

Access for Maintenance – Plant and Equipment Located within Buildings and Structures (G189)

Introduction

Construction and Refurbishment projects shall by design, place a high emphasis on the ongoing maintenance access requirements for all plant and equipment. Access for Maintenance provisions shall provide safe, consistent and cost-effective maintenance access, to all plant and equipment. Designers shall consult with the DIT Construction Advisory Group to inform their designs if there are any departures from the requirements of this Guide Note.

Access for maintenance shall be suitable for the 50 year design life (or as otherwise specified for a specific project) of Government Buildings.

Requirements of this Guide Note apply to all DIT Infrastructure Delivery Construction Projects.

Definitions

- **Category A access:** Plant or equipment that requires regular scheduled maintenance or inspection at less than 12-month intervals. This typically includes but is not limited to such items as filters and coils.
- **Category B access:** Plant or equipment that may require maintenance, repair or inspection at 12-month intervals or longer. This typically includes, but not limited to such equipment as Air Handling Units, Energy Recovery Units, fans, control boxes, isolators, and branch splitter boxes.
- **Category C access:** Plant or equipment that only requires access for initial commissioning or breakdown repairs. E.g.: mechanical balancing dampers, power supplies, lighting control gear and cable junctions.

Maintenance frequency may be determined by Legislation, manufacturer's instructions, or End User's maintenance requirements.

Requirements

General

Maintenance access provisions shall be provided to allow safe access, clear and unobstructed space for all maintenance, repair and inspection tasks. Services shall be located to minimise inconvenience and disruption to building occupants during normal business hours and to prevent damage to the building structure or finishes. In Health, laboratory, Correctional or other sensitive facilities, locate plant and hatches in areas that will not disrupt operational requirements or increase infection control risks.

Access shall allow for full removal and replacement of all plant and equipment if required.

In addition:

- a) No serviceable part of any equipment requiring Category A or B access shall be located more than 4.3m above floor level.
- b) No part of any equipment requiring Category A or B access, or its isolation point, shall be located more than 1m above the underside of a ceiling, hatch or access panel.
- c) Where the above two requirements cannot be achieved, permanent access systems such as stairs and catwalks shall be provided to safely reach all plant and equipment.
- d) Maximum height requirements do not apply to equipment that only requires Category C access.
- e) Plant or equipment requiring Category A and B access shall not be located above partitions, fixed joinery, workstations or other permanent fixtures.
- f) In suspended ceilings, locate items of plant and equipment that require Category A or B access above tiled areas. Smaller items of plant or equipment may be located above solid or perforated ceilings, providing sufficient access panels or hatches are provided to allow for replacement of the equipment.
- g) Category A or B access shall not require relocating of any other adjacent services such as lights or fans. Adjacent services such as flexible ducts and catenary systems shall not obstruct access.
- h) Plant and equipment shall be oriented so that controls or isolators can be viewed, and all parts can be safely reached from the intended access position.

Hatches and Access Panels:

- i) No hatch or panel opening shall be smaller than the largest serviceable component that may need maintenance or replacement. The minimum nominal size for hatches and panels shall be 560x560mm for Category A and B access and 300x300mm for Category C access.
- j) There shall be clear unobstructed space equivalent to the hatch dimensions, that extends to the top height of the equipment.
- k) Serviceable components and isolation points shall not be positioned more than 600mm horizontally from the hatch.
- l) Hatches for Category A access in T-bar type ceilings shall be hinged type with a safety lanyard.
- m) If a ceiling tile is nominated for Category B or C access, the tile shall be readily removable. This may require T-bar ceilings at access locations are reduced to 600x600mm or hangers/brackets relocated to prevent deterioration when the tile is lifted.
- n) Hatches in solid or perforated ceilings shall be hinged type with a safety lanyard and shall be fixed to the framework, not the lining alone.
- o) All hatches and panels shall be selected and installed to be compatible with the substrate integrity, acoustic requirements, infection control and with the building's seismic design.
- p) Ceiling tiles nominated as access panels shall not contain services such as lights, speakers, alarms or sprinklers.
- q) Luminaires or other services shall not be nominated an access panel or hatch.

- r) There shall be no loose cabling within 1m in any direction of a hatch opening. When a panel or hatch is intended for a person to fully enter through, this shall be extended to 2m.
- s) Hatches and nominated tiles of a T-bar type ceiling shall have permanent marking to indicate the equipment above. Marking on T-bar frames shall indicate the nominated tile.

Other Considerations

- Safety in Design practices
- Manufacturers' specific requirements and maintenance regimes.
- Ministerial Building Standards

Reference Documents

- G190 Building Access and Roof Safety Systems.
- The base Natspec document, and the overriding DIT amended NATSPEC section *0171 General Requirements*.
- Work Health and Safety Act and Regulations.

Contact

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