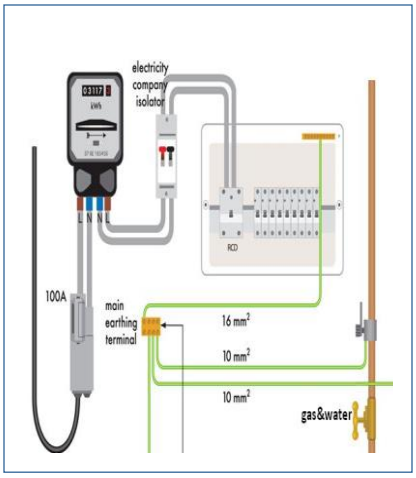
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CLIENT HELP SHEET

Explaining Earthing and Bonding



Earthing and bonding is a less 'glamorous' aspect of the work an electrician carries out in your home.

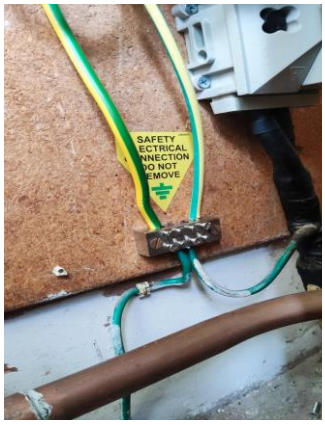
It is a highly essential safety element in your home and as the title suggests, earthing and bonding work is carried out to ensure the electrical installation in your home is correctly earthed and bonded ensuring metal surfaces such as the metal cases of cookers, washing machines, fridge freezers etc do not become live if a fault develops with the electrical installation or the appliance. Instead, the electrical current will flow down the earth connection thereby minimizing the risk of electric shock.

A qualified Part P electrician will always ensure earthing and bonding work is carried out on your electrical installation; however, this very important work is nearly always overlooked by an unqualified person.

"A qualified Part P electrician will always ensure earthing and bonding work is carried out on your electrical installation."

What is Bonding?

Bonding should not be confused with earthing. You may have heard of the term 'earth bonding' this is a meaningless term, as the earth and bonding are 2 separate connections. Bonding is a connection of metallic parts with a protective bonding conductor. As an example, a protective bonding conductor is simply a connection between a cooker and a water pipe and tap. Without the bonding conductor, a faulty oven could become live, you could touch the



oven and then touch the tap. You would then become the earth which means you would receive a potentially fatal electric shock.

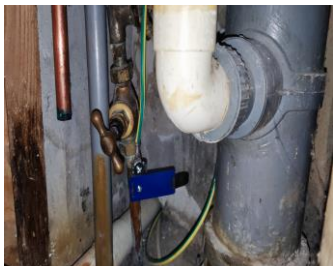
Why do we bond to gas and water?

OK so now the importance of earthing and bonding is known, why does an electrician also bond to gas and water?
Without bonding to the gas and water installation pipes, these are any pipework that are on the consumer side of meters, the risk of this pipework, that would be the pipework in your home becoming live is greatly increased. It also a very important electrical regulation and your electrical installation cannot be certified without it.

How to recognize if your home has correct earth bonding

"Remember that in order for an electrical installation to be deemed safe, satisfactory earthing AND bonding must be carried out."

To find out if your electrician has carried out earth and bonding correctly, take a look at your main gas meter. You should see a green and yellow 10mm Cable attached to it. In addition, also take a look at your main water stopcock, you should see a similar connection. Earthing and bonding work are both visually similar in terms of the green and yellow color identification. Do remember though that in order for an electrical installation to be deemed safe, satisfactory earthing AND bonding must be carried out within 600mm of the meter or stopcock.



Shem *is a qualified electrician with over 20 years experience in electrical contracting, design and installation. Shem owns and runs* ***Solid Electrics Limited****, who specializes in* ***domestic electrical*** *installations and* ***fault finding****. Having qualified in 2001 he holds a range of testing and installation qualifications.*

Solid Electrics Limited is based in Southampton and serves Hampshire area. Please visit our Web Page at www.solidelectrics.co.uk *for more information.*