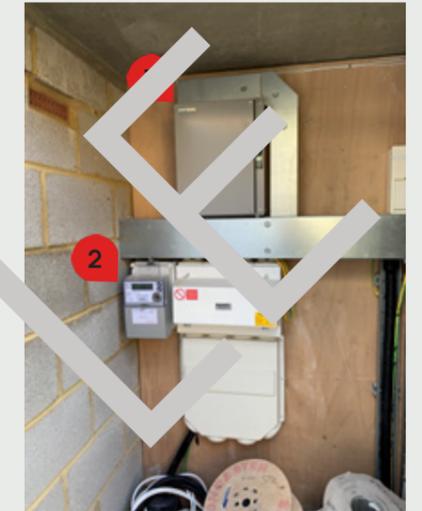
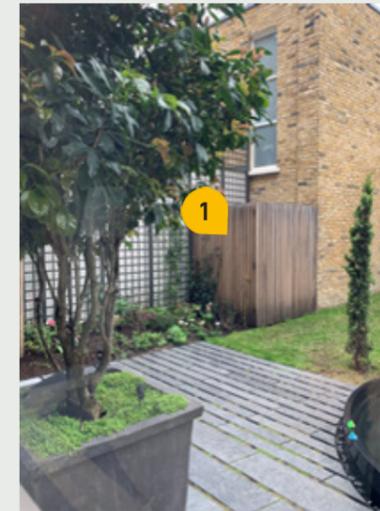
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Electric Main Switch & EI. Meter

The **Incoming Electricity Supply 1** is wired into the housing outside, in the Back Garden where the **Electric Meter 2** and the **Electric Mains Switch 3** are also located.

The area is freely accessible throughout the **Back Garden Gate** from the **Portland Street**.

Shutting the **Electric Mains Switch** will close the electricity supply to the whole house.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

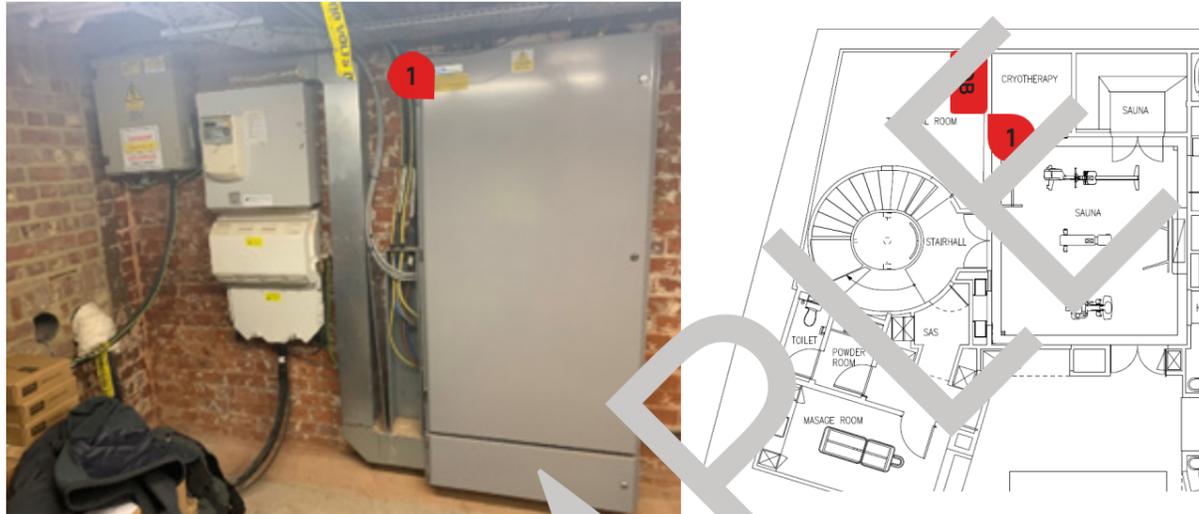
Distribution Boards

Technical Room (B)

The **Main Distribution Board 1** (labelled as "Main Board 01") is located in the **Technical Room (B)**.

To isolate this Distribution Board, shut its "Main Switch".

Please note that shutting the Main Isolator Switch will also close the electricity supply to the whole house.



| | | | | | |
|---|----|------------------------------------|----|----|-----------------------|
| 1 | L1 | | 7 | L1 | Lutron Panel 1 |
| | L2 | Plant Room Supply | | L2 | Lutron Panel 2 |
| | L3 | | | L3 | Outbuilding DB |
| 2 | L1 | | 8 | L1 | Electric Car Charger |
| | L2 | Booster Pump Set | | L2 | Plant Room Sockets |
| | L3 | | | L3 | AV Cupboard Supply |
| 3 | L1 | Pumps | 9 | L1 | |
| | L2 | Distribution Board DB-LP02 | | L2 | AC DB TP |
| | L3 | Distribution Board DB-LP01 | | L3 | |
| 4 | L1 | Kitchen Appliances/ Pantry Sockets | 10 | L1 | External Lighting |
| | L2 | Immersion 1 | | L2 | Condenser Unit 1 |
| | L3 | Immersion 2t | | L3 | Condenser Unit 2 |
| 5 | L1 | Fire Alarm Panel | 11 | L1 | Condenser Unit 3 |
| | L2 | Manifold 1 | | L2 | Security Panel |
| | L3 | Manifold 2 | | L3 | Smoke/ Heat Detectors |
| 6 | L1 | Manifold 3 | 12 | L1 | |
| | L2 | Kitchen Appliances | | L2 | Spare |
| | L3 | Garden Sockets | | L3 | |

Distribution Boards

Guest Salon (2F)

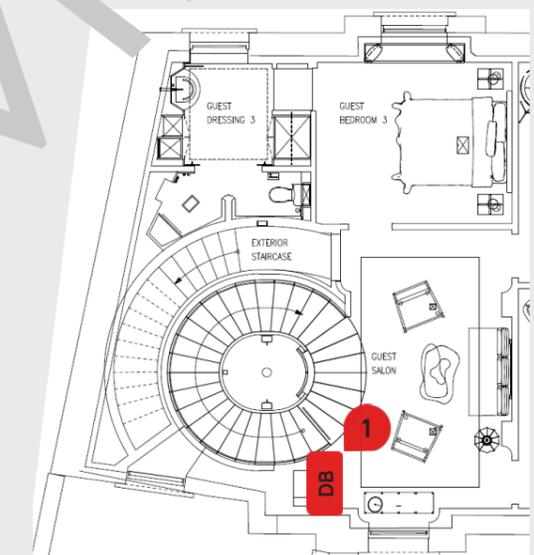
The **Distribution Board 2** (labelled as "DB-LP02") is located in the storage area in the **Guest Salon (2F)**.

To isolate this Distribution Board, shut its "Main Switch" or shut the **Breaker No. 3/L2**, labelled as "Distribution Board DB-LP02" on the **Main Distribution Board** in the **Technical Room (B)**.

Please note that shutting the Main Isolator Switch will close the electricity supply to the connected equipment.



| | |
|----|---------------------------|
| 1 | Fire Curtain |
| 2 | Blind Control 4 |
| 3 | Blind Control 5 |
| 4 | Blind Control 6 |
| 5 | Manifold 7 |
| 6 | Guest Bedroom 1 Ring |
| 7 | Guest Bedroom 2 Ring |
| 8 | Guest Bedroom 3 Ring |
| 9 | Guest Bedroom 1 Ring |
| 10 | Guest Bathroom 1 Ring |
| 11 | Guest Bathroom 3 Ring |
| 12 | Bathroom 1 Electric UFH |
| 13 | Bathroom 2 Electric UFH |
| 14 | Bathroom 3 Electric UFH |
| 15 | Bathroom 1 Extractor |
| 16 | Bathroom 2 & 3 Extractors |



Lighting - General Rules

General Rules

- ▶ All **Spotlights** **1** are on individual **Drivers** that are fitted above them. For more information, please refer to the following page.
- ▶ All **Wall Lights**, **Pendant Lights** **2**, **Chandeliers** and **Picture Lights** **3** are on mains electricity supply.
- ▶ All **Nightlights** **4** are connected to a Sensor in the room. As soon as the Sensor detects a movement, it automatically turns the Light ON.
- ▶ Other **Lights** have their **Drivers** installed nearby for ease of maintenance – specific locations, please refer to following pages.
- ▶ **5 Amp Sockets** **5** are installed throughout the house as a supply for additional lighting.



Lighting - Bulb Replacement



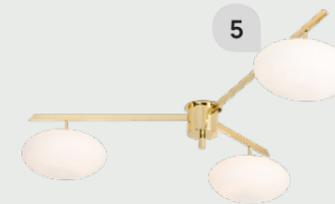
Polaris Sconce (Arteriors)

To remove this cover, you need to carefully unscrew the top part **1** of the light. Make sure to hold the glass globe **2** until it is fully removed to prevent it from falling. Then you should put it aside, remove the bulb and put it back.



Paola Wall Light (Hector Finch)

To remove this cover, you need to carefully unscrew the top part **3** of the light. While unscrewing the top part, make sure to hold the glass light cover **4** carefully until it is fully removed to prevent it from falling. The globe will release itself and you can carefully put it aside and replace the bulb.



Leif Ceiling Lamp (Maplewonders)

On the top of each glass globe **5** is a small screw which needs to be unscrewed to get the access to the light bulb. Then you should carefully put it aside, replace the bulb and put it back. Once you unscrew the glass light cover, it will release itself, so be careful when removing the cover to prevent it from falling!



Glass Globe Pendant Light

To access the luminaires in the centre, first, three of four lamps (globes or balls) need to be removed. It is recommended that at least two persons are on site while the lamps are being unscrewed and the bulbs are being replaced. Once you unscrew the lamp, it will release itself, so be careful when removing the cover to prevent it from falling!

Dahl Pendant Light (Nest)

To remove the bulb, you need to unscrew the bottom part **6** of the light. Then you should carefully put it aside, replace the bulb and put it back. Extra care needs to be taken during the manoeuvre to avoid any damage to the light! Also, make sure to keep your hands clean while touching the light shade.

Maintenance

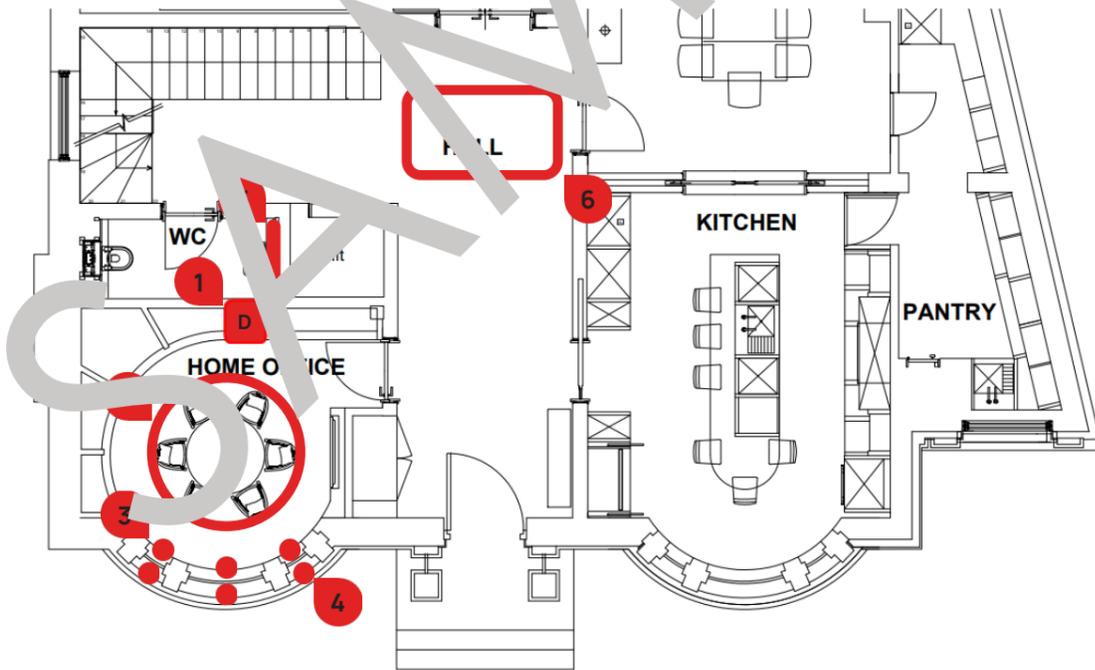
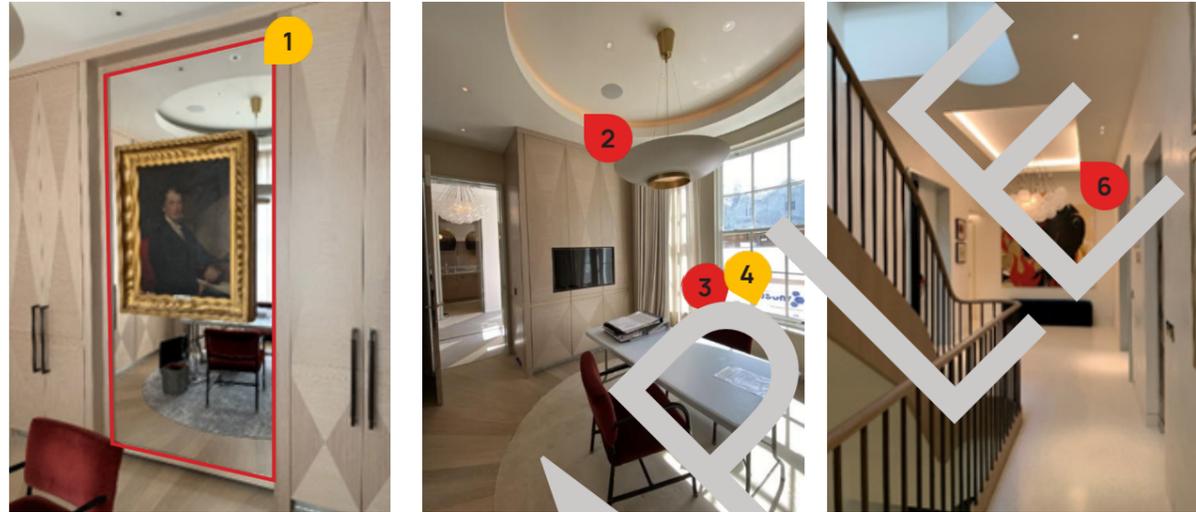
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Lighting - Drivers

Home Office (GF)

In the Home Office (GF), behind the removable mirror panel, there are Drivers 1 for the following Lights:

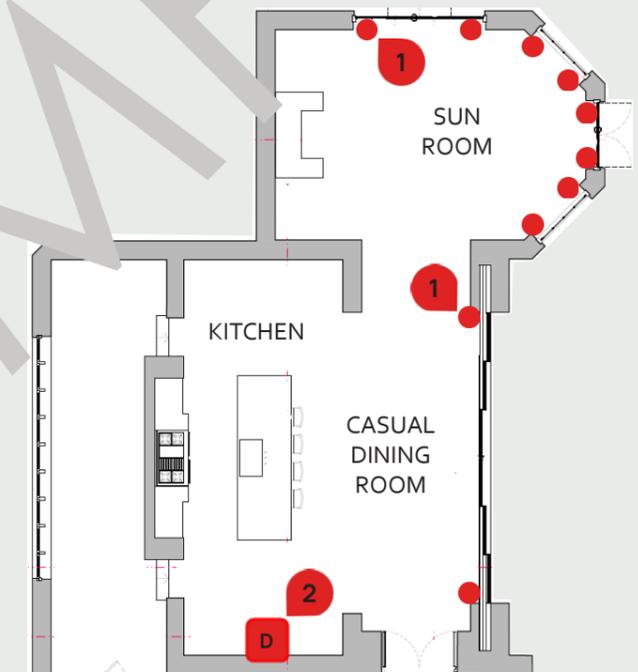
- ▶ Coffe LED Light 2
- ▶ Window Sill Lights 3 4
- ▶ LED Strip Light in the WC (GF) 5
- ▶ Coffe LED Strip in the Hall (GF) 6



Lighting - Drivers

Sunroom & Casual Dining Room (GF)

