The number of cables and the resulting corridor width for both MV and LV power distribution corridors depends on Land Use Context and Street Family, electrical loads and the number of storeys per building, as outlined below:

- In City Contexts, most high-rise buildings are expected to have their own substation and a high proportion of the power distribution corridors are expected to be for the MV type (i.e. 33 kV, 22 kV, 11 kV or 0.4 kV);
- In Town Contexts, while some buildings will have their own substations, others will rely on an off-site substation for their power supply and consequently require an LV supply cable. Therefore, the power distribution corridors are expected to be of both the MV and LV types; and
- In Residential/Emirati Neighbourhood Contexts, since most buildings/villas are limited in height, LV power distribution is therefore primarily required.

The spacing between MV power distribution cables shall be 400 mm. Where necessary in specific circumstances, the spacing may be reduced to 300 mm over short distances, subject to the relevant utility providers' approval. Where 33kV cables are used, the spacing shall be 500mm.

Similarly, the spacing between LV power distribution cables shall be 300 mm and the spacing may be reduced to 200 mm over short distances, where necessary in specific circumstances, subject to the relevant utility providers' approval.

Street Lighting/Tree Corridors

Street lighting cables and chambers shall be located within the corridor allocated for trees. Street lighting corridors shall be provided on one or both sides of the street and in the Median, depending on the RoW width and the required street lighting design requirements.

At the root barrier/tree pit, street lighting cables shall be installed in ducts and arranged at the corridor edge as illustrated in Figure 4.29. In general, root barriers shall be provided on all trees adjacent to power cables.

Street lighting design is based on safety and security requirements and their location shall take precedence over tree locations, should trees conflict with street lighting poles.

Street lighting cables and poles shall be installed in accordance with the local Municipality requirements and shall follow the LV power distribution requirements.

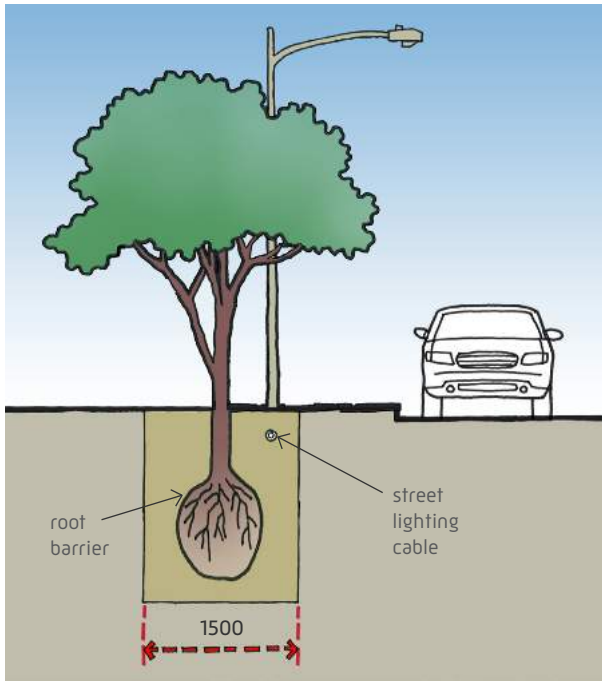

Figure 4.29: Shared Street Lighting/Tree corridor