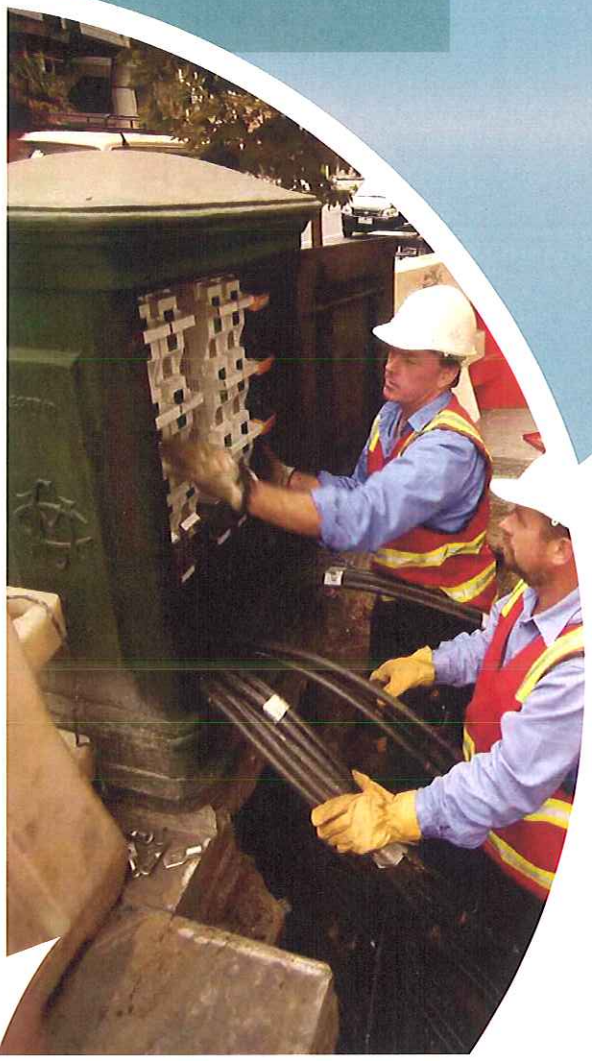
VESI/VCSA
Interface Arrangements

2007



Victorian Construction Safety Alliance

VESI

GUIDANCE ON

INTERFACE ARRANGEMENTS

FOR

CONSTRUCTION AND DEMOLITION SITES

WITH

ELECTRICAL NETWORK OPERATORS

PREAMBLE

At a meeting between representatives of the Construction Industry and the Electricity Supply Industry in Victoria, it was recognised that the roles and responsibilities for safety arrangements and protocols on construction and demolition sites at the interface between the groups needed to be clarified. Consequently, a working group consisting of representatives from the Victorian Construction Safety Alliance (VCSA) and the Victorian Electricity Supply Industry (VESI) was established to clarify these arrangements and to develop a set of guidelines and principles as a basis of shared values to improve safety outcomes at the interface.

The intention is for this document to come into effect when parties at initial stages of a demolition or construction project meet and agree that the requirements of this guidance document will apply for that workplace.

This document was prepared by representatives of VCSA and VESI. Future amendments / revisions should be notified to either the Chair of the VCSA or Convenor of the Code of Practice on Electrical Safety for the Distribution Businesses in the Victorian Electricity Supply Industry Committee (the Green Book Committee).

Victorian Construction Safety Alliance (VCSA)
Companies represented :

Victorian Electricity Supply Industry (VESI)

Abigroup

Australand

Baulderstone Hornibrook

Bovis Lend Lease

Contexx

Grocon

John Holland

Leighton

Mirvac

Multiplex

Probuild

Salta

Thiess

Thiess John Holland Joint Venture

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1 Objectives

For the Building & Construction Industry and the Electricity Supply Industry:

- To have a common understanding and acceptance of the safety procedures at the interface;
- Establish consistent and uniform interface safety procedural arrangements across Victoria;
- To encourage a uniform national approach to interface safety procedural arrangements.

2 Scope

This document covers the principles and arrangements to be employed where construction industry and electrical network operators interface on major demolition and construction sites. This includes safe work on / around and access / egress to construction / demolition sites and substation enclosures.

