

ISSUE NO 1

FEBRUARY 2002

Electron rocks

The Board previously advised that information dissemination would be through its own newsletter. Welcome to Electron.

The first publication will be distributed to all registered electrical workers residing in New Zealand. However, future editions will only be sent to those electrical workers who hold a current practising licence as Electron is seen as part of the value added concept for those that re-licence every year. If you are registered but do not hold a current practising licence, Electron will be available at the Board's website.



Electron is a vehicle designed to give you information. Its purpose is to keep you informed about electrical matters, both technical and legislative. There will also be articles on licencing renewals, Bookshop products, audits, brochures to help you in your business, training providers, etc. In fact, we will have articles on all sorts of items that have relevance to your working life. If there are subjects that you would like to see in Electron – let us know and we will do our best to include them in future issues.

Email kay.lyons@med.govt.nz or

Fax 04 473 2395 or

Phone 0800 66 1000 and ask for Kay.

Electron is not only an information provider but also a forum for you to discuss issues that concern you. I hope you will take the opportunity to share your views. Address letters in this regard to The Editor, Electron, PO Box 10156, Wellington.

In keeping with our desire to keep you informed of any changes to legislation we are including a copy of the Electricity Amendment Act (No 2) 2001 and a copy of ECP 34 2001.

John Sickels

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Safety • Competency

New wiring rules

Seminars

Planning is underway for Standards NZ to conduct a nationwide series of seminars in the next few months aimed at outlining the key features and relevant changes incorporated in AS/NZS 3000:2000. AS/NZS 3000 is the joint Australia/New Zealand standard for the wiring of electrical installations (also known as the Australian/New Zealand Wiring Rules).

This document, along with its companion standards, is planned for citation by the Electricity Regulations 1997 in the middle of this year.

It is intended that the standards will supersede many of the existing electrical codes of practice and standard NZS 3000.

The seminar series is a prime opportunity for contractors and employers to become fully conversant with the standard.

Standards New Zealand is keen to get an indication of numbers of people interested in attending the seminar series. If you are interested and have internet access, please register this interest on website www.standards.co.nz/seminars/3000.htm

Progress on Development of AS/NZS 3000

Work on amending AS/NZS 3000, to make it ready for implementation under the Electricity Regulations 1997 is nearing completion with Amendment 2 to the joint Standard being finalised. Companion standards (e.g. AS/NZS 3004 covering boats and marinas, AS/NZS 3001 covering movable premises etc), are also in the final stages of standards committee review.

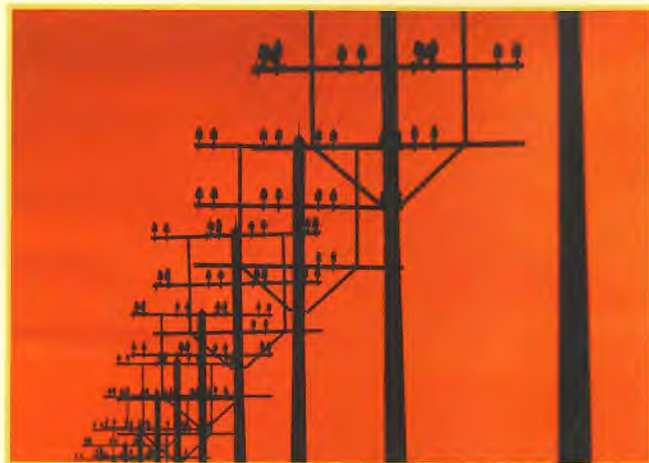
Implications of introducing AS/NZS 3000

EL1/19, the New Zealand Standards Committee responsible for the joint wiring rules, has recommended an amendment to the Electricity Regulations to implement a 'clean' changeover from the existing provisions (which recognise NZS 3000 and the electrical codes of practice) to AS/NZS 3000. Technical requirements applying to installations would be removed from the regulations, as they are contained in the new joint Standard.

The intention is that the fundamental safety requirements of AS/NZS 3000 (mainly Part 1) would be mandated while the majority of technical provisions (in Parts 2 to 7) would be cited as a means of compliance. A few technical requirements will still need to be mandated and for ease of recognition these will be specifically identified within the text of the Standard.

Differences between AS/NZS 3000 and Existing Requirements

The implementation of the joint Standard represents a significant step in terms of aligning Australian and New Zealand technical requirements for wiring of electrical installations. However the differences between the technical requirements in the present New Zealand documents and the joint Standard are not great in number.



Of the small number of technical requirement changes the most important of these is the introduction of mandatory RCDs for socket outlets and lighting circuits in domestic premises. Another is the deletion of a neutral-earth link for all switchboards fed from a submain.

There are no great surprises in the companion standards, although it is very likely that in-line RCDs will no longer be required for caravans, being replaced by a requirement for RCDs to be installed within the switchboard of these "movable premises".

At the Electrical Workers Registration Board meeting held in Wellington on 13 February 2002, Murray Willis was re-elected as Presiding Member and Barrie Mason as Deputy Presiding member for a further 12 month term.



