

Highways Authorities and Utilities Committee

**CODE OF PRACTICE FOR
RECORDING OF UNDERGROUND APPARATUS
IN STREETS**

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RECORDING OF UNDERGROUND
APPARATUS IN STREETS**

A Code of Practice

**Issued by the Secretary of State for Transport
on behalf of the Highway Authorities and Utilities Committee**





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Foreword

Under section 79 of the New Roads and Street Works Act 1991 undertakers are required to provide (subject to such exemptions as may be prescribed), keep up to date and make available for inspection, records of every item of apparatus belonging to them in the street as soon as reasonably practicable after placing it in the street, altering its position or locating it in the course of executing any other works.

The Street Works (Records) (England) Regulations 2002 set out the form and manner of keeping records of street works in England. While the Act does not make any provision for the Secretary of State to issue or approve a code of practice on record keeping, the highway authorities and utilities have agreed that it would be prudent to have a non-statutory code covering such matters.

Street works have been a devolved matter in Scotland and Wales since the promulgation of constitutional changes with effect from 1999. Given this, this Code of Practice applies in England only.

This Code of Practice was prepared by a working party of the Highway Authorities and Utilities Committee (HAUC), and was the subject of extensive consultation with interested organizations. On the working party were representatives of the National Joint Utilities Group (NJUG) (of which the majority of utilities are members), the Local Government Association (LGA) (representing local authorities in their capacity as highway authorities) and the then Department for Transport, Local Government and the Regions (DTLR).

The Regulations and Code of Practice will come into operation on 1 May 2003. As soon as possible after publication in paper form the Code will be posted on the DfT website at <http://www.street-works.dft.gov.uk>.

Department for Transport
November 2002

CHAPTER 1

Introduction

- 1.1 Section 79 of the New Roads and Street Works Act 1991, hereinafter referred to as “the Act”, requires undertakers to provide (subject to such exemptions as may be prescribed), keep up to date and make available for inspection, records of every item of apparatus belonging to them in the street as soon as reasonably practicable after:
- (a) placing it in the street or altering its position, or
 - (b) locating it in the course of executing any other works.
- Failure to comply is an offence and may give rise to a liability to compensate persons suffering loss or damage as a consequence of the failure.
- 1.2 There are no current proposals to implement sections 79(1)(c) and 80 of the Act, which cover the recording of apparatus found by any person executing works of any description in the street where it is not clear who is the owner of that apparatus.
- 1.3 The form and manner of keeping records is prescribed for England in The Street Works (Records) (England) Regulations 2002, made under Section 79 of the Act, and any subsequent amendments thereto. These are hereinafter referred to as “the Regulations”.
- 1.4 The following are exempt from the obligation in the Regulations to keep records:
- (a) instances where compliance with it would be in breach of a requirement of national security;
 - (b) instances where compliance with it would be prejudicial to the commercial interests of the undertaker;
 - (c) any apparatus placed by an undertaker within its existing apparatus, whose position has already been recorded;
 - (d) any apparatus placed in the street prior to the implementation date of the Regulations. However, this exemption does not apply where the undertaker has altered the position of such apparatus, or located apparatus belonging to them in the course of executing other works, after the implementation date;
 - (e) any apparatus located during the course of emergency and urgent works;
 - (f) any apparatus not installed underground;
 - (g) service pipes and lines; and
 - (h) private sewer connections as defined in section 219(1) of the Water Services Act 1991.

- 1.5 Conditions which street authorities attach to street works licences, which they issue under section 50 of the Act, should require licensees (who are also undertakers under the Act) to follow this Code of Practice as far as standards and creation of records are concerned. This may be accomplished in one of two ways; either the licensee will himself create the record or the highway authority may do so on behalf of the licensee. After completion, the record must also be lodged with the highway authority, which will keep and make it available to persons proposing to excavate in the street and any other persons appearing to have sufficient interest requesting details of underground apparatus in that vicinity. Licensees must inform the highway authority of any known future alterations to the underground apparatus in order that the record may be suitably amended. Section 50 licensees must also advise the highway authority of any change in ownership of this apparatus.
- 1.6 It is essential that records be used only as part of a careful on-site exploration by a person proposing to excavate in the street using all available methods, (such as pipe and cable locating equipment and safe digging practices) together with the advice given in this Code plus any additional advice that the apparatus owner may be able to provide. This is because there will inevitably be cases where, for a number of reasons, apparatus or its location, especially service pipes or service lines, is not recorded in the new records.
- 1.7 This Code does not alter the common law responsibility of persons proposing to excavate in the street to take reasonable care before commencing excavation by using their best endeavours to obtain the records of all apparatus installed in a street, and thereafter in locating and avoiding damage to the apparatus.

