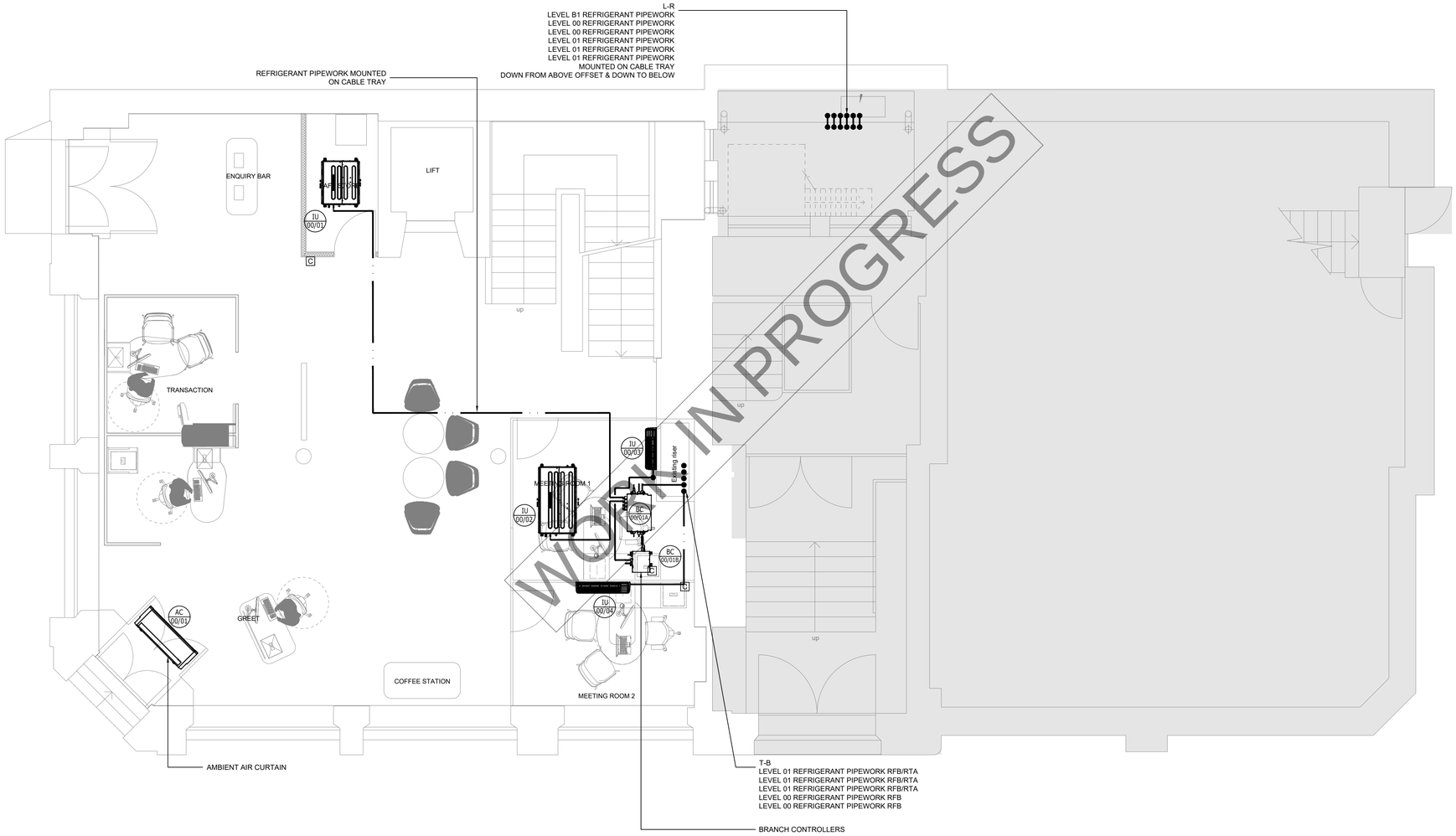
Copyright © Clark Degnan Limited

DO NOT SCALE FROM THIS DRAWING.
CHECK ON SITE AND REPORT ALL DISCREPANCIES TO CLARK DEGNAN LIMITED.