MURRAY WILLIS
Presiding and Registered Member,
Auckland

Murray has had wide experience in the electronics and electrical industry both in New Zealand and overseas. He has held management, board and committee positions and is at present self-employed specialising in the design and construction of renewable energy generation and communication systems.

contact details
120A Pakuranga Road,
Pakuranga, Auckland,
Tel 09-577 3031
Fax 09-577 3032



BARRIE MASON
Deputy Presiding and Lay Member,
Auckland

Barrie is a business consultant and company director with a background in management, marketing and communications. For 20 years he was the New Zealand General Manager of Reader's Digest and was the founding president of the Magazine Publishers' Association. Barrie, a former member of the Auckland Regional Authority, is a court experienced Justice of the Peace, a Registered Senior Trustee, a member of the Institute of Directors and a board member of the Museum of Transport and Technology (MOTAT).

contact details
33 Sylvan Park Avenue
Milford, Auckland 9
Tel 09-489 6288
Fax 09-489 6588
Email barrie@mason.gen.nz



The difference between the impossible and the possible lies in determination.

Information circulars

The EWRB has produced a series of information circulars, primarily associated with licensing and registration matters. In the future the intention is to produce further circulars where the emphasis will be on the technical aspects of the electrical safety legislation.

The information sheets produced so far are:

- 01/01 Electrician Registration – NZ Experience and Coursework
- 02/01 Electrician Registration – Persons with Overseas Experience and Coursework
- 03/01 Electrical Service Technician Registration
- 04/01 Line Mechanic Registration
- 05/01 Warrants of Electrical Fitness
- 06/01 Certificates of Compliance
- 07/01 Electrical Inspector Registration
- 08/01 Electrician Registration – Upgrade from Electrical Service Technician
- 09/01 Electrical Service Technician – Registration Upgrade
- 10/01 Electrical Registration in New Zealand – General requirements.
- 11/01 General Information for Newly Registered Electrical Workers
- 12/01 Tradespersons Electrical Work Certificate
- 13/01 Qualified Engineers
- 14/01 Testing, Inspection and Certification of Prescribed Electrical Work
- 15/01 Electrical Registration in New Zealand – General Information for Overseas Applicants.
- 16/01 Electrical Registration and Safety Legislation – Organisation Structure
- 17/01 Electrical Worker Registration – Organisation Structure
- 18/01 Electrical Appliances – Periodic Testing
- 19/01 Provisional Licence Registration
- 20/01 Training Providers – For Safety Tuition
- 21/01 Mutual Recognition Arrangement New Zealand/Australia

Copies of the information circulars are freely available from the Board's website at www.ewrb.govt.nz or by contacting the Electrical Workers Licensing Group by phone on 0800 66 1000, or by email to licensinggroup@med.govt.nz



Installation of cables in ceiling spaces

From time to time enquiries are received requesting information on the correct means of installing installation wiring in ceiling spaces. The basic requirements are:

- The current rating of a cable must be appropriate to the rating of the circuit protection (for short circuit and overload) and for the environment in which they are located;
- There must be adequate protection against mechanical damage.
- Cables must be adequately supported.
- They must be suitable for the location in which they are installed.

Current rating – For common cables the current ratings for the standard environments are found in electrical code of practice ECP 28 and ccvNZS 3000. For a particular cable the current rating will determine the maximum rating of the protective device that can be fitted for fault and/or overload protection.



Support – Cables are required to be supported so that damage over time, due to stress at the fixings, is avoided. Regular supports also prevent cables from sagging, and therefore damage from objects hooking or snagging the cables.

In general supports for cables are required to be no more than 1 metre apart. There is a **special requirement** for cables located within 2 metres of the manhole giving access to the ceiling space where support by clips or other means is required every 300mm.

Suitability for location – The correct cable needs to be selected in regards to the effects of environmental factors such as moisture, high ambient temperatures, corrosion (e.g. contact with polystyrene) etc.

Working with Imperial Size Cables?? Read On

For those altering or working with circuits containing imperial sized cables (generally prior to the late 60's) the following table may assist in determining the suitability of the cables in regards to current rating and volt drop. The table relates to PVC, non armoured, single phase (with or without an earth) cables.

Cable	Size	Rating	Metric Equivalent	mV/A/m
1/0.044	0.0015 sq in	12.0 A	0.97 mm ²	41
3/0.029	0.002	15.0	1.29	30.6
3/0.036	0.003	19.0	1.94	20.7
7/0.029	0.0045	23.0	2.90	13.9
7/0.036	0.007	31.0	4.52	8.9
7/0.044	0.01	37.0	6.45	5.6
7/0.052	0.0145	46.0	9.35	4.2
7/0.064	0.0225	61.0	14.5	2.7

The current ratings listed assume the use of "coarse excess protection" (e.g. rewirable fuses). Where close excess protection is used a multiplying factor of 1.33 was normally applied to the rating.

The current ratings are for an environment where the cable is clipped directly to a surface or on a cable tray, is unenclosed and not bunched with other cables, and are for a maximum ambient temperature of 30° C. The ratings are reduced where thermal insulation is present; the cables are bunched, the cables are enclosed in conduit or trunking or the ambient temperature is greater than 30° C.

Current ratings are taken from The Handbook to the Electrical Wiring Regulations 1961.

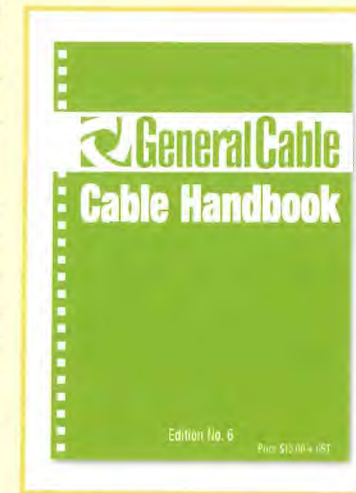


Enthusiasm is the partner of success.

