OLD NATWEST BANK BUILDING RYDE
MECHANICAL SURVEY REPORT

DATE 19.12.24

Old NatWest Building
St Thomas Street,
Ryde

Heating System:
A function test was carried out on the central heating system and components, including controls, covering the following:

- Gas Boilers
- Flue system
- Pumps and valves
- Gas meter
- Gas Detection system
- Gas solenoid valve
- Pressurisation unit and expansion vessels
- Heat Emitters including Radiators
- Radiator valves

Hot and Cold Water Systems:
A function test was carried out on the hot and cold water systems covering the following:

- Point of use water heaters
- Mains stop-cock
- Taps and basins.
- CWS tank

The below tables show details of each item checked and their condition and whether working or not.

This is followed by photos and descriptions of the Air Conditioning and Ventilation systems and an overall summary of this report.

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Boiler	Basement Plant Room	Keston	Keston Heat 55	ZU20863400008117	IDEAL	WORKING, AND OVERALL IN GOOD CONDITION.

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Wireless roomstat	Basement Plant Room	Honeywell	CM927		Honeywell	WORKING AND OVERALL IN GOOD CONDITION

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Condense Pump	Basement Plant Room	ASPEN	FP2071/2	HL28798122	ASPEN.	WORKING AND OVERALL IN GOOD CONDITION.

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Twin Head Pump	Basement Plant Room	Wilo	DPL40/ 130-0.25/ 4-N-V4	2121664 1/0001	wilo	WORKING AND OVERALL IN GOOD CONDITION.

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Air/Dirt Seperator	Basement Plant Room	Flamcovent	clean 1 3/4	–	–	Good

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Auto top up	Basement Plant Room	Jet	Mini 130 HL	505250	–	Not working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Expansion Vessel	Basement Plant Room	Jet	80L	–	–	Good

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Gas detection System	Basement Plant Room	Merlin	GDP2	–	–	Working

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Gas solenoid valve	Basement Plant Room	Bonico	ZEV40	ISO9001:2015	—	Good

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Gas Meter	Basement eletric room	Itron	MDA2S	M02SA061300906 2009	—	Good

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Water Heater	Basement cleaners cupboard	Ariston	New Europrisma IS UR 2kw EU	3100310005240191015557	Ariston	Not working.

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
2x Basins 2x toilets	Basement mens toilets	—	—	—	—	All working ok.

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
2x Basins 2x toilets	Basement ladies toilets	–	–	–	–	All working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Stop cock 28mm	Basement ladies toilets	–	–	–	–	working.

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	Basement ladies toilets	–	–	–	–	working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	Basement mens toilets	–	–	–	–	working

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	Basement Hallway between toilets	–	–	–	–	Working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	Ground floor stairs to basement	–	–	–	–	All working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator 2x	Ground floor back office	–	–	–	–	Both working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator 7x	Ground floor					Working

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radicter	Ground floor WC					woking

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
toilet	Ground floor WC					working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
water heater	Ground floor WC	Heatrae Sadia	Express 7L	CKA082200131AU		No Power

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
wash hand basin	Ground floor WC					woking

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
toilet	1st floor toilets					working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	1st floor toilets					Not working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
wash hand basin	1st floor toilets					working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
water heater	1st floor toilets					Not working

Appliance Information:

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Radiator	1st Floor Conference Room					The middle rad in the row of three — TRV not working

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes
Water tank	1st Floor loft space					Good

