

ASSISSI CENTRE

230 Rosanna Road, Rosanna

ELECTROMAGNETIC SHIELDING

OPERATING MANUAL

Date: 8th October 2013
Revision: 002

Gaussmeter Hire

Shielding Installation

EMF Remediation

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FOR ALL WARRANTY OR MAINTENANCE ISSUES PLEASE CONTACT:

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PURPOSE

Electromagnetic shielding minimizes the effects, of extremely low frequency magnetic fields produced by 50Hz power supplies, on equipment and people. Shielding of low frequency magnetic fields requires specialist design, materials and methods. ELF shielding does not provide protection from high frequency or RF (radio frequency) interference and other higher frequency fields.

EMF's are generated wherever an electrical current is present, such as in:

- Substations
- Switchboards
- Transformers
- Meters
- Cable runs
- Appliances

Electromagnetic interference with computer monitors and other electronic equipment can result in costly losses of office space, whilst also being an important consideration for developers of office and apartment buildings due to public concern over the potential adverse health effects of EMI.

The shielding installed at this location has been designed to achieve a performance rating according to the specified electrical conditions at the time of installation.

Changes to the electrical conditions may reduce the performance outcomes of the shielding.

MATERIALS & METHODS

The shielding consists of multiple layers of high permeability electrical steels. The materials do not contain hazardous substances; however, they are extremely sharp.

Sheet size varies but is approximately 2.4 metre x 1 metre.

Sheet thickness varies between 0.27mm to 1mm.

Total thickness of the shield varies from 0.5mm to a maximum thickness of 5.5 mm.

Weight of shielding varies with design and is from 10 to 32 kg per square metre.

The installation is not earthed and is not required to be earthed for it to perform the shielding function. Earthing can be arranged if requested.

Joints and penetrations

Multiple layers of shielding material are overlapped with care taken at the joins and to reduce gaps within the shield.

Fixings

Wall and soffit shielding is fixed with Ramset pins and nylon anchors to a maximum depth of 38mm.

Where wall shielding is fixed to metal stud, tek screws and pop rivets have been used.

Penetration of the shielding by nails, screws and similar is acceptable but should be avoided as much as possible.

Finishes

The finished shield consists of a shiny metallic surface with some waviness to the surface.

Shielding may be painted using only Oil-based or Kill-Rust paints. Acrylic/water based paints should not be used on the shielding.

Wall shielding has been covered over with 6mm cement sheet.

It is not recommended that shielding be left exposed in damp or humid conditions, due to its propensity to corrode.

MAINTENANCE

There are no maintenance or service requirements.

The shielding must not be permitted to get wet.

If the shielding suffers water damage, please contact EMI Shielding for advice.

Water damage causes corrosion and may reduce the performance of the shield.

Shielding may be painted using only Oil-based or Kill-Rust paint. Acrylic paints must not be used.

Removal of any part of the shielding will reduce the effectiveness of the shield and void the warranty unless a written approval is obtained from EMI Shielding beforehand.

Penetrations for fixing of services and switchboards are permitted.

Penetrations in excess of 100mm diameter and/or 6 per square metre may reduce shielding effectiveness and the client should advise EMI Shielding prior to carrying out any such works.

Contact EMI Shielding for advice before modifying any part of the shielding.

Shielding materials are extremely sharp and should not be handled.

Where EMI Shielding has given approval for handling of the shielding KEVLAR or Dyneema safety gloves and sleeves must be worn to prevent injury from sharp edges. EMI Shielding will not be responsible for loss or injury caused by failure to follow these instructions.

WARRANTY

EMI Shielding warrants the materials, workmanship and performance for a period of seven years from the date of installation being 28th June 2013

The following conditions will void the warranty:

Removal of any part of the shielding without prior written consent from EMI Shielding

