



10 December 2009

Dr Ian Holland  
Committee Secretary  
Senate Standing Committee on Environment and the Arts  
PO Box 6100  
Parliament House  
CANBERRA ACT 2600

Dear Dr Holland

Thank you for your email of 4 December 2009 calling for submissions with regard to an Inquiry into the Government's Energy Efficient Homes Package.

The Construction and Property Services Industry Skills Council (CPSISC) would like to make a submission in response to terms of reference Part iii B and F. CPSISC is the National Skills Council for Construction and Property Services and one of our key roles is to support the development, implementation and continuous improvement of high quality nationally recognised training products and services.

In May 2009, the Department of Environment, Water Heritage and the Arts (DEHWA) contracted CPSISC to produce a range of training resources for Registered Training Providers and a booklet for installers of ceiling insulation. CPSISC worked with a large Industry Training Advisory Group appointed by DEHWA including players such as the Master Builders Australia, Housing Industry Association, CFMEU, Ceiling Insulation representatives and licensing bodies to produce the resources.

The first task prior to producing the resources was to map existing competency standards to ascertain their adequacy to support the job functions required in the program. The following four units were identified:-

- CPCCOHS2001A Apply OH&S requirements, policies, procedures in the construction industry;
- CPCCCM1006A Work Safely at heights;
- CPCCPB3014A Install batt insulation products; and
- Partial coverage of CPCCPB3015A Install acoustic and thermal environmental protection systems.

The Training Advisory Group drafted a revised unit of competency covering all functions and based resources on the draft unit. It was not lodged for endorsement at that time due to time constraints in launching the program.

Our Ref:  
L09.0165.ar

The materials available for Registered Training Providers and on the CPSISC web site [www.cpsisc.com.au](http://www.cpsisc.com.au) (click on Resources) from 1 July 2009 included:-

- Training Delivery Guide
- RPL Assessment
- Assessment Guide
- Assessment instrument.

A pocket book guide for installers of insulation and a power-point presentation for training providers was available from 1 August 2009. Both DEWHA and the Department of Education, Employment and Workplace Relations ran workshops for training providers in every state and territory throughout July 2009 to brief them on the new program and on the materials available.

The materials provide clear warnings of the dangers associated with installing ceiling insulation, particularly electrocution. For example the booklet (Version 1) shows on page 35 a figure being electrocuted stapling batts to ceiling joists. It is understood that one of the QLD fatalities was due to this error of judgement. Similarly, on pages 91-92 issues around clearances for down-lights are detailed and minimum clearances stipulated. The booklet was cleared with the ElectroComms and Energy Utilities Industry Skills Council - EE-Oz prior to being publicly available on 1 August 2009.

In light of fatalities in QLD, CPSISC met with EE-Oz to once again look at current units of competency and to review the current training materials to include additional information on identifying different types of electrical wiring. A copy of the changes which were cleared with the Training Advisory Group is enclosed as Attachment A. The purpose of the changes was to strengthen electrical safety messages, hazard identification and control. The changes were really about fine tuning quality resources. The draft unit of competency is now being lodged with the National Quality Council for endorsement following clearance with regulators. DEWHA have also produced a mandatory risk assessment template to strengthen safety messages.

At the end of the day CPSISC was contracted to develop quality training materials which was done. These materials have been further refined in light of experience. Commonsense in the workplace, quality training by providers and employers and employees taking responsibility for their own workplace safety is the way to reduce further fatalities. The Construction industry is high risk with an average of 35 fatalities a year in Australia despite great OH&S standards and severe penalties for non compliance. With up to 10,000 homes a day being insulated and people working in confined spaces, with heat issues, close to electrical wires and at heights there remains the risk of further injuries. We have just on a million workers in the Construction Industry in Australia and this is likely to expand in the future.

Kind regards

A handwritten signature in black ink, appearing to read "Alan", is positioned above the printed name.