3 Definitions

Authorised Person	A person with technical knowledge or sufficient experience / competence who has been approved through endorsement in writing for a specific function
Energisation	To connect to a source of electrical supply
Handover	The point in time when the control of a substation enclosure is passed from one responsible party to another, which would include the transfer of documentation.
Job Safety Analysis (JSA)	A process for identifying hazards, assessing risks and determining adequate controls and assigning responsibilities prior to commencing a work task. (*Also known as Safe Work Method Statement [SWMS]*)
Live	Containing hazardous level of electrical voltage
Network Operator	The operator of an electricity distribution network
Not electrically connected	Disconnected from all sources of electricity supply by the removal or absence of conductors and not able to be made live by normal operating means.
Permit System	A documented permission, issued by responsible party, detailing the controls established for the management of risks associated with the works.
Recipient	A person who signs for and receives a Permit, a ***SILV*** (Statement of Isolation of Low Voltage) or a ***SCAP*** (Statement of Condition of Apparatus - Plant)
Responsible entity	The principal contractor / occupier or its representative that has the authority to act on behalf of the organisation responsible for the construction / demolition site.
Safe Work Method Procedure (SWMP)	Documented statement describing the methodology to be applied to undertake a task in a safe manner.
Safe Work Method Statement (SWMS)	See JSA above
Safety Incident	An unplanned occurrence which results in injury, structural failure / damage or both and includes a near miss event

Shall	Is to be interpreted as "mandatory".
SCAP	A statement of condition of apparatus and / or plant. This is a document outlining the condition of apparatus and / or plant. It is used between operating authorities (organisation having control of high voltage apparatus and / or plant) to confirm plant conditions and isolations to support an access authority.
Should	Is to be interpreted as "advisory or discretionary".
SILV	A statement of isolation of low voltage. This is a document issued by a Network Operator to inform other parties of the control measures implemented by the Network Operator during the currency of the document, to describe the de-energised state of a customer's Low Voltage un-metered incoming mains.
Substation enclosure	An enclosed area under the control of a Network Operator established for the purposes of supplying electricity.

4 Works Coordination

4.1 Pre-commencement Coordination

Prior to the Network Operator commencing any works (including inspections) on a construction site, the Network Operator shall initiate consultation with the responsible entity to identify site access and egress arrangements.

In the case of a demolition site, the responsible entity shall initiate consultation, at the earliest opportunity after taking control of the site, with the Network Operator to identify site access and egress arrangements.

The initial consultation shall include information relevant to :-

- An exchange of contact details
- Timing of works, including but not limited to;
    - handover of substation enclosure,
    - delivery of major substation apparatus and / or plant,
    - fitting out works of the substation,
    - associated civil works, eg trenching for installation of conduits
    - supply availability,
    - issue of certificate of electrical safety where required
- Proposed site induction requirements and details of content (see site access protocols below)
- Exchange or viewing of relevant OH&S documentation such as:-
    - Public liability insurance (certificate of currency)
    - Workers compensation (certificate of currency)
    - Risk assessment and *JSA / SMWS* (task and project specific)
    - plant & equipment requirements - as per statutory OH&S requirements
    - proof of plant operators' qualifications and competencies - as per OH&S requirements
- Site access protocols for Network Operator personnel (see site access protocols below)

4.2 Site Access Protocols

During the period of time of construction or demolition on the site, the Network Operator may require access to the substation for short term visits or long term visits. Short term visits are for periods of typically less than two hours for such matters as: operating activities, short term maintenance, inspection, testing and cleaning. Long term visits are for periods of typically greater than two hours for such activities as; installation of substation equipment, installation of cables and significant maintenance activities.

The pre-commencement coordination consultation should establish arrangements that are commensurate with the duration of the visit. This could include requirements for full project induction, escorted visitor arrangements and emergency access provisions. The detail of the arrangements established may differ according to the durations of the visit and could include but not be limited to matters such as:

- First aid facilities
- Emergency evacuation procedures
- Toilet and mess room facilities
- Access routes
- Restricted areas
- Contact details.
- Supervised entry arrangements
- Personal protective apparel requirements
- Site security arrangements including after hours access
- Site sign in / sign out protocols

4.3 Works adjacent to the site

The parties shall consult to coordinate arrangements on matters that could impact on each others' operations or public safety; e.g. public protection arrangements, traffic management, site access (both pedestrian and vehicular), excavation works, overhead works and No Go Zone requirements.