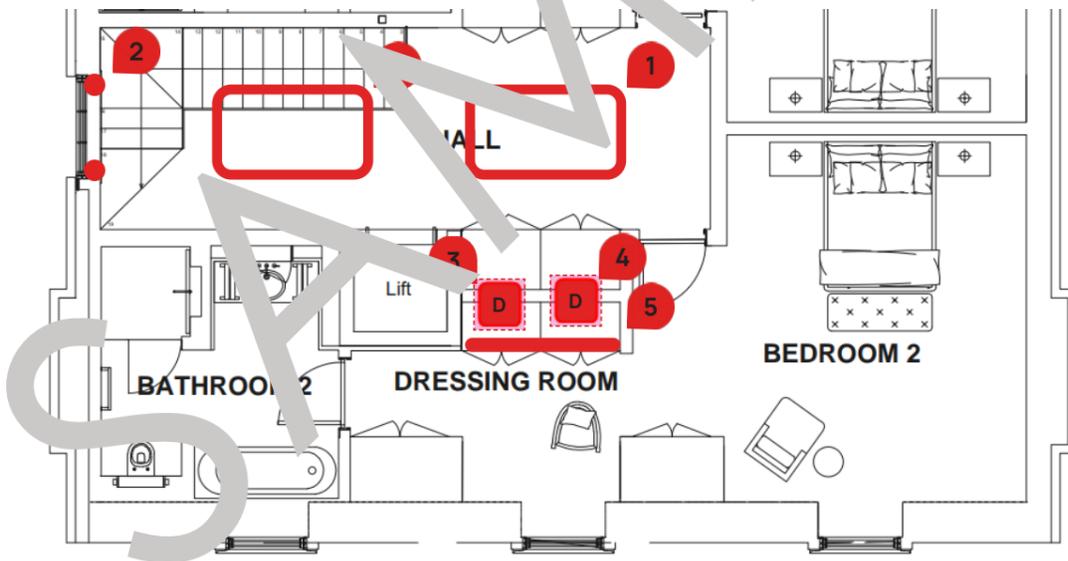
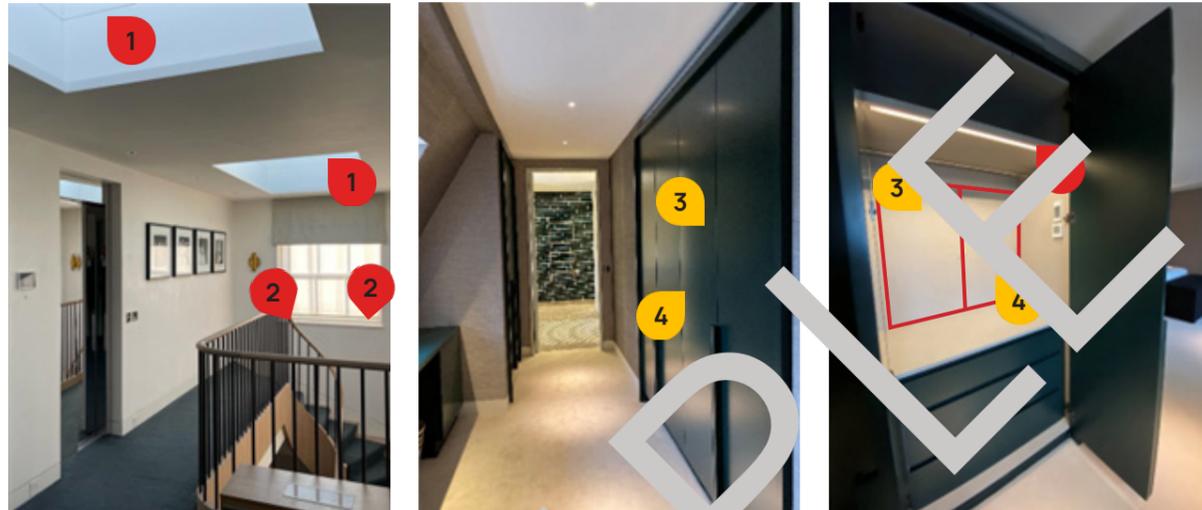
The Low-Level Lights 2 in the Sunroom (GF) and Casual Dining Room (GF) have their Drivers 2 located inside the joinery above the oven in the Kitchen (GF).



Lighting - Drivers

Hall & Dressing Room (2F)

The **Skylights LED Strips** 1 and the **Window Sill Lights** 2 have their **Drivers** 3 located behind an access panel at the bottom of the left-hand side cupboard in the dressing area of Bedroom 2 (2F). Additionally, there are also **Drivers** 4 for the **LED Strips** 5 inside this wardrobe.



Appliance Spurs

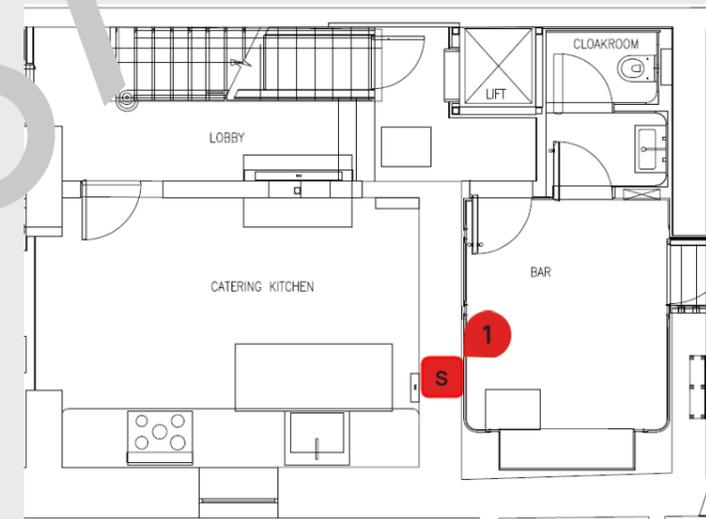
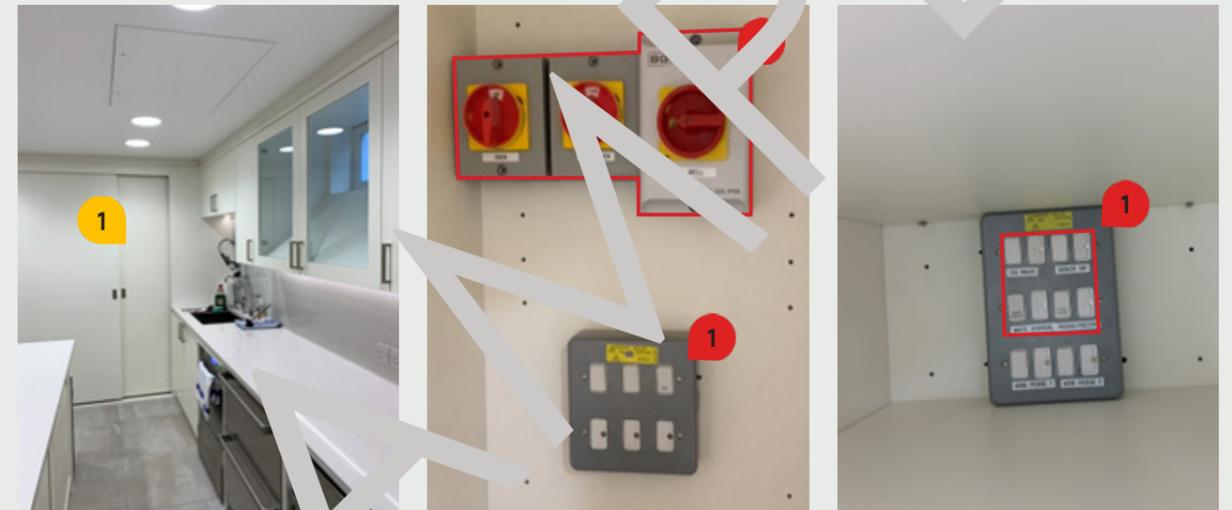
Catering Kitchen (LGF)

In the **Catering Kitchen (LGF)**, there are the following appliances: **Fridge, Freezer, Extraction, Hob, Microwave, Warming Drawer, Rational Self-Cooking Centre, Dishwasher, Ice Maker, Quooker Tap, Waste Disposal, Salamander Grill, Fridge Freezer.**

Each appliance has its own **Spur** 1 located in the LHS cabinet.

To switch off these appliances completely, shut the following breakers on the **Distribution Board 3** in the **Corridor (B)**:

- ▶ Breaker No. 1/L1 labelled "Fridge"
- ▶ Breaker No. 1/L2 labelled "Freezer"
- ▶ Breaker No. 1/L3 labelled "Extraction"
- ▶ Breaker No. 2/L1 labelled "Induction"
- ▶ Breaker No. 2/L2 labelled "Microwave"
- ▶ Breaker No. 2/L3 labelled "Warming Drawer"
- ▶ Breaker No. 3 labelled "Cooking Centre"
- ▶ Breaker No. 4/L1 labelled "Salamander Grill"
- ▶ Breaker No. 4/L2 labelled "Dishwasher"
- ▶ Breaker No. 5/L1 labelled "Ice Maker"
- ▶ Breaker No. 5/L2 labelled "Quooker Tap"
- ▶ Breaker No. 5/L3 labelled "Waste Disposal"
- ▶ Breaker No. 6/L3 labelled "Fridge Freezer"

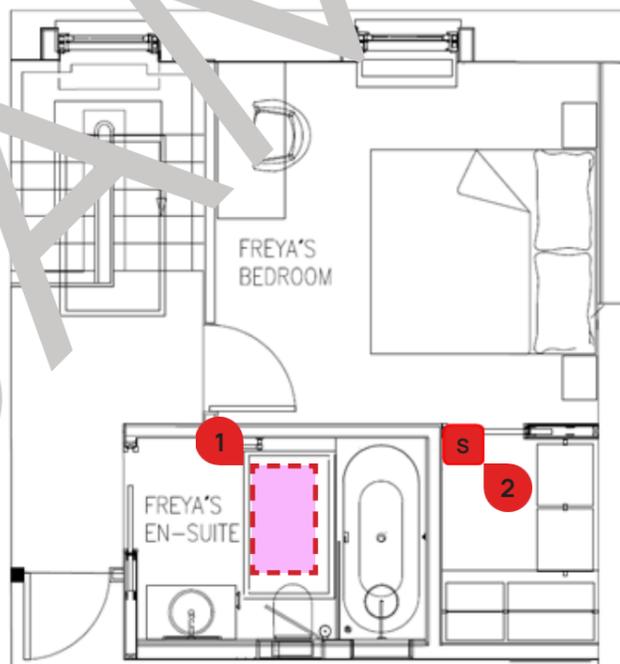
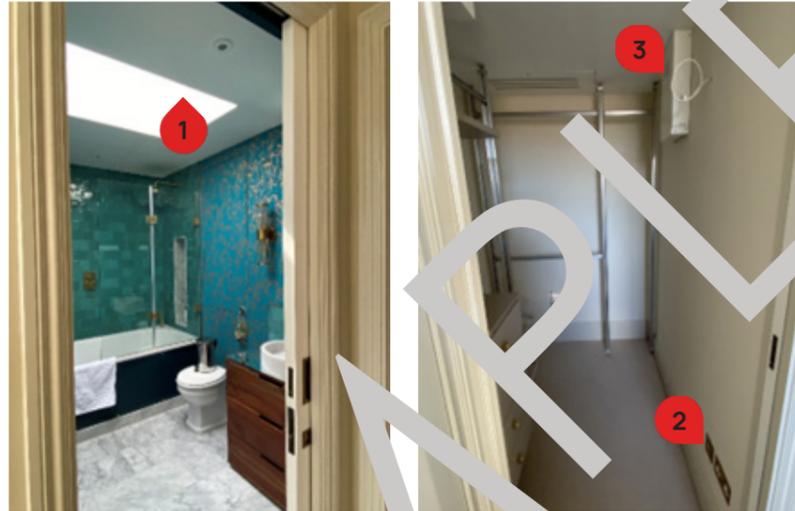


Motorised Skylights

Freya's En-suite (4F)

The **Freya's En-suite (4F)** is equipped with the **Motorised Skylight 1**. Its **Spur 2** is located in the **Freya's Bedroom (4F)**, in the walk-in closet. To control the Skylight, use the buttons on the high level **White Panel 3** in the **Freya's Bedroom (4F)**, in the walk-in closet.

The Skylight is connected to **Breaker No. 1**, labelled as "**Bedroom Skylight**" on the **Distribution Board 2** in the **Small Plant Room (1F)**.



Maintenance

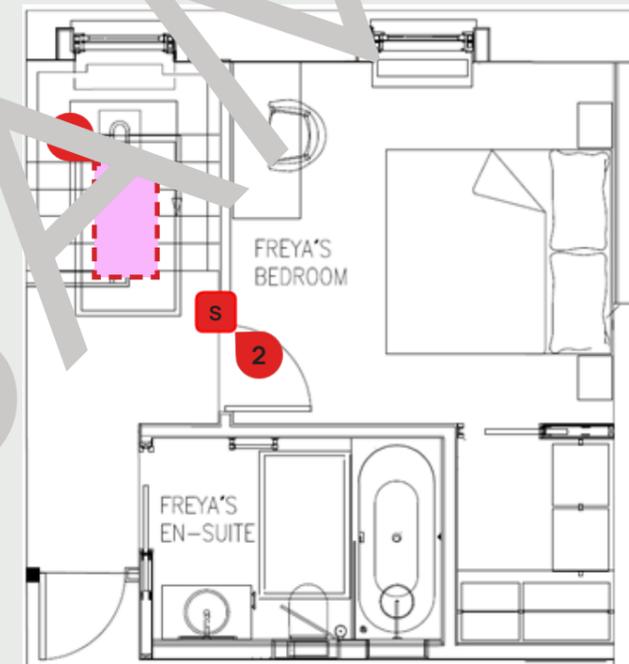
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Motorised Skylights

Landing (4F)

The **Landing (4F)** is equipped with the **Motorised Skylight 1**. The **Spur 2** serving the Skylight and its **Controller 3** are located in the **Landing (4F)**, by the entrance to the Freya's Bedroom (4F). There is a **Driver 4** located in the small space behind the Controller from where the wiring leads to the **Junction Box 5** and then to the Motorised Skylight.

The Skylight is connected to **Breaker No. 2**, labelled as "**Landing Skylight**" on the **Distribution Board 2** in the **Small Plant Room (1F)**.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

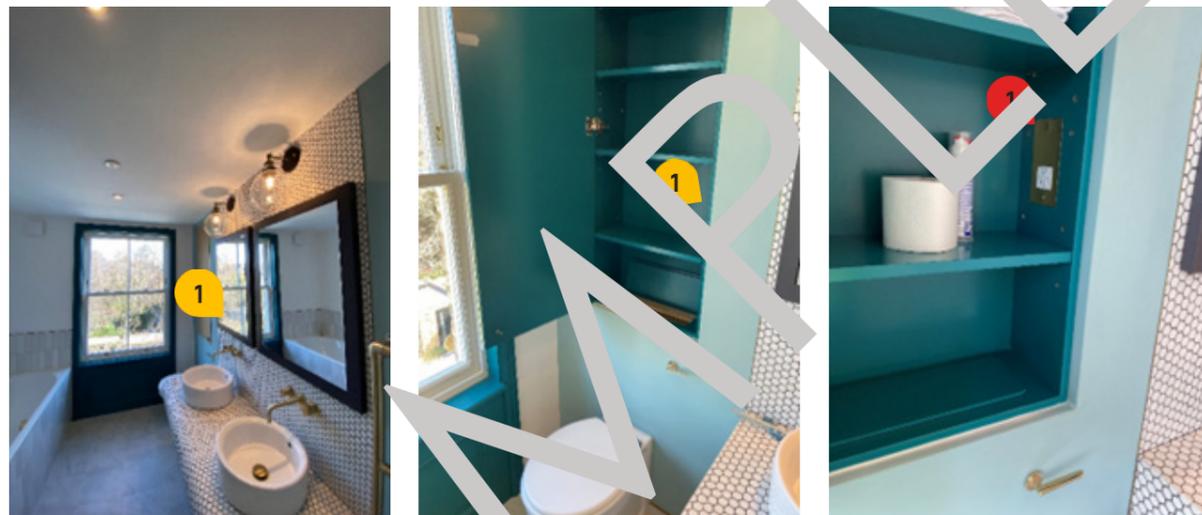
Shaver Sockets

In each bathroom with a mirror cabinet, there are **Shaver Sockets** 1. They can be found in the following areas - **Bathroom 1 (1F)**, **Bathroom 2 (1F)**, **Master Bathroom (1F)** and **Guest Bathroom (2F)**.

They are connected to the lighting circuit within a dedicated room ring, and they can be completely switched off by shutting the corresponding Distribution Board Breaker.

