

EXISTING SUB-MAIN SUPPLY TO CHILLER TO BE CAREFULLY DISCONNECTED AND LEFT COILED WHILE ROOF WORKS ARE COMPLETED. ON REINSTATEMENT OF CHILLER PLANT, CONTRACT TO RECONNECT AND TEST EXISTING CABLING

RF18/RF20 - 065mm STEEL CHILLED WATER SECONDARY F&R PIPEWORK TO BE REPLACED TO ENABLE FLAT ROOF INSTALLATION. NEW Ø15mm MCWS TO SERVE TO SERVE CHILLED WATER PLANT ROOM. PIPEWORK C/W NEW VALVES INSULATION & REINSTATED TRACE HEATING. ENSURE WATERTIGHT SEAL BETWEEN SERVICES & ROOF PENETRATION - REFER TO ARCHITECTS INFORMATION.

RF14/RF15 NEW CONTAINMENT TRAY FOR CONTROLS CABLING THE VENTILATION PLANT ON THE ROOF.

FOR NEW VENTILATION SERVICES LAYOUT TO ROOF RF14 / RF15 REFER TO DRAWING: 011270-EAL-01-RF-D-M-5701.

RF14 / RF15 CHILLED WATER FLOW & RETURN ALONG WITH BOWS WITH BACKFLOW PROTECTION & CONTROLS CABLING TRAY RISES FROM BELOW VIA WEATHER TIGHT BOXING DETAIL & UPSTAND TO SERVE VENTILATION PLANT AHU01. C/W REINSTATED TRACE HEATING CABLING & NEW VALVES & INSULATION.

RF14 / RF15 STEEL Ø40mm LTHW F&R RISES FROM LL VIA TIGHT BOXING DETAIL A TO SERVE VENTILATION PLANT AHU01 & 3P01 C/W REMOVED AND REINSTATED TRACE HEATING CABLE & NEW ISOLATION VALVES INSULATION.

FOR NEW VENTILATION SERVICES LAYOUT TO ROOF RF11 REFER TO DRAWING: 011270-EAL-01-RF-D-M-5701.

RF08/RF09/RF11 - STEEL LTHW PIPEWORK AND INSULATION TO BE TO BE REPLACED TO ENABLE FLAT ROOF INSTALLATION.

RF08/RF11 - ELECTRICAL SERVICES TO BE PULLED AWAY FROM WALL TO ALLOW ROOF WORKS TO BE INSTALLED. SEPARATE PRICE TO BE ALLOWED FOR INSTALLED BALLAST TYPE MOUNTING SYSTEM TO AVOID PENETRATING THE NEW ROOF COVERINGS.

RF08/RF09 - 25mm STEEL LTHW PIPEWORK AND INSULATION TO BE TO BE REPLACED AND AND TRACE HEATING TO BE REMOVED AND REINSTATED TO ENABLE FLAT ROOF INSTALLATION.

RF20 - REMOVAL AND REINSTATEMENT OF EXISTING VALIDATED CHILLER. PROVIDE NEW PROPRIETARY CONTROLS AND PROVIDE NEW CONTROL CABLING TO PLANT ROOM CONTROL PANEL. ALLOW FOR CHILLER REFRIGERANT SYSTEM TO BE CHECKED BY A SPECIALIST FOR REFRIGERANT LEAKS BOTH ONCE REMOVED AND WHEN REINSTATED.

RF18/RF20 - 100mm STEEL CHILLED WATER PRIMARY FLOW AND RETURN PIPEWORK TO BE TO BE REPLACED EXTERNALLY TO ENABLE FLAT ROOF INSTALLATION. C/W NEW ISOLATION VALVES INSULATION AND REINSTATED TRACE HEATING.

EXISTING TRACE HEATING SUPPLY TO BE RETAINED AND RE-USED ONCE CHILLER AND PIPEWORK ARE REINSTATED

RF20 - REMOVAL UNISTRUT BLOCKING THE CHILLER CONTROLS PANEL FOR FUTURE MAINTENANCE.