CHAPTER 2

Scope

- 2.1 Whilst the Act does not require a statutory Code of Practice, the Highway Authorities and Utilities Committee (HAUC) has agreed that the principles set out in this Code should be adopted not only by all undertakers carrying out street works under the Act but also by highway authorities in the recording of their own apparatus. The recommendations in this Code should be regarded as minimum requirements for all concerned. HAUC therefore strongly recommends that highway authorities adhere to the Code. Subsequent references in this Code to apparatus owners accordingly include both undertakers and highway authorities, unless the context otherwise requires. A schedule of types of highway authority owned apparatus is to be found at Appendix C.
- 2.2 The purpose of this Code is to enhance the quality of record keeping of underground apparatus installed within the street and to encourage the making available of information relating to such apparatus.
- 2.3 The specific aims of this Code are to minimise:
- (a) injury to operatives and others;
 - (b) disruption to undertakers' customers;
 - (c) inconvenience to street users;
 - (d) damage to apparatus.
- 2.4 This Code sets a common standard for the establishment, maintenance and making available of records of underground apparatus. It is in all parties' interests to try to provide as much detail as is reasonably practical.
- 2.5 This Code does not cover records of apparatus installed in a street before the date on which the Regulations come into force, except where:
- (a) the position of the apparatus owners own apparatus is altered, or
 - (b) apparatus owners locate their own apparatus in the course of other works.
- 2.6 An apparatus owner must make records available for inspection free of charge at all reasonable hours during the working day, as defined in s98(2) of the Act by any person having authority to execute street works of any description in the street or otherwise appearing to the apparatus owner to have a sufficient interest. It is recommended that records should be made available to authorised users by electronic means (eg through web pages). This would be of particular assistance to enquirers living or working at some distance from the location of the records.

CHAPTER 3

Establishment of Standards

GENERAL

- 3.1 The adoption of common recording standards within this Code is intended to improve the quality and consistency of all records of underground apparatus in the street.
- 3.2 The standards contained in this chapter are framed in terms of what is both reasonable and achievable using a conventional map base.
- 3.3 Whilst this Code introduces consistent standards, these cannot provide a precise measure of location and it is important to note that the tolerances in this Code demand careful on-site plant location and excavation procedures.

FORM OF THE RECORD

- 3.4 Apparatus owners have a certain amount of discretion as to the form of their statutory record and to enable them to record apparatus in ways that do not involve the use of maps. The introduction of new technology will lead to new methods being adopted in the future. However, for the foreseeable future it is likely that apparatus owners will continue, for the most part, to use map records. Whatever the form of record keeping adopted by individual apparatus owners, they should always ensure that persons exercising their right to inspect the record are supplied with appropriate, intelligible information to enable them to identify underground apparatus.
- 3.5 Regulation 3(1) specifies that the record of every item of apparatus belonging to the apparatus owner shall be in one of the following forms, which may be either on paper or in the form of an electronic record, or a combination of both:
 - (a) a location or route map drawn on mapping which is related to the National Grid and prepared to an accuracy at least equivalent to Ordnance Survey maps of similar scales (although the use of County Series Ordnance Survey maps for the purposes of this Code is to be phased out over a period of 5 years);
 - (b) a statement of co-ordinates derived from a Geographical Information System (GIS) for example, in the National Grid. The co-ordinates can be measured using satellite based surveying techniques (the Global Positioning System – GPS – for example) or more traditional methods of data capture; and
 - (c) if available, such diagrams, sketch maps or descriptions as may be necessary to identify the item of apparatus and the date that record was created.

ACCURACY

- 3.6 The location of apparatus should be measured to an accuracy of plus or minus 300 millimetres on the ground, and recorded at a minimum accuracy of plus or minus 500 mm of the actual position of the plant.

- 3.7 Accuracy in recording the location of apparatus cannot be guaranteed and, for this reason solely depending on the accuracy stated in the record can be misleading and dangerous. Wherever possible apparatus owners should seek to guarantee the accuracy of the location of their apparatus to the standards set down in paragraph 3.6. However, it should be recognised that the apparatus may have been moved by a third party subsequent to the last time its position was recorded.
- 3.8 The introduction of new technologies may make it possible and cost effective for records to be made and maintained to improved standards of accuracy. Highway authorities and apparatus owners should keep their recording procedures under continual review so as to take full advantage of such opportunities.
- 3.9 Building lines, kerb lines and geographical features may also be used as reference points, supplementing and linked to dimensions from more permanent features, provided their use is clearly stated in the record. These are all subject to alteration without the knowledge of apparatus owners and consequently, despite their best efforts, positions indicated in records may be inaccurate to some degree.

