

Introduction

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

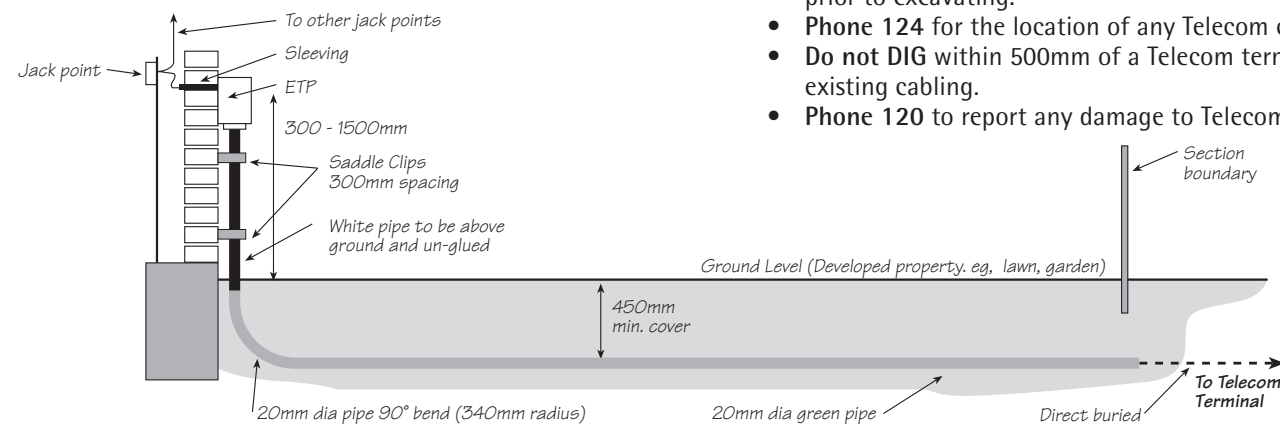
An Underground Lead-In consists of:

- **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 (RURAL)

Fig. 1

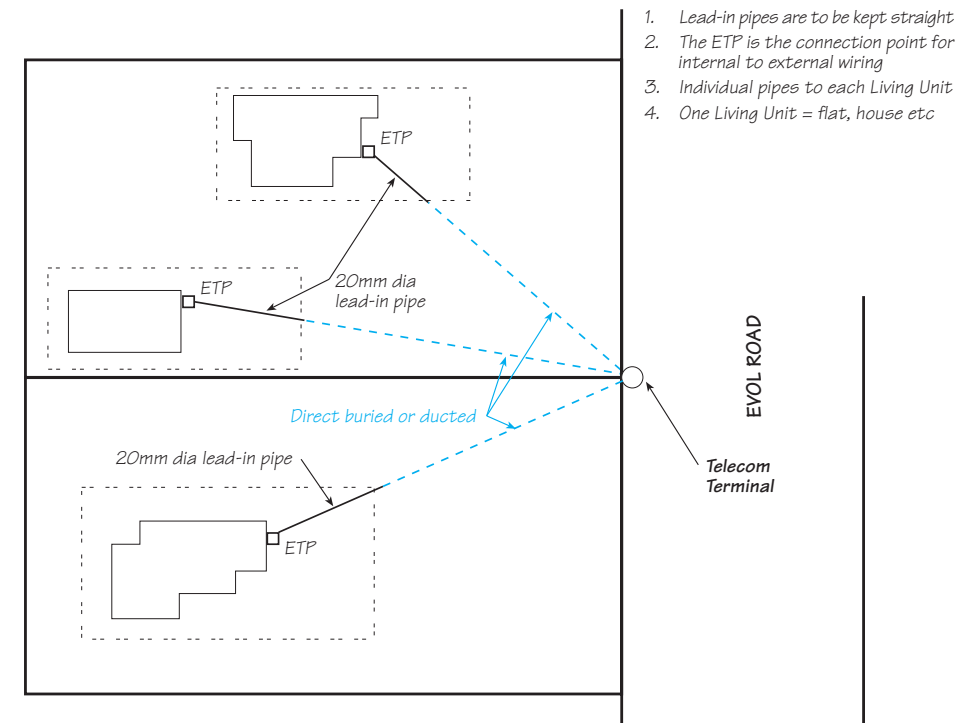
Trenching

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 or road, 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, underground mole or moleplough.
- The following situations you must install lead-in pipe and not direct bury:
 - Under a permanent surface such as concrete or hotmix driveways.
 - In unsuitable ground such as rock.
 - Within the developed confines of the property, e.g. Gardens lawns etc.
- 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

- Direct buried should only be considered in rural environments when the length of trench is excessive. (Typically greater than 60m.)
- 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.
- Lead-in cable not to exceed 250m. (4 pair lead-in must be used for greater than 250m.)

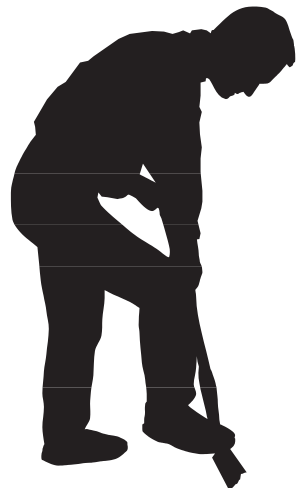


PLAN VIEW OF A TELECOM LEAD-IN INSTALLATION (RURAL)

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.

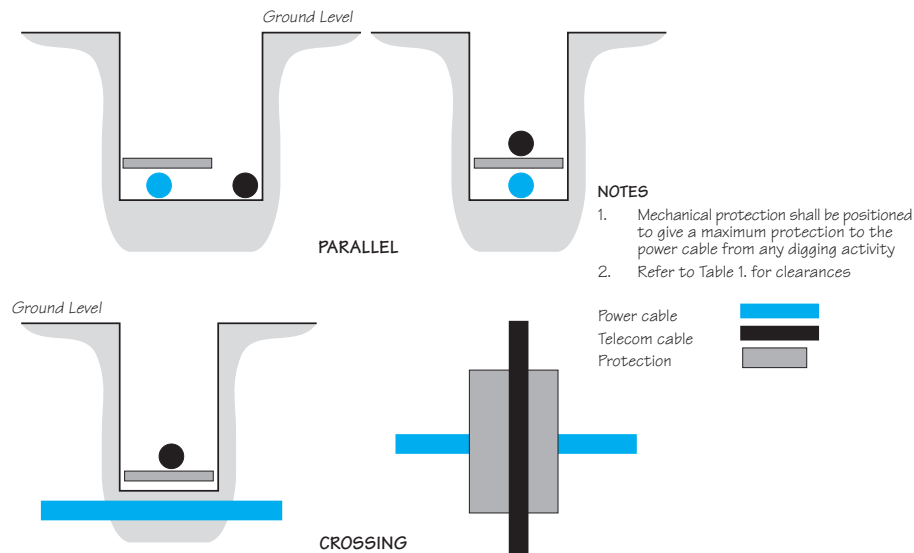
Examples are:

- 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 450mm Parallel
Exceeding 650 volts	Single core or Multi core	No	450mm
		Yes	150mm Crossing 450mm Parallel

CLEARANCES BETWEEN POWER CABLES AND TELECOM LEAD-INS
Table 1



EXAMPLES OF INSTALLING MECHANICAL PROTECTION IN A SHARED TRENCH
Fig. 3

Contact Phone Number

RURAL Installation of Underground Lead-Ins for Telecom Residential Customers

Contractor's Information