LEGEND

- PIPEWORK BELOW GROUND
- PIPEWORK AT LOW LEVEL
- PIPEWORK AT HIGH LEVEL
- PIPEWORK IN CEILING VOID
- LTHW FLOW PIPE
- LTHW RETURN PIPE
- PIPEWORK RISES/ DROP
- PIPEWORK RISES/ DROP C/W
- IV (NC) ISOLATION VALVE (NORMALLY CLOSED)
- IV ISOLATION VALVE
- NRV NON RETURN VALVE
- DRV DOUBLE REGULATING VALVE
- 3-PORT CONTROL VALVE C/W ACTUATOR
- 2-PORT CONTROL VALVE C/W ACTUATOR
- DRAIN
- CS COMMISSIONING SET WITH ORIFICE PLATE
- TRV THERMOSTATIC RADIATOR VALVE (TRV)
- LSV LOCKSHIELD VALVE
- PICV PRESSURE INDEPENDENT CONTROL VALVE
- SV SAFETY VALVE AND DISCHARGE PIPE TO DRAIN
- STR STRAINER
- FC FLEXIBLE CONNECTION
- A ANCHOR POINT
- EXPANSION BELLOW
- G EXPANSION GUIDE
- P PRESSURE GAUGE
- T TEMPERATURE GAUGE
- T TEMPERATURE SENSOR
- P PRESSURE SENSOR
- Pd DIFFERENTIAL PRESSURE SWITCH
- M METER
- BMS BMS LINK
- C SPACE CONTROLLER
- LTHW RADIATOR
- LST LOW SURFACE TEMPERATURE (LST) RADIATOR
- TOWEL RAIL
- ELECTRIC PANEL HEATER
- LST LST ELECTRIC PANEL HEATER
- DIRECTION OF FLOW
- UNDER FLOOR HEATING MANIFOLD
- ROOM HEATED BY INDIVIDUAL UNDERFLOOR ROOM HEATING CIRCUITS WITH LOCAL THERMOSTATIC CONTROL

RTHL	RISE TO HIGH LEVEL
RTA	RISE TO ABOVE
RFB	RISE FROM BELOW
DTLL	DROP TO LOW LEVEL
DFA	DROP FROM ABOVE
DFB	DROP TO BELOW
CV	CEILING VOID
HL	HIGH LEVEL
LL	LOW LEVEL



WORK IN PROGRESS

NOTES - LTHW HEATING SYSTEMS

1. THE CONTRACTOR SHALL ALLOW FOR THE FIXING, TAKING DOWN FOR DECORATION AND RE-FIXING OF ALL RADIATORS (WHERE APPLICABLE).
2. ALL PIPEWORK SHALL BE FULLY INSULATED IN ACCORDANCE WITH THE TIMSA BUILDING SERVICES COMPLIANCE GUIDE. INSULATION SHALL BE APPLIED TO ALL CONCEALED SERVICES (I.E. IN SERVICE VOIDS, OR BOXED IN) AND IN PLANTROOMS.
3. THE INSULATION SHALL BE KINGSPAN KOOLTHERM OR EQUAL AND APPROVED.
4. PRIOR TO THE APPLICATION OF INSULATION, ALL NEW LTHW PIPEWORK SHALL BE HYDRAULICALLY PRESSURE TESTED FOR NOT BE LESS THAN 30

NOTES - GENERAL

1. DO NOT SCALE FROM THIS DRAWING.
2. THIS IS NOT AN INSTALLATION DRAWING.
3. THIS DRAWING SHALL BE READ IN CONJUNCTION WITH THE MECHANICAL AND ELECTRICAL PERFORMANCE SPECIFICATIONS, AND ALL ACCOMPANYING TENDER DRAWINGS AND SPECIFICATIONS, INCLUDING ARCHITECTURAL, STRUCTURAL ENGINEERING, CIVIL ENGINEERING, MEP AND OTHER THIRD PARTY DESIGNERS.
4. ALL SERVICES SHALL BE INSTALLED IN ACCORDANCE WITH THE RELEVANT STANDARDS AND WORKMANSHIP CLAUSES DETAILED WITHIN THE ACCOMPANYING SPECIFICATION (WHERE PROVIDED).
5. THE DESIGN AND INSTALLATION SHALL COMPLY WITH THE BUILDING REGULATIONS, BRITISH STANDARDS, EU LEGISLATION, STATUTE, CIBSE GUIDES, CIBSE COMMISSIONING CODES, B&ES, H&S GUIDANCE AND ACOP'S, THE GAS REGULATIONS AND ALL OTHER APPLICABLE REGULATIONS.
6. PRIOR TO ANY WORKS, THE CONTRACTOR SHALL REQUEST A COPY OF THE ASBESTOS REGISTER/REPORT DETAILING THE LOCATION OF ANY EXISTING ASBESTOS. SHOULD THE CONTRACTOR COME ACROSS ANY SUSPICIOUS MATERIALS, THEY SHOULD STOP WORK IMMEDIATELY AND INFORM THE SITE AGENT.
7. THE CONTRACTOR SHALL ALLOW FOR SPECIALIST COMMISSIONING OF ALL MECHANNICAL AND PUBLIC HEALTH SYSTEMS BY THE MANUFACTURER OR MANUFACTURERS APPOINTED AGENT.
8. FOLLOWING COMPLETION OF THE INSTALLATION, THE SYSTEMS SHALL BE TESTED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
9. ALL EQUIPMENT SHALL BE INSTALLED, TESTED AND COMMISSIONED IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
10. THE CONTRACTOR SHALL INCLUDE FOR ALL NECESSARY FIRE STOPPING, SLEEVES AND DAMPERS TO SUIT THE PROPOSED FIRE STRATEGY.
11. PRIOR TO COMMENCING THE WORKS, THE CONTRACTOR SHALL BE RESPONSIBLE FOR SEEKING APPROVAL OF THE PROPOSALS BY THE GAS AND WATER AUTHORITIES.
12. PRIOR TO INSTALLATION, THE CONTRACTOR SHALL SEEK CONFIRMATION OF ACCEPTANCE OF THE PROPOSALS BY THE BUILDING CONTROL OFFICER.
13. A FINAL SITE MEASURE SHALL BE CARRIED OUT BY THE CONTRACTOR PRIOR TO ORDERING OF PLANT OR EQUIPMENT.
14. ACCESS PANELS SHALL BE PROVIDED AND INSTALLED BY THE CONTRACTOR TO ALLOW ELECTRICAL, ISOLATORS, CONTROLLERS, ETC. TO BE EASILY ACCESSED AND MAINTAINED.

