

## Introduction

This information relates to the installation of a underground lead-in on private property, sited on a typical urban section. For larger developments **phone 123**. An underground lead-in is a method of providing you, the customer, with a connection to the Telecom Network.

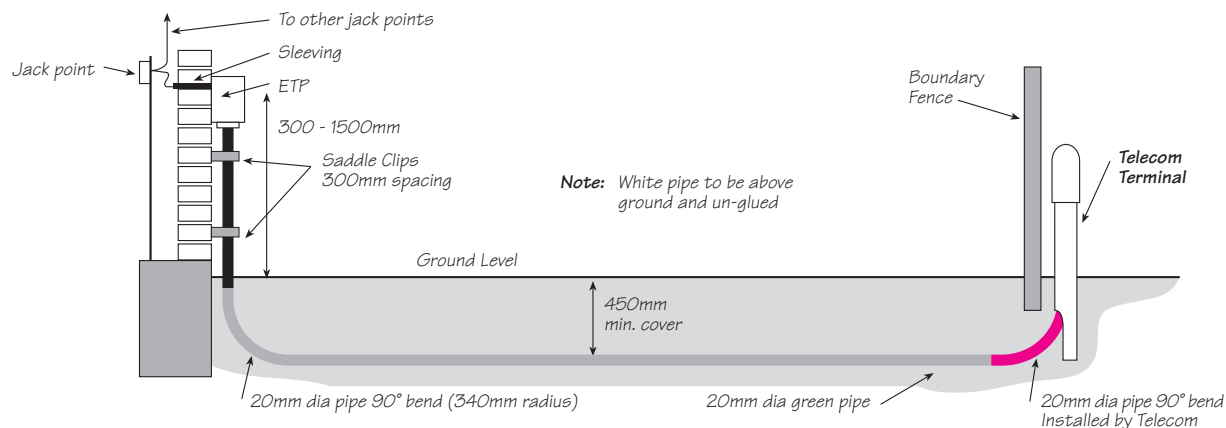
### An Underground Lead-In consists of:

- **A lead-in cable.**  
A grease filled cable designed for outside use.
- **A lead in pipe.**  
A 20mm pipe (green below ground, white above ground) with associated pre-formed bends. This gives protection to the cable and will allow cable to be added, or replaced, with minimal disturbance in the future.
- **An External Termination Point (ETP).**  
This houses the connection of the inside cabling to the outside cabling. This should be positioned as close as possible to the front of the building. (See Figs. 1 & 2.)

**Materials are provided at no cost by Telecom as part of the Network connection, and remain in Telecom ownership.**

*Telecom also provide a complete trenching and installation service.*

**Phone 123 for installation charges and appointments.**



CROSS SECTIONAL VIEW OF A TELECOM LEAD-IN INSTALLATION (URBAN)

Fig. 1

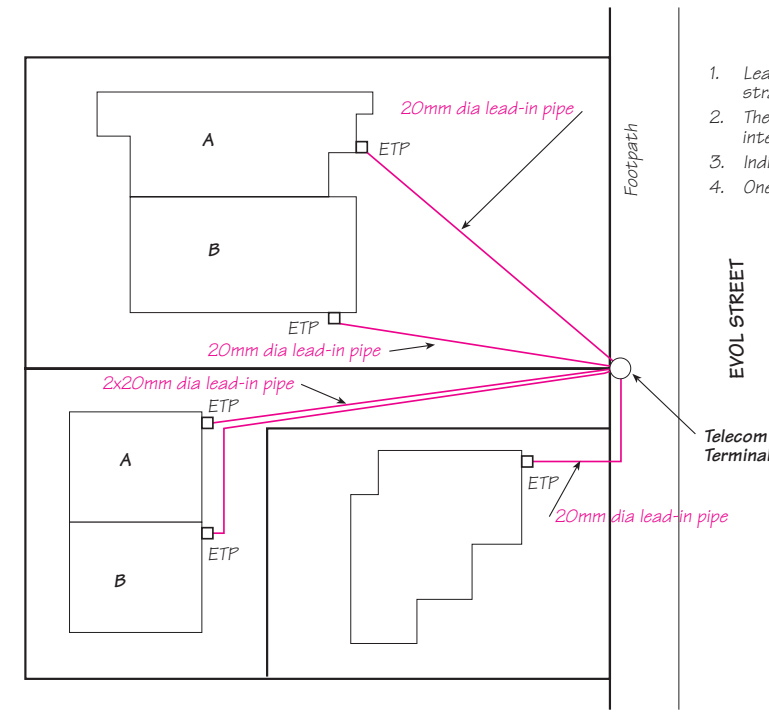
## Trenching

The following outlines the basic requirements for trenching. **If you have any doubts, please enquire, as this can save unnecessary work.**

- The route for the trench should only be chosen, and the trench excavated, once the Telecom terminal in the street, and the ETP location at the property have been **clearly identified**. Where there is no terminal or doubt exists, **phone 123**.
- The trench should be as straight as practicable avoiding sudden changes in direction, or elevation.
- Trench depth is 450mm below the finished ground level. Where the lead-in will be under permanent material, e.g. concrete driveway, the depth can be reduced to 300mm.
- Trenching methods are: open trenching or underground mole
- Trenching of public footways/roadways requires permission of the local council.
- Special conditions apply to uncovering or trenching in the vicinity of other underground services including Telecom. Check with the service providers concerned prior to excavating.
- **Phone 124** for the location of any Telecom cabling.
- **Do not DIG** within 500mm of a Telecom terminal or existing cabling.
- **Phone 120** to report any damage to Telecom plant.

