

## A guide for home builders

### 1. Contact Forssan verkkopalvelut Ltd's staff

The staff at Forssan Verkkopalvelut Ltd will be happy to give you advice and guidance on matters regarding electrification and choosing the right connection. This way you can find out the price of the connection and ensure that you'll have electricity when you need it.

With matters regarding network connections, call 03 4126 710.

Approving construction permit plans, call 03 4126 790.

### 2. Think about your needs regarding electrification and heating systems

### 3. Have an electrical plan made

A good electrical plan ensures that everything runs smoothly. Have an electrical plan done by a professional planner before you begin constructions. An electrical contractor can also draw the plan, but in order to get a competitive offer it may be more beneficial to use a separate planner. Your job is to think about your needs and wishes considering the house and that way create a base for the planner's work.

### 4. Draw up a connection contract

For us to be able to supply you with any electricity ( including temporary construction connections), a written connection contract must be signed between the customer and the company. All fees and costs of the connection are also laid out at this moment. If the constructor is not the final owner of the house or location in question, a temporary connection contract is made instead.

### 5. Electricity for construction

For connections during the construction phase, Forssan Verkkopalvelut Ltd will rent you a temporary power distribution box equipped with sockets and a meter for measurements. (picture1) A request for renting a temporary power distribution box and getting a temporary connection should be made early enough, about 2 weeks before delivery. A separate fee will be charged for the installment of the distribution box. On the city zoning area, the availability of a temporary connection may also be affected by the region's municipal engineering schedule. Orders for construction connections, call 03 7126 710.



#### **6. Installing a connection cable**

We recommend you to find out the different options for installing the part of the connection cable that is on your property. It is also possible for the distribution company to take care of the maintenance of the connection cable, but this needs to be laid out in detail in the connection contract.

The part of the connection cable that is on your property is not included in the distributor's delivery. You may ask for a quote on installing the property cable from Forssan Verkkopalvelut Ltd.

#### **7. Ask for quotes and choose an electrical contractor**

Choose an electrical contractor and draw up an official contract, a written contract ensures you your rights. Don't give up on your demands when comparing the quotes and remember: the cheapest is not always the most affordable choice.

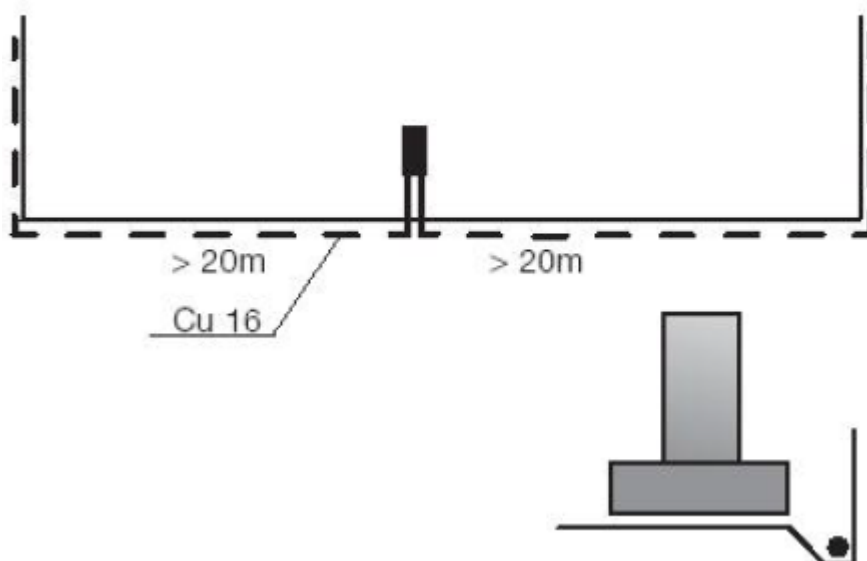
#### **8. Grounding electrode**

According to the electric safety regulations, a separate grounding electrode must be installed to all buildings connected to the distribution network. The grounding electrode's cross-section must be 16mm<sup>2</sup> and it must be made of copper. There are two ways to install the grounding electrode: as a loop in the building's foundations or around them (picture 2), or install a 20 meter (minimum) electrode to the connection cable trench (picture 3).