Cable handbook

General Cable New Zealand Limited has produced an updated version of their cable handbook and have made it available at a modest cost.

This new edition of the handbook in A5 format includes significantly more information than previous editions. It has now been amalgamated with an updated version of Technical Publication No 7 (MM Cables Cable Selection Guide), enabling optimum cable selection using a graphical format.



As well as a greatly expanded energy section, also included is a section on communications cables. This details coaxial cables, "B" series instrumentation and control cables, telephone cables, local area network (LAN) cables and optical fibre cables.

A third section includes information on cable glands and general information of everyday use to the electrical worker.

The new handbook is based on the following documents.

NZS 3000:1997	AS/NZS 3155:1995
AS/NZS 3008.1.2:1998	AS/NZS 1995:1995
AS/NZS 5000.1:1999	AS/NZS 4193.4:1994
AS/NZS 3191:1996	NZ Electrical Codes of practice

The Cable Handbook will be of particular value to designers of electrical installations and electrical workers wishing to determine the correct size and type of cable to use without the need for extensive calculation.

The Cable Handbook is available from the Electrical Workers Licensing Group Bookshop and your local electrical wholesaler for \$16.90 GST inclusive.

If you would like to purchase this Handbook from us contact the EWLG Bookshop on 0800 66 1000 and have your credit card details handy or write to EWLG, PO Box 10 156, Wellington Attn: Bookshop, include a cheque for \$16.90 plus your postal details. Your Handbook and a receipt will be posted to you as soon as the order is completed.

Electrical safety certificates

These certificates can be used where the law does not require a Certificate of Compliance to be issued for electrical work e.g. maintenance of electrical appliances.

The certificates are not mandatory, but the Board recommends they be used to indicate to clients that fully qualified and professional electrical workers have tested the electrical work for safety.

The certificates are:

- available to electrical workers with a current practising licence only.
- free of charge.
- allocated to a particular licensed worker and are not to be transferred or used by other persons.
- to be completed with the signature and practising licence number of the electrical worker, and the date of issue.
- to be affixed to the supply cord or electrical appliance itself, or for an electrical installation, at the switchboard. Alternatively the certificate can be provided to the customer with the invoice.
- available in books of 50.

The certificates are available from ElectricalWorkers Licensing Group. For an initial supply of the certificates phone 0800 661 000, fax to 04 473 2395 or email to licensinggroup@med.govt.nz.

Please provide your name, practising licence number and mailing address. Further supplies can also be obtained by sending in the coupon enclosed with each book.

Many of you already use them and feedback has been very positive. The certificates are a positive endorsement of the work you do, they are free – take advantage of them.



Always view problems as opportunities in disguise.

Audits

Compliance not Punishment

Why do we audit work?

The Board's primary focus is to ensure the competency of registered electrical workers and the audit process is one of the tools used to measure this.

How does it affect me?

The Board requests copies of certificates of compliance to be returned to its administrative arm the Electrical Workers Licensing Group at various times during the year. These certificates of compliance provide the basis for final audit selection. The certificate of compliance numbers are taken from database records which are based on the monthly return information filled in at the point of sale. The selection process for auditing is completely random and is based on region, certificate type and month purchased.

What happens next?

Once the requested certificates of compliance are returned to the Electrical Workers Licensing Group, a range of electrical work is selected for an audit inspection.

The person who certifies the work done and the property owner are then advised by letter that the work has been selected for audit and that a registered inspector will be contacting them to arrange a suitable time to inspect the work done. If you are contacted regarding inspection of your work it is recommended that you accept the invitation to be present as the inspectors role is not only to check for compliance but also to provide advice as required. Past experience has shown that this support is appreciated by the electrical worker concerned. If the inspected work is found to be hazardous or non compliant, the homeowner is immediately notified.

Please remember – auditing is about compliance not about punishment. Inspectors are there to provide advice if needed, so try to attend if you can.



Practising licence renewal

Our annual practising licence run will begin from mid May this year.

Here are a few of the most commonly asked questions answered for your information:

Why do I have to have a practising licence?

All registered electrical workers must hold a practising licence if they carry our prescribed electrical work for reward. This is a requirement of section 95 of the Electricity Act 1992.

What does this mean to me?

Most importantly, your valid practising licence tells your clients that you are a qualified electrical professional. It proves that you are legally allowed to carry out electrical work and that you are up to date on current safety procedures. Your practising licence is an important business tool. It gives the public (your clients) reassurance about your competency.

What do I have to do?

Look out for your personalised practising licence pack from mid May. These will be mailed to the latest address we have for you on the database.

When you receive the pack, complete the personalised practising licence application enclosed, sign and return with your cheque or credit card payment for \$92.00.

What about my safety training?

To be eligible for a practising licence, your refresher courses for safe working practices, testing to ensure safety, basic first aid and CPR must be current. This requirement is detailed in regulation 26 of the Electricity Regulations 1997.

Important note:

If you know that your safety training will expire before 30 June 2002 - **UPDATE IT NOW!**

Expired or incomplete safety training is the most common reason for practising licence applications to be held up. Courses for training fill very quickly – so beat the crowds – do it now.

What if I am not doing prescribed electrical work for reward and don't need a practising licence?

If you do not need a practising licence please tell us by sending the form back with the relevant details.

