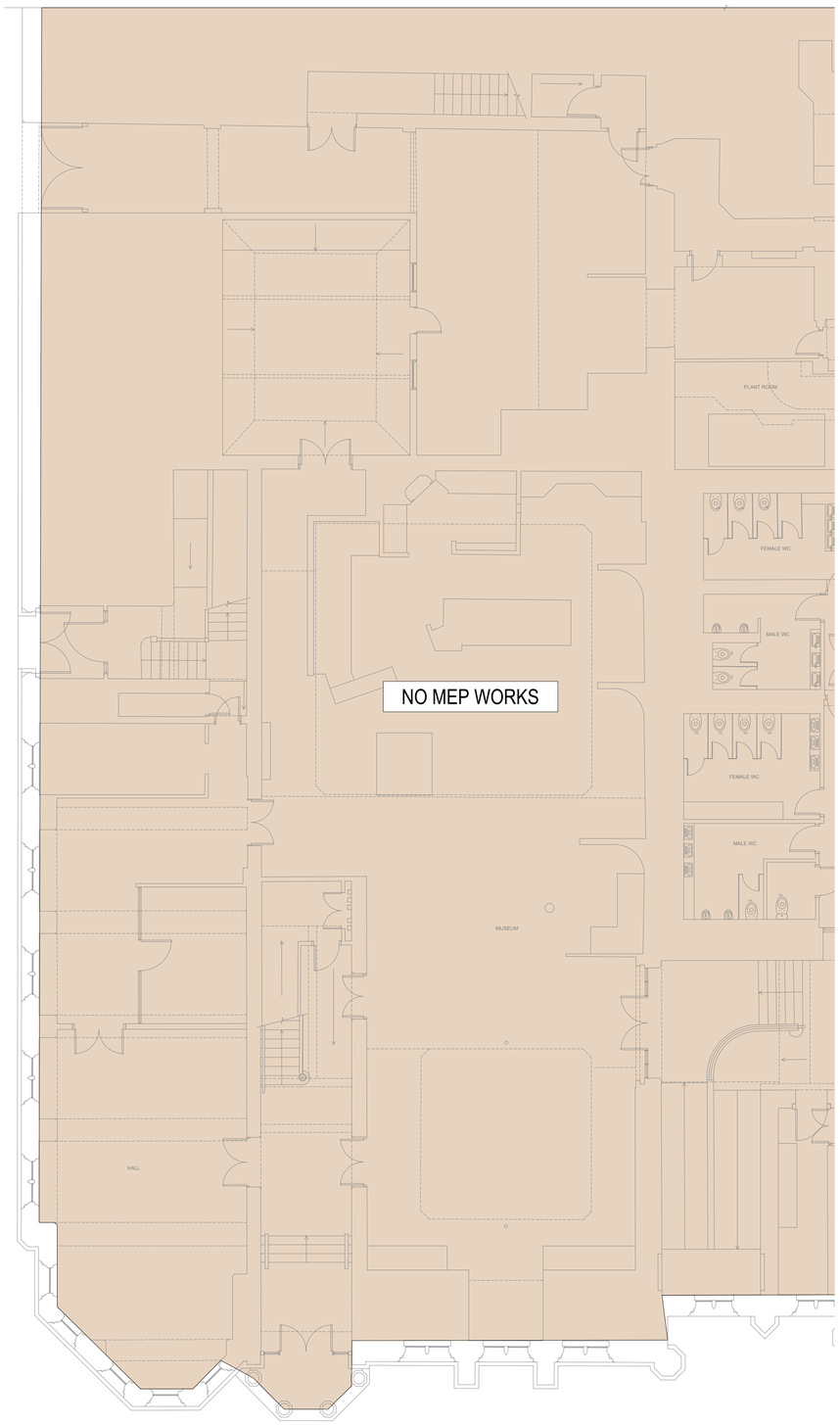

// DRAWING NOTES

1. 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.
2. ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE RELEVANT BUILDING REGULATIONS.
3. 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).
4. ALL STEEL PIPEWORK TO BE HEAVY GRADE GALVANISED CARBON STEEL TO BS EN 10255. SCREWED AND SOCKETED JOINTS UP TO 50mm. WELDED AND FLANGED JOINTS FOR 65mm AND ABOVE. ALL WELDING TO BE IN ACCORDANCE WITH APPROVED WELDING PROCEDURE SPECIFICATIONS.
5. ALL COPPER PIPEWORK TO BE BS EN 1057 R250 WITH BRAZED CAPILLARY JOINTS UP TO 54mm AND BRAZED FLANGED JOINTS FOR 67mm AND ABOVE.
6. PROVIDE DIELECTRIC UNIONS OR INSULATION KITS AT ALL CONNECTIONS BETWEEN STEEL AND COPPER PIPEWORK.
7. 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.
8. 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.
9. 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.
10. 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.
11. 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.
12. 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.
13. ALL SERVICES TO BE IDENTIFIED IN ACCORDANCE WITH BS 1710 WITH ARROWS INDICATING DIRECTION OF FLOW.
14. 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.
15. ALL PIPEWORK SHALL BE HYDROSTATICALLY PRESSURE TESTED AT 1.5 TIMES DESIGN PRESSURE FOR A MINIMUM OF 2 HOURS. SUBMIT TEST CERTIFICATES.
16. BEFORE FILLING, THE COMPLETE SYSTEM SHALL BE CHEMICALLY CLEANED AND FLUSHED IN ACCORDANCE WITH BSRIA BG 29/2021. THE SYSTEM SHALL THEN BE FILLED WITH INHIBITED WATER TO BS 7593. SUBMIT WATER QUALITY AND INHIBITOR CONCENTRATION CERTIFICATES.
17. UPON COMPLETION, SUBMIT AS BUILT DRAWINGS, SYSTEM SCHEMATICS, COMMISSIONING RECORDS AND ALL TEST CERTIFICATES

DOMESTIC WATER DRAWING NOTES

18. 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.