To completely switch the Shaver Sockets, shut the following Breakers on the **Distribution Board 2** in the **Small Plant Room (1F)**:

- ▶ **Breaker No. 5**, labelled as "Bathroom 1 Lighting"
- ▶ **Breaker No. 6**, labelled as "Bathroom 2 Lighting"
- ▶ **Breaker No. 7**, labelled as "Master Bathroom Lighting"
- ▶ **Breaker No. 8**, labelled as "Guest Bathroom Lighting"



Shaver Sockets are designed specifically for low-power devices like electric shavers and tooth brushes, so avoid using them for high-power appliances, which could cause overheating or damage. As these sockets are often installed in bathrooms, it's crucial to keep them dry. Always ensure the hands and the appliance plug are dry before use, and avoid positioning the socket near water sources or within splash zones.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Car Gate

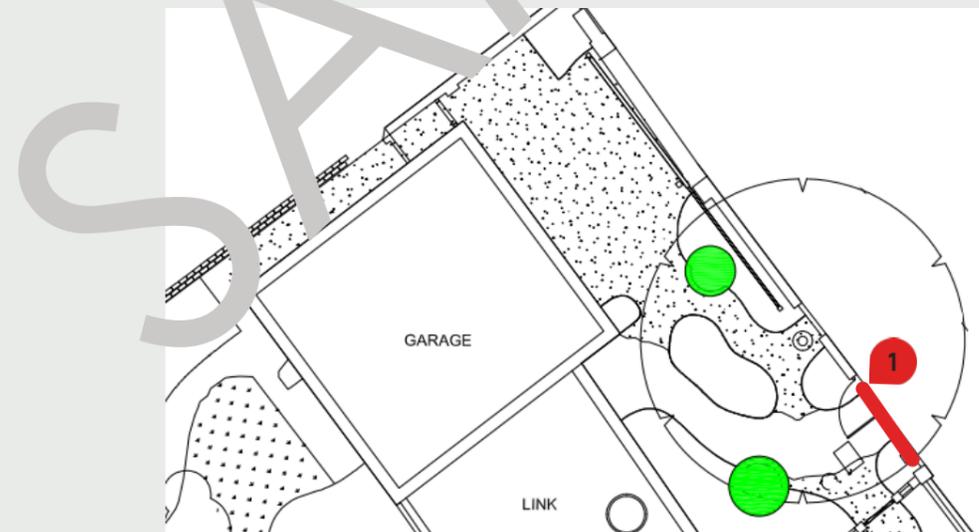
The **Car Gate** 1 is located in the front of the house and can be operated using a **Remote Controller** 2. It is programmed to stay open for 30 seconds and then close automatically.

An **Invisible Beam** runs from the RHS pier across the front of the house. **If the beam is blocked, the Car Gate will stop working.**

The Car Gate can be operated manually using a **Key Release**. The key is inserted into the opening device allowing the Car Gate to be opened and closed manually. Alternatively, it can be operated via the **Touch Screens (Crestron)** 3 located on the 1F-5F.

It is also connected to a fully independent **Flood Light** 4. It has its connecting point inside the **Wiring Box** in the **Small Plant Room (LGF)**.

To switch off the Main Gate completely, shut the **Breaker No. 27** labelled "Main Gate" on the **Consumer**



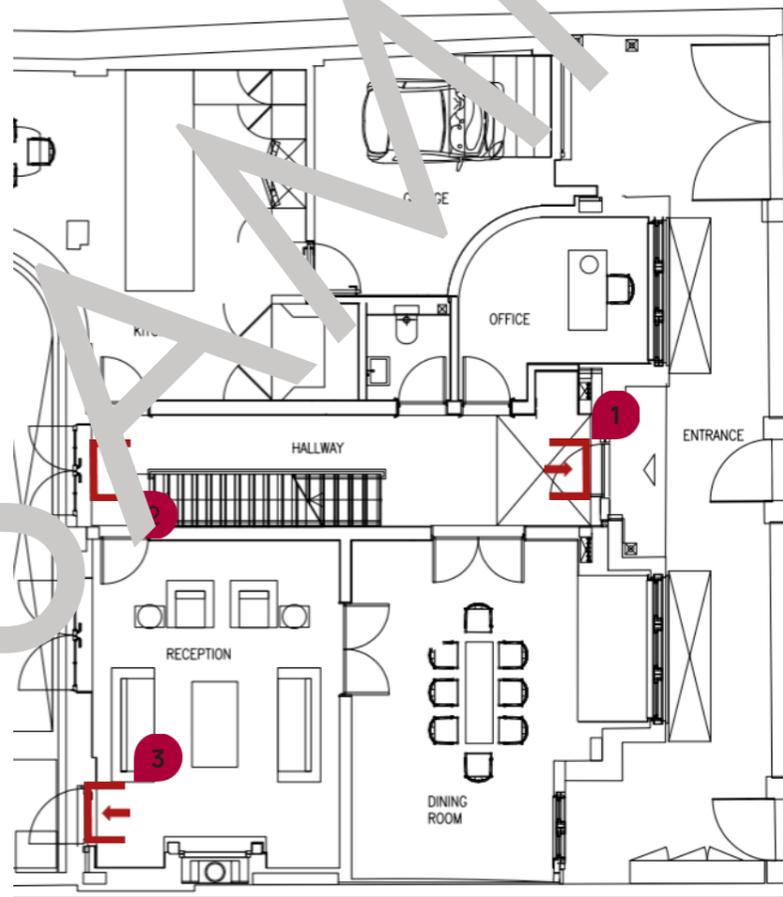
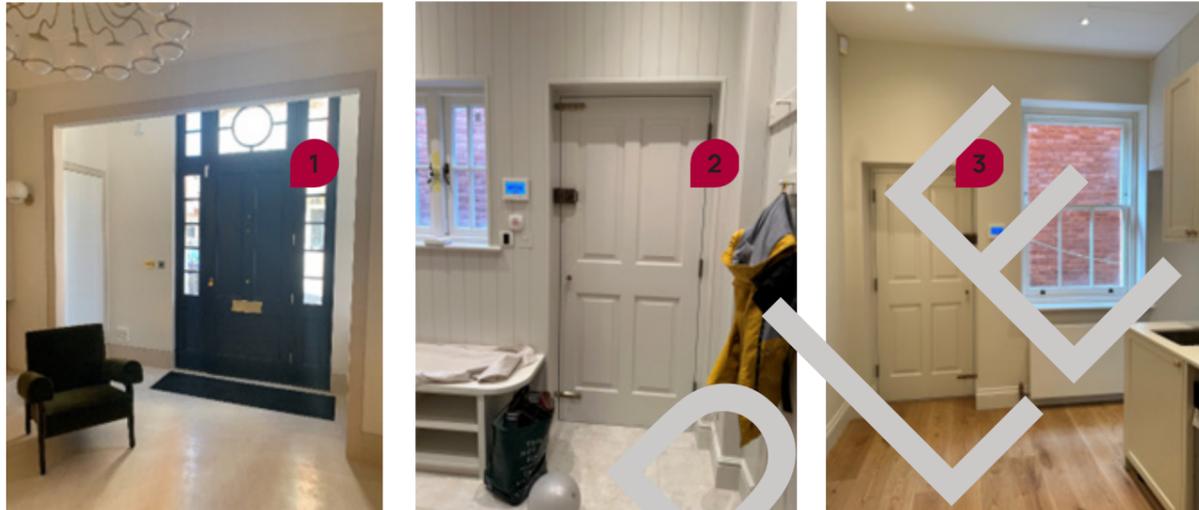
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Escape Routes

In total, there are four house Entrances/Escape Routes throughout the house:

- ▶ **Main Entrance/Exit** in the **Hallways (GF)** leading to the **Front Garden** **1**
- ▶ **Entrance/Exit** in the **Hallway (GF)** leading to the **Back Garden** **2**
- ▶ **Entrance/Exit** in the **GRception (GF)** leading to the **Back Garden** **3**



Fire Alarm

Fire Prevention

There are things that can be done to make a fire less likely to break out:



- ▶ Keep matches and lighters away from children
- ▶ Correctly dispose of cigarettes and any other flammable material
- ▶ Switch off electrical appliances if they are not being used
- ▶ Do not overload electrical sockets
- ▶ Keep an eye out for damaged cables or wiring
- ▶ Use a deep fat fryer instead of a chip pan
- ▶ Keep candles away from curtains and extinguish them before leaving a room or going to bed

Find out more by visiting www.gov.uk/firekills.

If a fire breaks out, call the **fire brigade on 999 immediately**. A signal may already have been automatically transmitted to the fire brigade. It is essential, however, to call the fire brigade to ensure that they are aware of the fire condition.

Escape

If a fire occurs, it is crucial to get out quickly. It is therefore important to work out in advance the safest means of escape as soon as possible. Be sure to know the exact location of any necessary keys and learn how to operate every window.

Smoke, & Heat Detectors, Sounders and Call Points

The Fire Alarm is equipped with **Smoke & Heat Detectors** **1**, **Fire Alarm Sounders** **2**. From each of the above, there is always at least one per main area. A **Call Point** **3** is located in the **Plant Room (LGF)**. It is important to make sure that each smoke detector is tested every week by pressing the test button. The detectors contain a **Back-Up Battery** to ensure the alarm will function in the event of a power cut. This is rechargeable, so you do not need to change it.



Smoke & Heat Detector



Fire Alarm Sounder



Call Point

Note that supplier recommends **bi-annual maintenance** of the fire alarm system and assistance of other trades, such as open a hidden access panels and safe access to certain areas will be required.

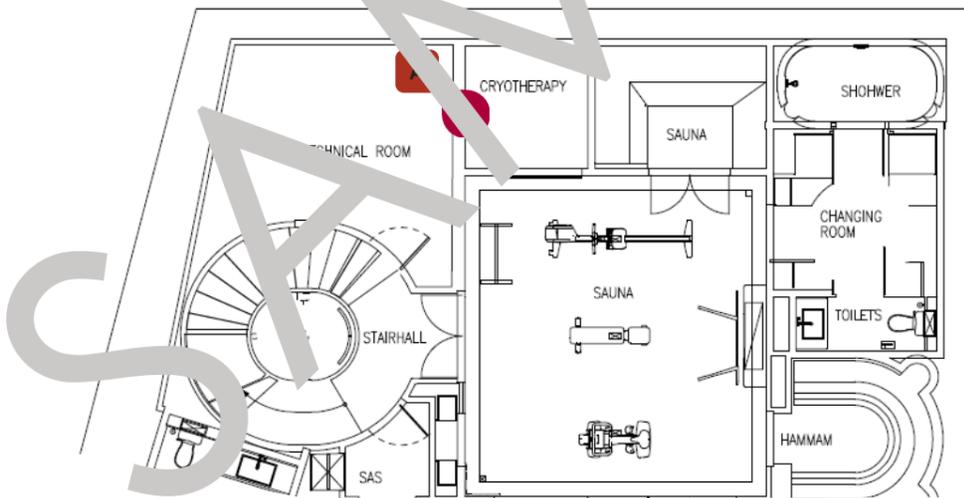
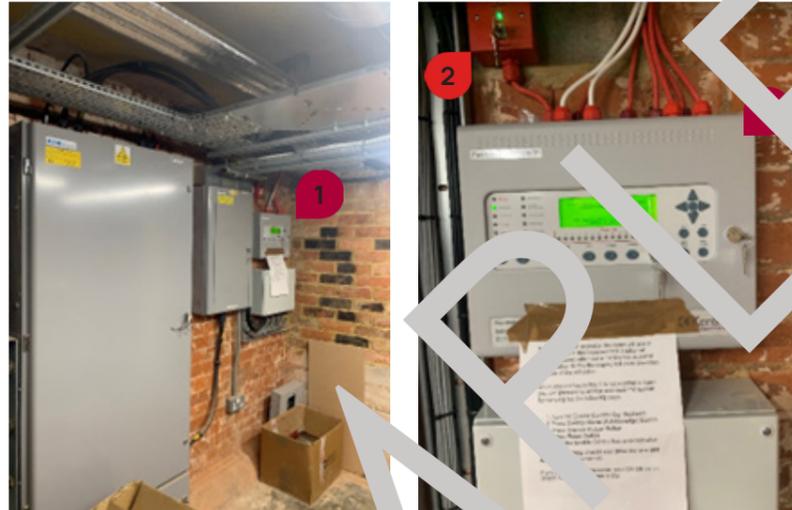
Fire Alarm

The house is equipped with **Fire Alarm**. It is interlinked with **BMS Panel** and **Aspirating Smoke Detectors**, and also interlinked with **Intruder Alarm** for the sound and notification purposes only.

The **Fire Alarm Panel** ① is located in the **Technical Room (B)**. Its **Spur Switch** ② is directly above it.

To completely deactivate the Fire Alarm System, shut the **Breaker No. 5/L1**, labelled "**Fire Alarm**" on the **Main Distribution Board** located in the **Plant Room (LGF)**.

Please note that it should be always kept ON as switching it off will leave your house unprotected!



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Intruder Alarm

The house is secured by an **Intruder Alarm System**. It is equipped with the following devices:

- ▶ **Wiring Box**
- ▶ **Control Units (Keypads)**
- ▶ **External Sirens**
- ▶ **Panic Buttons**
- ▶ **PIR Sensors**
- ▶ **Window Vipers (Vibration Sensors)**
- ▶ **Magnetic Door Contacts**
- ▶ **Internal Sounders**

For specific locations of Wiring Boxes, please read as follows.

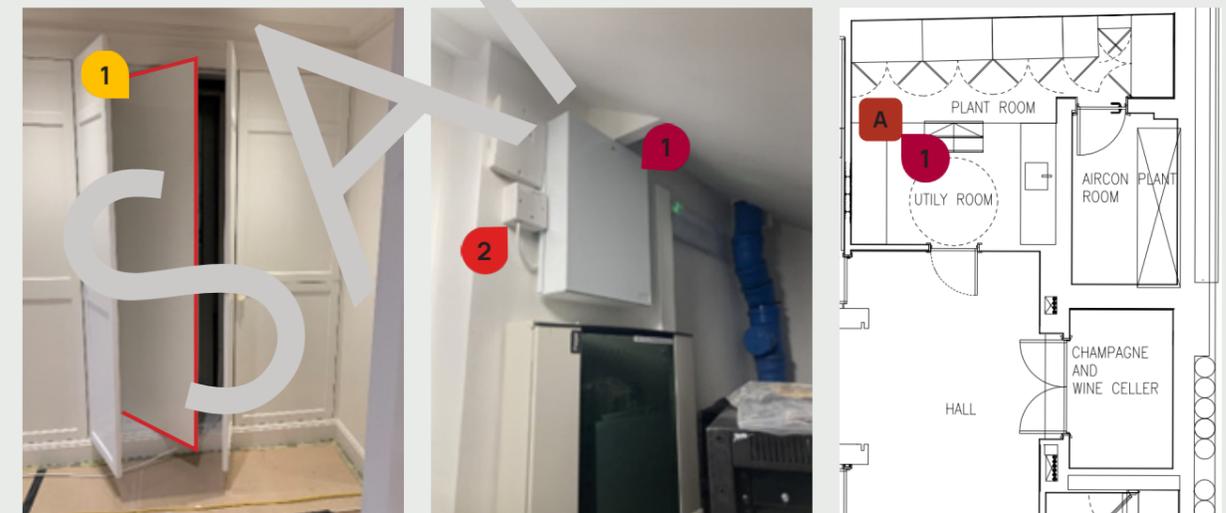
For specific locations of the other security devices, please refer to the following page.

To completely switch off the Intruder Alarm, shut the **Breaker No. 5**, labelled "**Security**" on the **Distribution Board 3** located in the **Utility Room (GF)**.

Please note that it should be always kept ON as deactivating the alarm will trigger the alarm Sounders and send a signal to the Intruder Alarm company.

Wiring Boxes

The **Wiring Box** ① for the Intruder Alarm has been installed in the **Plant Room (GF)**. Its **Spur Switch** ② is mounted on the wall next to it.