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes

Appliance Type	Location	Make	Model	Serial No.	Manufacturer	Condition / Notes

Gas Meter

Wall Mounted Gas Boiler

Boiler Condensate Pump

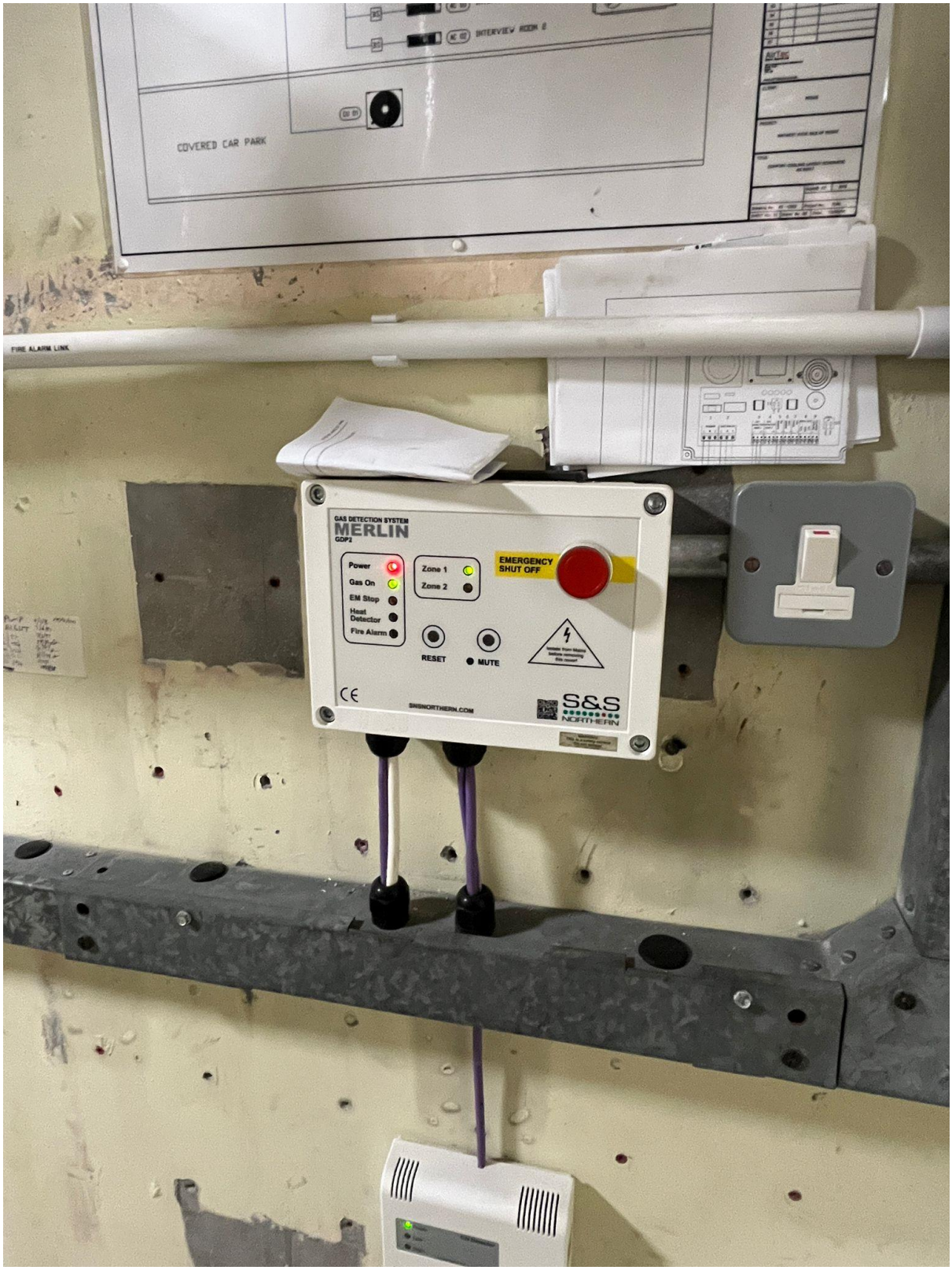
Boiler Wireless Receiver

Heating Primary Circulation Pumps

Gas Solenoid Valve

Heating Expansion Vessel

Gas Detection System



Carbon Monoxide Detector

Heating System Pressurisation Unit

Point of Use Hot Water Heater – First Floor Toilets

Mains Water Stop Cock (28mm) in Basement Ladies Toilets

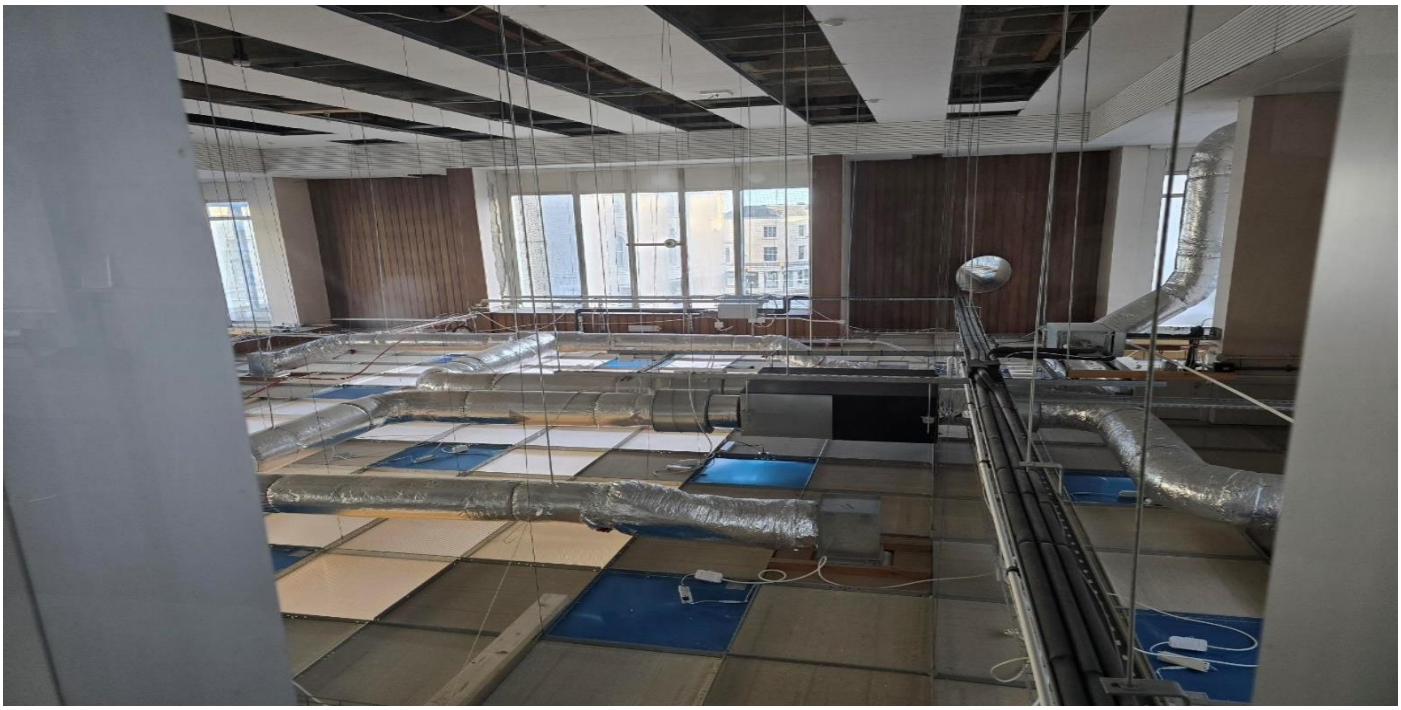
Point of Use Hot Water Heater in Ground Floor W.C.

Cold Water Storage Tank in First Floor Roof Space

Air conditioning overview:

The air conditioning in the building comprises of six wall mounted units across the ground floor of the building located in small meeting rooms and other offices and open plan areas. The system also supplies a door curtain heater, which is located