Whatever you sell, the first thing you sell is yourself.

Training providers

For safe working practices, testing, basic first aid and CPR electrical workers are required to have periodic safety tuition and the following list is provided as a service to assist registered electrical workers to complete that tuition.

● = Safe working practices and testing tuition provided.

● = CPR and basic first aid training provided.

NORTH ISLAND FULL NORTH ISLAND COVERAGE

ECANZ

PH 0800 506 688 FAX 04 494 1549

TASKA RISK MANAGEMENT LTD

PH 09 836 1697 FAX 09 836 5736

M A CHOPPING LTD

PH 09 524 2402 or 021 946 326

FAX 09 524 2360

NZ RED CROSS

PH 0800 733 276

ELECTRICAL TRAINING CO

PH 0800 275 3826 FAX 09 527 6166

EMERGENCY CARE CONSULTANTS

PH 0800 707 383

NZ ELECTRICAL INSTITUTE

PH/FAX 03 455 2787

THE ORDER OF ST JOHN

PH 04 472 3600 FAX 04 499 2320

ENERGY TRAINERS LTD

PH 07 378 0033 or 025 540 967

FAX 07 378 8500

ALSTOM TRAINING SERVICES

PH 09 272 0513 or 025 509 688

FAX 09 273 7947

UTILITECH TRAINING CENTRE

PH 09 837 6354 FAX 09 837 8143

NORTHLAND

NORTHPOWER

PH 09 430 1803 or 025 744 394

FAX 09 430 1804

INNOVATIVE TRAINING SERVICES

PH 09 408 0451 or 09 430 6964

A1 FIRST AID

Ph 0800 102 233

ANDREW PEARCE ELECTRICAL LTD

PH 09 407 9606 or 025 912 072

AUCKLAND

MANUKAU INSTITUTE OF TECHNOLOGY

PH 0800 111 030 or 09 273 0726

FAX 09 524 2360

AUCKLAND UNIVERSITY OF TECHNOLOGY

PH 09 307 9999 Xtn 8714

FAX 09 307 9973

SAFETY SERVICES

PH 025 366 325 FAX 09 275 5095

ELECTRICAL SAFETY COMPANY

PH 09 299 9123 FAX 09 299 9893

FIRST AID NZ LTD

PH 09 480 0182 FAX 09 480 4326

A1 FIRST AID

PH 09 836 6677 FAX 09 836 6688

BRUCE GOSLING ELECTRICAL

PH 09 849 2391 or 021 621 112

FAX 09 849 2391

EMERGENCY CARE CONSULTANTS

PH 0800 707 383 FAX 09 489 7580

ORDER OF ST JOHN

PH 09 579 1015 FAX 09 526 0557

PROFESSIONAL FIRST AID TRAINING LTD

PH 09 426 0965

FIRST RESPONSE TRAINING ASSOCS LTD

PH 0508 MEDICS or 021 804 872

FAX 09 273 9697

I B TRAINING

PH 09 811 8771 FAX 09 811 8771

TOPLINE TRAINING

PH 025 511 931

NZ RED CROSS

PH 09 377 8185 or 025 510 343

G & D ENTERPRISES

MOB 025 879 959

HAMILTON

TASMAN TRADE TRAINING CENTRE

PH/FAX 07 323 3927

COLIN WOOD CONSULTANCY

PH/FAX 07 856 0337

Training providers cont.

