

## Safety for Garden Electrical Installations

*Includes - Garden Ponds - Spas - Garden Lighting – Greenhouses - Garden Sheds - Inground Swimming Pools and Above Ground Swimming Pools - Sewage Pumps and Aerators – Garden Sauna – Hot Tubs – Garages – Garden Sockets*

Building regulations require any work done in the garden MUST be done by a Part P registered Electrician.

They must notify the local building regulations department and record the safety test results. Many people believe it is in their own garden and try to do it. For your family's safety, don't cut corners.

This work can be expensive to do properly. One way you can reduce the cost is to do any trenches and building works yourself.

Trenches should be 2ft deep. Always put a yellow marker tape between the underground cable and the surface and we recommend taking photos to record the cable route.

Information your electrician will require:

What equipment you want installed and its loadings.

Think about the future (may be a hot tub). This will affect the cable size. It will not cost that much more but it is the labour cost if the work has to be duplicated.

Options and what is involved and why.

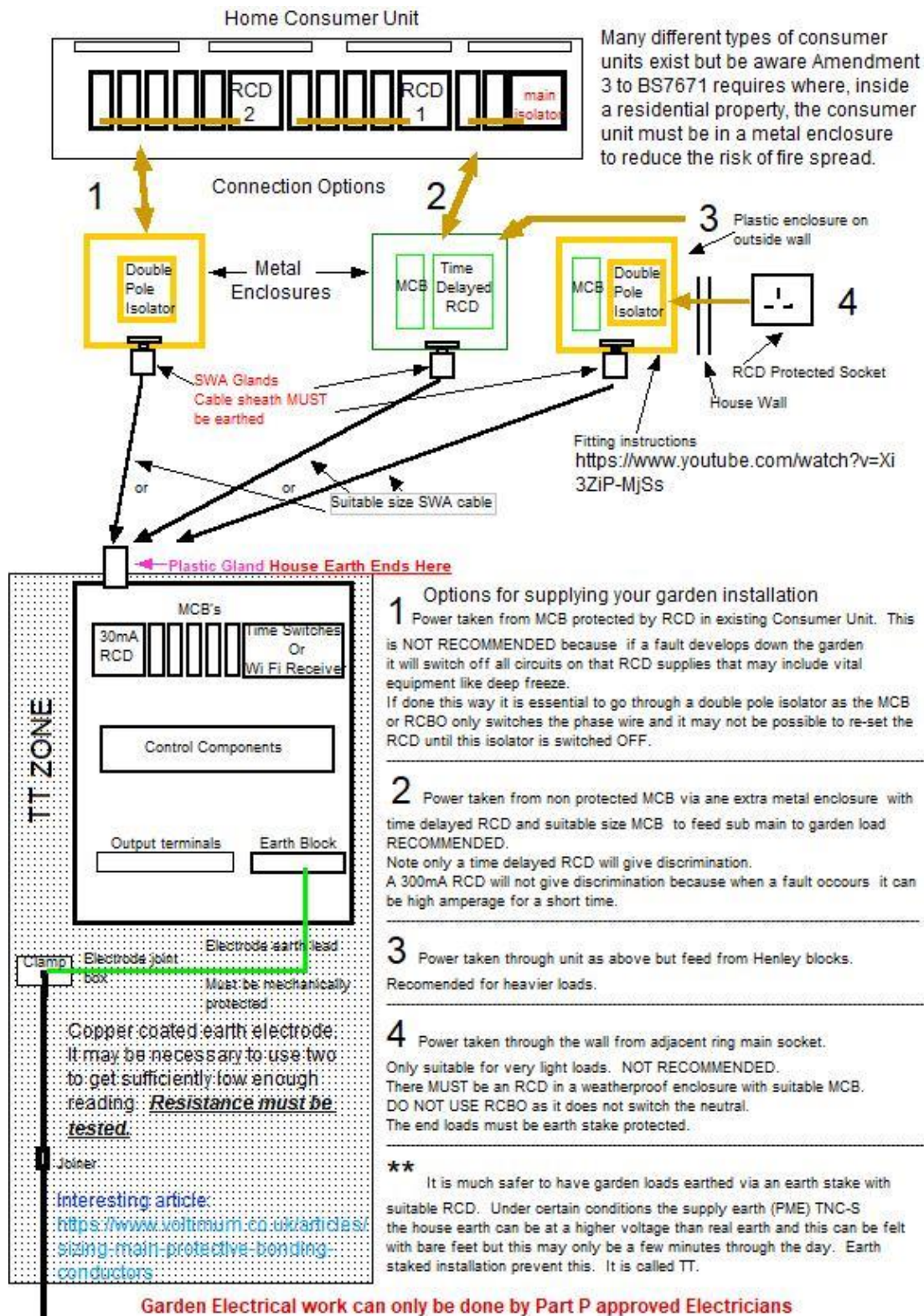
(See drawing below.)

## Inspection and Testing

BS7671 requires swimming pool installations to be tested professionally annually. This needs to be done by an electrician that has full understanding of swimming pool installations. ***This is important. It is for your family's safety.***

Common faults found on existing installations are rodent damage to cables, moisture ingress, damaged cables going to earth electrodes and/or corrosion and, often, equipment having been installed non-professionally. We would always recommend that your installation is tested by a qualified and registered electrician.

The RCD has a test button. This must be tested every three months. This testing proves that the trip still works but keeps it mechanically free. By doing this test, the time that it is supposed to trip in does not get extended by contacts growing together. Always make sure that any heating equipment is turned off when you press this button and you do not lose the prime to the pump. This testing can only be done when there is access to the mains supply position as this testing with instruments can cause RCDs within the property to trip in order to avoid fridges/freezers to defrost.



### 1 Options for supplying your garden installation

1 Power taken from MCB protected by RCD in existing Consumer Unit. This is **NOT RECOMMENDED** because if a fault develops down the garden it will switch off all circuits on that RCD supplies that may include vital equipment like deep freeze. If done this way it is essential to go through a double pole isolator as the MCB or RCBO only switches the phase wire and it may not be possible to re-set the RCD until this isolator is switched OFF.

2 Power taken from non protected MCB via an extra metal enclosure with time delayed RCD and suitable size MCB to feed sub main to garden load **RECOMMENDED**. Note only a time delayed RCD will give discrimination. A 300mA RCD will not give discrimination because when a fault occurs it can be high amperage for a short time.

3 Power taken through unit as above but feed from Henley blocks. Recommended for heavier loads.

4 Power taken through the wall from adjacent ring main socket. Only suitable for very light loads. **NOT RECOMMENDED**. There **MUST** be an RCD in a weatherproof enclosure with suitable MCB. **DO NOT USE RCBO** as it does not switch the neutral. The end loads must be earth stake protected.

★★ It is much safer to have garden loads earthed via an earth stake with suitable RCD. Under certain conditions the supply earth (PME) TNC-S the house earth can be at a higher voltage than real earth and this can be felt with bare feet but this may only be a few minutes through the day. Earth staked installation prevent this. It is called TT.