19. ALL WORK SHALL COMPLY WITH THE LATEST EDITIONS OF THE RELEVANT BUILDING REGULATIONS, INCLUDING PART G (SANITATION, HOT WATER SAFETY, AND WATER EFFICIENCY).
20. 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.
21. PIPEWORK DESIGN CRITERIA: HWS MAX VELOCITY 1.0 m/s, CWS MAX VELOCITY 1.5 m/s. HWS TEMPERATURE 60°C.
22. ALL VALVES AND FITTINGS IN CONTACT WITH POTABLE WATER SHALL BE WRAS APPROVED.
23. ALL MIXING VALVES MUST BE ANTI SCALD TMX 2 OR 3 TO KEEP THE OUTLET TEMPERATURE WITHIN 41°C PLUS OR MINUS 2°C.
24. 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.
25. 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.
26. 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.
27. 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.
28. PROVIDE ACCESS OPENINGS FOR INSPECTION, CLEANING AND MAINTENANCE AS REQUIRED. ENSURE ACCESS TO ALL VALVES, FILTERS AND EXPANSION JOINTS.
29. 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.
30. 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.
31. PROVIDE LOCAL CHLORINATION INJECTION POINTS AND BLANKED OFF SAMPLING TAPS ON NEW DOMESTIC WATER SERVICES TO ENABLE LOCAL STERILISATION AND WATER QUALITY MONITORING.
32. 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.
33. 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.
34. 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.
35. 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.

REV.	DESCRIPTION	DES.	CHK.	APP.	DATE
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

etch

// CLIENT

Reading Borough Council
Working better with you

// PROJECT

READING TOWN HALL
ROOF REPLACEMENT WORKS

// TITLE

COMBINED MEP ENGINEERING SYSTEMS
MEP PROPOSALS - GROUND FLOOR
PHASE 1

SCALE: 1:100

SHEET SIZE: A1

Proud to be certified by BSI

SUITABILITY DESCRIPTION: FOR REVIEW & AUTHORISATION BY LEAD APPOINTING PARTY

SUITABILITY CODE: S4

DRAWING STATUS: TENDER ISSUE

REVISION: T01

DRAWING NUMBER: 011270-EAL-01-00-D-Z-9901