

GROUND FLOOR PLUMBING WATER SUPPLY PLAN  
PROPOSED PLAN  
1 REF: A.03-100 SCALE: 1:50(A3)

PLUMBING LEGEND	
	BALL VALVE (BV)
	SOLENOID VALVE (SV)
	MIXING VALVE (MV)
	PIR, CONNECTED IN DAISY CHAIN
	FLOOR DRAIN (FD)
	External Beacom
	FLOOR SINK (FS)
	PIPE TURNING UP
	PIPE TURNING DOWN
	EXISTING PIPE
	NEW PIPE
LINES TYPE LEGEND	
	COLD WATER LINE (CW)
	HOT WATER LINE (HW)
	SEWER LINE (S)
	GAS LINE (G)

NOTE:  
This Plumbing Water Supply Layout Plan for The Meal Box Cafe, Unit 5, 120 Fenchurch Street, London, EC3M 5BA, has been meticulously designed in strict adherence to the following updated codes and regulations:

- Approved Document G: Sanitation, Hot Water Safety, and Water Efficiency (2024 Edition): This document provides statutory guidance on building regulations in England, covering standards for cold water supply, water efficiency, hot water supply systems, and sanitary conveniences.
- Water Supply (Water Fittings) Regulations 1999: These regulations govern the design, installation, and maintenance of plumbing systems, water fittings, and water-using appliances to prevent waste, misuse, undue consumption, contamination, or erroneous measurement of water.
- Water Regulations Approval Scheme (WRAS) Product Approval Codes: All plumbing products and materials specified in this plan are compliant with WRAS, ensuring they meet the high standards set for the UK to keep water safe and prevent contamination.

By following these codes and regulations, we ensure that the plumbing system is safe, efficient, and compliant with all relevant legal requirements.



## ENGINEER'S TEAM

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**THE MEAL BOX CAFE**  
UNIT 5, 120 FENCHURCH, STREET,  
LONDON, EC3M 5BA

SEAL:

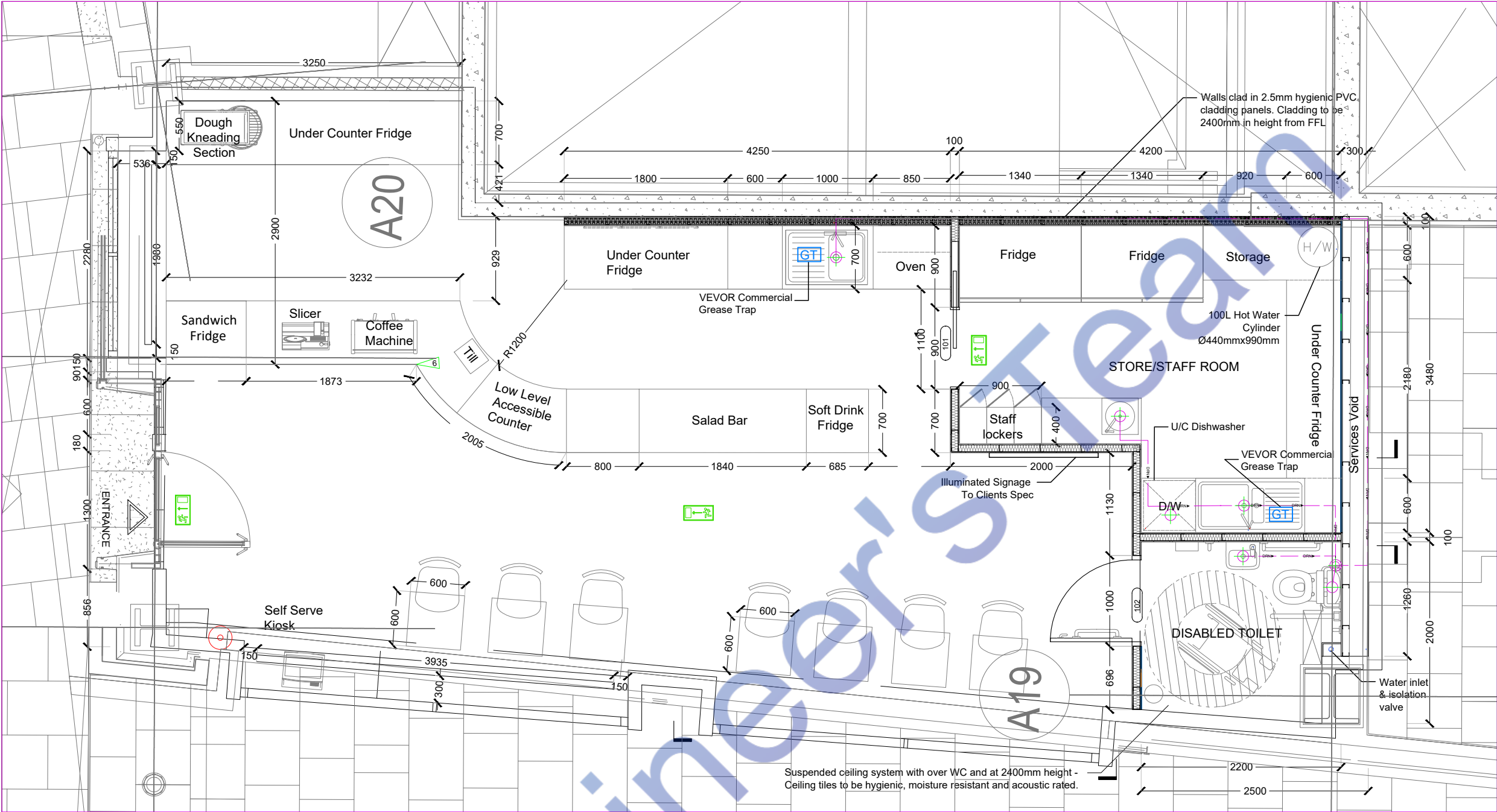
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PLUMBING WATER  
SUPPLY PLAN