4.4 Cable Identification

The Network Operator and Responsible Entity as appropriate will consult on any requirements for additional signage or markings during the demolition or construction process for underground cables, conduits or cable riser areas.

5 Substation Handover (Commissioning and Retirement)

5.1 Handover of Substation Enclosure

When a substation enclosure has been constructed to the specifications provided by the Network Operator, control of the enclosure shall be handed over from the Responsible Entity to the Network Operator using a formal Handover form (refer Appendix A). The form shall be signed and dated by both parties.

From the time of handover, entry to the substation enclosure will require authorisation from the Network Operator and all persons are to treat the substation area and associated electrical cable conduits **as live**. The changed status of the substation enclosure shall be communicated at the earliest practicable opportunity to all site personnel and included in subsequent site inductions.

At the time of handover the Network Operator shall reinforce the need to treat the substation **as live** by installing danger signage and locks on the substation.

5.2 Initial Energisation / Commissioning

Electrical equipment in the substation and conduits may be energised from the point of handover (in accordance with the Network Operator's initial energisation procedures and control mechanisms), without the requirement for the Network Operator to provide further advice to the Responsible Entity. Consequently, the Responsible Entity shall ensure that site procedures or instructions include a statement to the effect that "*substation enclosures that have danger signage and affixed locks and associated conduits are to be treated* ***as live*** *and must not be entered at any time without the authority of the Network Operator*".

5.3 Substation De-commissioning and Retirement

The **Network Operator** shall not hand over control of the substation enclosure until all **Network Operator** switchgear and transformers have been rendered **Not Electrically Connected**.

Control of the enclosure shall be handed over from the Network Operator to the Responsible Entity using a formal Handover form (refer Appendix B).

In regard to Network Operator cables that exist through a site as part of supply arrangements for the substation, the Network Operator shall make all reasonable endeavours to identify all such cables and disconnect them from the network. Where Network Operator cables are to remain live, they are to be identified and documented by the Network Operator, and full details of locations etc. provided to the Responsible Entity.

The substation shall have signage and locks removed and the Network Operator will, where applicable, give notification of any contamination from hazardous substances, e.g. details of any audit conducted under Part 5 or 6 of the OHS Regulations as relevant.

5.4 Security

The Network Operator shall ensure its personnel comply with the security arrangements for entry to the site. Such arrangements should be adequate for the Network Operator to gain access to the substation enclosure for personnel and plant / equipment at all times.

The Responsible Entity shall ensure that site personnel comply with the security arrangements for entry to substation enclosures under the control of a Network Operator, that is:

- when authorised to do so by the Network Operator, or
- under the direct supervision of such an authorised person.

5.5 Safe Control Measures

For work on construction / demolition site electrical circuits (not Network Operator assets)
For works on installation circuits that emanate from the substation enclosure, the Network Operator shall implement control measures in the substation in order to facilitate the safety of such works. Such control measures shall include as appropriate :

- Disconnection or isolation
- Bridging or bonding
- Earthing
- Tagging
- Locking (if possible)
- Issue SILV or SCAP

Prior to acceptance of a SILV or SCAP the intended recipient shall satisfy himself that the control measures implemented by the Network Operator are appropriate for the circumstances. The recipient shall ensure that additional safety control measures are employed outside the substation enclosure to further facilitate the safety of the works. Such control measures shall included as appropriate:

- Testing
- Tagging
- Locking
- Bridging or bonding
- Consideration of auxiliary supplies
- PPE requirements e.g. wrist to ankle cover, fully enclosed footwear, insulated gloves, insulated mats, insulated ladders and insulated tools.
- JSA shall include reference to the SILV or SCAP and any specified electrical safe work requirements

Where a person who has previously been working on an installation circuit and has been absent from the work site for more than four hours, upon return, shall before resuming work:

- Sight SILV or SCAP to refresh on conditions and check currency of the document
- Review the JSA details
- Identify tags – outside substation
- Check locks - outside substation
- Test circuit - outside substation

NOTE : The recipient may request of the Network Operator, to have escorted access to the sub-station to confirm Statement conditions. The Network Operator will make reasonable endeavours to meet that request at a time convenient to both parties.

5.6 Substation

Authorisation for access to a substation may only be obtained via the Network Operator. For the purpose of short-term visits, access arrangements shall include escorted access, otherwise a Permit to Work must be obtained from the Network Operator.