MAINTENANCE OF RECORDS

- 3.10 Apparatus owners must make or amend records of their apparatus as soon as reasonably practicable after:
- (a) completion of the work of placing apparatus in the street, or altering its position; or
 - (b) locating apparatus belonging to the apparatus owner concerned in the course of other works, except emergency or urgent works, carried out by that apparatus owner.

USING THE RECORD TO LOCATE UNDERGROUND APPARATUS

- 3.11 Locations should not be scaled from the location or route maps referred to in paragraph 3.5(a). These should only be used to indicate the general position of underground apparatus, which should be more accurately located with the use of sketches and other information.
- 3.12 Records should be carefully examined to determine whether kerb lines, building lines or other features might have altered since the information was recorded. Apparatus would normally be expected to be found to the accuracy provided for in paragraph 3.5. However, where the record proves to be less reliable than that, the search should be widened until the apparatus is found before the main excavation is progressed. It must always be assumed that recorded apparatus, which does not become exposed where indicated is nevertheless present in the vicinity and its position must be clearly established before proceeding.

SAFE DIGGING PRACTICES

- 3.13 Valuable guidance is given in HSG 47 “Avoiding Danger from Underground Services” which should be consulted by all persons proposing to excavate in the street.¹

¹ “Avoiding danger from underground services” Revised: Health and Safety Executive published by the Stationery Office London 30 December 1999 ISBN 0717617440.

SERVICE RECORDS

- 3.14 Persons proposing to excavate in the streets should assume that all premises are supplied by service pipes and cables when records showing detailed information are not available. Advice given in Appendix B of this Code should be used to indicate the likely routes of services.

CHAPTER 4

Provisions relating to persons proposing to excavate in the street

- 4.1 Those proposing to carry out excavations should obtain relevant information before commencing the works. This requirement does not absolve all concerned from their responsibilities under other legislation, such as the Construction (Design and Management) Regulations 1994.
- 4.2 When requested, the person proposing to excavate in the street should advise the owners of apparatus already in the street of the nature and the extent of the proposed works.
- 4.3 Apparatus owners supplying information are recommended to include a statement as to accuracy of records. The following is provided as sample text:

‘The information supplied is given in good faith as a guide to locating underground apparatus. Its accuracy cannot be guaranteed, nor does it include comprehensive information about the existence or location of service pipes or cables to individual premises. The responsibility for locating and avoiding damage to apparatus on site shall be that of the persons proposing to excavate in the street who shall be liable to the apparatus owner and any third party who may be affected in any way for any loss or damage caused by their failure to do so’.

APPENDIX A

Glossary of Terms

(Terms used in this Code of Practice that are defined in the Act shall have the same meaning as they have in the Act)

Apparatus Owner: any person owning apparatus situated in the street, including undertakers, licensees and street authorities.

Person proposing to excavate in the street: any person carrying out works that involves breaking open the street, including undertakers, licensees, highway authorities, bridge authorities and transport authorities or contractors operating on their behalf.

Geographic Information System (GIS): a computer system for capturing, storing, checking, integrating, manipulating, analysing and displaying data related to spatial locations.

Global Positioning System (GPS): a US Department of Defence satellite-based navigation system. It is designed so that a passive user can obtain a three-dimensional position anywhere on the Earth's surface.

Plant locating equipment: proprietary pipe and cable locating instruments.

Service pipes or lines: a pipe or line or apparatus for the purpose of providing a supply or service to a customer's premises of the type described in subparagraphs (3) (a), (b) and (c) of paragraph 7 of Schedule 4 to the Act, together with all apparatus associated with it.