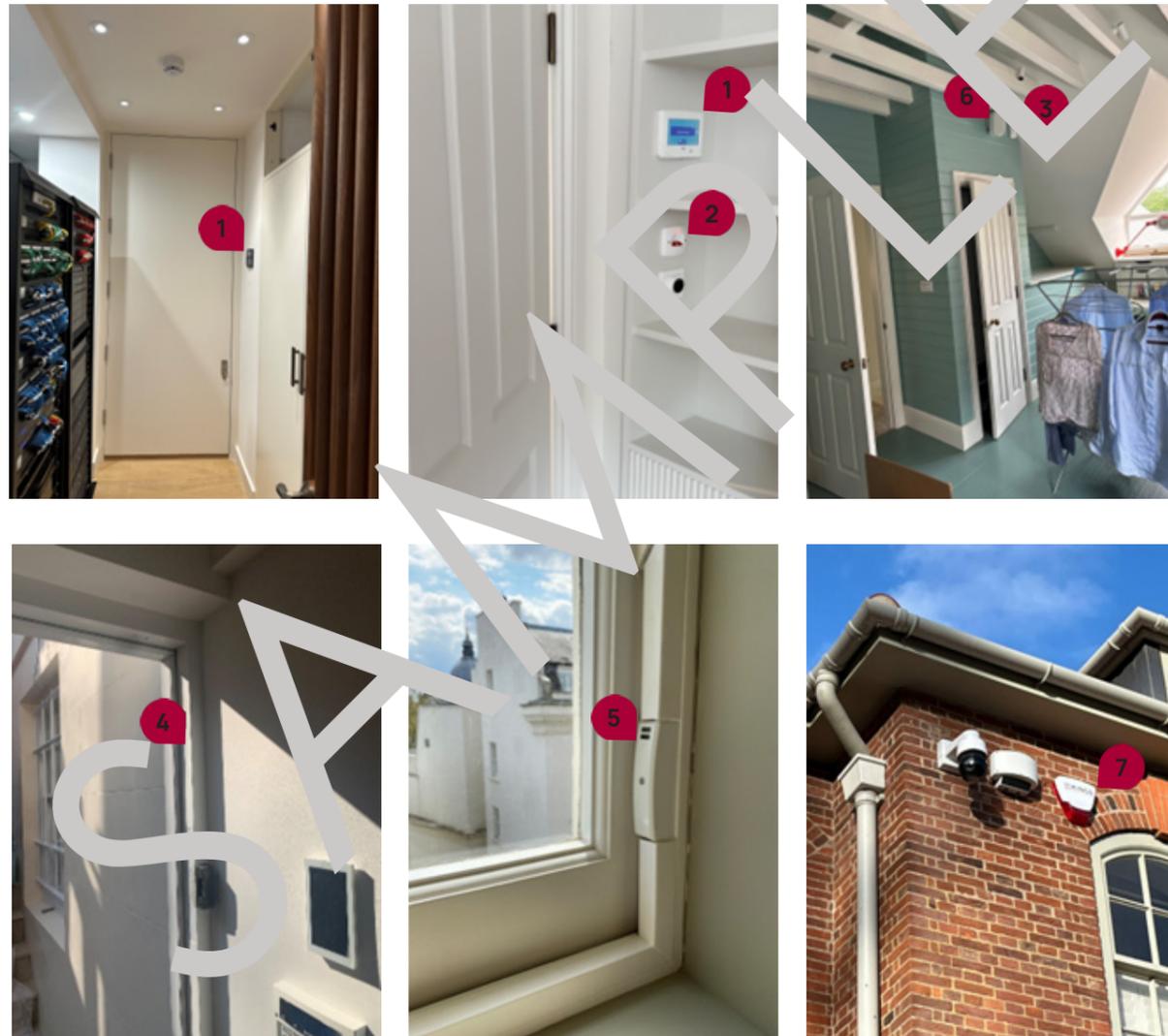


Intruder Alarm

Other Intruder Alarm Equipment

Other Intruder Alarm equipment was installed in the following areas:

- ▶ **Alarm Keypads 1** - in the **Storage by Entrance Hall (GF)** and **Master Bedroom (1F)**
- ▶ **Panic Buttons 2** - installed in the **Security Room (GF)** and **Master Bedroom (1F)**
- ▶ **PIR Sensors 3**
- ▶ **Door Contacts 4** - on all main and side entrance doors
- ▶ **Vibrating Sensors 5** - on all windows throughout the house
- ▶ **Internal Sounder 6** - in the **Boot Room (GF)**
- ▶ **External Sounder 7** - mounted to the house facade



Maintenance

For contact details and responsible personnel, please refer to section 3. **Project Directory - Ludek Ltd.**

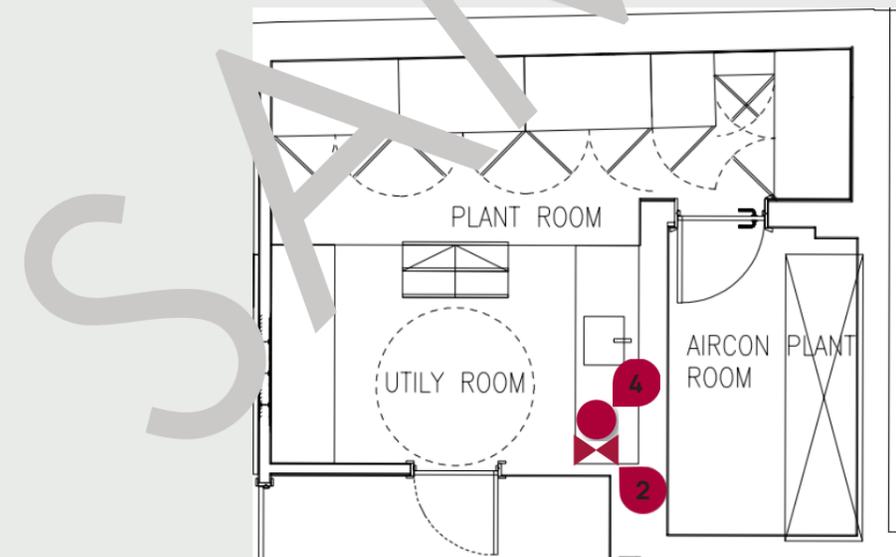
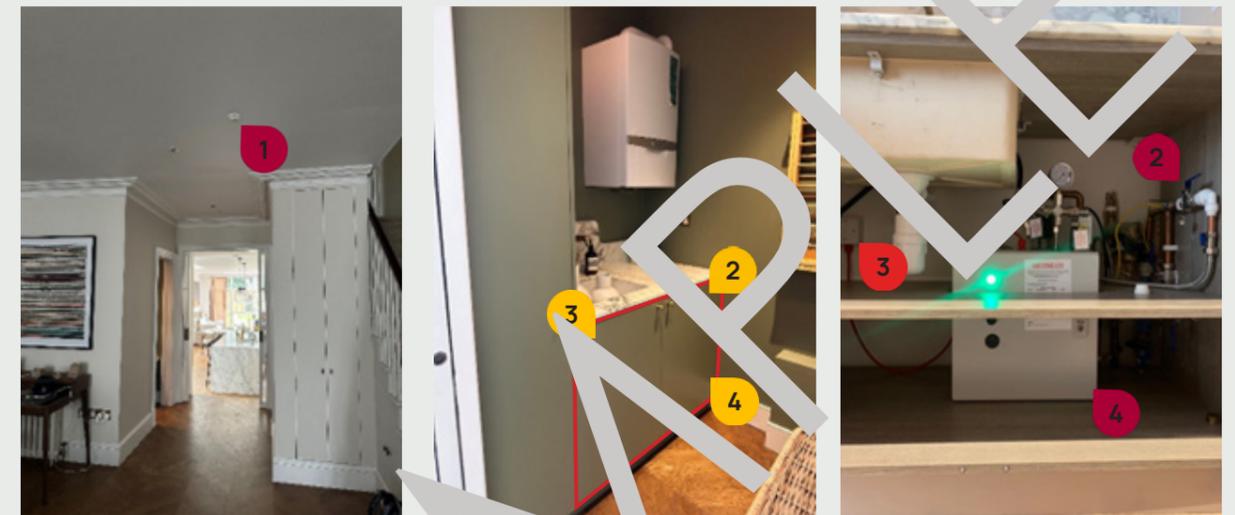
Sprinkler System

The **Ground Floor** is secured with a mist **Sprinkler System**.

In the event of a fire, heat alarm will immediately send a signal to the pump and the **Sprinkler Heads 1** will spray a fine mist of water. In case of an emergency, please contact the company responsible for the maintenance of the Sprinkler System.

The **Main Water Supply Valve 2** and the **Spur 3** for the Sprinkler System are located in the cupboard, under the sink in the **Utility Room (GF)**. The **Tank 4**, together with the pump and the pressure gauge, is located in the same area.

The Sprinkler System can be switched off completely by shutting the **Breaker No. 1** labelled "Fire Pump" on the **Main Distribution Board** in the **Plant Room (LGF)**.



Maintenance

For contact details and responsible personnel, please refer to section 3. **Project Directory - Ludek Ltd.**

Aspiration System

The house is equipped with an **Aspiration Detection System**. The system takes samples of the Air from all the habitable areas and corridors and tests them for the presence of smoke.

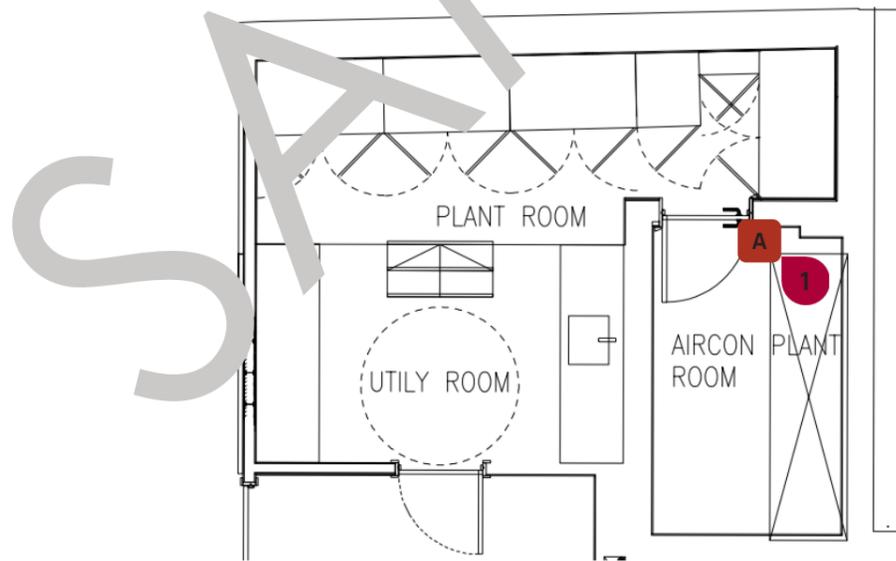
The **Aspirating Panel** ① is located in the **Plant Room (B)**.

The **Sampling Points** ② are located in the following rooms: **Family Room (B)**, **Plant Room (B)**, **Hall (B)**, **Wine Room (B)**, **Hallway (GF)**, **Dining Room (GF)**, **Master Bedroom Walk-in Closet (1F)**, **Hallway (1F)**, **Bedroom 3 (2F)**, **Bedroom 4 (2F)**.

It has its own **Spur** ③ right underneath the Panel in the **Plant Room (B)**.

To completely deactivate the Aspirating Smoke Detention System, shut the **Breaker No. 7L2**, labelled "**Aspiration Panel**" on the **Main Distribution Board** located in the **Plant Room (B)**.

Please note that it should be always kept ON as switching it off will leave your house unprotected!



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

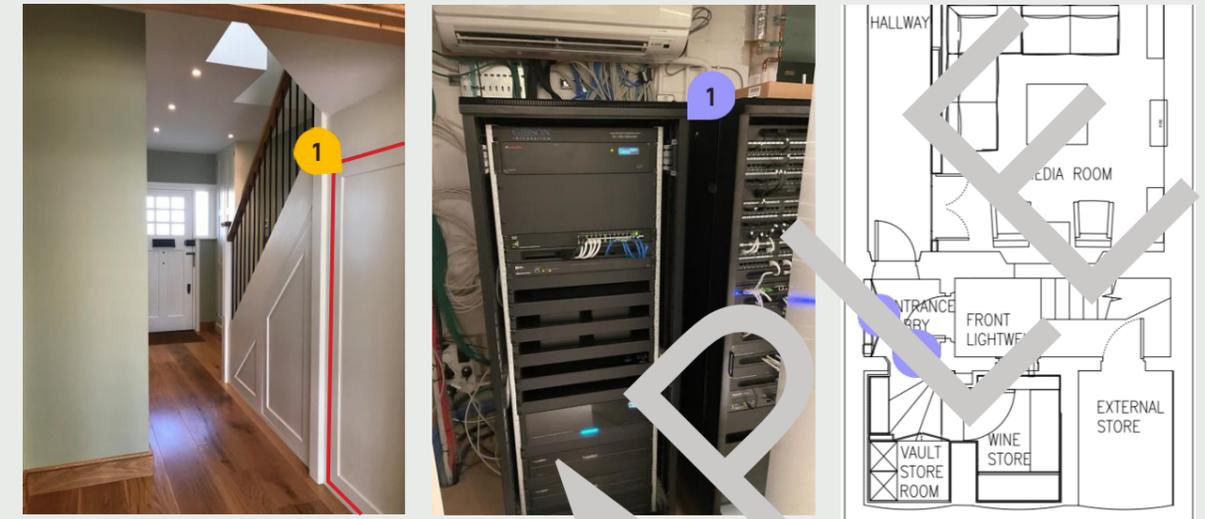
Door & Video Entry

The house is equipped with a **Door & Video Entry**.

All the equipment is wired into the TV/AV Rack in the cupboard in the **Entrance Lobby (GF)**.

To switch it off completely, shut the **Breaker No. 26**, labelled "**Wi-fi & Door Entry**" on the **Main Distribution Board** in the **Entrance Lobby (LGF)**.

Please note: make sure that the equipment for the Door & Video Entry is always switched ON.



It is equipped with the following devices:

- ▶ **Internal Units** ③ installed in the **Hallway (LGF, Landing (1F) and Landing (2F))**
- ▶ **External Push-button Panel** ④ located outside, by the Entrance Door.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

CCTV

The house is equipped with a **CCTV (Lilin)**. It consists of the following:

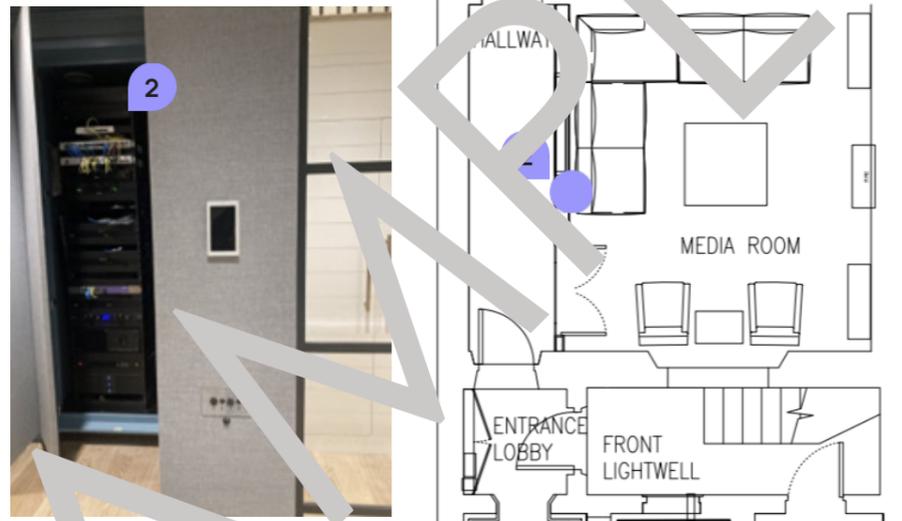
- ▶ **CCTV Cameras** 1
- ▶ **Lens**
- ▶ **Monitor**



There are a total of eleven **CCTV Cameras** positioned throughout the property. They are installed in all hallways and landings, as well as outside around the perimeter of the house.

Signals from the CCTV Cameras are sent to the **Monitor** and are connected to the **Main Security Box / Recording Unit** which is wired into the **TV/AV Rack** 2 in the **Media Room (B)**.

To switch off the CCTV completely, shut the **Breaker No. 1 / L3**, labelled "**Basement Rack Ring**" on the **Distribution Board** in the **Plant Room (LGF)**.



The CCTV is part of the **Smart Home** and can be operated via the **Touch Screens** located throughout the house or via the App installed on a smart device.

Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

CCTV

The CCTV Cameras are installed in the following areas:

- ▶ Entrance Garden, above the main entrance to the house 1
- ▶ Entrance Garden, above the car park 2 3
- ▶ above the entrance to the Security Room 4 5
- ▶ Back Garden, in the corners of the house 6 7
- ▶ Back Garden, above the back entrance to the house 8



For specific locations of CCTV Cameras marked on drawings, please refer to the following page.

