



openreach

Connecting you to your network

Cable Identification Booklet

Version 4

The theft of metal is a growing problem in the UK, directly affecting multiple industry sectors (power, transportation, water and communications).

The current cost of metal theft to the UK economy has recently been estimated by ACPO¹ at £770m p.a. This financial impact is dwarfed by the impact on society (inconvenience and potential impact on public health and safety) and commerce.

¹ ACPO – Association Of Chief Police Officers
Conductive Metal Theft Working Group – Metal Theft Problem Profile

Attacks on the Openreach network have isolated entire communities and disrupted emergency service communications.

Openreach strictly controls the recovery and processing of its own waste cable and it should not be available on the open market. **All cable recovered by Openreach, or its contractors, is disposed of through Openreach's official channels and should not be offered directly to scrap metal dealers or recyclers.**

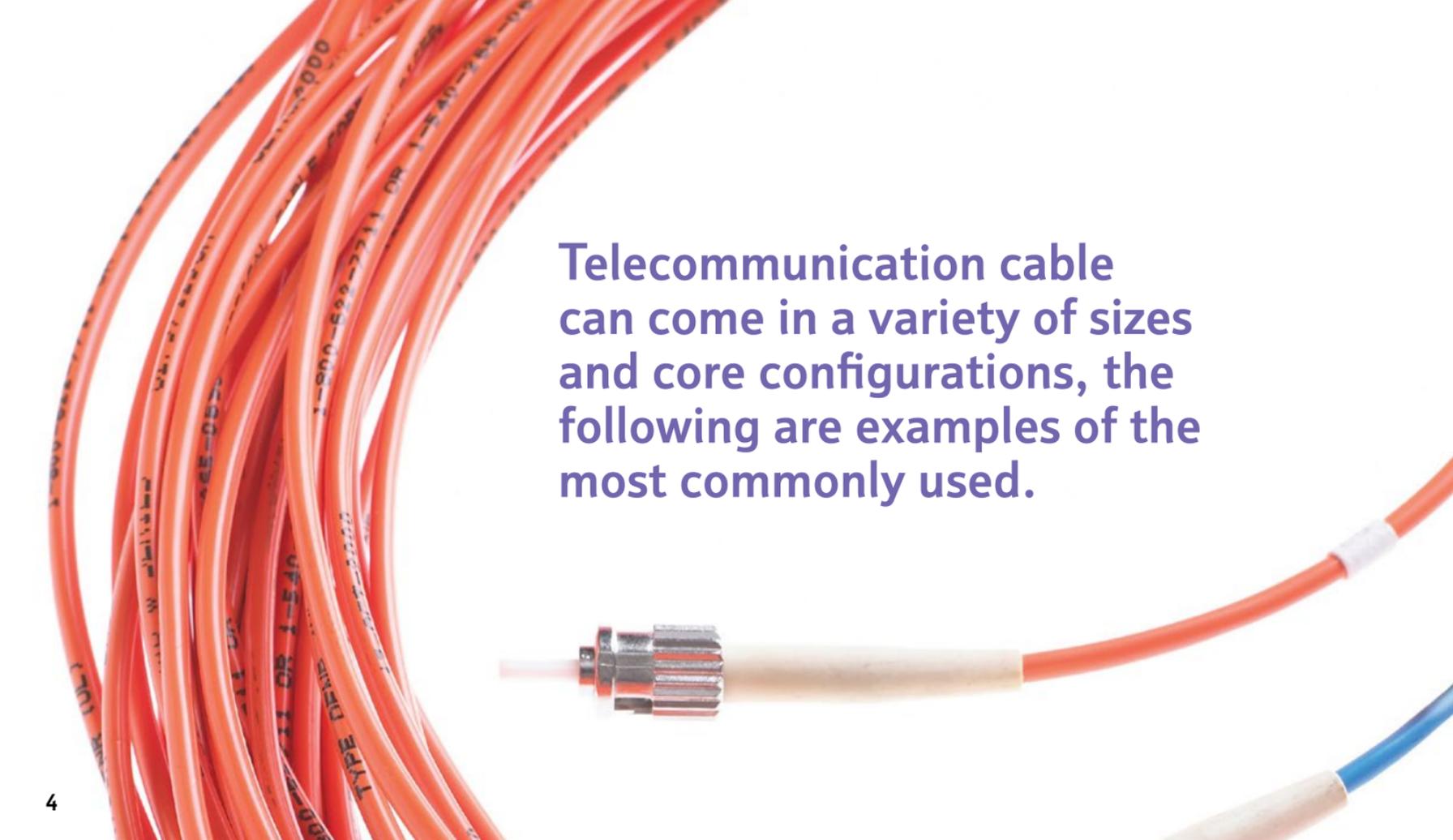
We mark – This document is designed to assist in the identification of Openreach owned cables and associated metal assets. It is only a guide and is by no means exhaustive. If in doubt, the Openreach Security team will be able to provide formal identification.