APPENDIX B

Typical Routes for Service Pipes and Cables

B.1 GENERAL

- B.1.1 Persons proposing to excavate in the street should expect that the majority of premises are supplied with gas, electricity, telecommunications, sewerage and water services. It is safest therefore to assume that each premise is supplied with all five types of service until the persons proposing to excavate in the street can confirm by site investigation those that are not present.
- B.1.2 In most circumstances service pipes or cables are laid along the shortest possible route from the main to the service entry position or meter. It is likely, therefore, that the service will travel at right angles from the main to the premises.
- B.1.3 Main pipes and cables are not always placed on both sides of the street. If for any reason the record of a particular utility main is not available to persons proposing to excavate in the street, it is safest to assume that the main is situated on the opposite side of the street to the premises and that the services cross the street. This should continue to be the assumed route of the services until the persons proposing to excavate in the street is able to confirm their positions and routes. However, as far as excavating near the main is concerned, the persons proposing to excavate in the street should assume that it might be on either side of the street in the footway or the carriageway unless and until they have confirmation of the exact position of the main.
- B.1.4 Service pipes and cables are normally laid at shallower depths than mains. The specific advice for individual utilities, which follows in this Appendix, indicates the depths that may be expected.
- B.1.5 Indications of service routes may show on the pavement surface or at the boundary of the premises:
- reinstatement of the street, made when the service was installed, often lasts many years before the street is completely resurfaced and will indicate the route of the pipe or cable;
 - gas and water services often include service valves or stopcocks respectively. Gas service valve boxes are situated in the street near the boundary of the premises. Water stopcock boxes may be situated either in a similar position to gas service valves or just inside the boundary of the premises, say, in a front garden;
 - water services may also be fitted with an underground meter that may be situated either in the street or just inside the boundary of the premises;
 - cable television services are laid to the curtilage of every premise in the franchise area, whether or not a supply enters the premises. These may terminate at a small junction box placed as close as possible to the boundary of the premises;

- gas, electricity and water meters may be placed in meter boxes situated on an outside wall of the premises;
- gas, electricity and telecomms services may enter the premises above ground level, giving an indication of the line of the service;
- where no indications of service positions show outside premises it may be possible to check the entry positions from inside, thereby giving an indication of the likely service routes;
- street lighting columns and traffic signs all have an electricity service, mostly supplied from electricity cables situated in the footpath;
- the position of traffic signal and other traffic control cables and loops can be clearly seen on the surface of the road, as a saw cut filled with mastic.

B.1.6 The following NJUG Publications offer useful advice:

NJUG 4: The identification of small buried mains and services

NJUG 7: Recommended positioning of utilities' apparatus for new works on new developments and in existing streets

B.2 TELECOMMUNICATIONS CABLES

- B.2.1 Telecommunication cables can be copper, co-axial or optical fibre and are currently laid in PVC duct that may be coloured grey, green, white or purple. Older duct may be earthenware, asbestos cement, iron or pitch fibre. Common cable colours include light grey, black, mauve, brown and orange. Fibre optic cables may additionally be laid in a sub-duct within the main duct. The duct ranges in size from 25mm to 110mm external diameter.
- B.2.2 Services may enter premises from below ground or overhead from cables supported by poles. Cable services are laid to the curtilage of every premise in the franchise area, whether or not a supply enters the premises and terminate at a small junction box placed as close as possible to the boundary of the premises. Other below ground services may rise up outside the wall before entering the premises.
- B.2.3 Below ground cable services are normally laid from a supply cable situated in the nearest footway which is normally between 250mm and 450mm cover to the crown of the duct. However, site conditions may cause the duct to be laid shallower or deeper. Marker tape is sometimes laid above the duct and can be green, yellow with a blue legend or white with a black legend.
- B.2.4 Duct laid in carriageway is normally laid between 450mm cover and 600mm cover, dependent upon the type of carriageway and street authority requirements. Again, site conditions may cause the duct to be laid shallower or deeper.
- B.2.5 Telecommunication companies will often assist with the location of their apparatus on site.