above the main door into the building. The only other unit on the system is a ceiling cassette unit in the 1st floor office, all the indoor units and the ventilation unit are wired back to a centralised controller located in the basement level, the basement / underground shelter is where the outdoor (condensing unit) is located.

The system is a Daikin three pipe simultaneous heating and cooling system meaning each area can have independent heating and cooling all running off the same outdoor unit, the pipework, BS (branch selection) boxes, cable, drain and lagging looked to be in very good condition above the ceiling in the main area and looked to be installed to a high standard.



One of the indoor wall mounted units has had a wall built around it, so this unit would need to be removed from the main system or moved into the main area before this unit could be operational.

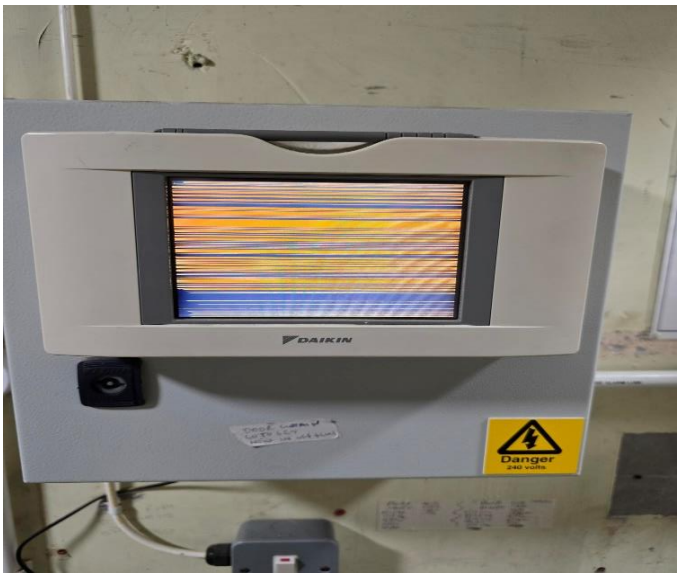
Air conditioning condition:

Indoor units: All the indoor units are old, and the estimated age/installation date was in early 2008, aside from this all the indoor units (apart from the one built into the wall) look to be **visually** in good condition, both internally and casings. The unit coils were clean and showed no signs of damage. We could not test any of the indoor units as none of them had a power supply.

The door curtain had duct tape holding the outer case together so we did not inspect the inside of the unit, we also could not find a controller for this unit, so suspect that this is controlled via the centralised controller.

If this door curtain does not work when power is restored to the system and following our discussions with Daikin the new modern day equivalent DX door curtain would not be compatible with the existing Outdoor unit. Subsequently If the main door was going to be frequently used by the public and the door open to the outside environment, we would recommend fitting an electric air blower type door curtain in its place and remove the existing DX one from the centralised controller.

All the controllers on each indoor unit are very old but show no signs of visual damage, we could not test them due to the system not having power. We managed to power up the centralised controller in the basement, but the screen is damaged, the system could run in the future without this so we wouldn't need to replace it if the client does not want to adjust and control all the A/C at once as the indoor units could be controlled by their individual controllers instead.

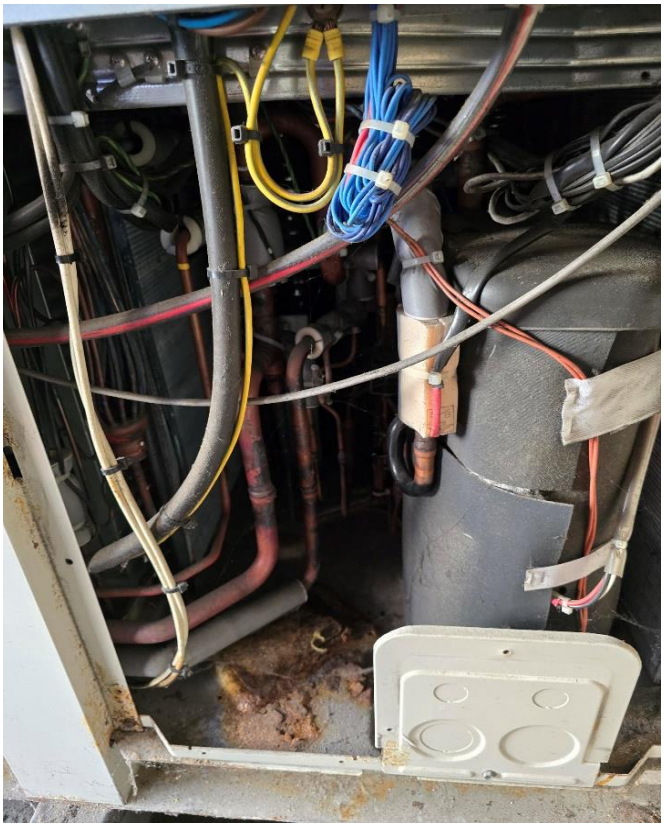


All indoor units have condensate pumps attached either through an old style ceiling peristaltic type or a newer corner tank pump, they looked visually to be in good condition, but we could not test these pumps as there was no power to the indoor units or pumps.

While on site we tried to identify the reason why we had no power to the internal A/C and Ventilation systems, the cables seemed to trace back to a Fuse board that the customer report that they had some damage and had an emergency repair and a new board fitted, but not all the fuse board was reconnected. We would need this reconnected to be able to run and test the internal units.

Outdoor unit: The outdoor unit is as old as the indoor units (2008) and like the indoor units the outer case, (apart from some small rust patches) and the general condition of the unit and coil looks to be in good condition for a unit of its age. The outside pipework is protected in metal containment trunking routed from the outdoor unit to inside of the building and is installed to a good standard. There are some materials stored too close to the coil restricting the airflow that would need to be removed when the system is up and running. The supporting feet are a basic Plyroc plastic type which are deteriorating, which would need to be replaced and upgraded to antivibration rubber support feet instead.