**Installing a grounding electrode to the foundations or around them**

Recommended

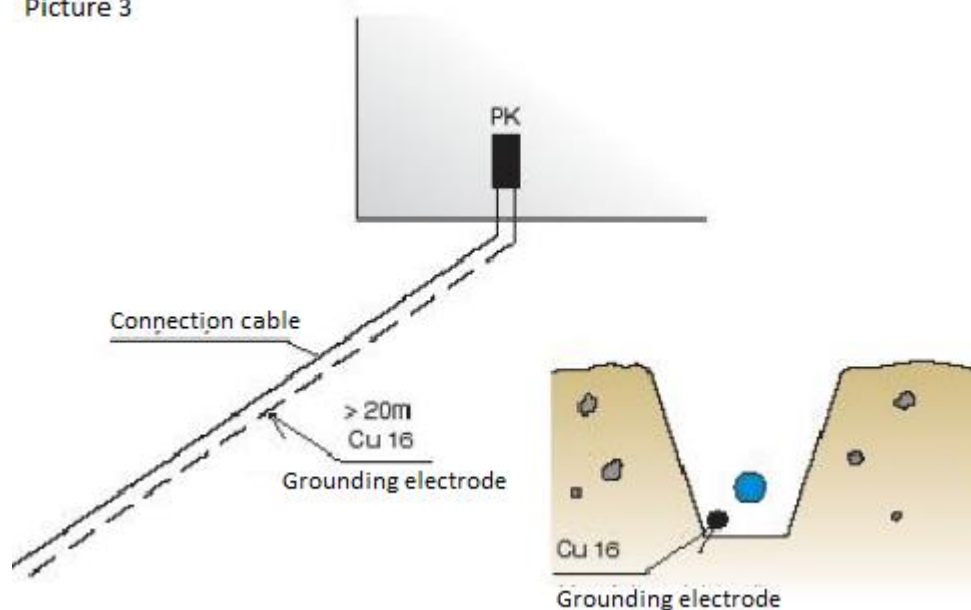
Picture 2



**Installing a grounding electrode next to the connection cable**

Alternative way

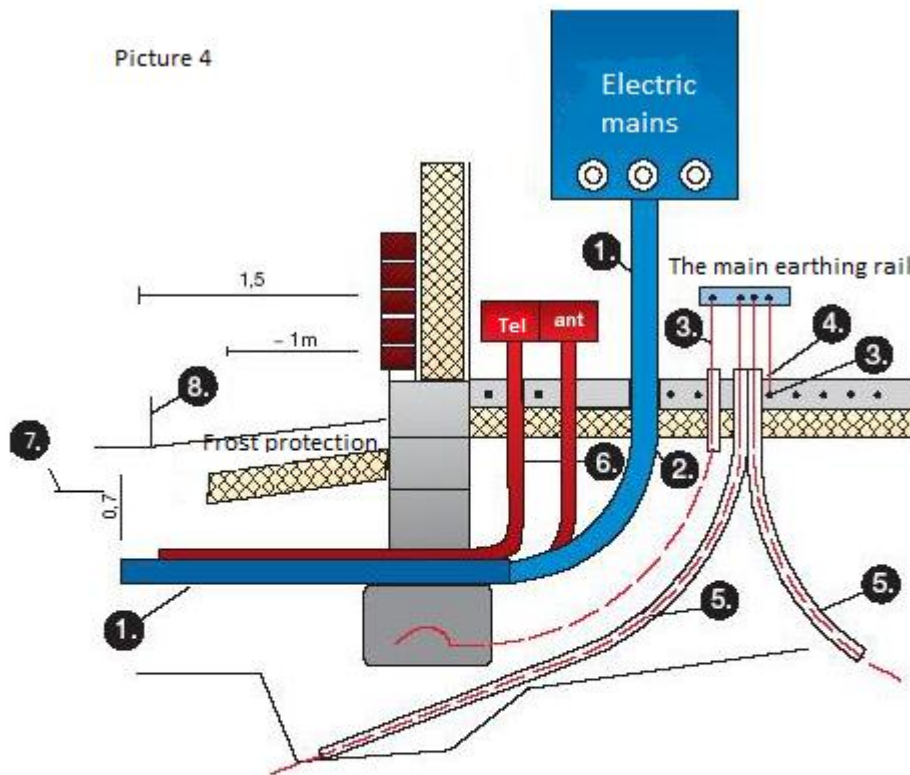
Picture 3



**9. Connection cable**

The connection cable is usually built as an underground cable. When the plinth is laid, necessary pipes for electric and phone cables and antenna must be prepared. The necessary piping can be seen in picture 4. The cable trench for the connection cable is dug below the metering center to the property line. The depth and filling of the trench is demonstrated in picture 5. When the cable has been installed, the trench is filled elsewhere except for 1.5m from the building's outer wall. This way, the protective work can be done properly.

Picture 4



1. Protective conduit for the connection cable: Stenght 4 electric conduit JM50, 50mm in diameter, protective conduit extends beyond frost protection layer
2. Curve 50mm
3. Attaching the reinforcement steel to the earthing rail
4. Earthing conductor's protective conduit JM20
5. Earthing electrode Cu16, as a loop in the building's foundations or around them, or 20m (minimum) in the connection cable trench
6. Telephone- and antenna conduits JM50
7. Warning tape (above the cable approx. 40cm below ground)
8. A stick or a pole marking the end of the conduit

## 10. Mapping the underground cables

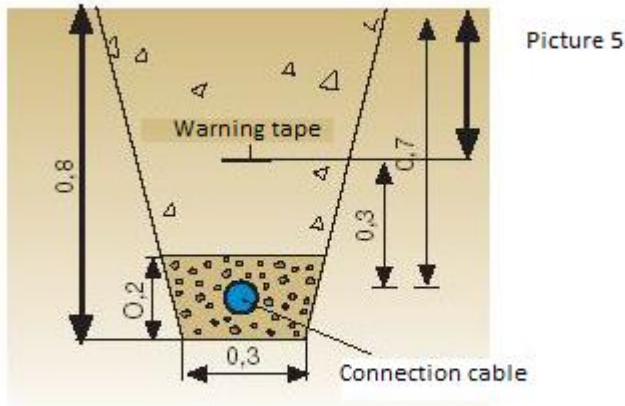
If Forssan Verkkopalvelut Ltd is doing the installation, the company maps the parts of the connection cables that are on the property in question. If that part of the cable is installed by some other constructor, the location on the cables is mapped if possible. This requires that Forssan Verkkopalvelut Ltd is notified before the cable trenches are covered. Mapping is free of charge. For matters regarding mapping, call 03 4126 730.

### Connecting to the distribution network and final inspection

Once the electrical constructions are finished, place an order for Forssan Verkkopalvelut Ltd for someone to come and install a suitable kWh-meter and connect the property to the distribution network.

An electrical constructor is obligated to make sure the condition of the installments is as required before handing over to the client. A record of launch must be made during the inspection and this record must be delivered to Forssan Verkkopalvelut Ltd beforehand or it must be presented before the installation of the kWh meter is done. Inspection fees are usually included in the construction. A proper inspection is mandatory by law.

### Cross-section of a cable trench



Use stoneless soil around the connection cable  
Cable depth 0,7m

#### 11. Connection contract and distribution contract

Discuss your preferred distribution product with your electrical planner. Sign a connection contract with Forssan Verkkopalvelut Ltd before the property is metered or the electricity supply is meant to begin (call customer service 020 790 4140). The distribution contract can be made with any electricity distributor or you can order a distribution deal from the local electricity provider, Vapo Ltd.

#### 12. Instructions and guidance for using electric devices

Instructions and guidance for using electric devices is included in the electrical contractor's job. Electrical safety regulations require that proper instructions must be handed out to the client. Keep all the instructions.