Entrance Garden



Back Garden

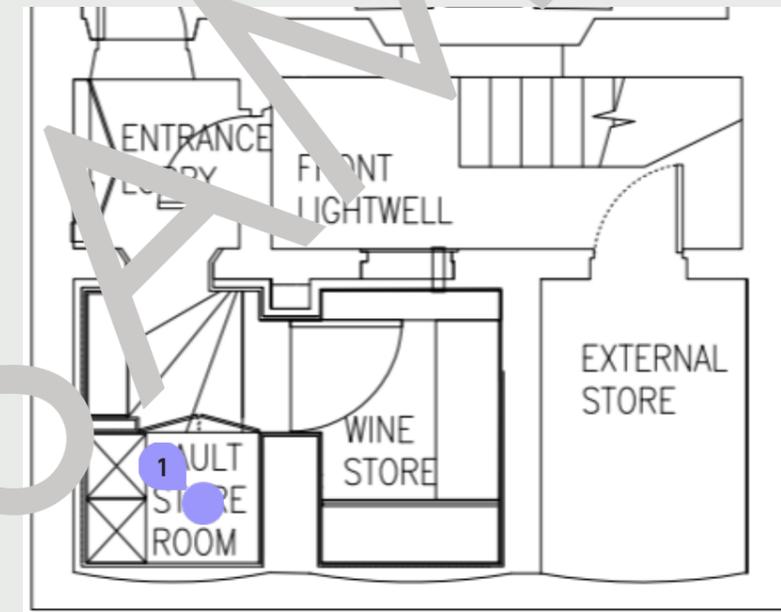
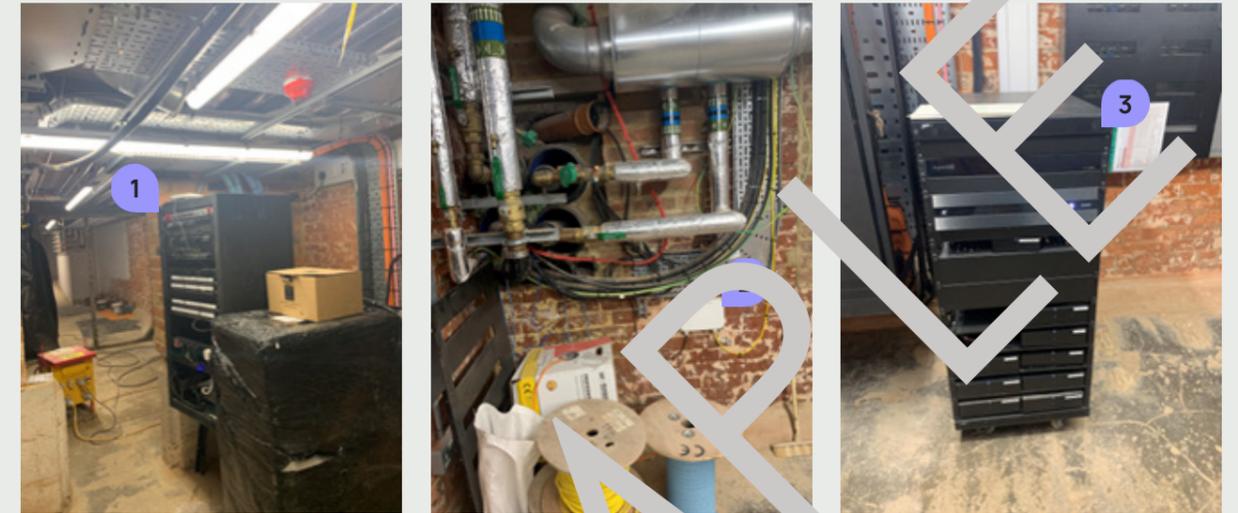


The property is wired for telephone and network distribution utilising CAT6 Cables.

The BT Incoming Telephone Line is installed on the pole outside. It then leads to **Data Network Rack 1** in the **Vault Store Room (B)**. There is also the **Telephone Line Connection Box 2**.

All TV/AV Equipment is wired into the **TV/AV Rack 3** in the **Vault Store Room (B)**.

To switch off the Data Network and TV/AV Racks completely, shut the **Breaker No. 8** labelled "PWR - Data Rack Sockets (Ring)" on the **Distribution Board** labelled "DBLP.01" in the **AV Room (B)**.



Maintenance

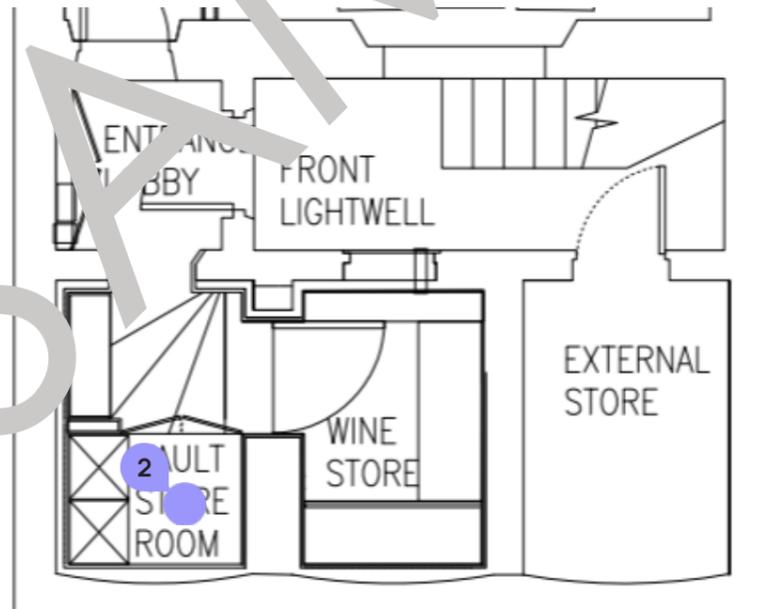
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Satellite & TV/AV

The property is fitted with a **Satellite Dish, TV, and DAB Aerials** 1. The Dish and Aerials are placed on the **Roof** with direct connection to the central equipment in the **Vault Store Room (B)**. From there, the TV Connection is distributed throughout whole house via the **CAT6A Cables** (light blue cables), **CAT6 Cables** (green cables) and **HD100 Coaxial** (black cables).

To switch off the TV / AV Racks completely including the AV equipment, shut the **Breaker No. 17**, labelled "**Basement Under Stairs Cupboard Socket**" on the **Main Distribution Board** in the **Plant Room (B)**.

Please note that the central equipment under the stairs in the Vault Store Room is also connected to the Distribution Board 2 which should be only operated by the company responsible for the maintenance.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Control4 Smart Home

The house has been equipped with the **Control4 Smart Home System** which can be used with:

- ▶ **Handheld Remotes** 1
- ▶ **Wall Mounted Touch Screens** 2
- ▶ **Portable Touchscreens** 3
- ▶ **Control4 app** 4

The Control4 System will look familiar across all these devices and is presented in 6 categories: **Watch, Listen, Comfort, Security, Intercom, and History.**

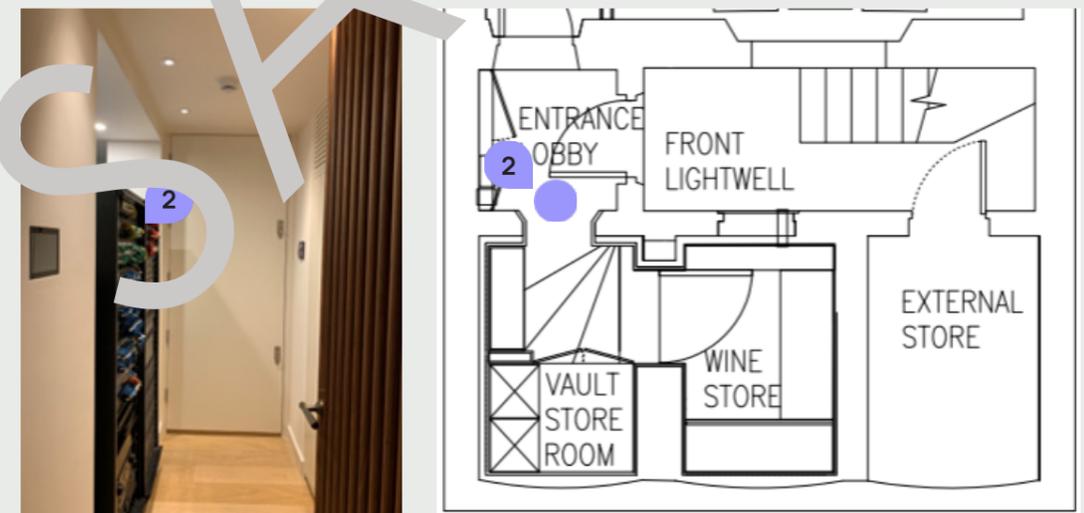


The Handheld Remotes and Touch Screens control devices only within the room in which they are located, but the mobile Control4 App can control the entire property.

It controls the following equipment:

- ▶ **TV/AV**
- ▶ **Audio System**
- ▶ **Heating**
- ▶ **A/C**
- ▶ **Lutron Lighting**
- ▶ **Electric Blinds**
- ▶ **CCTV**
- ▶ **Door Entry**

All the equipment above is linked to the Control Unit inside the **TV/AV Rack** 5 in the **Entrance Lobby (LGF)**. **Please note** that only qualified personnel should be accessing the TV / AV Racks.



Maintenance

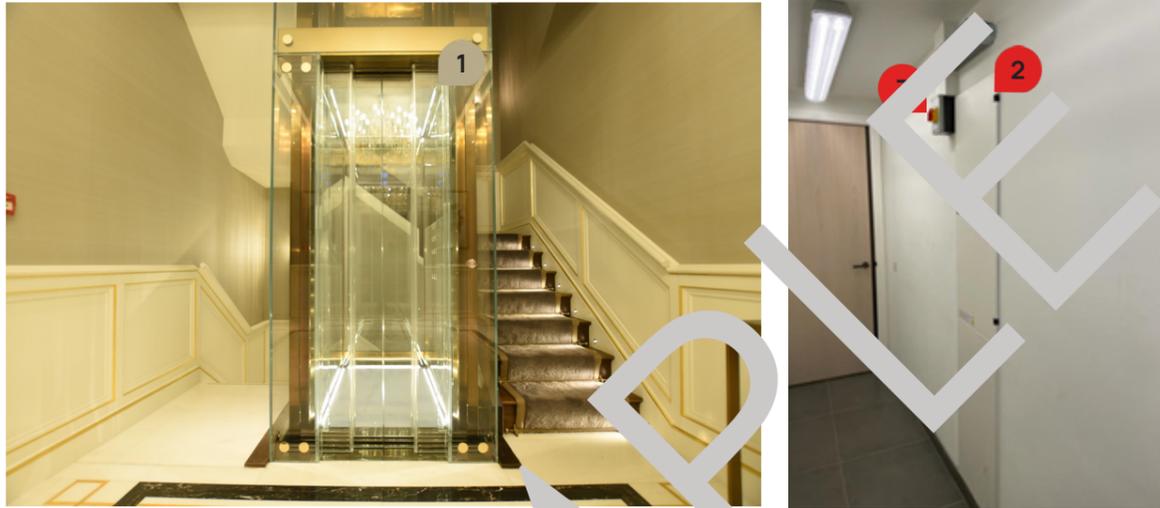
For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Passenger Lift

The **Passenger Lift 1** goes through all five floors – from Basement up to the Second Floor.

Its **Motor 2** and **Main Isolator Switch 3** are located in the **Service Corridor (B)**.

To switch off the Passenger Lift completely, shut the **Breaker No. 7** labelled “Main Supply Passenger Lift” on the **Main Distribution Board “DB MP”** in the **Small Plant Room (LGF)**.



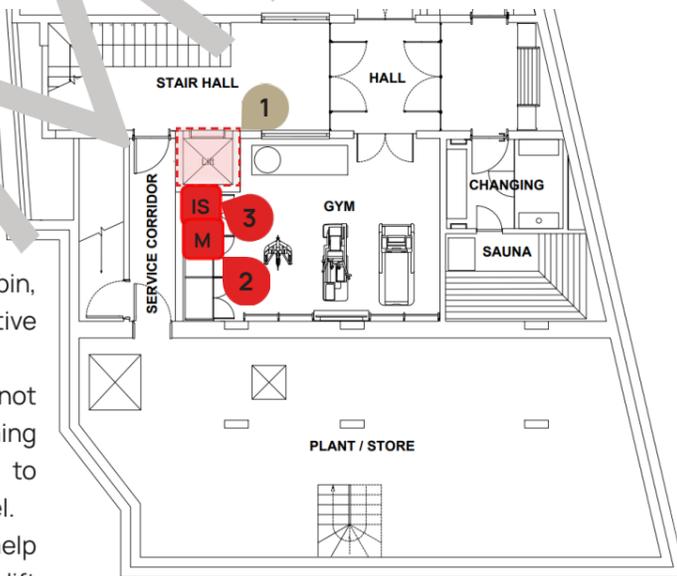
In case of emergency, dial the number 1234 000 0101. It will automatically connect you to the central control station dedicated to the lift in this house.

Passengers Trapped in Lift

Should a passenger be trapped in the cabin, the user must follow a series of preventative measures for their own safety.

If the lift stops but the doors do not open, do not force the doors open. If nothing happens, press the alarm button to obtain aid from the relevant personnel.

- ▶ Do not attempt to exit the lift without help from qualified personnel; when the lift stops irregularly, do not force the doors.
- ▶ Keep calm; do not repeatedly press the button or command panel. Repeat. If it does not work, press the alarm button and wait to be rescued.
- ▶ Breathe normally: ventilation in the cabin is guaranteed.



Maintenance

For contact details and responsible personnel, please refer to section 3. Project Directory - Ludek Ltd.

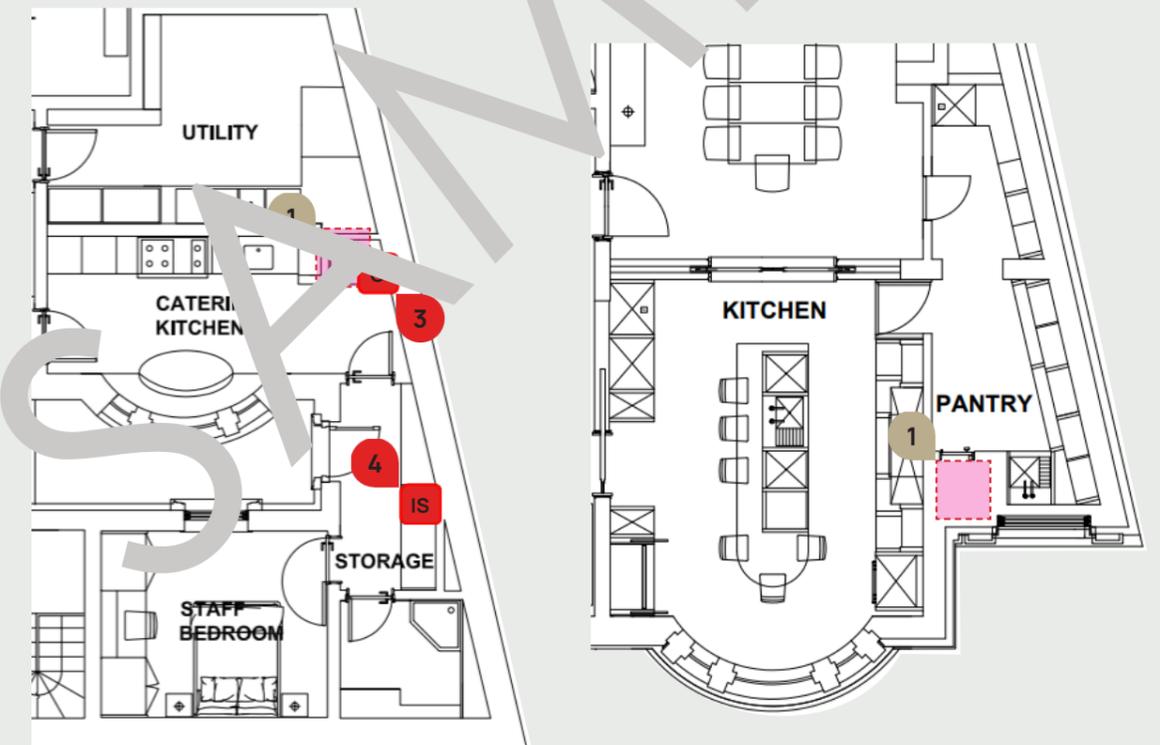
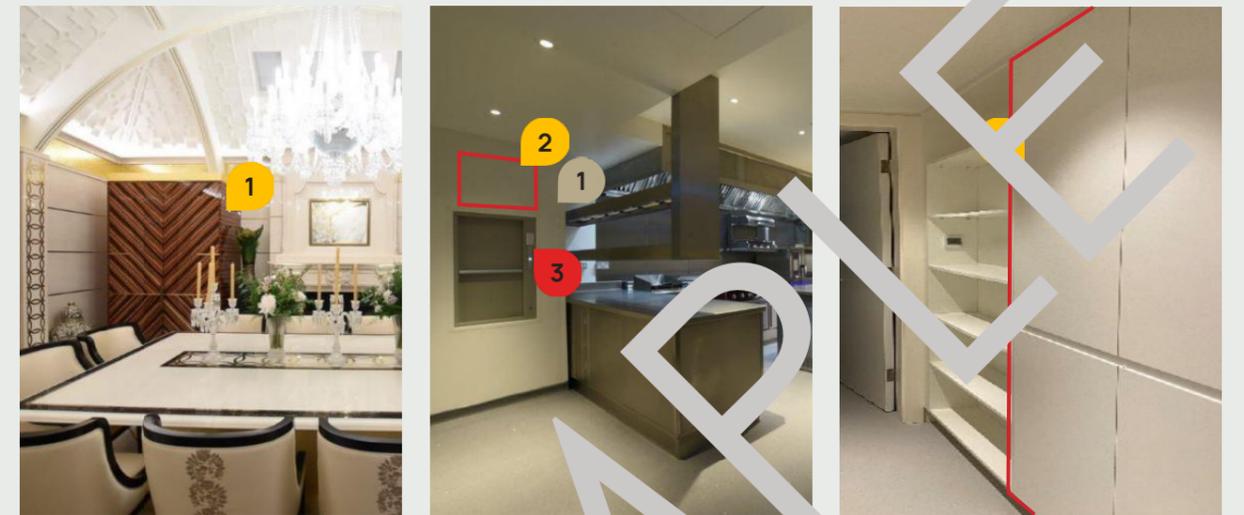
Dumbwaiter Lift

The **Dumbwaiter Lift 1** is accessible from the **Catering Kitchen (B)** and from the **Pantry (GF)**.