We search – Openreach and BT Group are working closely with police forces across the UK, The British Metals Recycling Association and Crimestoppers to combat metal theft.

We prosecute – Openreach and BT Group provides dedicated resource and investigates all incidents involving the theft or damage of cable from within our network and operational estate.

CONTACT DETAILS

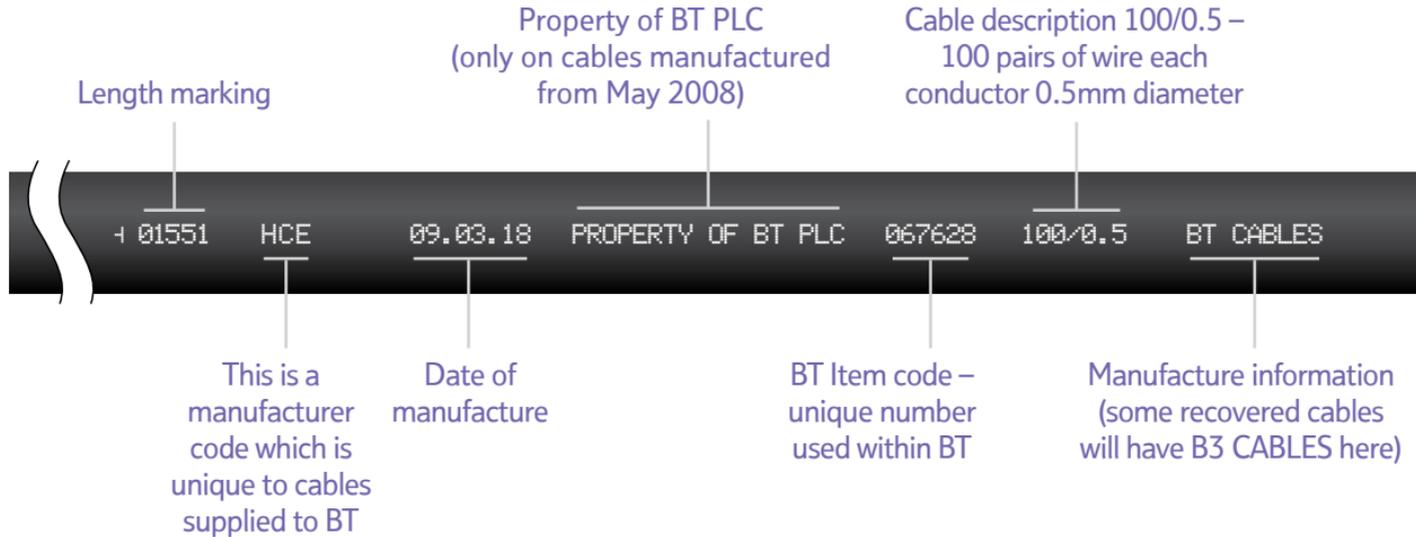
You'll find contact details for BT Security Helpdesk, Operation EIGER, Openreach Security and Crimestoppers on the inside back cover of this booklet (page 23).

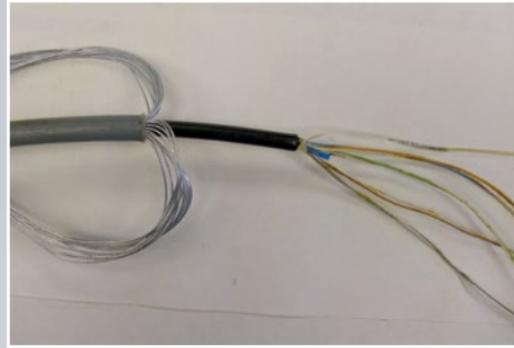
The image features a large, tangled mass of orange telecommunications cables on the left side, with some text printed on them such as 'TYPE DATA', '1-540', and '1-540-255-000'. On the right side, two individual cables are shown: one orange cable with a silver metal connector and a white sleeve, and a blue cable with a white sleeve. The background is plain white.

Telecommunication cable
can come in a variety of sizes
and core configurations, the
following are examples of the
most commonly used.

