In multi unit developments each unit has a separate underground conduit feed from suitably located pits to a wall box or Premises Connection Device (PCD) at each unit (see Figures 1 & 2).

This individual underground feed is also the preferred method in blocks of adjoining units (see Figure 3 below). However, this option is not viable where:

- There is no suitable place to install a wall box or PCD on the outside wall of the unit;
- Where suitable measures cannot be taken to prevent the entry of water or termites into the building via the building entry conduit;
- The pits cannot be installed in a suitable location on common property (pits must not be located in roads, driveways, or common property areas);
- There is no suitable access to the electrical earthing system for connection of customer lightning protection (CLP). Customer lightning protection is necessary where copper cable (normally Telstra) will be installed prior to the deployment of Fibre cable. In these cases alternative solutions should be agreed with the network operator (carrier).

Figure 1 - Typical Gated community

Figure 2 - Typical unit development

Figure 3 - Typical multiple adjoining units

Figure 4 - Pipe entry to pits

Table 1

Conduit combinations at one end of a pit, including pit with collar

<table>
<thead>
<tr>
<th>Pit Size</th>
<th>100mm</th>
<th>50mm</th>
<th>23mm</th>
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<td>4</td>
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</tr>
<tr>
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<td>6</td>
</tr>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
</tr>
</tbody>
</table>

Table 1

Pit Size and Placement (See Figure 1 and Figure 2)

- For every group of 6 units (or part of), a type P50 pit (or larger) is required to accommodate a future fibre enclosure.
- A Size 2 pit may be used to connect typically two and a maximum of four single building units.
- A Size 5 pit shall be used to connect typically four and a maximum of six single building units.
- Pits shall not be placed in a roadway or driveway.
- Avoid placing pits within 15 metres of pad mount or pole mount electricity transformers. Refer to AS/NZS 3835.1.
- For additional detail on pit placements, bends and lengths between pits etc., refer to G645.
Fibre Ready “Pit and Pipe” Guidelines for Multi Unit Real Estate Developments including Retirement Villages

**Figure 5 - Building Entry Point – Conduit Placement (P23 only)**

- Conduit installed in the building footings
- Conduit installed over the building footings

**Notes:**
1. No more than the equivalent of two 90° bends, comprising one 300 mm radius bend underground and one 100 mm radius bend above ground, are permissible at the building. Another 300 mm radius bend may be installed at the street pit, making a total of three bends (the maximum permitted) between cable access points.
2. Only pre-formed bends may be used. Conduit must not be bent on site (e.g. by application of heat or using a bending tool).

**Figure 6 - Typical drainage pit at Concealed Building Entry Point**

**Note 1:** Where the building entry point is lower than the street conduit network and there is risk of water entering the building through lead-in conduit, a pit may be required at or near the building perimeter for drainage of water.

**Figure 7 - Typical Premises Connection Device (PCD) configuration.**

**P23 - Minimum radius bends (must be factory formed)**
- Underground: 300mm.
- Above ground: 100mm.
- Flexible conduit is not to be used underground, or in wall or ceiling cavities.

**References**

- G645:2011 Communications Alliance Ltd - Fibre Ready Pit and Pipe Specification for Real Estate Development Project
- AS/NZS 2430.3 Classification of Hazardous Areas
- AS/NZS 3000 Electrical Installations (known as Australian/New Zealand Wiring Rules)
- AS/NZS 60079.10 Electrical apparatus for explosive gas atmospheres – Part 10: Classification of hazardous areas (formerly AS 2430.1)
- DR AS/CA 1000.9:2012 Installation requirements for customer cabling (Wiring rules)