

Category 1 Standard

1-068 Mechanical Building Services, Utility Provision and Energy Management in London Underground

Issue: A3

Issue date: May 2011

MAYOR OF LONDON

Downloaded from the London Underground Library

AVA Documents
Document Sharing Hub



Contents

1	Purpose	3
2	Scope	3
3	Requirements	3
3.1	General	3
3.2	Hot and Cold Water Systems	3
3.3	Gas, Oil and Solid Fuel Systems	4
3.4	Heating	5
3.5	Ventilation	5
3.6	Air Conditioning	5
3.7	Air Cooling	5
3.8	Mechanical Services Electrical Supplies	6
3.9	Labelling	6
3.10	Energy Management	7
3.11	Controls	7
3.12	Environment	7
3.13	Reliability, Availability, Maintainability and Safety	7
4	Responsibilities	8
5	Evidence of compliance	8
6	References	8
6.1	References	8
6.2	Abbreviations	9
6.3	Definitions	9
6.4	Technical content manager	10
6.5	Document history	10



1 Purpose

- 1.1 The purpose of this standard is to define the requirements for operational property building mechanical services, the provision of utility connections and energy management.

2 Scope

- 2.1 This standard covers hot and cold water systems; gas, oil and solid fuel systems; ventilation, comfort cooling, air conditioning and heating systems; mechanical services electrical supplies; and energy management. Tunnel and public area ventilation systems are covered under LU category 1 standard 1-067.
- 2.2 This standard replaces 1-068 A2 and should be used in conjunction with the supporting mechanical guidance document G-074 which provides support for the majority of this standard.

3 Requirements

3.1 General

- 3.1.1 All designs shall be optimised for energy use and whole life cost.
- 3.1.2 Services shall not be installed or run through lift shafts or lift and escalator machine chambers unless required to service that area.
- 3.1.3 Water pipes and ductwork shall not pass through electrical switchrooms, interlocking machine rooms (IMRs), signalling equipment rooms (SERs) or communications equipment rooms (CERs).
- 3.1.4 Redundant mechanical services are to be removed. All pipework shall be sleeved in all cases where they pass through walls, floors, ceilings or under tracks.
- 3.1.5 Water and gas supplies or changes to supplies shall be obtained using LU category 1 standard 1-100.
- 3.1.6 Materials in mechanical assets in sub-surface locations shall comply with LU category 1 standard 1-085.

3.2 Hot and Cold Water Systems

- 3.2.1 Water services installations shall comply with Water Supply (Water Fittings) Regulations and should meet the recommendations of Chartered Institute of Building Services Engineers (CIBSE) Guide G.
- 3.2.2 Lead pipework shall not be used.
- 3.2.3 Water mains shall be no larger than is necessary for the projected consumption at a given location. All new mains water supplies shall be metered at the point of entry to LU premises
- 3.2.4 Tenant's supplies shall be a separate supply where possible or sub-metered from LU supply.
- 3.2.5 Even if meters come with integral valves there shall be separate isolation valves installed for ease of isolation, for maintenance or modification of the supply into the LU property.
- 3.2.6 Potable water supplies shall be direct from the incoming cold water main.