RF20 - REMOVAL AND REINSTATEMENT OF EXISTING WALKWAY - REFER TO ARCHITECTS SPECIFICATION.

RF23 - ALLOWANCE TO ENSURE THAT THE SMOKE VENTILATION SYSTEM IS WEATHER TIGHT AND OPERATING IN ACCORDANCE WITH THE FIRE STRATEGY. ANY OPERATIONAL DEFECTS THAT NECESSITATE TEMPORARY WEATHER PROTECTION ARE ADDRESSED.

RF22 - CONTRACTOR TO INSPECT CONDITION OF FOUL DRAINAGE AND REPORT TO THE CONTRACT ADMINISTRATOR. ALLOW PROVISIONAL SUM FOR REPAIRS ABOVE VALLEY GUTTERS TO 2m AND FITTINGS OF CAST IRON FOUL DRAINAGE STACKS.

NEW WINDOW MOUNTED VERTICALLY MOUNTED 400 x 500 WEATHER LOUVRES IN GLAZING TO PROVIDE EXHAUST 0.07m² FREE AREA. REFER TO ARCHITECTS INFORMATION FOR DORMER BOXING AND WEATHER TIGHT DETAILING.

NEW WINDOW MOUNTED VERTICALLY MOUNTED 400 x 500 WEATHER LOUVRES IN GLAZING TO PROVIDE EXHAUST 0.07m² FREE AREA. REFER TO ARCHITECTS INFORMATION FOR DORMER BOXING AND WEATHER TIGHT DETAILING.

RF12 - REMOVAL & REINSTATEMENT OF LIGHTING PROTECTION TAPE AS REQUIRED.

RF08 - Ø40mm STEEL LTHW PIPEWORK AND INSULATION TO BE DIVERTED TO ENABLE ROOF INSTALLATION BETWEEN ROOF 8 & 11. ASSUMED REQUIREMENT TO MAINTAIN HEATING SERVICES TO AREAS OF THE TOWN HALL OTHER THAN THE MUSEUM AND THAT ANY DOWN TIME IS MINIMISED. C/W REINSTATED TRACE HEATING CABLE AND NEW ISOLATION VALVES AND INSULATION. ELECTRICAL SERVICES TO BE PULLED AWAY FROM WALL TO ALLOW ROOF WORKS TO BE INSTALLED. SEPARATE PRICE TO BE ALLOWED FOR INSTALLED BALLAST TYPE MOUNTING SYSTEM TO AVOID PENETRATING THE NEW ROOF COVERINGS.

RF08 - ALLOWANCE TO ENSURE THAT THE SMOKE VENTILATION SYSTEM IS WEATHER TIGHT AND OPERATING IN ACCORDANCE WITH THE FIRE STRATEGY.

RF07 - REPLACE DAMAGED INSULATION TO EXTERNAL HEATING PIPEWORK AND ENSURE WATERTIGHT SEAL BETWEEN SERVICES AND ROOF PENETRATION - REFER TO ARCHITECTS INFORMATION.

RF08 - REPLACE DAMAGED INSULATION TO EXTERNAL HEATING PIPEWORK AND ENSURE WATERTIGHT SEAL BETWEEN SERVICES AND ROOF PENETRATION - REFER TO ARCHITECTS INFORMATION.

RF08 - PROVIDE TEMPORARY PROTECTION TO HEATING ZONE. PUMPS/SETS AND VALVES LOCATED WITHIN ROOF VOID PLANTROOM DURING ROOF WORKS.

RF08 - REPLACE WATERTIGHT SEAL BETWEEN SERVICES AND ROOF PENETRATION - REFER TO ARCHITECTS INFORMATION.