Drawn by:	Engr. Al Amin
Checked:	
Date:	FEB, 06.

P 1  
Scale: 1:100





GROUND FLOOR SEWER PLAN  
PROPOSED PLAN  
1 REF: A.03-100 SCALE: 1:50(A3)

PLUMBING LEGEND	
	BALL VALVE (BV)
	GATE VALVE (GV)
	MIXING VALVE (MV)
	FLOOR CLEAN OUT (FCO)
	FLOOR DRAIN (FD)
	GREASE TRAP
	FLOOR SINK (FS)
	PIPE TURNING UP
	PIPE TURNING DOWN
	EXISTING PIPE
	NEW PIPE
LINES TYPE LEGEND	
	COLD WATER LINE (CW)
	HOT WATER LINE (HW)
	SEWER LINE (S)
	GAS LINE (G)

NOTE:

This Plumbing Sewer Layout Plan for "The Meal Box Cafe, Unit 5, 120 Fenchurch Street, London, EC3M 5BA" has been meticulously designed in strict adherence to the following updated codes and regulations:

- Approved Document H: Drainage and Waste Disposal (2015 Edition): This document provides comprehensive guidance on the design and installation of drainage systems, including foul water drainage, wastewater treatment systems, rainwater drainage, building over sewers, separate systems of drainage, and solid waste storage.
- Building Regulations 2010 (Part H - Drainage and Waste Disposal): Part H of the Building Regulations outlines the legal requirements for drainage and waste disposal in buildings, ensuring the health and safety of occupants and the protection of the environment.
- Thames Water Build Over/ Near Agreement Guidelines: As the local water authority, Thames Water provides specific guidelines for building over or near public sewers. Compliance with these guidelines ensures that the structural integrity of the sewer system is maintained and that access for maintenance is preserved.
- Water Industry Act 1991: This act governs the water supply and sewerage services in England and Wales, outlining the responsibilities of water companies and the rights of consumers. It provides the legal framework for the provision of water and sewerage services, including the maintenance of water quality and the regulation of discharges into the sewer system.
- Public Health Act 1936: This act includes provisions related to sanitation and public health, including the regulation of drainage systems. It mandates proper construction and maintenance of drainage systems to prevent health hazards and environmental contamination.
- British Standard BS EN 12056-2:2000 (Gravity Drainage Systems Inside Buildings): This standard specifies requirements for the design and calculation of gravity drainage systems inside buildings, ensuring reliable and effective removal of wastewater.
- London Building Acts (Amendment) Act 1939: This act provides additional regulations specific to building works in London, including provisions related to drainage and sewerage systems. It ensures that building practices meet the unique requirements of the London area.

By adhering to these codes and regulations, we ensure that the plumbing and sewer systems are designed and installed to the highest standards, promoting safety, efficiency, and environmental responsibility.