B.3 ELECTRICITY

- B.3.1 Electricity service cables are generally laid directly in the ground and are connected to the nearest adequate mains cable. Service cables are installed to meet the load required and may often be identical to the cables used as mains feeders.
- B.3.2 Most electricity cables are coloured black, though some high voltage cables are red. Where ducts are used they are normally coloured black if of modern plastic construction. Protection tiles may be placed in the ground above a cable, made out of concrete, clay or plastic. Where marker tapes are used, they are usually coloured yellow with a black legend.
- B.3.3 Most electricity service cables are laid at a depth of 600mm cover under carriageways and 450mm cover in footways, though these depths can alter due to unforeseen circumstances or because of interference by other excavators some time later.
- B.3.4 All dwellings, shops, offices and factories can be assumed to be served by an electricity service cable. Street lighting columns, telephone kiosks, street signs and other street furniture are also provided with electricity service cables.
- B.3.5 It is common practice for the main feeder cable to be laid only on one side of the street. Service cables to properties on the other side of the street will therefore cross the carriageway. In most cases there will be no permanent surface marker posts or other visible signs to indicate the presence of cables.
- B.3.6 Most electricity service cables belong to the local electricity company but some private cable networks may be owned by other bodies such as the highway authority, the street lighting authority, National Grid, Ministry of Defence, railway companies and private companies etc.
- B.3.7 Street lighting columns are generally erected at the rear of the footpath to protect them from vehicular impact, however, where there are no footpaths lighting columns are set back a minimum of 0.8m from the kerb edge, although changes that may have occurred to the position of kerb lines since the columns were erected may have changed this distance. Illuminated traffic signs are generally erected just behind the kerb. Apart from protecting the electricity supply cable, persons proposing to excavate in the street should take care when excavating close to lighting columns or traffic signs to avoid the risk of them being disturbed.
- B.3.8 Electricity is supplied to street lighting columns and illuminated traffic signs directly from the electricity companies' low voltage cable networks or by means of a private cable network. Older street lighting cables may be marked by earthenware tiles but equally may not be marked at all. Private cable networks are installed in a similar manner to electricity company cables but may have a different coloured outer sheath or marker tape.
- B.3.9 Traffic signal cables are normally laid at a depth of 600mm in carriageways and 450mm cover in footways, though some extra-low voltage cables may be laid in the footway at 250mm cover. It should be noted that vehicle detector loops and their interconnecting cables are laid in slots in the carriageway at a depth of only 65mm cover.
- B.3.10 It is essential to note that street lighting and traffic control cables may not be carrying a current during daylight hours but they are "live" at all times and will arc if struck.

- B.3.11 Street lighting or traffic control cables may be coloured black, purple or orange. Where ducts are used for street lighting and traffic control, they are normally coloured orange in England, although one electricity supply company uses black ducts, and marked with the legend “Street Lighting Cable Below” or “Traffic Signals”. Where marker tape is used for street lighting and traffic control, it is normally yellow with a black legend.

B.4 GAS

- B.4.1 Gas services are normally laid directly in the ground and are connected to the nearest suitable gas main, which could be on the opposite side of the street. Gas services are normally laid at approximately 600mm in the carriageway and 450mm in the footway, rising to approximately 375mm in private ground. However, there may be a number of circumstances that cause gas services to be laid at shallower depths. The actual depths of services should be determined by careful working practices.
- B.4.2 Gas service pipes were traditionally made of iron or steel, sometimes encased in black bitumen or black PVC. During the 1970s new steel service pipes were encased in yellow PVC sheathing and yellow polyethylene pipe came into increasing use. During the 1980s yellow polyethylene pipe became the most commonly used material for gas mains and services. In 1987 intermediate pressure mains made from High Density PE, which are orange in colour, were introduced. There were also a number of instances of mains made of asbestos cement and special provision has been made for highlighting their presence on location records.
- B.4.3 Where ducts are used, they are usually coloured yellow or pale green, though in the past ducts, which were mostly used for street crossings, were made from a variety of materials, including pitch fibre, PVC, steel or clay. Where marker tape is used it is usually coloured yellow with a black legend.
- B.4.4 In urban areas it should be assumed that all properties have a gas service pipe. Many domestic premises will have an above ground service entry or external meter box which will give an indication of the line of the service. Commercial or industrial premises, flats and multiple occupancy dwellings, will have service valve boxes situated in the street and similar service valves are increasingly being used on new domestic services.
- B.4.5 Most of the underground gas network is operated by Transco plc but private gas networks are increasing in frequency, particularly in connection with new housing or commercial developments.
- B.4.6 Persons proposing to excavate in the street should beware that yellow polyethylene gas service pipes are sometimes wrongly used as ducts on building sites to carry electricity cables. Discarded mains and service gas pipes are also sometimes wrongly used as ducts for electricity cables and other apparatus. This practice creates an unnecessary risk to health and safety and occurrences should be reported to the appropriate authorities.

B.5 SEWER SYSTEMS

- B.5.1 Responsibility for public sewers in England is in the hands of the water companies that may have agency arrangements with the local authorities.
- B.5.2 Private sewers and drains, which may or may not be in the street, are the responsibility of their respective owners who may, by deed, have corporate responsibility. Local authorities have, under public health legislation, power in certain circumstances to carry out work in such installations.