WAIKATO INSTITUTE OF TECHNOLOGY
PH 07 834 8834 FAX 07 858 0214

ORDER OF ST JOHN
PH 07 847 2849 FAX 07 847 2850

A1 FIRST AID
PH 0800 102 233

LIFE CARE CONSULTANTS LTD
PH 07 850 8250 or 027 4832 634
FAX 07 850 9079

EMERGENCY CARE CONSULTANTS
PH 07 843 0478 or 027 4832 364
FAX 07 843 0459

TAURANGA/ROTORUA/BAY OF PLENTY

BAY OF PLENTY POLYTECHNIC
PH 07 544 0920 XTN 6618 FAX 07 544 2386

ORDER OF ST JOHN
PH 07 578 6746 FAX 07 578 1368

WAIARIKI POLYTECHNIC
PH 07 346 8999 or 07 346 8735
FAX 07 346 8743

POWER SOLUTIONS
PH 07 347 8385 or 025 958 175
FAX 07 347 8321

A1 FIRST AID
PH 0800 102 233

TURCO ENTERPRISES
07 571 4335

ELECTRICAL INSPECTION AND SERVICES
PH 07 348 8220 or 021 444 679

TAUPO

TEAMPOWER LTD
PH 07 377 3527 or 025 333 593
FAX 07 377 1581

GISBORNE/HAWKES BAY

ECIS
PH 025 285 4677 or 025 285 4675



NAPIER/HASTINGS

TALBOT ELECTRICAL
PH 06 876 6436 or 025 430 440
FAX 06 876 4677

EIT HAWKES BAY
PH 06 844 8710 XTN 5217 FAX 06 844 1910

NOEL ALDERTON
PH 06 844 3565 or 025 453 375

HAWKES BAY ELECTRICAL INSPECTION SERVICES
PH 06 843 7297 or 025 417 486

PROFESSIONAL FIRST AID TRAINING LTD
PH 06 843 5259

RICK BOWKER
PH 06 844 2496 or 025 497 205

NEW PLYMOUTH

EMERGENCY CARE CONSULTANTS
PH 06 751 1101 or 0800 707 383
FAX 06 751 1120

TARANAKI POLYTECHNIC
PH 06 757 6625 FAX 06 757 8261

FIRST AID SPECIALISTS
PH 06 758 4738

WEST MICROWAVE AND APPLIANCE SERVICES
PH 06 757 8149 or 025 947 242
FAX 759 0171

RINALDI ELECTRICAL SERVICES
PH 06 765 5453 or 025 453 108

ELECTRICAL SAFETY SERVICES
PH 06 759 1066 or 025 238 6650
FAX 06 759 4066

PARAMED LTD
PH 06 753 7874 or 06 751 0677

HAWERA

G-TECH LTD
PH 06 278 7761 or 025 499 290
FAX 06 278 7761

PALMERSTON NORTH

EMERGENCY CARE CONSULTANTS
PH 06 751 1101 or 0800 707 383
FAX 06 751 1120



UNIVERSAL COLLEGE OF LEARNING
PH 06 952 7000 FAX 06 952 7002

ORDER OF ST JOHN
0800 909 900 or 06 355 5051
FAX 06 355 0771

LINKS LIMITED
PH 06 355 0789 FAX 06 354 5246

MIDWAY OCCUPATIONAL HEALTH SERVICE
PH/FAX 06 358 1616 or 025 303 325

OCCUPATIONAL SUPPORT SERVICES
PH 06 353 7060 or FAX 06 356 4006

WANGANUI

EMERGENCY CARE CONSULTANTS
PH 06 751 1101 or 0800 707 383
FAX 06 751 1120

WALKER AND THOMAS ELECTRICAL
PH 06 344 7503 FAX 06 344 5959

LEVIN/HOROWHENUA

LEVIN SPECIALIST TRAINING
PH 06 368 3333

WAIRARAPA

NZ ELECTRICAL INSTITUTE
06 379 7953 or 025 404 029

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PH 04 920 2533 FAX 04 920 2469

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PH 04 234 1155

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PH 04 527 7267 FAX 04 528 4405

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04 479 7647

COMPUTER ELECTRICAL & DATA SYSTEMS LTD
PH 04 566 5535 FAX 04 566 5753

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PH 04 568 8968 FAX 04 568 3571

FAST AID LIMITED
PH 04 902 5303 or 025 862 252
FAX 04 902 5303



OK HEALTH
PH 0800 654 325 or 04 568 7128
FAX 04 568 0090

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025 247 7859, Fax 06 356 8025

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EMERGENCY CARE CONSULTANTS
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NZ ELECTRICAL INSTITUTE
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ALSTOM TRAINING SERVICES
PH 09 272 0513 FAX 09 273 7947

UTILITECH TRAINING CENTRE
PH 09 837 6354 FAX 09 837 8143

NELSON

KEITH ALDREN TRAINING SERVICES
PH 03 548 8100 or 025 470 865

HERB EDIE
PH 03 546 8575 or 025 838 343

ORDER OF ST JOHN
PH/FAX 03 546 7420



Training providers cont.

PRECIOUS PEOPLE

PH 0800 7283 2543 or 03 548 0774
FAX 03 548 0786

BLLENHEIM

ELECTRICAL INSPECTION SERVICES
PH 03 578 8668

HOKITIKA

AERIAL ELECTRIC
PH/FAX 03 755 6622 or PH 025 322 212

GREYMOUTH

JIM OHARA
PH 03 762 7378 or 025 273 9418

ORDER OF ST JOHN
PH 03 768 5417 FAX 03 768 5661

WELTEC
PH 027 418 673 or 03 732 4133 (a/h)