The **Motor 2** is located in the access panel above it in the **Catering Kitchen (B)**, and the **Control Panel 3** next to the Lift.

The **Isolator Switch 4** is located inside the cupboard in the **Storage (B)**.

To switch off the Dumbwaiter Lift completely, shut the Breakers No. 10 / L1-3 labelled “Dumbwaiter Lift” on the **Main Distribution Board “DB MECH”** in the **Main Plant Room (B)**.



Maintenance

For contact details and responsible personnel, please refer to section 3. Project Directory - Ludek Ltd.

Swimming Pool

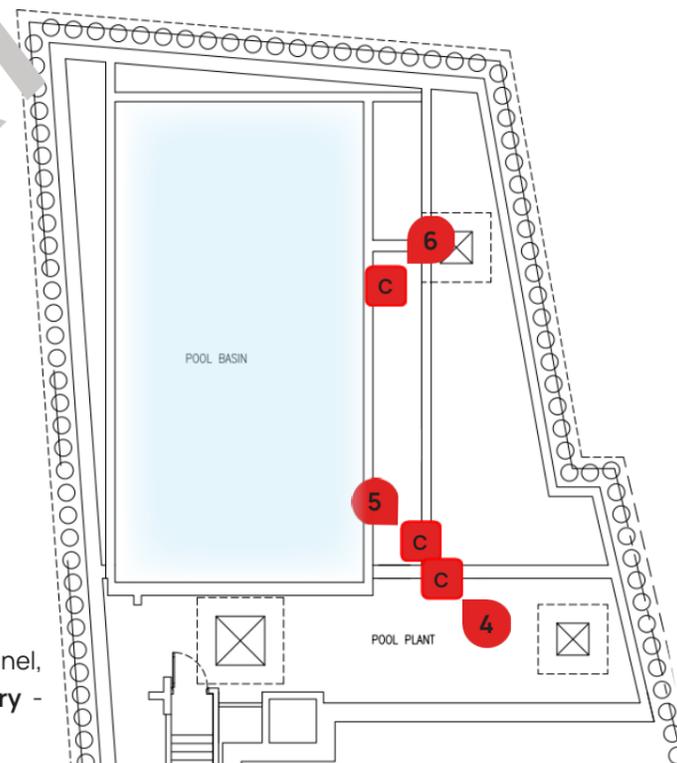
The house is equipped with indoor **Swimming Pool 1**. It is equipped with the following features:

- ▶ Pool Cover
- ▶ Pool Water Fall 2
- ▶ Pool Jacuzzi 3
- ▶ Top-Up System

Swimming Pool Controls

The **Control Panel 4** for the **Pool Cover** is located by the entrance to the swimming pool. In the same area, there is also the **Control Panel 5** for the **Pool Water Fall**.

Another **Control Panel 6** is mounted on one of the slopes in the Pool area. It can turn ON/OFF the Pool Jacuzzi, and the Pool Water Fall.



Maintenance

For contact details and responsible personnel, please refer to section 3. **Project Directory - Ludek Ltd.**

Swimming Pool

Swimming Pool - Plant Equipment

In the **Plant Room (SB)**, there is the following pool equipment:

- ▶ BMS Panel 1
- ▶ Pool Level Control 2
- ▶ Pool Level Probe 3
- ▶ Top Up 4
- ▶ Additional Hose Filling Point 5

The Pool Level Probe continuously monitors the water level in the pool. In case the water level drops too low, it automatically activates the Pool Top-Up system to refill the pool.



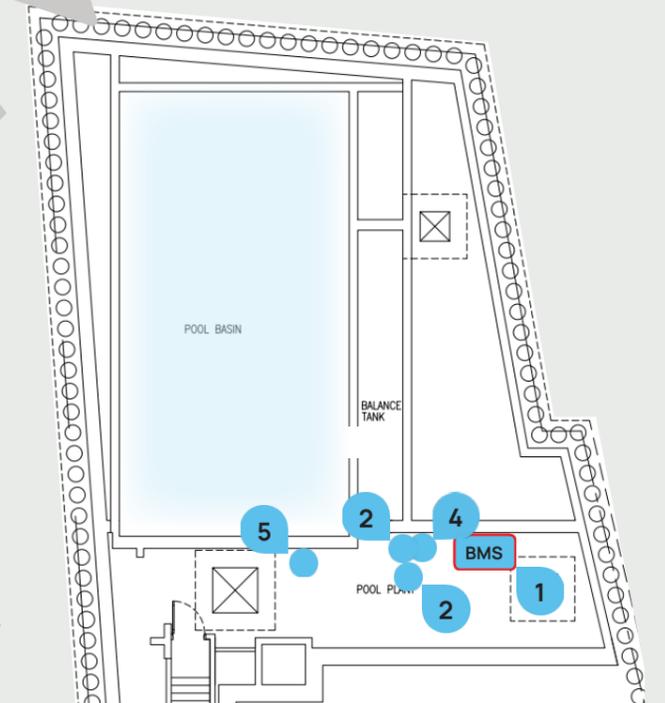
BMS Controls

The Pool BMS Panel controls the following:

- ▶ Jets
- ▶ Waterfall
- ▶ Cover Drive
- ▶ Flood Alarm
- ▶ Pool Lights
- ▶ Swim Jets
- ▶ Pool Filter Pump 1
- ▶ Pool Filter Pump 2
- ▶ Main Pool Chemical Controller
- ▶ PAC Dosing

The **GREEN** light indicates that the function is ON, the **RED** light indicates that there is an Error in the function.

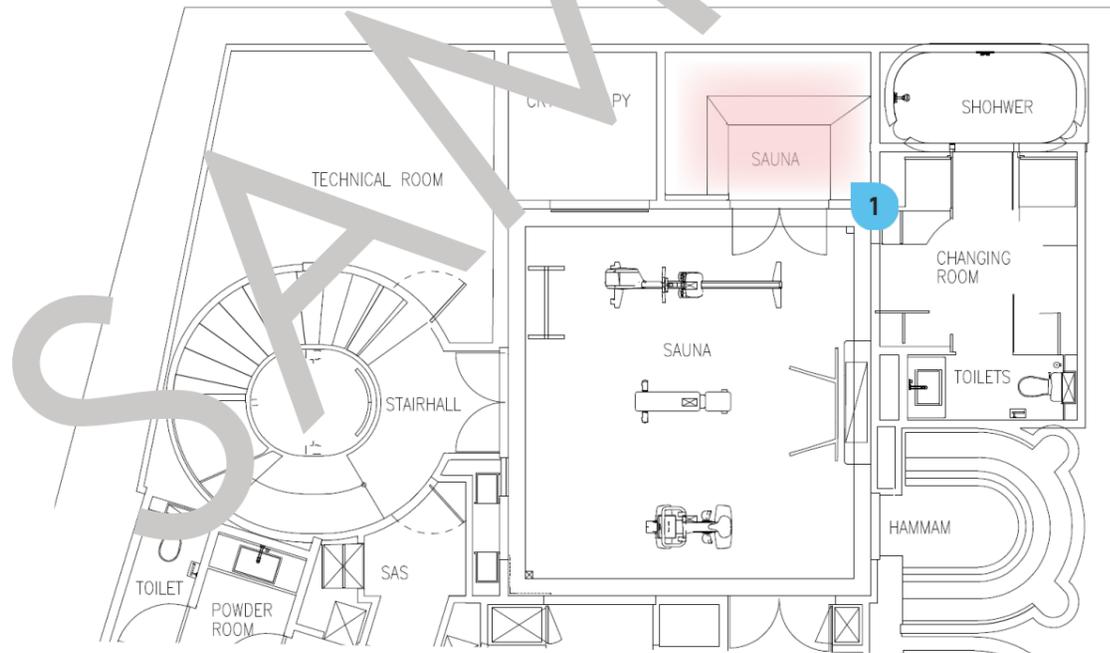
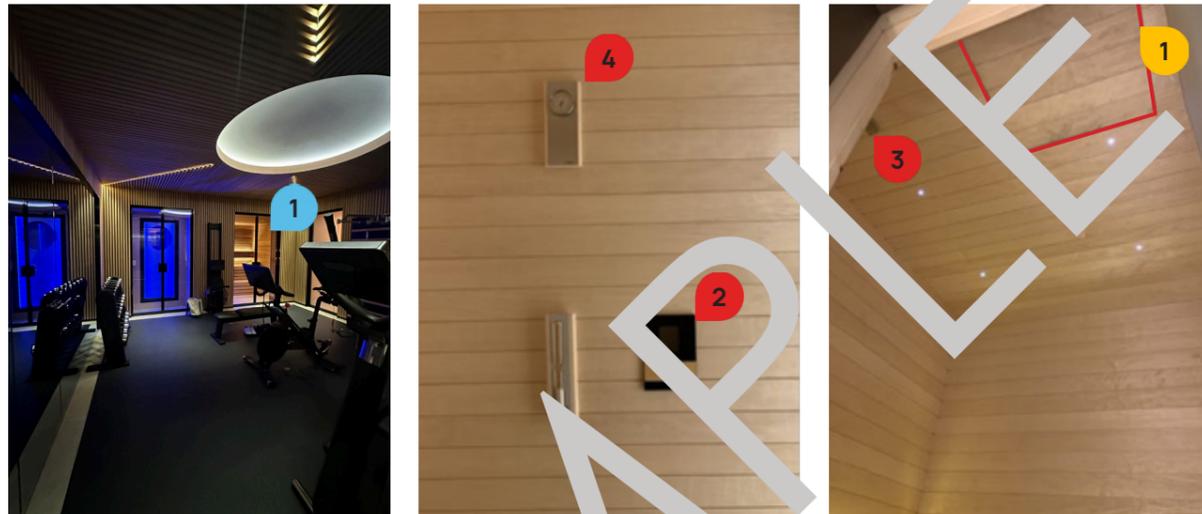
In case the **RED** light appears, immediately contact the maintenance company!



Sauna

The **Sauna 1** is located in the basement, accessible through the Gym (B).
 Inside, there is a **Heater**, a **Control Panel 2**, **Temperature Sensor 3**, and a **Timer 4**.
 There is an access panel next to a Sensor. Behind it, there are Lighting Control and Lighting Junction Box for the Sauna.
 The Heater has its **Main Switch** at the bottom part of it.

To switch off the Sauna completely, shut the **Breaker No. 1** labelled "**Sauna Heater**" on the **Distribution Board "DB1"** in the **Main Plant Room (B)**.



Maintenance

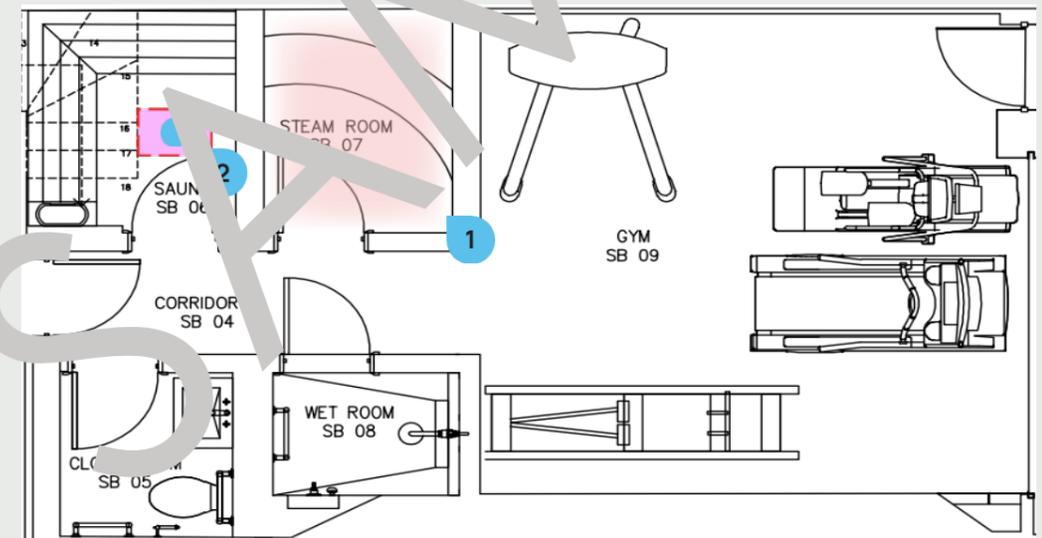
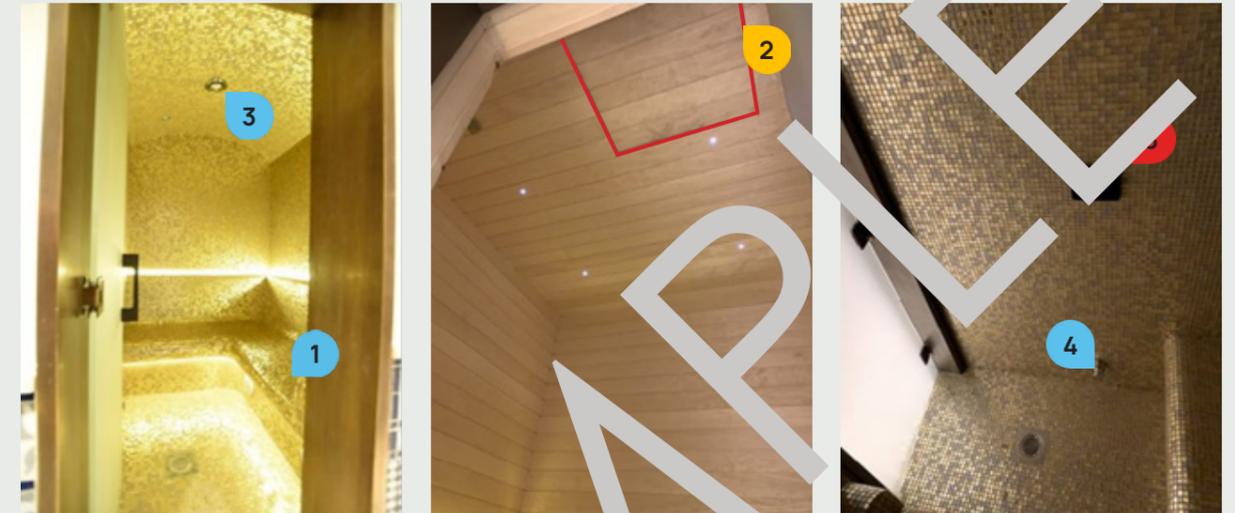
The Sauna should be checked and maintained at least once a year.
 For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Steam Room

The house is equipped with **Steam Room 1**.
 The **Steam Generator 2** is located above an access panel in the **Sauna**. To access it, it is required to use at least 7-step ladder.
Extra care needs to be taken when accessing the Steam Generator.

The Steam Room has also its **Control Panel 3**, **Nozzle Steam 4** and **Extractor 5**.

The Steam Room can be completely shut off by shutting off the **Breaker No. 2** labelled '**Steam Room Supply**' on the **Distribution Board** located in the **Plant Room (SB)**.