Alan Ross  
CEO

## Summary of changes to DEWHA insulation materials November 2009

### DELIVERY GUIDE

| Page/section  | Modifications to encompass risk assessment and/or knowledge of electrical hazards  |
|---|--|
| p14, table  | Include advice about risk of electrocution   |
| p19, learning outcomes                                  | To be slightly modified to highlight risk of electrocution   |
| p19, key coverage                                       | Point 2 specify 'risk assessment'  |
| p20, competency area 2, delivery outline, point 2       | Include electrical hazards and how these are identified (must include type, condition and position of electrical cabling)<br>Modify text to "For each hazard, explain the associated risks, and recommended control methods. Allow learners to practice completing a risk assessment. Highlight situations which require the advice of specialists to be sought (eg an electrician or asbestos consultant)." |
| p20, competency area 2, delivery outline, point 3       | Note that PPE can act as an insulator and items such as leather gloves, rubber soled shoes etc can help to reduce severity of electric shock.  |
| p21, competency area 2, assessment methods and criteria | Include electrical hazards as a dot point<br>Also include "Learner should be able to demonstrate completion of a risk assessment"  |
| p23, competency area 3, delivery outline, point 1       | Insert "Note that some electrical cables can corrode if they come into contact with polyurethane or polystyrene types of thermal insulation. Where contact is likely, work must not proceed until cables have been protected by a licensed electrical contractor"  |
| p23, competency area 3, delivery outline, point 6       | Insert "Warn learners that some fixing methods can damage electrical cables (ie using fixing nails, pins, cleats or staples), and of the dangers associated with the practice of stapling (particularly RFLs)."  |
| p24, competency area 3, delivery outline, point 8       | Insert "Include procedures for turning off/isolating power to the building."   |
| p24, competency area 3, assessment methods and criteria | Insert additional wording in installation procedures "including power on/off, fixing materials and methods and their impact on electrical cables ..."  |
| p25, work project, objective 1, Task 2                  | Modify text "Identify the safety, legislative, environmental and organisational requirements which will impact on installation (particularly relating to electrical and building regulations, eg downlights may need covers/barriers etc)"   |
| p25, work project, objective 1, Task 3                  | Include text "and location of ceiling downlights."   |
| p25, work project, objective 1, Task 7                  | Reword to "Identify and control existing and potential risks and hazards in the work area by checking the ceiling space, conducting a risk assessment, confirming the type, position and condition of electrical cabling and downlights. Obtain specialist advice if needed (eg licensed electrician, asbestos consultant etc). Turn off/isolate power to building."   |
|   | p26, objective 3, task 14: include text "Turn on power."   |

## ASSESSMENT GUIDE

| Page/section  | Modifications to encompass risk assessment and/or knowledge of electrical hazards  |
|---|--|
| p1, overview:   | Delete fourth dot point re partial coverage of unit.<br>Next para include "Depending on the RTO's scope, the training program also may provide possible partial coverage of CPCCPB3015A Install acoustic and thermal environmental protection systems."  |
| p12, gathering evidence   | Modify text "records and documentation (eg completed risk assessment form)"  |
| p20, analysis of competency summary, element 2:   | Portfolio of evidence to include "... completed risk assessment"<br>Observation to include "application of procedures to check for risks and hazards"<br>Questioning to include "knowledge of hazards particularly types of electrical hazards, risk control methods, risk assessment process"   |
| p22, analysis of work activities, work domain: plan and prepare   | Include "Conduct risk assessment including type, location and condition of electrical cabling" and "locate position of ceiling downlights"   |
| p28, work project, objective 1, task 2  | First dot point include text "eg downlights may need covers/barriers etc"  |
| p28, work project, objective 1, task 3  | Second dot point include text "and location of ceiling downlights". Comments section to include "and location of downlights"   |
| p29, work project, objective 1, task 7  | Include 3 new dot points: <ul style="list-style-type: none"> <li>• Conduct a risk assessment</li> <li>• Confirm type, position and condition of electrical cabling and downlights</li> <li>• Obtain specialist advice if required (eg licensed electrician/asbestos consultant etc).</li> </ul> Comments section to include "Effective completion of risk assessment" and "Demonstrated knowledge of risks associated with electrical cabling" |
| p32, record of assessment of work project   | Insert new dot points: <ul style="list-style-type: none"> <li>• Was an effective risk assessment conducted?</li> <li>• Were ceiling downlights accurately located prior to commencing work?</li> <li>• Were the types, condition and position of electrical cabling accurately assessed?</li> <li>• Was specialist advice sought as required (eg from licensed electrician, asbestos consultant etc)?</li> </ul>                               |
| p33, record of assessment of work project, Supporting workplace documents/records (provided by the learner) | Insert "completed risk assessment document"  |