CHRISTCHURCH

CHRISTCHURCH POLYTECHNIC
PH 03 364 9645

ORDER OF ST JOHN
PH 03 366 4776 FAX 03 353 7112

ELECTRICITY ASHBURTON
PH 03 307 9800 FAX 03 307 9801

EMERGENCY CARE CONSULTANTS
PH 03 312 2406 or 0800 707 383
FAX 03 312 2407

INDEPENDENT MEDICAL SERVICES
PH 03 366 1931 FAX 365 0291

AVO NEW ZEALAND
PH 03 348 5999 FAX 03 348 5993

OCCUPATIONAL SAFETY MANAGEMENT NZ LTD
PH 03 377 4199 FAX 377 4198

CITY FIRST AID TRAINING LTD
PH 03 326 5067 FAX 03 326 5061

OAMARU

PETER COUGHLAN
PH 03 434 5478

JOHN MURRAY
PH 03 434 7322

TIMARU

TONY HILL
PH 03 434 8557

NZ ELECTRICAL INSTITUTE
PH 03 688 8545

DUNEDIN

DELTA UTILITY SERVICES LTD
PH 03 474 0322, 03 479 6672 or 025 284 3637

ORDER OF ST JOHN
PH 0800 ST JOHN (0800 785 646)
FAX 03 477 7994

ELECTRICAL TRAINING COMPANY LTD
PH 0800 488 867 or 025 292 0146

NZ ELECTRICAL INSTITUTE
PH/FAX 03 454 5468

CENTRAL OTAGO

IAN WESTERGAARD
PH/FAX 03 445 2333

NZ ELECTRICAL INSTITUTE
PH/FAX 03 448 8330

OTAGO

ELECTRICAL SERVICE PROVIDERS
PH 03 418 2623

EMERGENCY CARE CONSULTANTS
PH 03 454 5355 or 0800 707 383
FAX 03 454 5985

RAYMOND HALL
PH/FAX 03 476 1007 or 025 363 663

GORE

BD ELECTRICAL
PH 03 208 1994 or 025 352 248

INVERCARGILL

SOUTHERN INSTITUTE OF TECHNOLOGY
PH 03 218 2599 XTN 834
FAX 03 218 1629

POWER NET LIMITED
PH 03 217 1899 FAX 03 217 1880

Keeping Contact with Customers

EWLG receives a steady stream of enquiries from the public requesting contact details of electrical workers who have carried out electrical wiring work, or have carried out inspection of their electrical installation. Often the only paperwork the public can find is a Certificate of Compliance (COC) and the only contact details on this is that of the Board. The privacy legislation means that it is often difficult for the Board to provide the public with the contact information they require.

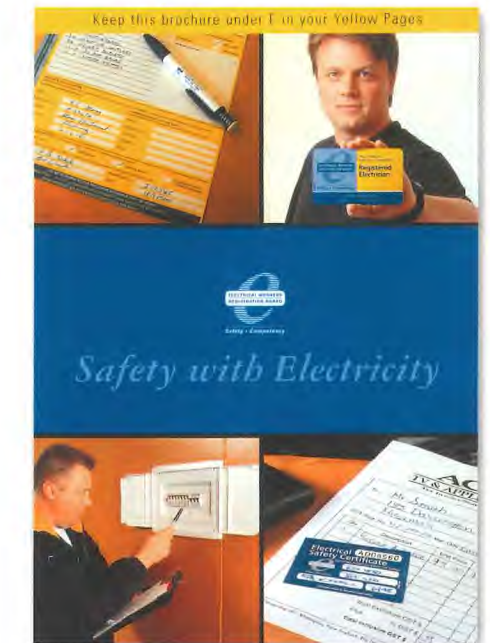
In order to assist electrical workers and customers to maintain contact with one another the next reprint of Certificates of Compliance will include a space for electrical workers to include their contact telephone number.

In the meantime why not stamp the COC with the contact details for your company (or staple a business card to the COC), so that the customer knows who to contact for future electrical work.



Safety with electricity brochures

To also help you keep your name in front of your clients, we have available a brochure called Safety with Electricity. This brochure contains information for the general public about certificates of compliance, electrical safety certificates and the advantages of using a licensed electrical worker. On the back cover is an area for you to stamp your contact details so that your client knows who to contact should they need more work done. They are free to valid practising licence holders.



Work smart – get some now!

Phone Kay on 0800 66 1000

Fax 04 473 2395

Email kay.lyons@med.govt.nz

or write to EWLG, PO Box 10156, Wellington



Technical corner

We continue with this very popular series. If you have technical queries, or you require clarification – send them to kay.lyons@med.govt.nz or post to EWLG, PO Box 10156, Wellington.

The questions and answers presented here are as the result of technical enquiries to the Electrical Workers Licensing Group.

The assistance of the Energy Safety Service, Ministry of Consumer Affairs is acknowledged in ensuring the correctness of the answers.

Q I have been asked to replace metal light fittings approximately 7 metres up on a wooden pole. The existing lights are supplied by a single core neutral screened cable with the metalwork of the light fittings being connected to the neutral. Am I permitted to replace the fittings without having to alter the supply wiring or do I need to make other arrangements to earth the metalwork of the new fittings?

A Yes. The new fittings may be connected to the existing wiring in the same manner as the previous (regulation 68 applies). However if the wiring is altered or extended earthing arrangements for any new fittings would need to be made or the provisions of regulation 84 applied.

Q I am a registered electrician and own a rental property. Do I require a practising licence to do electrical maintenance on that property?

A Yes. Where prescribed electrical work is done for reward, the registered electrician must hold a practising licence. If you carry out work on your rental property you are considered to be carrying out electrical work for reward.

Q What is the permissible voltage drop for an installation and where is the "point of supply" (where voltage drop requirements start)?

A The maximum allowable volt drop for an electrical installation operating at standard low voltage (230/400 system) is 5%. This applies from the "point of supply" to a socket outlet or to the supply terminals of any fixed wired appliance. The "point of supply" will normally be the point at which the main supply cable (mains) enters the property (premises).

As the 5% applies from the beginning of the mains to the end of the sub-circuits the allowance must be shared between the various parts of an electrical installation. The general recommendation is that no more than half of the allowance be allocated to the mains and the remainder be used for the sub-circuits.

Green Slime Syndrome

Q What is the green fluid discharging from a TPS cable in a house I am rewiring and what can I do about it?

A The green fluid (sometimes called a green slime) is caused by a chemical reaction between the conductor insulation and the copper wire. This can be a problem with TPS cables produced in the early 1970s. The fluid is said to be non-conducting and discharge is generally very slow. Minor staining can be removed with methylated spirits.

There have been cases of the fluid causing a fault at the electrical fittings, possibly due to the fluid attracting dust or dirt.

If in any doubt about the condition of the cable as the result of the fluid it is suggested the cable be replaced.

Electrical Appliance Testing

Q I am concerned that a 500 volt insulation resistance test required by AS/NZS 3760 could damage the electronics of the appliance I have just repaired. What are my alternatives and is the carrying out of an insulation resistance test a mandatory requirement?