Maintenance

The **Steam Room** should be checked and maintained at least once a year.
 For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd.**

Jacuzzi

The **Jacuzzi 1** is located in the Basement, by the Pool Area.
It can be controlled with a **Control Panel 2** is mounted on the wall next to it.

Cleaning Points

There are two **Cleaning Points 3** on each side of the Jacuzzi.
To lift it, put hand from below, lift it and then check the cleaning points.

BMS Panel

There are **Override Switches** on the **BMS Panel 4** – labelled as “Spa Lights”, “Spa Filter Pump”, “Spa UV”, “Spa Heating”, “Spa Jet Pump” and “Spa Air Blower”.

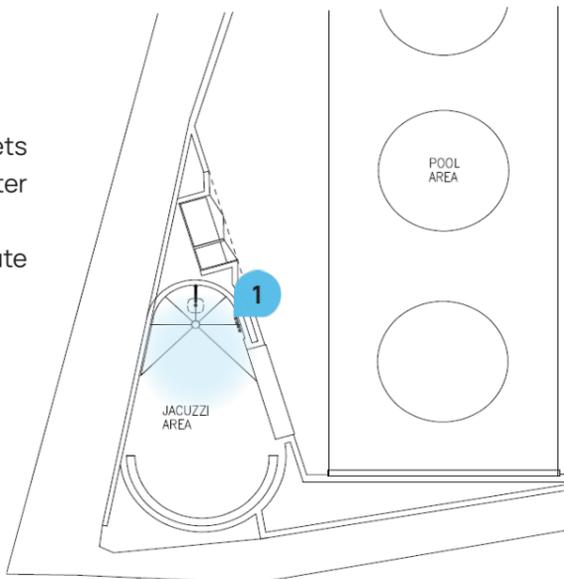
Alternatively, to switch off the Jacuzzi completely, shut the **Breaker No. 4** labelled “SAS & Pool Cupboard Ring” on the **Distribution Board “DB1”** in the **Plant Room (B)**.



Control Panel

The **Jacuzzi Control Panel** can control the following:

- ▶ **Heat 5**
- ▶ **Jets 6** – it is recommended to press both Jets and Air at the same time, otherwise lots of water will be spilled out of the edges.
- ▶ **Air 7** – please note that it takes up to a minute to fully run the feature.
- ▶ **Lights 8**



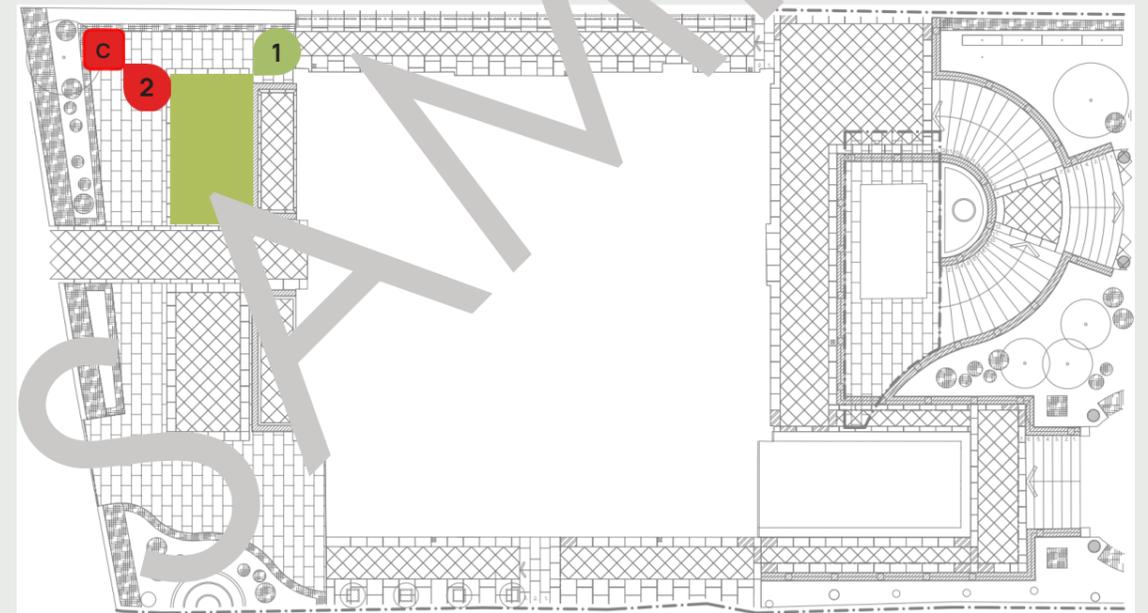
Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd Ltd**.

Car Lift

The property is equipped with a **Car Lift 1**.
The **Control Panel 2** is located in the **Shed** in the **Front Garden**.

Alternatively, to switch off the Jacuzzi completely, shut the **Breaker No. 4** labelled “SAS & Pool Cupboard Ring” on the **Distribution Board “DB1”** in the **Plant Room (B)**.



Maintenance

For contact details and responsible personnel, please refer to section **3. Project Directory - Ludek Ltd**.

Wet UFH Thermostat

Heatmiser Thermostat Neostat V2 - Quick Guide



| | | | |
|---------------------------|---|---------------------------------|---|
| 1 Mesh Symbol | Displayed when connected to the neoHub | 9 Program Indicator | Displayed during programming (6 level mode) to show which level is being altered. |
| 2 Day Indicator | Displays the day of the week | 10 Program Indicator | Displayed during programming (4 level mode) to show which level is being altered |
| 3 Frost Protection | Displayed when frost protection is enabled | 11 Main Menu | Displays which option is currently selected |
| 4 Flame Symbol | Displayed when the thermostat is set for heat and flashes when optimise start is active | 12 Keypad Lock Indicator | Displayed when the keypad is locked. |
| 5 Holiday | Displayed when the thermostat is in holiday mode | 13 Temperature | Displays the current sensor temperature |
| 6 Floor Limit | Displayed when the floor probe has reached the floor temperature limit configured in the setup menu | 14 Temperature Format | Degrees Celsius or Fahrenheit |
| 7 Floor/Room Temp | Indicates the displayed sensor mode | 15 Hold Left | Shown when a temperature hold is active, with remaining time |
| 8 Set | Displayed when changes are being made to the current set point | 16 Time/Day/ Month/Year | Displays when setting the Clock/ Calendar/Holiday |

Temperature Control

- ▶ The Δ ∇ keys allow you to adjust the set temperature
- ▶ When you press either key, you will see the word SET and the desired temperature value. Use the Δ ∇ keys to adjust the SET value.
- ▶ Press \checkmark to confirm settings and return to the main display

Holiday Mode

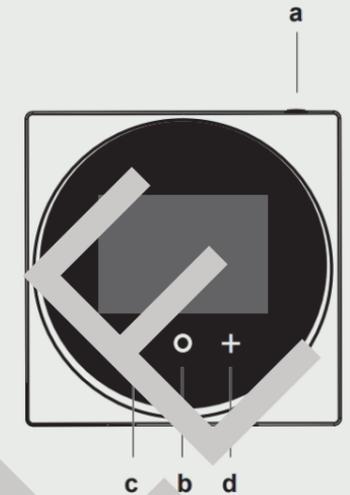
- ▶ Use the $\langle \rangle$ keys to scroll to **HOLIDAY**, then press \checkmark .
- ▶ Use the Δ ∇ keys to set the year, then press \checkmark .
- ▶ Use the Δ ∇ keys to set the month, then press \checkmark .
- ▶ Repeat the steps to set the Date & Time, then press \checkmark .

Note: The holiday period will start immediately and will return to the normal program at the time & date you have configured.

A/C Controller

Daikin Madoka BRC1HHDAAW - Quick Guide

- a ON/OFF
- b ENTER/ACTIVATE/SET
 - ▶ From the home screen, short press to cycle through the operation screens.
 - ▶ From the home screen, long press to go to the main menu.
 - ▶ From the main menu, short press to enter one of the menus.
 - ▶ In any of the menus, activate/confirm a function, value or setting.
- c CYCLE/ADJUST
 - ▶ On the room temperature/domestic hot water operation screen, activate the setpoint screen.
 - ▶ In the main menu, cycle left.
 - ▶ In any of the menus/operation screens, adjust a function, value, or setting (default: increase)
- d CYCLE/ADJUST
 - ▶ On the room temperature/domestic hot water operation screen, activate the setpoint screen.
 - ▶ In the main menu, cycle right.
 - ▶ In any of the menus/operation screens, adjust a function, value, or setting (default: increase)



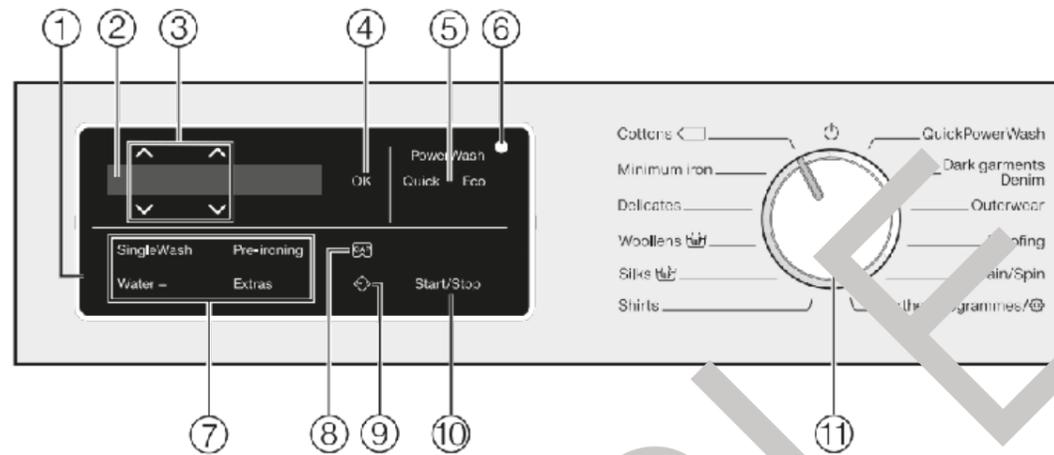
| | |
|--|---|
| | System operation OFF. Indicates that space heating/ cooling operation and/or domestic hot water operation are turned OFF. |
| | Bluetooth Indicates that the user interface is sending out a Bluetooth signal and is ready to a software update. |
| | Heating Operation - Indicates that the system is in Heating mode. |
| | Cooling Operation - Indicates that the system is in Cooling mode. |
| | Powerful Operation - Indicates that Powerful operation is active. |
| | Emergency - Indicates that Emergency operation is active. |
| | Warning - Indicates that an error occurred. |

Operation Screens

| | |
|--|---|
| | Home Screen / Room temperature. See the actual room temperature and control the (desired) room temperature. |
| | Domestic hot water temperature. See and control the domestic hot water temperature (i.e., tank heating operation). |
| | Powerful operation. Activate or deactivate Powerful operation (i.e., fast tank heating operation). |

Washing Machine

Miele WCE320 - Quick Guide



- | | |
|--|------------------------------|
| 1. Control Field | 7. Sensors for extra options |
| 2. Display | 8. Capsule dosing sensor |
| 3. Up and Down sensor | 9. Delay function sensor |
| 4. OK sensor | 10. Start/Stop sensor |
| 5. Power Wash display with the Quick and Eco sensor controls | 11. Programme selector |

Time Delay

After touching the sensor, water start time for the programme (delay start) can be selected. Once selected, lights up briefly. The duration of the delay start period is selected by touching the < or > sensor.

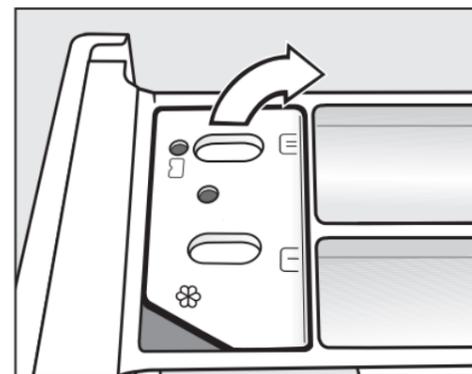
Capsule Dosing

Three different types of capsule are available:

- ▶ Fabric care (e.g. fabric conditioner, proofing agent)
- ▶ Additives (e.g. detergent enhancers)
- ▶ Detergent (for the main wash only)

Each capsule contains the correct amount for one wash cycle.

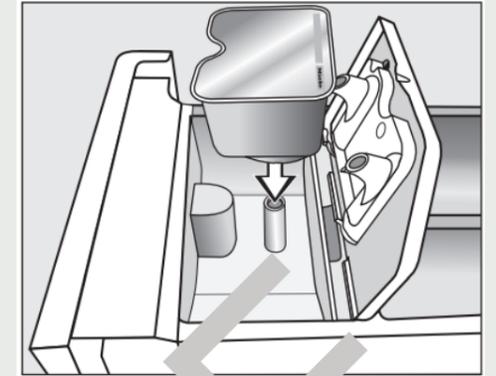
To activate CapDosing, touch the sensor for the capsule you want to use.



Washing Machine

Inserting a Capsule

1. Open the detergent dispenser drawer.
2. Open the lid of the compartment.
3. Press the capsule in firmly.
4. Close the lid and press it firmly shut.
5. Close the detergent dispenser drawer.



The capsule is opened by the act of inserting it in the detergent dispenser drawer. The contents can run out of the capsule if you then remove it from the drawer before it is used. In this case, dispose of the capsule and do not re-use it.

Dispensing Fabric Conditioner and Liquid Starch

Add the fabric conditioner or liquid starch to the compartment or insert the appropriate capsule. Do not exceed the maximum level mark. The agent will be automatically dispensed in the last rinse. At the end of the programme a small amount of water will remain in the compartment.



Cleaning

Disconnect the machine from the mains electrical power supply before cleaning or maintenance. The washing machine must not be hosed down.

Cleaning the Drum

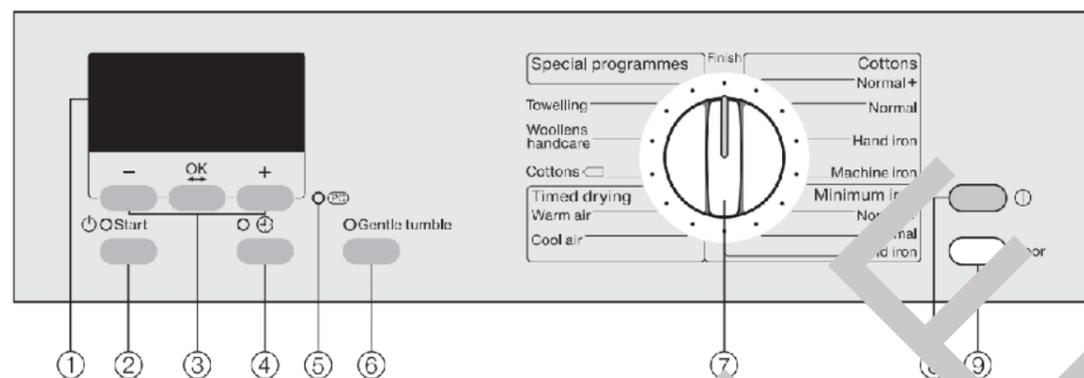
Washing at low temperatures and/or using liquid detergent can cause bacteria and unpleasant odours to build up in the washing machine. In order to clean the drum and also to prevent unpleasant odours building up, use the Cottons programme at 90°C to clean the machine once a month or when the Hygiene info light comes on.

External Casing and Fascia Panel

Clean the casing and fascia panel with a mild non-abrasive cleaning agent or soap and water using a well wrung-out cloth. Wipe dry with a soft cloth.

Tumble Dryer

Miele PT 5137 WP - Quick Guide



Control Panel

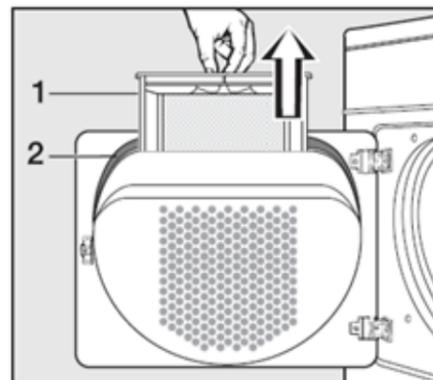
1. Display
2. Start button - The indicator light flashes when a programme is being selected and is then on constantly after the programme has started.
3. - OK + buttons
4. Time button - For selecting delay start; time of day display
5. PC/Optical Interface - Only used by service technicians.
6. Gentle Tumble button - For drying with reduced mechanical action.
7. Programme Selector
8. On/Off button - To save energy the dryer will switch off automatically 15 minutes after the end of the programme/anti-crease programme or 30 minutes after the dryer is switched on if it is not operated.
9. Door button - Opens the machine door independently of the electricity supply.