| Page/section                                  | Modifications to encompass risk assessment and/or knowledge of electrical hazards   |
|---|---|
| p34, questions and key points, Q3             | Insert "To conduct a risk assessment of the work area"  |
| p34, questions and key points, Q4             | Insert "To provide workers with a risk assessment proforma"   |
| p35, questions and key points, Q5             | Include:<br>"conducting a risk assessment"<br>"using tools that are non-conductive or have insulated handles to minimise the risk of electrocution"   |
| p36, questions and key points, Q10            | Modify electrical hazards to include text "(including those relating to type, condition and position of electrical cabling, and insulation fixing methods eg stapling)"   |
| p37, questions and key points, Q14            | Insert "leather" before "gloves"  |
| p40, questions and key points, Q26            | Insert Australian Standards titles for other insulations, dust and respirators and working at heights (to match pocketbook)   |
| p40, questions and key points, Q27            | Insert "seek advice from a licensed electrician"  |
| p41, questions and key points, Q28            | Insert "Seek advice from an asbestos consultant"  |
| p41, questions and key points, Q31            | Insert "Turning off or isolating power to the building before commencing work"  |
| p41, questions and key points, insert new Q31 | Q31: What practices could increase the chance of electric shock? Using staples, not wearing PPE, not conducting a risk assessment, not checking cabling, not enlisting advice of licensed electrician etc<br>Remaining questions and references throughout all docs would need to be renumbered   |
| p43, third party evidence report              | Include dot points: <ul style="list-style-type: none"> <li>• Is the learner able to conduct an effective risk assessment?</li> <li>• Is the learner able to accurately locate ceiling downlights prior to commencing work?</li> <li>• Can the learner accurately identify and assess the types, condition and position of electrical cabling?</li> <li>• Does the learner recognise when specialist advice should be sought (eg from licensed electrician, asbestos consultant etc)?</li> </ul> |

## ASSESSMENT INSTRUMENT

| Page/section  | Modifications to encompass risk assessment and/or knowledge of electrical hazards   |
|---|---|
| Throughout  | Changes to reflect those recommended for the assessment guide (ie to key points and questions etc).   |
| p3, assessment plan, purpose and aims of assessment   | Include new dot point "conduct a risk assessment to effectively identify and control hazards and risks"<br>Insert new sub-point under "follow work instructions ..." to include "effectively identify and assess type, position and condition of electrical cables" |
| p4, assessment plan, materials and resources  | Modify text to cover risk assessment documents, ie: <i>access to relevant workplace and relevant workplace policies/documentation</i> "including a risk assessment proforma"  |
| p14, record of assessment of work project, supporting workplace documents/records (provided by the learner) | Insert "completed risk assessment document"   |

## RECOGNITION APPLICATION

| Page/section | Modifications to encompass risk assessment and/or knowledge of electrical hazards   |
|--------------|---|
| Throughout   | Changes to reflect those recommended for the assessment guide and assessment instrument (ie to key points and questions etc). |

## POCKET BOOK

| Page/section  | Modifications to encompass risk assessment and/or knowledge of electrical hazards   |
|---|---|
| p15, section 2.1 OHS requirements, "what are the duty of care responsibilities of employees?" | Insert new tick point: "to conduct a risk assessment of the work area"  |
| p15, section 2.1 OHS requirements, "what are the duty of care responsibilities of employers?" | Modify last para to "Your employer should also provide you with health and safety information and training including a proforma or process to enable you to conduct a thorough risk assessment of the work area." |

| Page/section                                       | Modifications to encompass risk assessment and/or knowledge of electrical hazards   |
|--|---|
| p16, safe work methods and practices               | Insert new dot point "conducting a risk assessment of the work area"  |
| p17, you will also need to know about              | Modify last dot point to:<br>"other systems, methods and procedures which will help you to work safely (such as removing asbestos, minimising dust, using respirators, <b>and using tools that are non-conductive or have insulated handles to minimise the risk of electrocution</b> "   |
| p17, which activities require a licence or permit? | Include new x point "work to move, modify or fix electrical cabling"  |
| p19, why is ppe important?                         | Insert new second paragraph of warning: "If you are feeling hot, don't shed items of PPE. They can reduce the severity of electric shock. Instead, take frequent breaks and drink plenty of water."   |
| p20, feet protection                               | Insert sentence "Rubber soled shoes can reduce the severity of electric shock."   |
| p21, hand protection - gloves                      | Insert sentence "leather gloves can reduce the severity of electric shock."   |
| p24, examples of OHS documentation                 | Insert new heading " <b>site risk assessment proforma</b> " and include text "This is a critical safety document which will help you to identify hazards (particularly electrical hazards), and the controls needed to ensure the work area is safe. It must be conducted on site <u>before</u> any work is carried out. Your employer should provide you with a proforma, or you can download one from the website <a href="http://www.dewha.gov.au/????">www.dewha.gov.au/????</a> . "  |
| p28, how are hazards identified?                   | Insert new tick point "conducting a risk assessment of the work area (particularly to identify electrical hazards)"   |
| p30, what is risk assessment?                      | Reword first para: "You will need to be able to assess risks (or potential risks) <u>before</u> work starts, as well as each time a hazard is found and a risk control used. This is part of the risk management process. It means gathering information so that you can make a clear and educated decision on what needs to be done to lower the risk as far as possible."<br><br>New second last para: "A risk assessment proforma should be provided by your employer. Or, you can download a copy from website <a href="http://www.dewha.gov.au/???">www.dewha.gov.au/???</a> Importantly, a site risk assessment will help you to locate electrical hazards by identifying and assessing the type, position and condition of electrical cabling in the ceiling/roof space."  |
| p35, electrical                                    | Suggest rewording whole section. Introductory paragraphs:<br>"Electrical hazards are a serious concern, posing a high risk of injury and death for installers of ceiling insulation. This is because there is a large amount of electrical cabling in the ceiling, and the types, position and condition of cabling can vary from building to building (eg wiring could be damaged by vermin). There will also be a range of electrical equipment such as downlights and exhaust fans which pose many risks."<br><br>New heading: <b>WARNINGS</b><br><ul style="list-style-type: none"> <li>• You are at risk of electrocution if you do not conduct a proper risk assessment to identify and assess the types, position, and condition of electrical cabling (eg where cabling is damaged from vermin, or potentially subject to degradation from certain types of thermal insulation).</li> <li>• When placing insulation, only use tools that are non-conductive or have insulated handles to minimise the risk of electrocution.</li> </ul> |