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### PLUMBING SEWER PLAN

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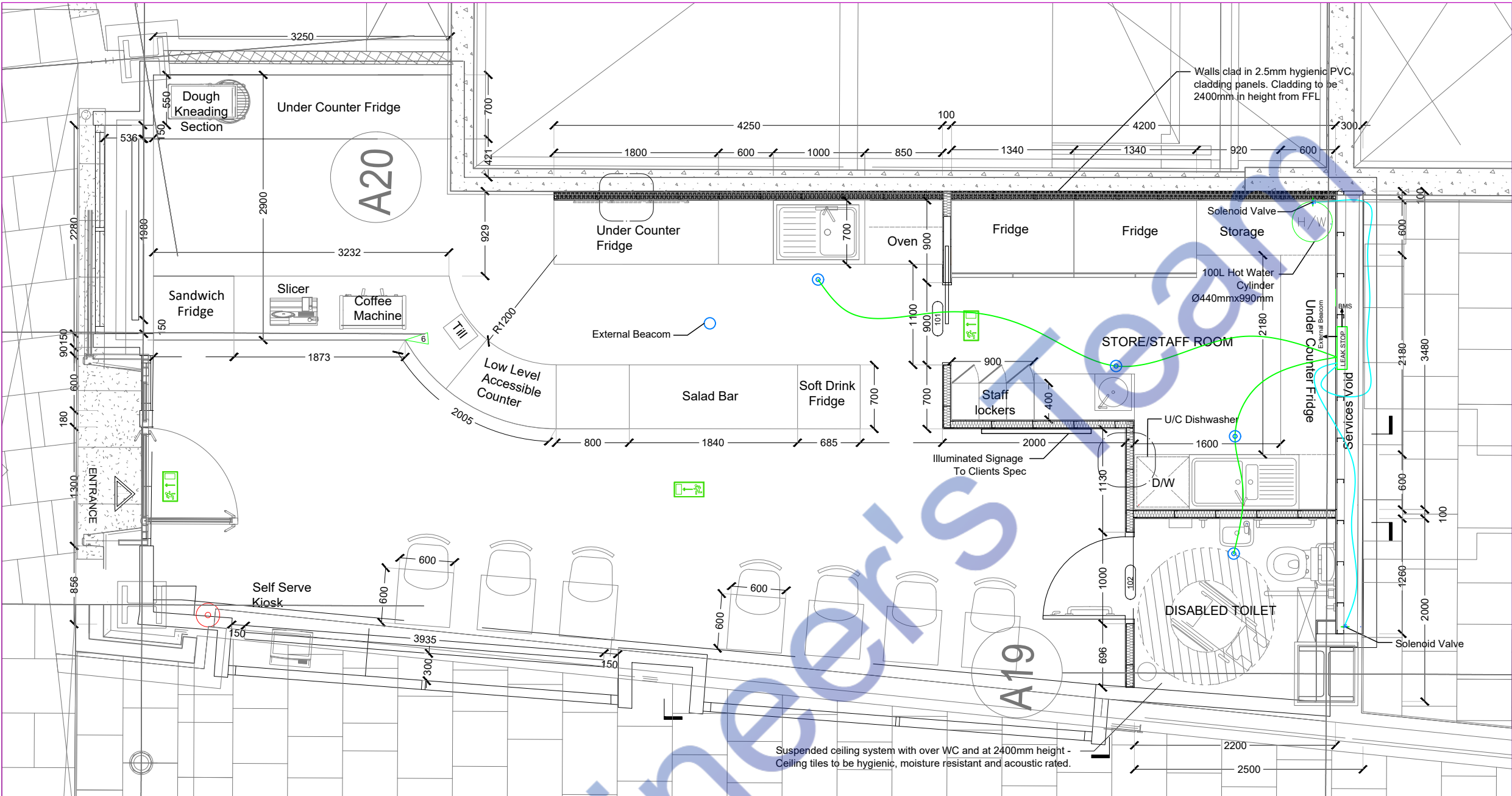
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Date: FEB, 06.