// DRAWING NOTES

- THIS DRAWING IS FOR DESIGN INTENT ONLY AND NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL PREPARE FULLY COORDINATED INSTALLATION DRAWINGS FOR CONSULTANT REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE RELEVANT BUILDING REGULATIONS.
- ALLOWABLE PRESSURE DROP 220 Pa/m. WATER VELOCITY NOT TO EXCEED 1.5 m/s IN BRANCHES AND 2.0 M/S IN PRIMARY MAINS (2.5 m/s PERMISSIBLE ONLY FOR PLANT ROOM PIPEWORK GREATER THAN 100mm).
- ALL STEEL PIPEWORK TO BE HEAVY GRADE GALVANISED CARBON STEEL TO BS EN 10255. SCREWED AND JOINTS UP TO 50mm. WELDED AND FLANGED JOINTS FOR 65mm AND ABOVE. ALL WELDING TO BE IN ACCORDANCE WITH APPROVED WELDING PROCEDURE SPECIFICATIONS.
- ALL COPPER PIPEWORK TO BE BS EN 1057 R250 WITH BRAZED CAPILLARY JOINTS UP TO 54mm AND BRAZED BRIDGING JOINTS FOR 67mm AND ABOVE.
- PROVIDE DIELECTRIC UNIONS OR INSULATION KITS AT ALL CONNECTIONS BETWEEN STEEL AND COPPER PIPEWORK.
- INSULATION, BRACKETS AND SUPPORTS ARE NOT SHOWN FOR CLARITY. INCLUDE ALL REQUIRED ANCILLARIES. PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH BS 3974 1. USE INSULATED PIPE CLIPS TO PREVENT THERMAL BRIDGING. DUCTWORK SUPPORTS SHALL BE IN ACCORDANCE WITH DW144 AND BS 5970.
- ALL PIPEWORK, INCLUDING SUPPORTS, TO BE THERMALLY INSULATED IN ACCORDANCE WITH BS 5422 AND THE PROJECT SPECIFICATION. INSULATION SHALL BE CONTINUOUS THROUGH SUPPORTS TO PREVENT THERMAL BRIDGING. INSULATION TO BE FITTED AFTER FINAL INSPECTION AND TESTING.
- ALL PIPEWORK TO BE SLEEVED AND FIRE STOPPED WHERE PASSING THROUGH FIRE COMPARTMENT WALLS, CAVITY BARRIERS OR FLOORS. FIRE STOPPING TO BE IN ACCORDANCE WITH BS 9999 AND BS EN 1366 3. PROVIDING THE SAME FIRE RESISTANCE AS THE COMPARTMENT MINIMUM 1 HOUR. SLEEVES TO BE FLUSH WITH FINISHED SURFACES.
- PROVIDE COMMISSIONING SETS VARIABLE ORIFICE TYPE AND ISOLATION VALVES TO ENABLE SYSTEM BALANCING AND ISOLATION. SYSTEM SHALL BE BALANCED TO ACHIEVE DESIGN FLOW RATES WITHIN PLUS OR MINUS 10 PERCENT.
- ALL MAIN PLANT SHALL BE INSTALLED WITH ISOLATING VALVES AND UNIONS. PROVIDE AUTOMATIC AIR VENTS AT ALL HIGH POINTS AND DRAINCOCKS WITH HOSETAILS AT ALL LOW POINTS.
- TRACE HEATING TO BE PROVIDED TO PIPEWORK SUBJECT TO FROST RISK, CONTROLLED BY FROST THERMOSTATS AND INSTALLED IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS AND THE PROJECT SPECIFICATION.
- ALL SERVICES TO BE IDENTIFIED IN ACCORDANCE WITH BS 1710 WITH ARROWS INDICATING DIRECTION OF FLOW.
- THE MECHANICAL CONTRACTOR SHALL LIAISE WITH THE STRUCTURAL ENGINEER PRIOR TO FORMING ANY HOLES GREATER THAN 100mm DIAMETER OR EQUIVALENT AREA AND PRIOR TO ORDERING OR POSITIONING ANY PLANT OR EQUIPMENT.
- ALL PIPEWORK SHALL BE HYDROSTATICALLY PRESSURE TESTED AT 1.5 TIMES DESIGN PRESSURE FOR A MINIMUM OF 2 HOURS. SUBMIT TEST CERTIFICATES.
- BEFORE FILLING, THE COMPLETE SYSTEM SHALL BE CHEMICALLY CLEANED AND FLUSHED IN ACCORDANCE WITH BSRIA BG 25/2021. THE SYSTEM SHALL THEN BE FILLED WITH INHIBITED WATER TO BS 7593. SUBMIT WATER QUALITY AND INHIBITOR CONCENTRATION CERTIFICATES.
- UPON COMPLETION, SUBMIT AS BUILT DRAWINGS, SYSTEM SCHEMATICS, COMMISSIONING RECORDS AND ALL TEST CERTIFICATES

