

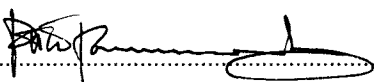
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Issue:	1
Date:	4 December 2010
Compliance date:	5 March 2011

Level 2

Design and installation of station cabling

Endorsement and Authorisation

Endorsed by:



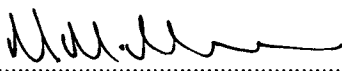
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Issue record

Issue	Date	Comments
1	December 2010	First issue.

Compliance

This Network Rail standard is mandatory and shall be complied with by Network Rail and its contractors if applicable from 5 March 2011.

When this standard is implemented, it is permissible for all projects that have formally completed GRIP Stage 4 to continue to comply with the Issue of any relevant Network Rail Standards current when GRIP Stage 4 was reached and not to comply with requirements contained herein, unless the designated Standard Owner has stipulated otherwise in the accompanying Briefing Note.

Reference documentation

BS 7671, *Selection and Erection of Wiring Systems*.

NR/GN/TEL/30138, *Buried Cable Route and Cable Route Through Station Platform*.

NR/GN/TEL/30139, *The Survey And Design Of Telecoms Cable And Route Owner*.

NR/GN/TEL/30140, *Telecom Cable Route Installation*.

NR/L2/INI/02009, *Engineering Management for Projects*.

NR/L2/TEL/30134, *Design and Installation Requirements for Public Announcement, Voice Alarm and Long Line Public Announcement Systems*.

RIS-7700-INS, *Rail Industry Standard for Station Infrastructure*. Published by RSSB.

Disability Discrimination Act 2005.

The Fire Precautions (Sub-Surface Stations) (England) Regulations 2009.

The Fire Precautions (Sub-Surface Stations) Regulations 1989 (as amended).

The Fire (Scotland) Act 2005, Part 3.

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1 Purpose

The purpose of this standard is to promote better cabling standards on stations. Its aims are to deploy best practice, to encourage standardisation, to promote fitness for purpose and longevity, to provide for future needs and to produce visually pleasing station cabling.

Through this standard, Network Rail as the Infrastructure Manager or Landlord sets out the telecom cabling requirements for all stations owned by Network Rail, including franchised stations.

2 Scope

This Network Rail standard specifies the design and installation of telecom cables and cable routes that support services.

It specifies the requirements applicable to all parties engaged in the design or installation of new works on telecoms cables or cable routes over which services are operated on station infrastructure that is managed or leased by Network Rail, including franchised stations.

This standard applies to all new installations.

The services across cable infrastructure that this standard covers are:

- alarm monitoring inclusive of fire alarms;
- Customer information system (Visual) (CIS);
- clocks;
- DOO CCTV (Driver Only Operation Closed-circuit television)
- Induction Loops;
- Local Area Network (LAN) and Wide Area Network (WAN);
- LLPA;
- Passenger Help points;
- public address (PA);
- public address and voice announcements (PAVA);
- radio: feeder cables;
- security closed-circuit television (CCTV);
- telephones;
- third party provisioned services.

The requirements of RIS-7700-INS are mandated within this standard.

The scope of this standard excludes lineside cable routes that pass through stations.

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3 Definitions

For the purposes of this standard, the following terms and definitions apply.

cable route

components that accommodate and protect cables

NOTE The preferred types of cable routes in station environs include, but are not limited to, cable trays, cable trunking, cable ladders, basket trays, cable hangers, ducting, rigid and/or flexible conduit, cable risers and cable catenaries.

cabling

cables and their associated cable routes and fixings

chasing

cutting a shallow slot in a wall or floor deep enough to accommodate a cable and repairing the surface afterwards to hide the cable from view

NOTE Care is needed not to damage power cables or other services that might traverse the wall or wall void.

equipment

unpowered cabling equipment

NOTE Examples are cable joints and cable terminations.

franchised stations

stations of which Network Rail is the landlord, and which are leased to and operated by a Station Facility Owner (SFO), usually a Train Operating Company (TOC)

mousing

fish wire

dropping a weighted string down inside a wall void and extracting it with a small hook through a small hole made at the bottom of the wall so that a cable can be pulled after it and hidden within the wall void.

path

physical course of a cable through station infrastructure

trunk cables

cables that are designed to carry a number of separate services to or from a single point such as a multi-pair copper cable or a backbone for an optical fibre transmission system

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4 Roles and responsibilities

Infrastructure Manager

The Infrastructure Manager:

- a) in relation to infrastructure other than a station, is responsible for developing and maintaining that infrastructure or, in relation to a station, the person who is responsible for managing and operating that station, except that it does not include any person solely on the basis that they carry out the construction of that infrastructure or station or its maintenance, repair or alteration; or
- b) manages and uses that infrastructure or station, or permits it to be used, for the operation of a vehicle.

Station Facility Owner

SFO

The SFO is the designated Infrastructure Manager at franchised stations as defined in Railway Group Standards, and holds a station operator licence issued by the ORR. SFOs are required to obtain the consent of Network Rail as landlord to carry out any alterations to the stations, and are expected to undertake their own works obligations in accordance with good building practice. This standard specifies good practice. Equally, they need to be consulted on any proposed works and might require their own standards to be applied, where these exist.

Other roles and responsibilities are as set out in NR/L2/INI/02009.

At franchised stations the Roles and Responsibilities of Network Rail and the Safety Facility Owner (SFO) are set out in the Safety Assurance Cases (SACs) and Letting Conditions, and these should be consulted before work takes place. Cognisance should also be given to the requirements of The Railways and Other Guided Transport Systems (Safety) Regulations 2006 (ROGs) in relation to safety interfaces between Infrastructure Managers.

5 Pre-design requirements

5.1 Site survey

The scope of GRIP Stage 4 Surveys shall be sufficient for producing the reference design and determining the scope of the work for GRIP Stages 5 to 8.

A site survey of the components for the service to be installed shall be carried out. The scope of the survey shall be agreed between the Sponsor and Project Manager.

NOTE The following list should be used as a guide:

- a) *the locations of both ends of the new service(s);*
- b) *a proposed path to connect the two ends of the new service(s);*
- c) *existing cable routes that may be used in the proposed path;*
- d) *ownership of the existing routes and other services that cross the proposed path that the new service will take, particularly those that are owned by third parties;*