Current cable markings

Some telecommunication cables used by BT have their own unique marking printed onto the outer sheathing. This is an example of a typical cable marking:





5 pair 0.5mm SWA Telecom cable

Grease filled steel wire armoured telephone cable

5 pairs 0.5mm conductor

Outer sheath colour – light grey

Layer of galvanised steel wires

Inner sheath colour – black

Diameter – 10mm

This cable also comes in 10, 20, 50 and 100 pair sizes
with various core configurations.



300 pair 0.4mm PEUT Telecom cable

Air core duct telephone cable

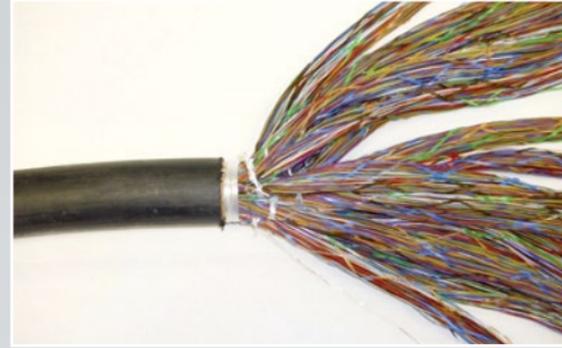
Aluminium moisture barrier adhering to the sheath

300 pair 0.4mm conductor

Sheath colour – black

Diameter – 23mm

This cable also comes in 50 – 4800 pair sizes with various core configurations.



800PR 0.5mm PEUT Telecom cable

Air core duct telephone cable

Aluminium moisture barrier adhering to the sheath

800 pairs 0.5mm conductor

Sheath colour – black

Diameter – 46mm

This cable also comes in 50 – 4800 pair sizes with various core configurations.



1600PR 0.4mm PEUT Telecom cable

Air core duct telephone cable

Aluminium moisture barrier adhering to the sheath

1600 pairs 0.4mm conductor

Sheath colour – black

Diameter – 51.5mm

This cable also comes in 50 – 4800 pair sizes with various core configurations.



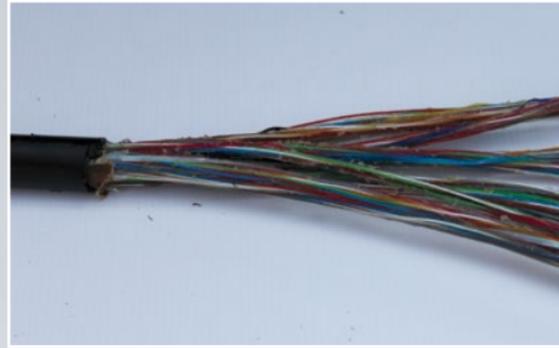
20 pair 0.5mm PET Telecom cable

Grease filled duct multi-pair telephone cable
20 pairs 0.5mm conductor

Sheath colour – black

Diameter – 10mm

This cable also comes in 2 – 100 pair sizes with various core configurations.



100 pair 0.5mm PET Telecom cable

Grease filled duct telephone cable

100 pairs 0.5mm conductor

Sheath colour – black

Diameter – 24mm

This cable also comes in 2 – 100 pair sizes with various core configurations.



50 pair 0.5mm Aerial cable

Grease filled figure 8 aerial cable

50 pairs 0.5mm conductor

Steel support strand

Sheath colour – black

Diameter – 16mm

This cable also comes in 10 – 100 pair sizes with various core configurations.