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GROUND FLOOR LEAK DETECTION PLAN  
PROPOSED PLAN  
1 REF: A.03-100 SCALE: 1:50(A3)

PLUMBING LEGEND	
	BALL VALVE (BV)
	SOLENOID VALVE (SV)
	MIXING VALVE (MV)
	PIR, CONNECTED IN DAISY CHAIN
	FLOOR DRAIN (FD)
	External Beacom
	FLOOR SINK (FS)
	PIPE TURNING UP
	PIPE TURNING DOWN
	EXISTING PIPE
	NEW PIPE
LINES TYPE LEGEND	
	COLD WATER LINE (CW)
	HOT WATER LINE (HW)
	SEWER LINE (S)
	GAS LINE (G)

NOTE:

This Leak Detection Plan for UNIT 5, 120 Fenchurch Street, London, EC3M 5BA, has been developed in strict adherence to the following updated codes and regulations:

- Health and Safety Executive (HSE) Guidelines on Leak/Gas Detection: This document outlines essential considerations for leak and gas detection systems, including human factors, detector types, maintenance protocols, and management practices.
- GOV.UK Guidance on Checking F Gas Equipment for Leaks: This guidance specifies responsibilities and procedures for regular leak checks on equipment containing fluorinated gases (F gases), detailing the frequency of inspections and actions required upon detecting leaks.
- FM Approvals Standard 7745, Liquid Leak Detection: This standard provides requirements for products designed to prevent and mitigate damages from liquid leaks, covering various detection systems and emphasizing the importance of certified leak detection solutions.
- Design, Construction, Modification, Maintenance, and Decommissioning of Filling Stations: This document discusses classes of leak containment and detection systems, offering guidance on their application and maintenance to ensure environmental safety and compliance.

By integrating the directives and best practices from these authoritative sources, this plan ensures robust leak detection measures are in place, aligning with current London, UK Product Approval Codes and regulations.

Leak Detection System Installation Details

This Leak Detection Plan for UNIT 5, 120 Fenchurch Street, London, EC3M 5BA incorporates a comprehensive leak detection system with solenoid valves for automatic shutoff to ensure compliance with London, UK Product Approval Codes and updated industry regulations. The system has been designed following all necessary health, safety, and environmental guidelines.

System Components & Installation Details

- Leak Detection System
  - A real-time monitoring system will be installed to detect leaks and trigger an automatic shutoff mechanism.
  - The system will include tape sensors, probes, or bunding as required based on site-specific conditions.
- Solenoid Valve Shutoff Mechanism
  - Electrically actuated solenoid valve will be integrated into the system to immediately stop fluid flow upon leak detection.
  - The shutoff mechanism will be fail-safe, ensuring operation even in the event of power failure.
- Installation Details
  - The system will be installed in one of the following methods, as per project and compliance requirements:
    - Below Floor Level (Bunding System): Leak detection components will be housed within a bunded containment area to prevent environmental contamination.
    - Above Finished Floor Level (Tape/Probe Sensors): Leak detection tape sensors or probe-based detectors will be installed to monitor any leakage along the system's pipelines.

4. Regulatory Compliance

- The system will be designed in accordance with:
  - Health and Safety Executive (HSE) Guidelines on Leak Detection
  - GOV.UK Guidance on Checking F Gas Equipment for Leaks
  - FM Approvals Standard 7745 - Liquid Leak Detection
  - British Standards for Plumbing & Leak Prevention

This plan ensures the highest level of safety and environmental protection, preventing leak-related hazards and ensuring full compliance with UK regulatory requirements.



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## PLUMBING LEAK DETECTION PLAN

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Scale: 1:100





1.2 Alarm Units

1.2.8 Alarm Unit: FG-A

The FG-A alarm unit is a non-locating unit. It is designed to be used with analog sense cables as FG-ECS, FG-ECX, FG-ACS and FG-ACX for water and acids leak detection.

Responses on the FG-A alarm unit:

- In the case of a leak, an audible alarm is triggered. The red LED on the front panel is switched on and the leak relay is activated.
- In the case of cable break, an audible alarm is triggered, the yellow LED on the front panel is switched on and the cable break relay is activated.