DOMESTIC WATER DRAWING NOTES

- THIS DRAWING IS FOR DESIGN INTENT ONLY AND NOT FOR CONSTRUCTION. THE CONTRACTOR SHALL PREPARE FULLY COORDINATED INSTALLATION DRAWINGS FOR CONSULTANT REVIEW AND APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE RELEVANT BUILDING REGULATIONS, INCLUDING PART G (SANITATION, HOT WATER SAFETY, AND WATER EFFICIENCY).
- DOMESTIC HOT AND COLD WATER INSTALLATIONS SHALL COMPLY WITH BS EN 806, THE WATER SUPPLY (WATER FITTINGS) REGULATIONS 1999, AND HSE ACOP L8 LEGIONNAIRES' DISEASE.
- PIPEWORK DESIGN CRITERIA: HWS MAX VELOCITY 1.0 m/s, CWS MAX VELOCITY 1.5 m/s. HWS TEMPERATURE 60°C.
- ALL VALVES AND FITTINGS IN CONTACT WITH POTABLE WATER SHALL BE WRAS APPROVED.
- ALL MIXING VALVES MUST BE ANTI SCALD TMX 2 OR 3 TO KEEP THE OUTLET TEMPERATURE WITHIN 41°C PLUS OR MINUS 2°C.
- ALL PIPEWORK, INCLUDING SUPPORTS, TO BE INSULATED IN ACCORDANCE WITH BS 5422 AND THE PROJECT SPECIFICATION. INSULATION SHALL BE CONTINUOUS THROUGH SUPPORTS TO PREVENT THERMAL BRIDGING. INSULATION ON CWS PIPEWORK SHALL INCLUDE A VAPOUR BARRIER.
- INSULATION, BRACKETS AND SUPPORTS ARE NOT SHOWN FOR CLARITY. PIPE SUPPORTS SHALL BE IN ACCORDANCE WITH BS 3974 1 AND MANUFACTURER'S RECOMMENDATIONS. USE COPPER OR INSULATED PROPRIETARY CLIPS TO PREVENT CORROSION.
- THE MECHANICAL CONTRACTOR SHALL LIAISE WITH THE STRUCTURAL ENGINEER PRIOR TO FORMING ANY HOLES GREATER THAN 100mm DIAMETER OR EQUIVALENT AREA AND PRIOR TO ORDERING OR POSITIONING ANY PLANT OR EQUIPMENT.
- ALL PIPEWORK PASSING THROUGH FIRE WALLS OR FLOORS SHALL BE SLEEVED AND FIRE STOPPED AS REQUIRED. FIRE STOPPING SHALL MAINTAIN THE FIRE RESISTANCE OF THE COMPARTMENT.
- PROVIDE ACCESS OPENINGS FOR INSPECTION, CLEANING AND MAINTENANCE AS REQUIRED. ENSURE ACCESS TO ALL VALVES, FILTERS AND EXPANSION JOINTS.
- ALL SERVICES SHALL BE CLEARLY IDENTIFIED IN ACCORDANCE WITH BS 1710. HOT AND COLD PIPES SHALL BE LABELLED AT REGULAR INTERVALS (MAX 5m) AND AT ALL CHANGES OF DIRECTION.
- PROVIDE DRAINCOCKS AT ALL LOW POINTS. SYSTEM DESIGN SHALL ELIMINATE DEAD LEGS. WHERE UNAVOIDABLE, DEAD LEGS SHALL NOT EXCEED 3 TIMES PIPE DIAMETER OR 300mm, WHICHEVER IS LESS, FROM THE DRAW OFF POINT.
- PROVIDE LOCAL CHLORINATION INJECTION POINTS AND BLANKED OFF SAMPLING TAPS ON NEW DOMESTIC WATER SERVICES TO ENABLE LOCAL STERILISATION AND WATER QUALITY MONITORING.
- ALL NEW PIPEWORK INSTALLATIONS SHALL BE HYDROSTATICALLY PRESSURE TESTED AT 1.5 TIMES MAXIMUM WORKING PRESSURE FOR 2 HOURS. SYSTEMS SHALL THEN BE THOROUGHLY FLUSHED, CHEMICALLY CLEANED, DISINFECTED BY CHLORINATION TO 50 PPM FOR 1 HOUR AND THOROUGHLY RINSED. SUBMIT TEST, DISINFECTION AND FINAL MICROBIOLOGICAL WATER TEST CERTIFICATES
- ALL EXTERNAL PIPEWORK SHALL BE AVOIDED WHERE POSSIBLE. WHERE REQUIRED, IT SHALL BE TRACE HEATED WITH FROST STAT CONTROL AND INSULATED WITH WEATHERPROOFED, UV RESISTANT JACKETING.
- PROVIDE SUITABLE EXPANSION DEVICES AND FIXED ANCHORS THROUGHOUT THE INSTALLATION TO ACCOMMODATE THERMAL MOVEMENT. VALVES AND FITTINGS SHALL BE ARRANGED TO FACILITATE MAINTENANCE AND MINIMISE ACCESS PANELS.
- UPON COMPLETION, SUBMIT AS BUILT DRAWINGS, SYSTEM SCHEMATICS, A LEGIONELLA CONTROL LOG BOOK AND ALL TEST AND COMMISSIONING RECORDS.