ACTIVITY	RESIDUAL RISKS	CONTROL MECHANISM & COMMUNICATION
SITE DELIVERY OF MATERIALS, E.G. PIPEWORK, CONTAINMENT, LUMINAIRES	- VEHICLE TO PERSON COLLISIONS - MANUAL HANDLING	NOTIFY ALL PARTIES CONCERNED OF DELIVERY DATES AND TIMES. ENSURE ALL PARTIES ARE FULLY AWARE OF THE SITE LOGISTICS PLAN IN RELATION TO UNLOADING AND RESTRICTED ACCESS TIMES.
TEMPORARY ELECTRICAL SERVICE INSTALLATIONS TO SITE AND SITE COMPOUNDS	- ELECTRIC SHOCK	ENSURE ALL SUPPLIES ARE INSTALLED IN ACCORDANCE WITH IET REGULATIONS. REC REQUIREMENTS AND IN LOCATIONS THAT ARE ONLY ACCESSIBLE FOR QUALIFIED AND SUITABLY TRAINED STAFF.
EXTERNAL WORKS AND POSSIBLE PRESENCE OF EXISTING UNDERGROUND SUPPLIES	- DAMAGE TO EXISTING SUPPLIES/ELECTRIC SHOCK	OBTAIN DETAILS OF LOCAL UNDERGROUND SERVICES. CONFIRM THE LOCATION OF SERVICES BY CARRYING OUT A SURVEY OF THE PROPOSED ROUTES. SURVEY PROPOSED ROUTES NOTING OBSTRUCTIONS. HAND DIG ANY AREAS IDENTIFIED AS CONTAINING UNKNOWN ELEMENTS.
ON SITE USE OF TEMPORARY ELECTRICITY SUPPLIES TO PORTABLE EQUIPMENT	- TRIPPING FROM TRAILING LEADS	MINIMISE THE LENGTH OF TRAILING LEADS. LEADS TO BE ROUTED, AND CLIPPED TO WALLS AT HIGH LEVEL WHERE POSSIBLE. ROUTES TO BE IDENTIFIED ON SITE PLANS AND HELD BY THE MAIN CONTRACTOR.
DRILLING/CHASING OF WALLS, ETC FOR CONTAINMENT FIXINGS.	- DUST/INJURY TO EYES - INHALATION OF DUST	APPROPRIATE PPE TO BE USED, E.G. EYE PROTECTION AND DUST MASKS
HANDLING OF HEAVY EQUIPMENT	- INJURY - MUSCLE STRAIN - BONE FRACTURE	ENSURE ADEQUATE LABOUR/MECHANICAL HANDLING EQUIPMENT IS AVAILABLE. ENSURE CORRECT METHODS, PROCEDURES AND WORKING PRACTICES FOR LIFTING OPERATIONS.
GENERAL WORKING	- INJURY TO SITE PERSONNEL AND VISITORS	SITE ACCESS TO BE RESTRICTED AND CONTROLLED. ALL PERSONNEL ENTERING SITE TO BE INDUCTED BY THE MAIN CONTRACTOR. ALL PERSONNEL WORKING ON OR VISITING SITE TO HAVE APPROPRIATE PPE FOR THE ENVIRONMENT THEY ENTER OR PASS THROUGH.

ARCHITECT'S DRAWING REFERENCE	REVISION
24003-07	C

Rev	Amendment	Date	By
00	COMMENT ISSUE	30.08.24	BH
01	COMMENT ISSUE	23.09.24	BH
T1	TENDER ISSUE	14.10.24	BH

Clark Degnan Consulting Engineers

Clark Degnan Limited

Durham Office
Humber House,
Mandale Business Park
Belmont Industrial Estate
County Durham, DH1 1TH
Tel : 0191 3860860
www.clarkdegnan.co.uk

Newcastle Office
Amber Court,
William Armstrong Drive,
Newcastle upon Tyne
NE4 7YA
Tel : 0191 4325692
www.clarkdegnan.co.uk

Client: NEWCASTLE BUILDING SOCIETY

Project Title: 74 KING STREET MANCHESTER

Drawing Title: MECHANICAL SERVICES HEATING SERVICES GROUND FLOOR LAYOUT

Drawn By	Checked By	Approved By
HD	CD	CD

Contract No.	Date	Scale @ A1
24427	12.08.24	1:50@A1

Status: TENDER

Drawing Number: 24427-CDL-XX-00-DR-M-5602

Rev: T1

Suitability: TE

TENDER