| Page/section                                       | Modifications to encompass risk assessment and/or knowledge of electrical hazards  |
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|  | <ul style="list-style-type: none"> <li>• Wear proper PPE (such as leather gloves and rubber soles etc) as these items can help to reduce the severity of electric shock.</li> <li>• Before starting any work, turn off or isolate power to the building where possible.</li> <li>• The practice of stapling insulation products is no longer allowed as it poses a high risk of electrocution to the installer.</li> <li>• Under no circumstances must fixing devices in proximity to electrical wiring be of metal or other conductive material.</li> <li>• If in doubt, contact a licensed electrical contractor.</li> </ul> <p>New heading: <b>Types of electrical cabling</b><br/>Insert descriptions and pictures of range of cabling as provided by EE-Oz.</p> <p>New heading: <b>Other electrical risks</b><br/>Remaining existing paragraphs commencing "other risks relate to fire ..." and covering tagging of electrical equipment.</p> |
| p36, tools and machinery                           | <p>Suggest final warning at bottom of page:<br/>"NEVER place insulation using tools that can conduct electricity, ie metal sticks or poles. Always use tools that are non-conductive or have insulated handles to minimise the risk of electrocution."</p>   |
| p38, heat stress, box at bottom of page            | <p>Suggest rewording text in box to:<br/>"Roof spaces can become very hot, particularly in warm weather. This has the potential to cause heat stress especially if you need to wear heavy PPE. Do not discard PPE.<br/>Get relief from the heat by taking breaks and drinking plenty of water to avoid dehydration. Learn to recognise the signs of heat stress."</p>  |
| p62, boards  | <p>Insert warning at end of section:<br/>"Some electrical cabling is insulated or sheathed by a material which can suffer degradation if it comes into contact with polyurethane or polystyrene types of thermal insulation.<br/>If these insulation products are to be installed near electrical wiring, <u>do not proceed</u>. You must contact a licensed electrical contractor."</p>   |
| p80, planning and preparation                      | <p>Modify last sentence of third para to:<br/>"In the planning stage, there are many things you'll need to consider <b>in addition to conducting a site risk assessment</b>"</p>   |
| p80, planning and preparation                      | <p>Insert new dot point:<br/>"before commencing work, isolate power and mark the position of downlights on a piece of paper as they may be difficult to see in the ceiling"</p>  |
| p81, when planning the installation work, consider | <p>Modify third dot point:<br/>"Inspecting the work site to conduct a risk assessment for potential hazards and risks and insulation requirements (eg asbestos, electrical cabling, fittings and appliances, roof leaks, insulation placement etc)"</p>  |



| Page/section                                 | Modifications to encompass risk assessment and/or knowledge of electrical hazards  |
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|  | Insert new dot points:<br>"Contacting a licensed electrician for advice"<br>"How the power can be isolated or turned off"  |
| p83, start with a clean work area            | Point 3 reword "Check the site for hazards (particularly electrical) and look for ways to avoid them (the JSA will help). Turn off or isolate power and mark the position of downlights on a piece of paper."  |
| p89, important guidelines and considerations | Insert warning at bottom of page:<br>"Remember, some electrical cabling is insulated or sheathed by a material which can suffer degradation if it comes into contact with polyurethane or polystyrene types of insulation.<br>If these insulation products are to be installed near electrical wiring, do not proceed. You must contact a licensed electrical contractor." |
| p91, downlights                              | Insert new second para:<br>"Before commencing work, note the placement of ceiling downlights on a piece of paper. This will help you to locate them in a dark ceiling or roof space."  |
| p99, after completion                        | Insert new point:<br>"Turning the power back on"   |

## TRAINER'S PRESENTATION

| Page/section | Modifications to encompass risk assessment and/or knowledge of electrical hazards |
|--------------|---|
| Throughout   | Changes to reflect those recommended for the delivery guide and pocketbook.       |