- B.5.3 Sewer pipes and drains have to operate with a line and level which cannot be varied in order to provide a fall to aid gravity flow of the effluent and often have to cross the footway at right angles in order to reach the public sewer in the carriageway. Older sewers were usually of brick but smaller sizes were often of fired clay or earthenware. The most popular materials today are concrete, earthenware, ductile iron, asbestos cement and plastics.
- B.5.4 Manholes at approximately 80m intervals in the carriageway will indicate the line of the main sewer in a street and manholes at the boundary of each premises will indicate the line of the private drain connecting with it.
- B.5.5 In addition to the foul sewers there are of course all the drainage or surface water sewers that tend to consist of gullies and pipes connected at manholes. There may in some cases be culverts that may be a large pipe or of another type of construction, and which may lie only a little way under the road surface.

B.6 WATER

- B.6.1 That part of a water service that is laid in the street up to the boundary of the premises is known as the communication pipe and usually ends in a stopcock. The remainder of the water service to the premises is known as the supply pipe. The stopcock box will usually indicate the line of the pipe, as will an underground meter box if one has been fitted.
- B.6.2 Water mains are normally laid at a depth of 900mm cover and communication and supply pipes usually at a depth of approximately 750mm cover to avoid freezing in cold weather.
- B.6.3 Older water services were laid in lead, copper galvanised steel or black polyethylene. Since 1980 most water service pipes are laid in blue polyethylene. Small amounts are still laid in bare copper, blue or green sheathed copper or galvanised steel. Most pipes are laid directly in the ground but, where ducts are used, they are coloured blue. Very little use is made of marker tapes above services but when used they are also coloured blue.
- B.6.4 Persons proposing to excavate in the street should beware that blue polyethylene water service pipes are sometimes wrongly used as ducts on building sites to carry electricity cables.

APPENDIX C

Highway Authority Apparatus

C1 ITEM COVERAGE

C1.1 Highway authorities should, in accordance with this code of practice, record the position of the following apparatus:

- street lighting cables and ducting
- highway drainage (see also item C2.4)
- CCTV cables and ducting

C2 GENERAL

C2.1 There are numerous other items of highway apparatus which, by virtue of their being classed as services, are not covered by this code. There could, however, be reference to these items under associated street works data (ASD) on the national street gazetteer (NSG). Reference should be made to the NSG at every opportunity. Typically, these items could include:

- illuminated traffic sign cables and ducting
- traffic signal cables and ducting
- traffic signal loops and ducting
- vehicle detector loops and ducting
- ice prediction detector cables and ducting
- traffic/speed camera cables and ducting
- traffic monitoring camera cables and ducting
- variable message sign cables and ducting
- automatic bollards cables and ducting
- height protection systems cables and ducting
- toll booth and barrier cables and ducting

- C2.2 In addition to the above, further information may be recorded on the gazetteer under streets with special engineering difficulties. Typically, these items could include:
- culverts
 - wildlife tunnels
 - foundations to structures
- C2.3 There are many old highway stone culverts that are uncharted and if uncovered may appear dry and unused. However no assumption that they are redundant should be made and if damaged they should always be properly repaired unless advised otherwise by the highway authority.
- C2.4 Surface water drainage tends to consist of a system of gullies connected by pipework to the main sewer. Whilst these piped connections are not covered by this code, they tend to be at shallow depths at the start of the run from the gully pot. Persons proposing to excavate in the street should ascertain the direction of the pipework by examining the gully pot prior to any excavation.
- C2.5 Persons carrying out excavations in the street should take care when excavating close to lighting columns and traffic signs to avoid the risk of them being disturbed
- C2.6 Traffic signal cables are normally laid at a depth of 600mm in carriageways and 450mm in footways, though some extra-low voltage cables may be laid in the footway at 250mm.
- C2.7 CCTV cables are generally laid at a depth of 550mm in the carriageway and 450mm in the footway
- C2.8 Persons carrying out excavations in the street should take particular note that vehicle detector loops for traffic signals or traffic counters and ice detection sensors are contained within the bituminous layers of the road and are particularly susceptible to damage if extreme caution is not taken
- C2.9 It is essential to note that street lighting and traffic control cables may not be carrying a current during daylight hours but they must be assumed to be live at all times and will arc if struck.

This code of practice sets out the agreed regime for keeping accurate records of apparatus buried beneath the street. Its aim is to improve the standard of record keeping with a view to minimising injury to those carrying out works, damage to apparatus and inconvenience to road users and utility (eg gas, water and electricity companies) customers.

£6