A Where there is concern that an insulation resistance test could cause damage to electronic equipment the advice of the manufacturer should be sought.

A note to clause 1.1 of AS/NZS 3760 warns that damage could occur to electronic equipment if not tested in accordance with the manufacturers instructions.

The standard allows for a leakage current test to be carried out as an alternative to the insulation resistance test.

Q Electrical appliances made to an international standard that have been imported and I have been asked to change the plugs on the flexible cord from an overseas type to the New Zealand 3 pin, flat pin type.

1. Is the changing of the plug, together with the test report to the international standard, sufficient proof that the products are acceptable for sale in New Zealand?

2. Is it necessary to change the plug or could an adapter plug be supplied with the product at the point of sale?

A No. In order for an electrical appliance to be sold in New Zealand it is required to be electrically safe and this is normally confirmed by compliance with a relevant electrical safety standard. While the joint Australia/New Zealand standards for appliances are based on international documents there can be some differences which need addressing before a product can be said to be fully compliant with NZ safety requirements.

Yes. It is necessary to change the plug to one which is compatible with New Zealand socket outlets. The supply of an adapter is not an acceptable alternative.

Warrants of electrical fitness

Under the Electricity Regulations 1997 (regulation 97) a Warrant of Electrical Fitness (WEOF) may be issued to reconfirm the essential electrical safety requirements of "connectable installations" i.e. electrical installations of caravans, vehicles, pleasure vessels (boats) and relocatable buildings.

WHEN A WEOF IS REQUIRED

A WEOF is required for a connectable installation to be legally connected to the electricity supply. See regulation 98(5).

A WEOF is also required when a vehicle, relocatable building or pleasure vessel containing a connectable installation is hired out or leased.

See regulations 97(4).

WHO MAY ISSUE A WEOF

A WEOF may be issued by:

- A Registered Electrical Inspector having a valid practising license; or
- A Person authorised for the purpose by the Secretary (of Economic Development).

EXAMINATION AND TESTING REQUIREMENTS

Vehicles and Relocatable Buildings

These are required to be examined and tested in accordance with section 5 of ECP 1. Vehicles include campervans, house-trucks; fire engines, ambulances etc.

Pleasure vessels

These are to be examined and tested in accordance with section 6 of ECP 29.

In general a pleasure vessel is a boat that is used exclusively for the owners pleasure or the owners residence, and is not offered or used for hire or reward.

See clause 1.3.7 of ECP 29.

PERIOD OF VALIDITY

A WEOF is valid for a maximum period of 48 months and expires on 31 January of the relevant year.

WHERE WEOF (FORMS AND STICKERS) CAN BE OBTAINED

Warrants of Electrical Fitness can be purchased, by registered electrical inspectors, at a cost of \$1.00 each (GST incl.), from the Electrical Workers Licensing Group Bookshop PO Box 10156, Wellington. Payment with orders for quantities of 20 or less. Make cheques payable to "Electrical Workers Registration Board".

Notes:

1. The Electricity Regulations 1997, and electrical codes of practice for caravans (ECP 1) and pleasure vessels (ECP 29), are available from the Electrical Workers Licensing Group Bookshop
2. A Certificate of Compliance must be issued if wiring work is carried out on a connectable installation, irrespective of a WEOF being held or obtained.
3. At the date of issue of this information sheet the requirements for a WEOF outlined in standard NZS 3000 (clause 602) are not recognised for the purposes of regulation 97 of the Electricity Regulations 1997.

New electrotechnology reference textbook

Electrotechnology: Principles and Practice is an authoritative resource for the electrotechnology industry. Written by staff of the Open Polytechnic of New Zealand, the textbook builds on the popular *Electrical Theory and Practice* issued by the Technical Correspondence Institute in the 1970s.

The book covers basic theory, the fundamentals of electrical circuits, and the operation and installation of electrical equipment. A large number of clear diagrams support the text.

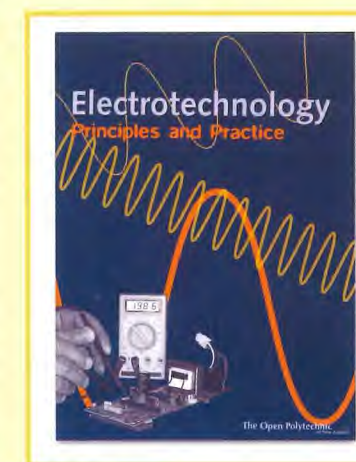
The book is a handy reference for electrical trainees because it assumes no prior knowledge and fully explains the terms and processes in clear language, backed up by illustrations. Experienced electrical workers will find the textbook useful in reviewing their knowledge.

The Electrical Workers Registration Board (EWRB) and the Electrotechnology Industry Training Organisation (ETITO) have endorsed

the textbook for New Zealand conditions. Several technical colleges in Australia have reviewed the publication for use in that country, and indications are that it is being very favourably received.

The 566 page textbook (280 x 210 mm, soft cover) *Electrotechnology: Principles and Practice* is available from Open Mind Publishing and the Electrical Workers Licensing Group Bookshop for \$75.00.