// GENERAL NOTES:

THIS DRAWING SHOULD BE READ IN CONJUNCTION WITH THE RELEVANT ETCH ASSOCIATES SPECIFICATIONS, TECHNICAL SCHEDULE DOCUMENTS, STANDARD SYMBOLS & ABBREVIATIONS DRAWING(S)

ALL APPARENT DRAFTING ERRORS OR DISCREPANCIES WITH OTHER DESIGN DOCUMENTS SHALL BE IDENTIFIED AS SOON AS POSSIBLE AND BROUGHT TO THE ATTENTION OF ETCH ASSOCIATES.

THIS DRAWING SHOULD ALWAYS BE PRINTED IN COLOUR.

ALL DIMENSIONS ARE IN MILLIMETRES UNLESS STATED OTHERWISE.

DO NOT SCALE FROM THIS DRAWING. IF ACCURATE DIMENSIONS ARE REQUIRED, MEASUREMENTS ARE TO BE TAKEN BY THE CONTRACTOR ON SITE.

THIS DRAWING IS INDICATIVE AND ILLUSTRATES PERFORMANCE DESIGN PRINCIPLES ASSOCIATES WITH THE RELEVANT SYSTEMS AND SERVICES. THE CONTRACTOR IS RESPONSIBLE FOR THE DETAILED DESIGN, SUPPLY, INSTALLATION, TESTING AND COMMISSIONING OF THE SYSTEMS AND SERVICES AS DEEMED NECESSARY TO FORM A COMPLETE AND FULLY FUNCTIONING SYSTEM. REFER TO RECORD INFORMATION FOR DETAILS OF EXISTING SYSTEMS TO BE RETAINED / ADAPTED.

T01	TENDER ISSUE	D.S.	M.E.	D.B.	17.02.2026
P01	ISSUED FOR INFORMATION	D.S.	M.B.	D.B.	06.02.2026
REV.	DESCRIPTION	DES.	CHK.	APP.	DATE

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// CLIENT



// PROJECT

READING TOWN HALL
ROOF REPLACEMENT WORKS

// TITLE

COMBINED MEP ENGINEERING SYSTEMS
MEP PROPOSALS - ROOF LEVEL
PHASE 1

SCALE:	1:100	SHEET SIZE:	A1	Proud to be certified by BSI
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SUITABILITY DESCRIPTION:	SUITABILITY CODE:
FOR REVIEW & AUTHORISATION BY LEAD APPOINTING PARTY	S4

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TENDER ISSUE	T01

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