

**ADDENBROOKE'S NHS TRUST
ESTATES & FACILITIES MANAGEMENT**

"Committed to Providing a Safe and Effective High Quality
Environment for the Delivery of Healthcare"

ESTATES DOCUMENT

"STANDARDS FOR CONTRACTORS"

DATA CABLING INSTALLATION PROCEDURE

TABLE OF CONTENTS – DATA CABLING INSTALLATION PROCEEDURE

Paragraph	Page
1. INSTALLATION PROCEEDURE	3
2. ROUTING CABLES THROUGH CEILING VOIDS	3
3. FIRE COMPARTMENTATION	4
4. CABLE TRAY / TRUNKING	5

DATA CABLING INSTALLATION PROCEDURE.

Installation of ALL data cables shall comply with the current edition of the IEE wiring regulations, Health Guidance Note: Structured Cabling for IT Systems, additional information given in this specification.

All cable routes must be authorized by the Addenbrookes Hospital supervising officer for the project.

All Data Cable installed must be **Cat5E, Low Smoke Zero Halogen and not exceed 90 metres in length.**

1. Installation Procedure

- 1.1 Bending of the cable shall be kept to an absolute minimum.
- 1.2 The back box used to house the data modules should provide a minimum internal dimension of 25mm.
- 1.3 The minimum bend radius of the cable is 25mm at any point, with zero stretching stress, following installation.
- 1.4 Cables should not be stressed by over-tight cable ties. Ties should be used to segregate the cables and manage them, not to flatten or change the geometry.
- 1.5 Cable ties should be used sparingly to hold the cables onto vertical cable trays or ducts, but not where trunking or trays allow the loose lay of cables.
- 1.6 Cable ties should only be used in such circumstances to loosely bundle the cable runs for ease of segregation and identification to various work areas.
- 1.7 When cables pass through holes in walls or floors precautions must be taken to remove the sharp edges, which will damage cable beyond repair.
- 1.8 Where possible, to minimize the effect of power cables on data cable when installed in three compartment trunking, it is recommended that the power cables occupy one of the outer sections and the data cables the other.

2. Routing of Cables through Ceiling Voids.

- 2.1 All cabling must be secured through ceiling voids.
- 2.2 Cables may not be tied to ceiling supports or rest on the false ceiling.

2.3 Any installation methods can only be installed such that they cross any other services at right angles only.

2.4 The methods of securing are as follows.

Minor Cabling Routes.

1. Tie plugs may be used to secure cables and should be installed at 0.6m intervals. Maximum 25 cables
2. 20mm plastic conduit can be installed at necessary locations and cables tied to the exterior, by tie wraps at 0.6m intervals. Maximum 25 cables.
3. Girder clips as appropriate.
4. A suspension wire may be installed in the false ceiling void to support the data cables. The suspension wire should be secured by a wall mounted bracket at appropriate locations. Maximum 25 cables.
5. Cable tray up to 100mm.

Major Cabling Routes.

1. Where an area is identified which has a requirement for cable tray that exceeds 100mm, approval will be required from the Addenbrookes Hospital supervising officer for the project.

3. Fire Compartmentation

- 3.1 All works are to comply with BS746 and manufacturers recommendations. Equal and Approved materials may be used where approved by Addenbrookes Hospital.
- 3.2 Reforming to full integrity

All penetrations through fire barriers for new installations should be kept to a minimum and the fire compartment fully reinstated before the end of the working day. No fire barriers/compartment walls should ever be left damaged overnight in any area. This can best be achieved by using seal bags to the supervising officer's approval.

3.3 Identification of fire compartment walls / fire barriers

All brick walls, which are carried through to full height to concrete soffit, must be considered to be fire compartment walls.

Holes through all types of fire barrier 10mm –50mm diameter:

Clean surfaces and insert Nullifire m710 backing rods (as required) to form back shutter for sealant. Fill void using Nullifire m701 acrylic mastic to a minimum depth of 10mm.

4. **Cable tray /trunking**

Remove cover from tray / trunking and install Nullifire B760 intumescent seal bags where trunking passes through wall. Replace cover once installed and attach identification label on trunking for later reference.