Operation

- ▶ A step-by-step guide on how to operate the washing machine correctly is described on pages 20-25 in the manual.
- ▶ To learn about the delay start function, please go to page 26.
- ▶ A very detailed programme chart can be seen on pages 27-30.
- ▶ For information on how to change or cancel a programme sequence, please go to page 31.

Cleaning Fluff Filters

Clean the surface of the fluff filters in the door and the door opening after each drying programme. Open the door and pull the fluff filter (1) out of the door as illustrated. Use your fingers or a vacuum cleaner to remove the fluff from the surface of the filter.



Tumble Dryer

Cleaning Fluff Filters

Remove any fluff from the hollow part of the door with a bottle brush or a vacuum cleaner. Also clean the door seal (2) with a damp cloth.

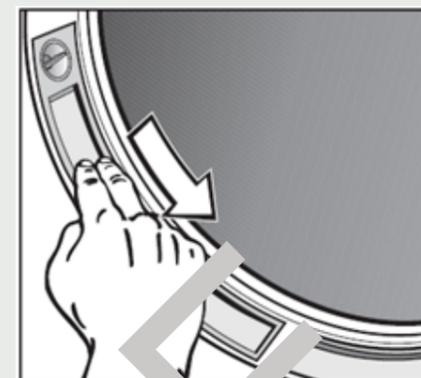
Once clean, push the filter back into the door holder until it clicks into position. Ensure it is facing the correct way.

Use your fingers or a vacuum cleaner to remove the fluff from the two fluff filters in the door opening, then close the door.

If there is a great deal of compacted fluff on any of the filters, they can be removed and cleaned under hot running water.

The two filters in the door opening can also be removed if you need to clean them with water.

When doing this, remember to dry all of the filters thoroughly with care.



Cleaning the Plinth Filter

The plinth filter should be cleaned when the Clean plinth filter prompt appears on the display. Press OK twice to delete the message once you're done.

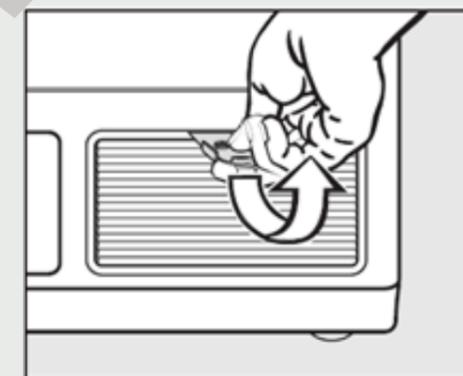
To open, press the right hand side of the plinth filter access panel. The panel will spring open. Pull the filter out by the handle. Pull the handle out of the filter. Clean the filter thoroughly under running water, then dry it thoroughly. Use a damp cloth to remove any fluff from the handle.

Cleaning the Appliance

Before doing any wet cleaning, disconnect the appliance from electricity.

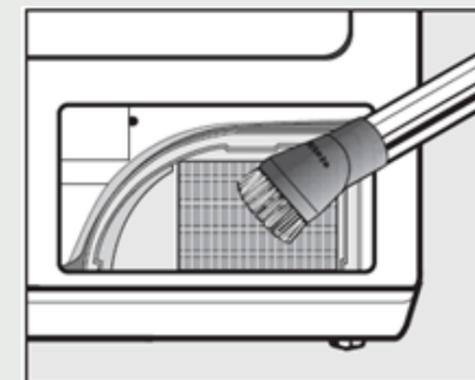
Clean the housing, control panel, door and door seal with a slightly damp cloth and mild detergent or soapy water.

Clean the drum and other stainless steel parts with a suitable proprietary stainless steel cleaner following the manufacturer's instructions. After cleaning, dry with a soft cloth.



Troubleshooting

A detailed troubleshooting guide can be found on pages 41-48 in the manual.



Hot Water Tap

Quooker - Quick Guide

The Quooker system provides instant boiling water and helps in maintaining a clean and efficient kitchen. It consists of various components such as taps, tanks, and scale control units that work together to ensure optimal performance.

Start-up

After installation, open the stop valve on the inlet combination and flush the tank until the water is clear. The tank has an on/off switch ("Q" shaped) on top and takes about 10 minutes to heat the water.

Usage

Activate water pressure with the lever handle. Adjust flow and temperature with the same handle. For boiling water or sparkling water, press and twist the textured handle, the illuminated ring turns red for the boiling water and turns blue for the sparkling water. Hold down the rotary button for slightly longer and turn, to get water filtered with Activated Carbon filter and Hollow Fibre filter.

Maintenance

Tank Maintenance
Switch off the tank with the On/Off button. Open the hot water tap and let it run until cold. Close the main shut-off valve or stop valve on the inlet combination. Depressurize the Quooker by opening the boiling water tap. Unplug the tank and disconnect before removing it. Service the pressure relief valve regularly to prevent lime scale build-up.

Scale Control:

The scale control unit uses an ion exchange cartridge that should be replaced before saturation. Test water hardness using the supplied test kit around the cartridge's expected expiry date. Order replacement cartridges online. There are two settings for the scale control: Maximum (70% hardness reduction) and Medium (50% hardness reduction).

Cleaning and Care:

Clean the aerator by unscrewing the nozzle and soaking it in a vinegar-water solution. Clean lime scale from the tank yearly using a cleaning kit from Quooker. Pressure water softeners do not remove all mineral or leave excess salt in the water to avoid corrosion. The filter should be changed annually, when the tank emits an acoustic signal.

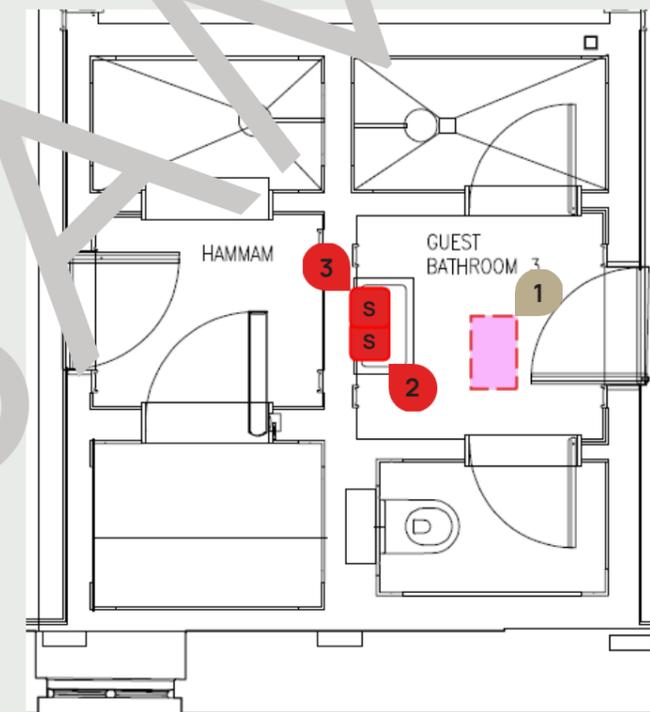
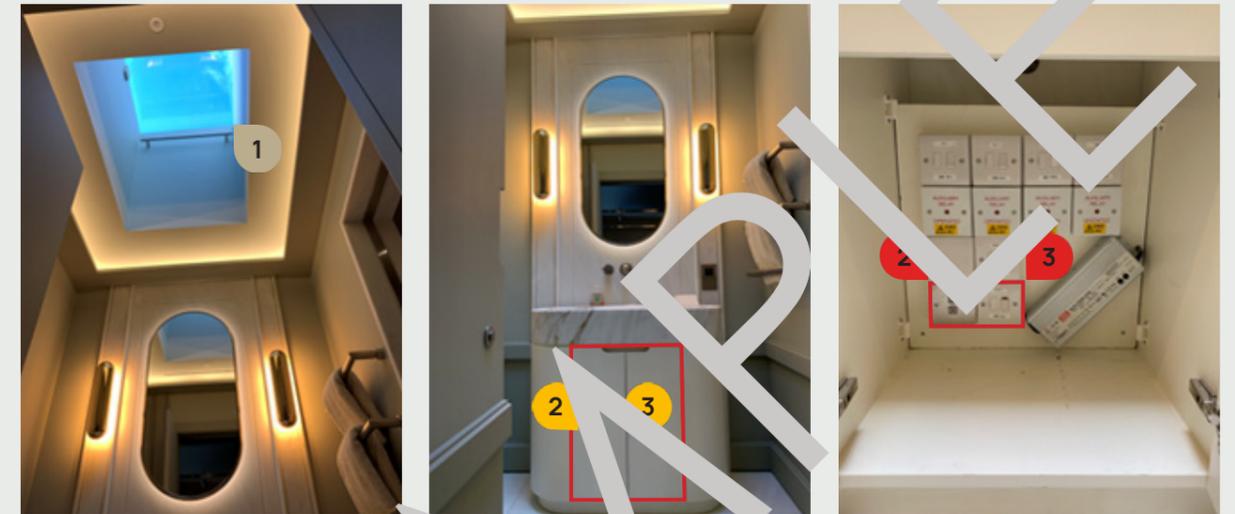


Access to Roof

The **Roof** is accessible through **Skyhatch/Rooflight** 1 on a ceiling in the **Guest Bathroom 3 (4F)**. It can be operated via a **Switch** 2 located in the bathroom, beneath a basin. Its **Spur** 3 is located next to it.

To access the Roof, you should carefully put a **Telescopic Ladder** 4 on the stable area right beneath the skylight and extend it.

However, only a qualified person should access the roof. Extra care needs to be taken when accessing the roof to avoid any injury or damage.



Unoccupied Property

When the property is left unoccupied or vacant for a long period of time, it is under threat of burglary, vandalism, and other dangers. To avoid this, there are several preventative measures which can be taken to reduce the risks.

Before you leave:

- ▶ Check if the **plumbing system** is running smoothly and there are no leaks.
- ▶ Turn off the **water supply**. Find out how to **shut the water supply**.
- ▶ If the water supply will be kept on, the heating system should run on low temperatures.
- ▶ Set the **Underfloor Heating** on "Holiday" mode. In which case, the electrical power should be on. For more information, please refer to the full User Guides stored within the O&M Manuals.
- ▶ Inspect the **gutters** and make sure they are clean.
- ▶ Lock **valuables** away in a safe deposit box or move them to a secure place.
- ▶ Make the property look occupied.
- ▶ Check the functioning of the **Intruder Alarm** and all **Smoke Detectors**.
- ▶ Shut off all **appliances** and unplug all **electronic devices** and **small appliances**.

We recommend to ask your neighbour, friend or relative to watch over the property. It would be the most ideal to let it be checked **every day**. The following should be regularly checked – security, water leaks, damp and mould and pests or vermin.

Also, avoid any visible signs that the property has been unoccupied for a long time.

Watch out for the following:

- ▶ **Overgrown and untended garden**. This can be solved by contacting a gardener to tend the garden every couple of weeks.
- ▶ **There is a lot of mail either in the letterbox or at the front door**. This can be solved by asking someone to check the letterbox every now and then.
- ▶ **House is either dark at all times and the curtains are closed**. This can be solved by buying a plug timer which can turn on and off the light at various times during the day and night.

Unoccupied Property

Sash Window Locks

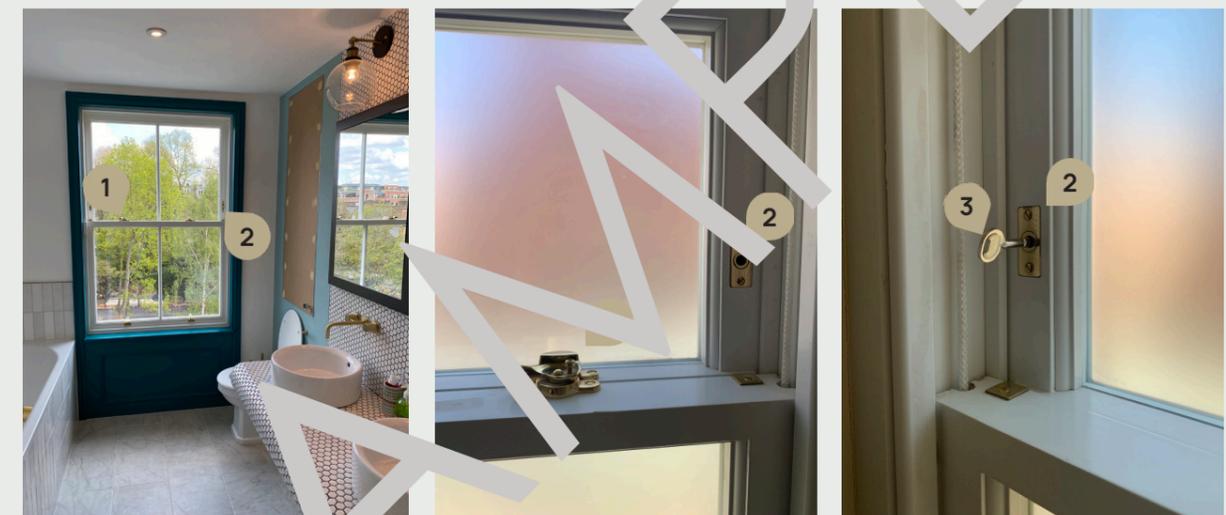
All **Sash Windows** installed in the house have the **Sash Locks** (Fitch Type) **1** and **Secure Ventilation Locks** **2**. The Sash Locks also require an **Allen Key** **3** to OPEN/ SECURE them. The Allen Keys are always located in the nearby area.

To open the window, rotate the **Sash Lock Lever Arm** to allow free upward movement of the sash. The Sash Lock Lever Arm in the closed position, does not provide sufficient security.

For full security, the Allen Key should be used to screw down the Locking Nut on the Sash Lock such that there is no free movement of the rotating lever.

The Secure Ventilation Locks can also be used to restrict the maximum degree of opening possible for the window, but still allow adequate ventilation. They can be adjusted so that they are flush with the fixed window frame. This will allow full upward movement of the Sash.

This option may not be without risk, please ensure adequate safety precautions are taken.



Energy Saving

There are several steps that can be taken that will also improve the energy efficiency of your property. It can be achieved by:

- ▶ turning the Thermostats down – reducing the room temperature by 1C can cut the heating bills by up to 10 percent and typically saves around 55 per year.
- ▶ setting the programmer for the heating and hot water – the heating and hot water should be set to come on only when required rather than all the time
- ▶ setting the temperature of the HWC to 60C/140F
- ▶ closing the curtains at dusk to stop heat escaping through windows
- ▶ always turning off the lights when not in the room
- ▶ not leaving appliances on standby and remembering not to leave laptops and mobile phones on charge when not necessary
- ▶ only boiling as much water as is needed
- ▶ filling up the machine, tumble dryer or dishwasher: one full load uses less energy than two half loads
- ▶ regularly checking if there are any leaking taps: a dripping hot water tap wastes energy, all the taps should fully turned off

Low Energy Light Fittings

Depending on how long the lights are in use every day, fitting the energy saving light bulbs could save you a bit of money. They will last around 10 times longer than a standard bulb and could save you around 40 before they need replacing.

Energy saving light bulbs use between a fifth and a quarter of the electricity of ordinary bulbs to generate the same amount of light. So where you'd normally use a 60W bulb, you'll only need an 11-14W bulb.

| Standard Bulbs | Energy Equivalent |
|----------------|-------------------|
| 25W | 5-7W |
| 40W | 8-9W |
| 60W | 11-14W |
| 100W | 20-23W |

Water Use & Efficiency

Steps you can take to reduce water consumption:

- ▶ take a shower rather than a bath
- ▶ stop the tap whilst cleaning the teeth
- ▶ only boil as much water as you need when making drinks
- ▶ not to leave taps dripping and to fix any worn washers
- ▶ only wash full loads in washing machine and dishwashers
- ▶ use the remaining water after boiling eggs for watering plants as this water is high in nutrients (dirty water taken from a fish tank can be used as well)
- ▶ wash vegetables in a bowl rather than under a running tap

Drilling, Screwing, Nailing

Electricity, Gas, Water and Underfloor Heating are distributed around your home using cables, wires and pipes concealed in the walls and floors. These may be located anywhere in your floor so **do not mount anything to your floors.**

In walls, cables run through specific areas as specified below. **Do not drill, screw, or nail anything into the walls in these places.**

- ▶ 200mm or less from the ceiling
- ▶ 200mm or less from the floor
- ▶ Between the light switches and the ceiling
- ▶ Vertically above and below or in a horizontal band either side of sockets, switches, or any other electrical accessories.