100 pair 0.6mm Aerial cable

Grease filled aerial cable

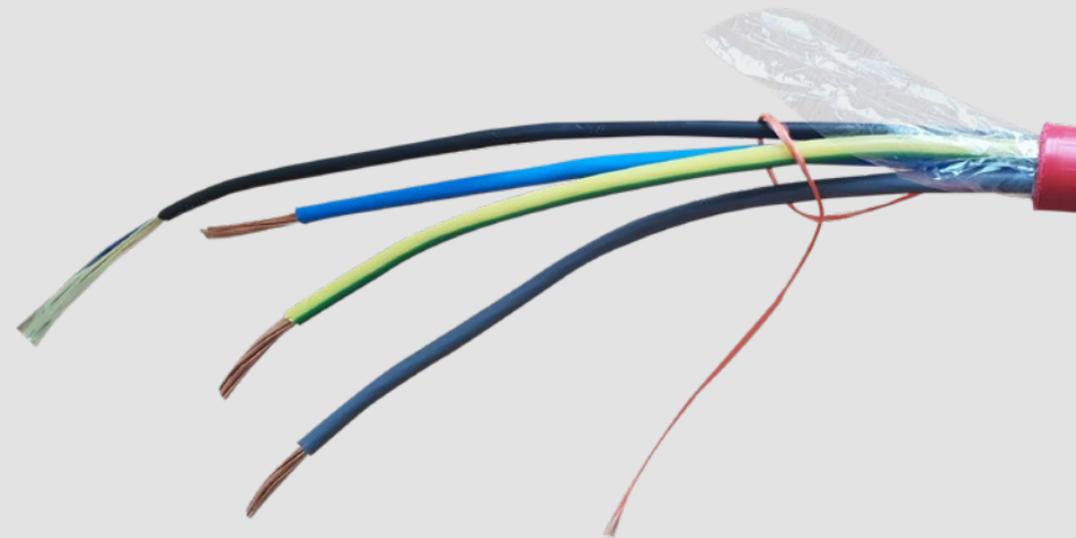
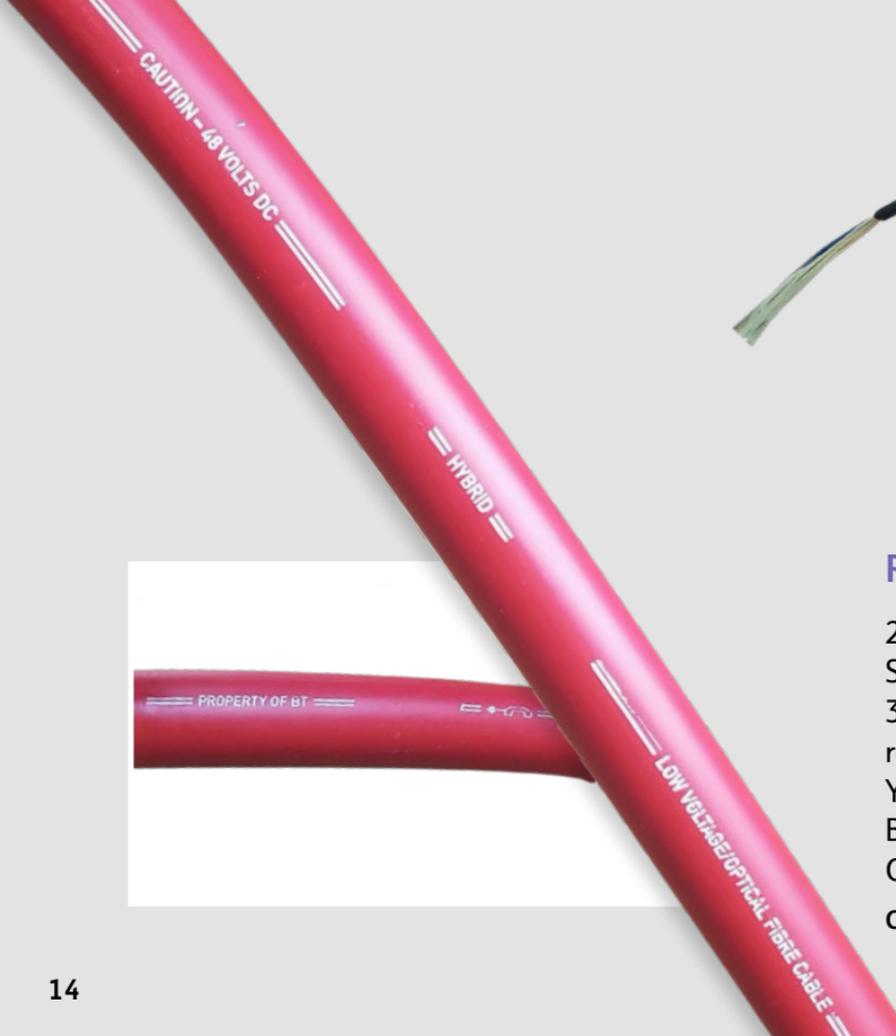
100 pairs 0.6mm conductor

Steel support strand

Sheath colour – black

Diameter – 30mm

This cable also comes in 10 – 100 pair sizes
with various core configura



Red HV Power cables

20mm in diameter

Silver **glove** barrier within

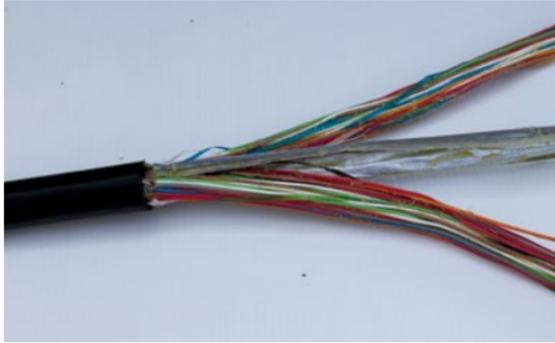
3 x 6mm interior cables wrapped in plastic with an orange rope to aid stripping