## Installation

- Lead-In cable **must** be installed in a lead-in pipe.
- Every Residence must have an **individual** lead-in from the Network terminal to the ETP.
- Only materials supplied by Telecom may be installed and **only a registered Telecom Installer can install it**.
- Access to, and terminating at a Telecom terminal is the responsibility of Telecom.
- A lead-in cable can share a trench with other services, but clearances must be met.
- Telecom cable must leave buildings through a separate conduit and is not to be shared with power cables.

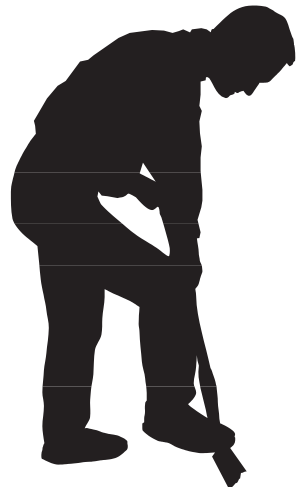


PLAN VIEW OF A TELECOM LEAD-IN INSTALLATION (URBAN)

Fig. 2

## Note:

Failure to comply with the guidelines set out in this pamphlet may result in a refusal to connect to the Telecom Network and the cost of rectifying any sub standard installation will be at the customer's expense.



## Clearances

- Power: See Table 1
- Gas pipelines: (Pressures 420 – 2000 Kpa)  
Crossings: 300mm min.  
Parallel: 450mm min.
- Sewer, Stormwater, Water etc.: 150mm min.

## Mechanical Protection

Mechanical protection is installed to give protection to the power cable from any future digging activity.

### Examples are:

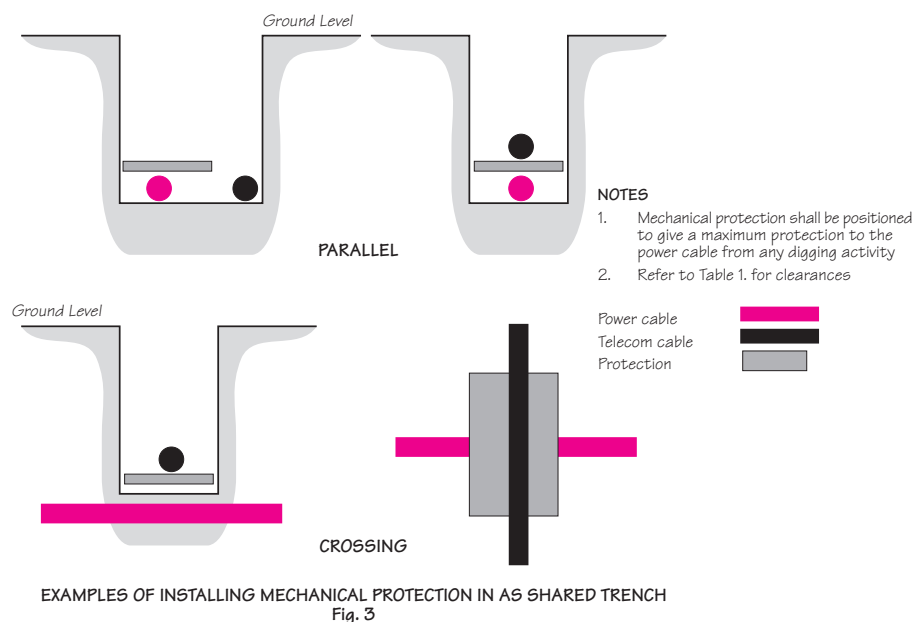
- 50mm thick (or greater) concrete slab.
- 25mm thick (or greater) ground contact treated timber.
- Tough plastic slab of minimal dimensions 10mm thick x 150mm wide x 750mm long.
- Mechanical protection installations are detailed in fig 3.

**If a doubt exists on the type of power cable contact your local power company.**

| Power Cable Voltage           | Power Cable Type is                     | With Mechanical Protection Installed | Minimum Separation is            |
|-------------------------------|-----------------------------------------|--------------------------------------|----------------------------------|
| Up to and including 650 volts | Neutral screened or armoured            | No                                   | 150mm                            |
|                               |                                         | Yes                                  | 50mm                             |
|                               | Other than neutral screened or armoured | No                                   | 450mm                            |
|                               |                                         | Yes                                  | 50mm Crossing<br>450mm Parallel  |
| Exceeding 650 volts           | Single core or Multi core               | No                                   | 450mm                            |
|                               |                                         | Yes                                  | 150mm Crossing<br>450mm Parallel |

CLEARANCES BETWEEN POWER CABLES AND TELECOM LEAD-INS

Table 1



Contact Phone Number

# URBAN Installation of Underground Lead-Ins for Telecom Residential Customers

## Contractor's Information