For further information or to purchase a copy contact: Open Mind Publishing, The Open Polytechnic of New Zealand, Private Bay 31914, Lower Hutt. Telephone 0508 507 333, Facsimile 04 560 5658, Email openmindorders@topnz.ac.nz Website: www.openmindpublishing.co.nz or Electrical Workers Licensing Group, PO Box 10156, Wellington. Telephone 0800 661 000, Facsimile 04 473 2395



New Codes Planned for Homeowner and Appliance Owner Work

ECP 50 and ECP 51 address homeowner and appliance owner work. ECP 50 covers work on domestic fittings and electrical appliances and ECP 51 covers electrical wiring work in domestic installations and on caravans and pleasure vessels.

The Energy Safety Service has rewritten these two codes to make them more accessible to non-technical people. Once finalised, they will replace the original ECP's approved in 1993. The draft Codes have been sent out for public consultation and comment.

Apart from many editorial changes to both codes, the main differences between the 1993 version and the revised versions are as follows:

ECP 50 has been expanded to include:

- Supply leads for caravans and pleasure vessels.
- Repairing a blown fuse.
- Testing fuses.
- Replacing fuse carriers with plug in circuit breakers.
- Procedures for connecting conductors of flexible cord.

ECP 51 has been expanded to include requirements for:

- Testing and certification.
- Residual current device(s) (RCDs).
- Main switchboard layout.
- Damp situations.
- Recessed luminaires and auxiliary equipment.
- Wiring work on caravans and pleasure vessels.
- Electrical safety checks.

Comment is invited on these two draft codes, by Friday 29 March 2002. For further information including a copy of the draft, email info@ess.govt.nz or contact the Support Officer, Energy Safety Service, Ministry of Consumer Affairs, PO Box 1473, Wellington Fax 64-4-460 1365, Phone 64-4-4720 030.



New Electrical Code of Practice for Electrical Safe Distances

The review of Electrical Code of Practice (ECP) 34, which covers electrical safe distances, has now been completed. The Minister of Energy approved the amended ECP on 21 December 2001.

The review process was both extensive and robust, with wide industry participation. The amended ECP includes requirements that were previously contained in the Electricity Regulations 1997. Compliance with this Code is mandatory.

ECP 34 has been clarified to make it easier to verify safe distances for construction from overhead electric power lines and when engineering advice needs to be sought.

ECP 34: 2001 is accessible on the Energy Safety Service website www.ess.govt.nz or copies can be obtained from the Electrical Workers Licensing Group Freephone 0800 66 1000.



Signs seen around the world

Cocktail lounge, Norway:

Ladies are requested not to have children in the bar.

At a Budapest zoo:

Please do not feed the animals. If you have any suitable food, give it to the guard on duty.

Doctors office, Rome:

Specialist in women and other diseases.

Hotel, Acapulco:

The manager has personally passed all the water served here.

In a Nairobi restaurant:

Customers who find our waitresses rude ought to see the manager.



Final thoughts from the Editor – I want to be a bear

If you're a bear, you get to hibernate. You do nothing but sleep for six months. I could deal with that.

Before you hibernate, you're supposed to eat yourself stupid. Then take a dump in the woods. I could deal with that too.

If you're a mama bear, everyone knows you mean business. You swat anyone who bothers your cubs. If your cubs get out of line, you swat them too. I could deal with that.

If you're a bear, your mate EXPECTS you to wake up growling. He EXPECTS that you will have hairy legs and excess body fat.

I wanna be a bear.



Electricity Amendment Act (No 2) 2001

Public Act 2001 No 64

Date of assent 26 September 2001

Commencement see section 2

Contents

1	Title	3	Disciplinary offence defined
2	Commencement	4	Regulations

The Parliament of New Zealand enacts as follows:

- Title**
 - (1) This Act is the Electricity Amendment Act (No 2) 2001.
 - (2) In this Act, the Electricity Act 1992 is called "the principal Act".
- Commencement**

This Act comes into force on the day after the date on which it receives the Royal assent.
- Disciplinary offence defined**

Section 118(1)(b) of the principal Act is amended by adding the words "or having carried out or caused to be carried out any prescribed electrical work".
- Regulations**
 - (1) Section 169(2)(a) of the principal Act is amended by adding the words "or any official standard".
 - (2) Section 169(2)(b) of the principal Act is amended by inserting, after subparagraph (i), the following subparagraph:

"(ia) any official standard, or any part of an official standard; or".

Amendment to the Electricity Act 1992

Attached as part of this newsletter is a copy of an amendment to the Act, originally issued in September 2001.

The amendment covers two aspects:

Section 118

The disciplinary offences have been extended to include electrical work creating risks and hazards.

Previously the section (118(1)(b) covered faulty or improper fittings but did not cover the work associated with installing the fittings.

Section 169

The section has been amended to allow official standards to be used in the same way as electrical codes of practice.

Previously proof of compliance with regulations could be achieved by compliance with certain electrical codes of practice, but this provision did not extend to official standards.

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Snowmen fall from Heaven unassembled.



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Electricity Amendment Act (No 2) 2001

2001 No 64

(3) Section 169 of the principal Act is amended by inserting, after subsection (2), the following subsections:

“(2A) Regulations may require compliance with an official standard (or a specified part of an official standard) that relates to the subject matter of the regulations by referring to it in the regulations (with any additions or variations that may be specified in the regulations).

“(2B) That official standard (or the specified part), as it existed on the date of the inclusion (but with any specified additions or variations), is then deemed to form part of the regulations.”

Legislative history

20 September 2001

Divided from Statutes Amendment Bill (Bill 97-2),

26 September 2001

third reading
Royal assent

This Act is administered in the Ministry of Economic Development.



Safety • Competency