Yellow/Green contains 5x1mm copper conductors

Blue contains 5x1mm copper conductors

Grey contains 5x1mm copper conductors

Cable also contains the small fibre whipping



40 pair 0.6mm TVS (PCM) cable

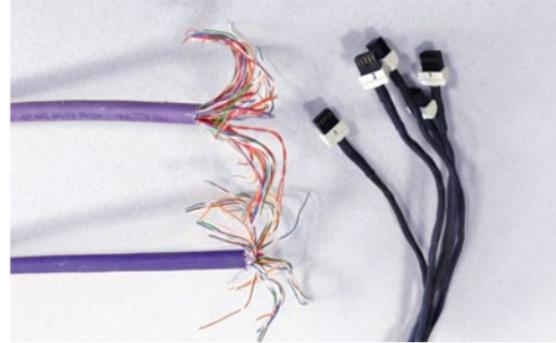
Grease filled duct Telecom cable

40 pairs 0.6mm conductor

Transverse screen – this is a second foil barrier separating the inner core

Diameter – 20mm

This cable also comes in 20, 40 and 80 pair sizes all with 0.6mm conductors.



CAT 5 type multi-coloured stranded cable

Purple/lilac sheathing

17mm diameter with markings

“Tyco electronics EVOTAM”

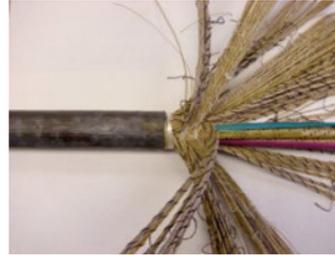
25 or 32 pair cable

Legacy cable

Lead-sheathed

Lead-sheathed cable was installed in the ground up until the late 1960s, but is still very common. It comprises of an outer layer of lead – sometimes wrapped in hessian and bitumen for protection, with a paper-wrapped copper core.

Lead cables come in a variety of sizes, from 10mm to nearly 100mm diameter. The inner core can also differ in its appearance – many trunk cables will have a number of thick coaxial tubes at the centre.



Polythene-sheathed cable

After lead-sheathed cable was discontinued, BT introduced a polythene-sheathed cable. The outer core is made up of a translucent or white coloured polythene sheath, with an aluminium barrier between it and the core. The core is still paper-wrapped copper and is identical to that used in the previous lead cables. Again it comes in a variety of sizes and core configuration.

The pairs are insulated with either plastic or paper insulation.



Coaxial cable was used to carry high grade circuits prior to fibre optics. This type of cable consists of copper coaxial tubes wrapped in a steel ribbon. Again, it comes in a variety of sizes and core configurations.



These are examples of manufacturers' ID labels found on legacy cable. ID labels are located between the sheathing and copper conductors.





Fibre optical cable

The examples here are of fibre optical cables and tubing. This type of cable consists of plastic tubing which protects the glass conductors. This cable does not contain any metal but is used extensively within the telecommunications network.

Stolen cable

It is common practice for thieves to process the cable before selling it on by removing its outer sheathing. This is generally achieved by stripping the outer sheathing and burning the conductors to remove the insulation. The following photos are examples of the results of this practice.

Stolen cable can also be found cut into 1 to 2 metre length “sticks”.



Cable Winch

Cable winches are used by Openreach and its contractors to install and remove cable from within the underground network. The following photographs are examples of the different types used by Openreach and contractors.



Crimestoppers

Crimestoppers is an independent charity helping to prevent crime.
It is not part of the police or government.

The charity believes everyone has the right to feel safe from crime, wherever they live; for themselves and all those they care about. They give people the power to speak up to stop crime. By phone and online, 24/7, 365 days a year.

You can call Crimestoppers on **0800 555 111** or use their online reporting form at **www.crimestoppers-uk.org** and

pass information on anonymously. They won't ask your name. Won't judge. They'll just listen to what you know. When you hang up the phone, or click 'send', you're done.

No police contact.

No witness statements.

No courts.

CrimeStoppers.

0800 555 111

100% anonymous. Always.

Found an item that's shown in this booklet? Then please contact us

BT SECURITY HELPDESK (24HRS)

0800 321999

OPENREACH SECURITY

or.security.team@openreach.co.uk

OPERATION EIGER

intel@bt.com

CRIMESTOPPERS

0800 555 111 www.crimestoppers-uk.org

For more information please visit
openreach.co.uk/cableprotection

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