We inspected the inside of the unit for signs of damage and any sign of refrigerant leaks, visually and with an electronic detector, we could not identify any leaks, meaning there was no cause to break into the system and check the refrigerant levels. We tried to run and test the unit and on inspection of the electrical components and PCB we noticed the LED on one of the boards was not lit as they should be, so we traced the power and identified no power coming from the inverter PCB to the main PCB. We checked all other major components including the fan motors and compressors and they showed no signs of damage at this stage, but with the PCB damage and no internal power we could not test the system further or gain any fault code information.

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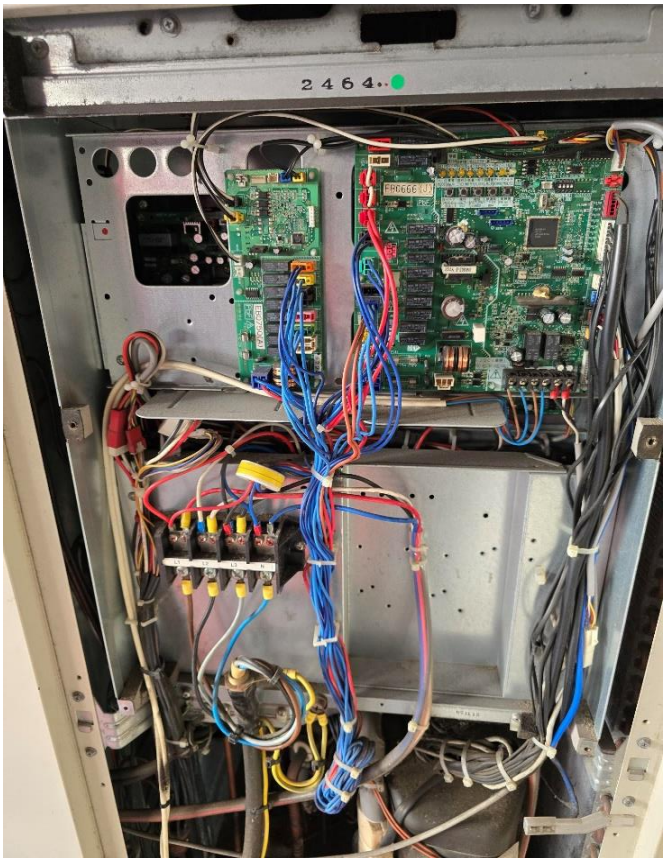
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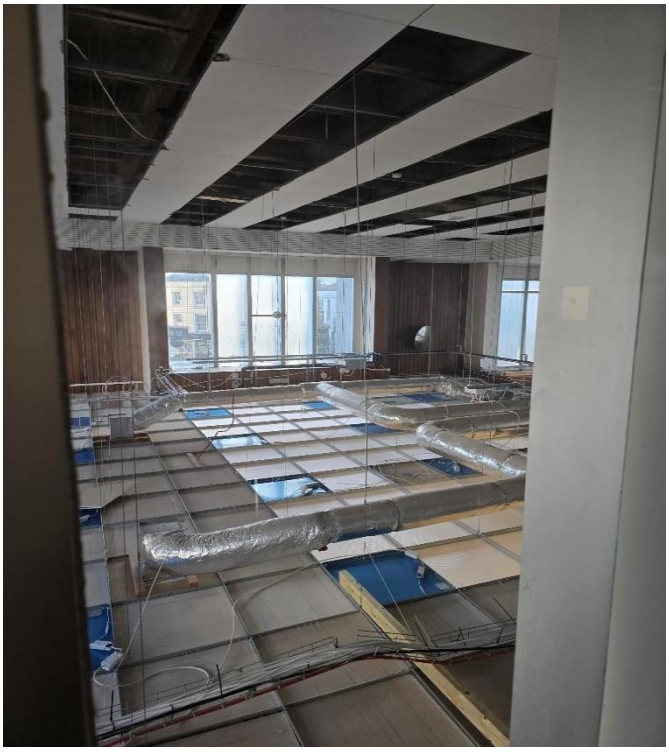
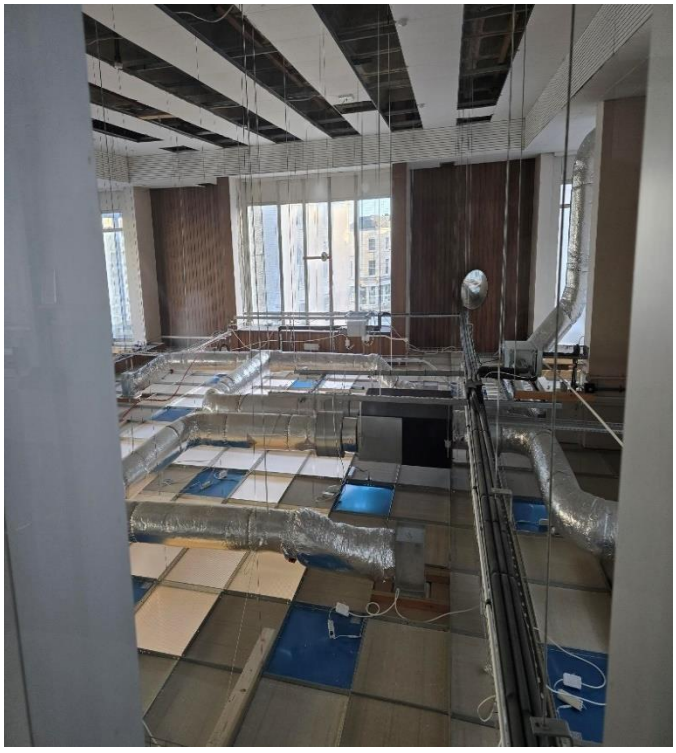
Ventilation: The ventilation system is a Daikin heat recovery system which brings in fresh air from outside and pretreats the unconditioned incoming air with the exhausted stale air but conditioned outgoing air, saving on running costs while replenishing the air in the main area of the old banking hall only. No other areas in the building are supplied by this unit and it is the only unit of its type on the property, and overall it is installed to a high standard and has its own controller but is also integrated into the A/C system central control. We could not test this system as there was no power to the unit and we suspect this is also fed from the damaged fuse board.