5.7 Vicinity of Network Operator supply cables (overhead and underground)

For Responsible Entity works in the vicinity of Network Operator supply cables, the NO GO ZONE rules shall apply.

6. Notification of Incidents / Injuries

6.1 Response

Where an incident occurs which impacts or has the potential to impact on both responsible parties, information shall be immediately shared between the parties to facilitate emergency response and notification arrangements.

6.2 Responsibility to Notify Authorities

Notification to Authorities is to be made by the responsible party at time of incident, as per legislative provisions and Regulator/s' reporting requirements.

The responsibility for incident notification remains under the OH&S Act (2004), the Electricity Safety Act (1998) and company requirements.

6.3 Investigation

Investigation could be carried out by the individual party or jointly, depending on the nature / location of the incident. Where appropriate, learning outcomes of the investigation will be shared.

APPENDIX A
HANDOVER OF SUBSTATION ENCLOSURE & ASSOCIATED CONDUITS &/OR CABLE RISER SHAFT

This notice serves to confirm that Network Operator has on the date, and at the time indicated below, taken possession of the following items (tick as appropriate):

- ☐ Substation enclosure
- ☐ Conduits
- ☐ Cable riser shaft
- ☐ Cable pit

From the date of hand-over,

- The areas identified above will be considered as containing **live equipment**. The communication of the handover status of the applicable areas to site employees will be the responsibility of site management.
- Network Operator will be provided with 24 hour unhindered access, in accordance with the Guidance Arrangements, to the above areas in line with operational requirements.
- The Network Operator's locks and warning sign/s will be fitted to all substation enclosure and cable riser shaft entrances to prohibit the entry of persons unless authorized by the Network Operator.
- Access to these secure areas identified above shall solely be under the control of the Network Operator and its authorized agents. For this purpose a Permit System or an authorized escort shall be used from the date of handover (irrespective of the presence or not of installed equipment).

Accompanying this notice is the completed "Hand-Over Inspection Report", which may detail any outstanding items. Any further work that the Responsible Entity or his agents may need to perform inside these areas will require an application to be made to the Network Operator in accordance with the Network Operator's requirements.

For an outside party to perform work inside the substation enclosure, the Network Operator requires that its Safety Procedures apply. This may include the issue of a Permit and other provisions deemed necessary by the Network Operator; e.g. the provision of an authorised safety observer.

Substation Name: .....

Substation Address: .....

Name of Network Operator's **representative accepting handover of the substation enclosure and (if applicable) any associated conduits and cable riser shaft:**

Signature: ..... **Phone Number:** .....

Name PRINTED (BLOCK LETTERS) .....

Name of Responsible Entity: .....

Name of Builder's representative "handing-over" substation enclosure and (if applicable) any associated conduits and cable riser shaft:

Signature: ..... **Phone Number:** .....

NAME PRINTED (BLOCK LETTERS) .....

Date: ..... **Time:** .....

APPENDIX B

HANDOVER OF DECOMMISSIONED & DISCONNECTED ENCLOSURE AND ASSOCIATED CONDUITS & / OR CABLE RISER SHAFT

This notice serves to confirm that the Responsible Entity has on the date, and at the time indicated below, taken possession of the following items (tick as appropriate):

- ☐ Substation enclosure
- ☐ Conduits
- ☐ Cable riser shaft
- ☐ Cable pit

From the date of handover,

- The areas identified above will be considered as de-commissioned and disconnected. The communication of the de-commissioning status of the applicable areas to site employees will be the responsibility of site management.
- The Network Operator's locks and warning sign/s will be removed from the substation enclosure and cable riser shaft entrances.
- Access to these secure areas shall solely be under the control of the Responsible Entity and its authorized agents.
- The Network Operator shall provide written advice of any 'live' electrical apparatus identified in the area above.

Substation Name: .....

Substation Address: .....

Name of Network Operator's representative handing over the substation enclosure and (if applicable) any associated conduits and cable riser shaft:

Signature: ..... **Phone Number:** .....

NAME PRINTED (BLOCK LETTERS) .....

Title : .....

Name of Responsible Entity: .....

Name of Responsible Entity's representative "accepting handover" of sub-station enclosure and (if applicable) any associated conduits and cable riser shaft:

Signature: ..... **Phone Number:** .....

NAME PRINTED (BLOCK LETTERS) .....

Date: ..... **Time:** .....