Water damage to the shielding materials

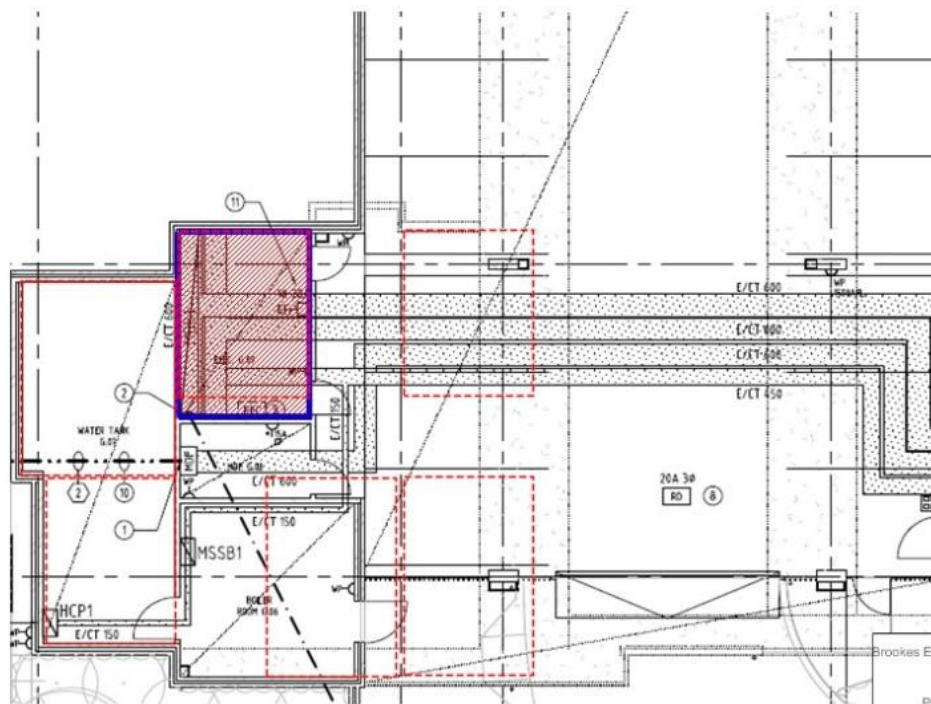
New penetrations in excess of 100mm diameter and/or 6 per square metre

Application of excessive force (e.g. hammering or scissor lifts over) to the materials that causes wrinkling, dents, tears or otherwise destroys the surface of the materials.

The shielding has been designed to achieve not more than **4milliGauss (mG)** for bedrooms and **30mG** for areas of a transient nature (lounge, meeting, treatment rooms etc). All measurements are to be taken at on metre above floor level and not less than 300mm from any shielded surface.

The design is according to the specified electrical conditions at the time of installation. Changes to the electrical conditions may reduce the performance outcomes of the shielding.

Contact EMI Shielding for advice before carrying out significant electrical upgrades.



NOT TO SCALE

 Wall Shielding

Outline of Protected Areas Above

 **Shielding to Soffit**

Brookes EMS F

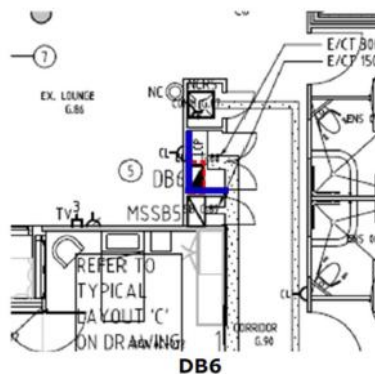
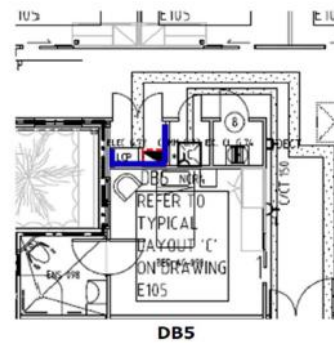
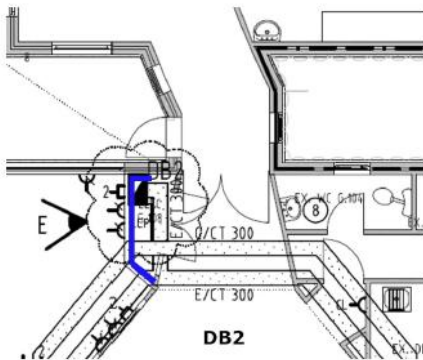
 **emi** shielding

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Assisi Centre Rosanna
Ground Level

Switchroom Shielding

24th Aug, 2012 AB1



NOT TO SCALE

 Wall Shielding

 Outline of Electrical Installation



Brookes EMS P/L t/as

emi shielding

PO Box 130, Ferntree Gully VIC 3156
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Assisi Centre Rosanna
Ground Level

Distribution Switchboard Shielding
28th June 2013 AB2