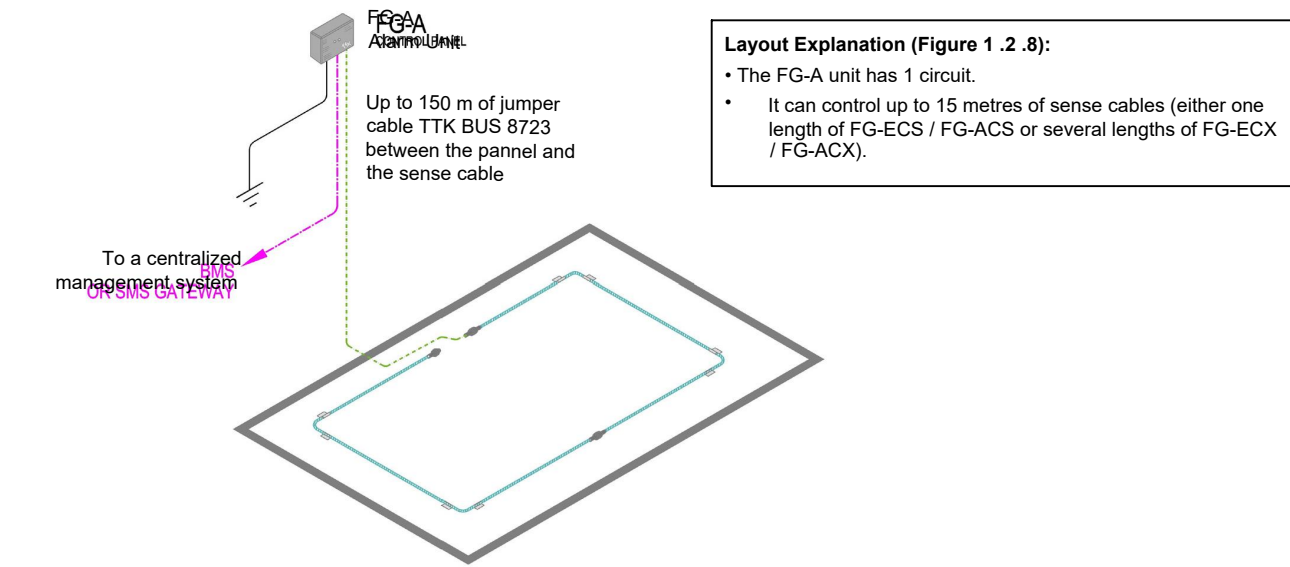


Figure 1: Layout with FG-A

1.2.9 Alarm Unit: FG-A-OD

The FG-A-OD alarm unit is a single sensor alarm unit. It is designed to be used exclusively with FG-OD hydrocarbon range of detectors for oil leak detection.

Responses on the FG-A-OD alarm unit:

- In the case of a leak, an audible alarm is triggered. The red LED on the front panel is switched on and the leak relay is activated.
- In the case of cable break, an audible alarm is triggered, the yellow LED on the front panel is switched on and the cable break relay is activated.

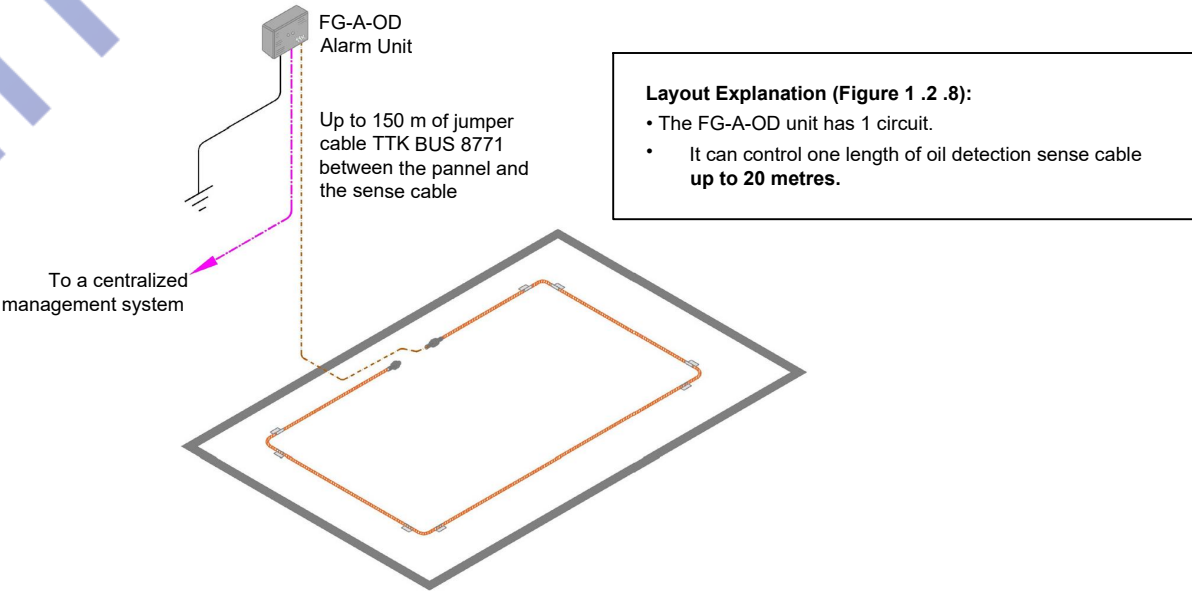


Figure 2: Layout with FG-A-OD



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