Summary and Recommendations

Heating System:
The overall condition of the gas fired central heating system is in good condition and has a relatively new wall mounted boiler and flue system installed. The heating controls were also in good working order.

The heating is circulated around the building via twin head heating pumps located within the basement plantroom. These were tested and although, fairly old, were working ok.

The 'Auto Top-up' or heating system pressurisation unit was not working.

Most of the radiators were found to be working and providing heat, except for the ones listed on the above tables, namely; one radiator in the First Floor Toilets and one radiator in the First Floor Conference room.

Recommendations:
Replace Heating system Pressurisation Unit.
Replace the TRV on the middle radiator in the Conference Room and replace valves on the radiator in the First Floor Toilets.

Hot and Cold Water Systems:
The pipework system providing hot and cold water throughout the building was in good condition. The main stop cock to the building was found in the Basement Ladies Toilets and was working ok.

Taps to wash hand basins were operational and in good condition. The same can be said of the w.c's and sanitaryware.

There were two point of use electric hot water heaters; one in the Basement cleaners cupboard and the other in the Ground Floor w.c. Both were not working.

The cold water storage tank in the First Floor roof space was replaced with a newer plastic tank. This serves cold water taps to toilet wash hand basins and w.c. cisterns.

The old redundant galvanised tank alongside a redundant heating header tank still remain in their original positions.

Recommendations:
Replace both hot water heaters. No repairs recommended.

The 'newer' plastic cold water storage tank supports should be replaced with a suitable support system, such as timber joists, instead of 'makeshift' wooden slats and a couple of bricks.

Air Conditioning and Ventilation Systems:
It appears that all the equipment on site has been installed and maintained to a good standard. However, with the system installed in late 2007 to early 2008, we would expect it to be coming to the end of its useful lifespan, with parts becoming obsolete.

Recommendations:
There is the potential to re-use certain parts of the installation, such as pipework and ductwork. However, we would recommend replacing the indoor and outdoor AC units.

Below is a list of recommended work needed to get the old system up and running:

- Electrical connections reinstated to indoor A/C and Ventilation power supplies
- Test all A/C indoor units and condensate pumps.
- Move or remove A/C unit built into the wall.
- Repair or remove door curtain and add additional controller.
- Replace or remove central controller from the system.
- PCB boards fitted to outdoor unit and testing continued.
- New anti-vibration feet fitted to outdoor unit.
- Ventilation unit tested.