

Part of Energy Queensland

### **Substation Standard**

# Standard for Substation Signage

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If this standard is a printed version, to ensure compliance, reference must be made to the Energy Queensland internet site www.energyq.com.au to obtain the latest version.

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Abstract: This Substation Standard outlines the safety, operational and functional signage application standards for zone substation and switching station sites. It establishes the guidelines for the design, manufacture, and installation of operational and safety signs at Ergon Energy Corporation Zone Substation sites.

Keywords: Signage, Sign, Substation Signage, Substation, Substation Standard, SS-1-9.3.

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### 1 Overview

#### 1.1 Purpose

This Substation Standard outlines the safety, operational and functional signage application standards for zone substation and switching station sites. It establishes the guidelines for the design, manufacture, and installation of operational and safety signs at Ergon Energy Corporation Zone Substation sites.

It is intended to assist Designers, Technical Officers, Project Managers and Construction Staff in specifying, ordering and fitting signage.

#### 1.2 Scope

Substation signs shall be designed and installed at Ergon Energy's Zone Substations to meet public safety and workplace safety standards in accordance with the relevant Industry Laws, Regulations and Applicable Standards. Care should be taken that signage placed conveys the message intended in a concise form.

Ergon Energy Corporation is committed to working in a way which ensures the health and safety of its employees, contractors, customers and members of the public

The document covers:

- An overview of definitions and sign classification.
- An overview of sign materials, location, sighting & maintenance.

Should there be a difference between the general wording of this document and the precise interpretation of any relevant legislation, then that legislation shall apply.

### 2 References

### 2.1 Legislation, regulations, rules, and codes

Queensland Electrical Safety Act, 2002 (Queensland Government)

Queensland Electrical Safety Regulation, 2013 (Queensland Government)

Queensland Work Health and Safety Act, 2011 (Queensland Government)

Queensland Work Health and Safety Regulation, 2011 (Queensland Government)

### 2.2 Ergon Energy controlled documents

Standard for Substation Fire and Explosion Protection, STNW3035 – 3058013

#### 2.3 Other sources

(AS 1216-2006: Class labels for dangerous goods, 2006) Class labels for dangerous goods.

(AS/NZS 3000, 2007) Class labels for dangerous goods.

(AS 1742.1:2014: Manual of uniform traffic control devices - General introduction and index of signs, 2014) Class labels for dangerous goods.

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(ISO 3864.3; 2012; Graphical sysbols - Safety colours and safety signs - Part 3: Design principles for graphical symbols for use in safety signs, 2012) Class labels for dangerous goods.

(AS 2676.1, 1992) Class labels for dangerous goods.

(AS2676.2 - 1992, 1992) Class labels for dangerous goods.

(AS/NZS 2865:2009: Safe working in a confined space, 2009) Class labels for dangerous goods.

(AS1319, 1994) Class labels for dangerous goods.

### 3 Definitions, acronyms, and abbreviations

#### 3.1 Definitions

For the purposes of this standard, the following definitions apply.

Background: That part of a sign that is behind the legend definition of term.

Combination Sign: A sign which combines both words and a symbol.

Composite Sign: A sign on which the words qualify or augment the symbol.

Hybrid Sign: A combination sign on which the words simply repeat the message given

by the symbol.

Danger: Applied in the context of safety signs to a situation which is likely to be

life threatening if the message is ignored.

Legend: The message content of a sign in words (text) or symbols, or a

combination of these.

Shall: The word shall is to be understood as mandatory.

Should: The word should is to be understood as non-mandatory, i.e. advisory or

recommended.

Symbol: A graphic or pictorial device used to represent objects or concepts, but

for purposes of this document excluding letters, numerals and

punctuation symbols.

Warning: Applied in the context of safety signs to a situation which is likely to be

hazardous but not likely to be life threatening if the message is ignored.

#### 3.2 Acronyms and abbreviations

The following acronyms and abbreviations appear in this standard.

PPE: Personal Protective Equipment

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### 4 Classifications

#### 4.1 Regulatory

Signs containing instructions with which failure to comply constitutes either an offence at law, breach of standing orders, Ergon Energy safety procedures or other directions and subdivided as follows:

- Prohibition signs Signs that indicate that an action or activity is not permitted.
- Mandatory Signs –Signs that indicate that an instruction must be carried out.
- Limitation or Restriction Signs –Signs that place a numerical or other defined limit on an activity or use of a facility.

#### 4.2 Hazard

Signs advising of hazards - subdivided as below:

- DANGER signs Signs warning of a particular hazard or hazardous condition that is likely to be life-threatening.
- WARNING signs Signs warning of a hazard or hazardous condition that is not likely to be life threatening.

NOTE: The term CAUTION used in earlier editions of AS1319 has now been replaced by the term WARNING. The two terms are regarded as being interchangeable.

### 4.3 Emergency information signs

Signs indicating the location of or directions to, emergency related facilities such as exits, safety equipment or first aid facilities.

This may include but is not limited to the following:

- Emergency telephone numbers
- First aid facilities
- Safety equipment
- Emergency assembly points
- Exits form enclosures/buildings within a substation site

NOTE: EXIT signs indicating exit points from substation buildings are part of the Substation Building requirements.

Such signs are covered, ref – AS/NZS 2293.1: -Emergency evacuation lighting for buildings, and actioned by Ergon Energy Civil and Building Group

#### 4.4 Fire signs

Signs advising the locations of fire alarms and fire-fighting facilities.

Separate signs should be used for any associated messages.

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### 4.5 Operational signs

Signs, other than MANDATORY signs, that are required to convey information, for safety of personnel and Electricity Network, security, data/characteristics relating to the operation of Ergon Energy Corporation Substation Plant.

The signage may contain but is not limited to the following:

- Site asset naming
- Device naming
- Substation fault level
- Telephone (internal and external) usage data
- Site entry requirements
- Radio operation and procedures
- Other non-specific data of operational nature

#### 4.6 Information signs

These signs convey a message or instruction that does not fit into categories listed in AS1319 but do communicate information of a general nature such as Ergon Energy Corporation practices and site policies.

#### NOTE:

This Ergon Energy Substation standard excludes EXIT signs of the type specified in AS2293.1: 1998 for use inside buildings.

These items are covered by Ergon Energy Substation Civil Construction Standards Group as part of Building Contract.

For security signage refer to Corporate Security Manual R137 and Corporate Security Signage Guideline – Draft.

### 5 Signs general requirements

- All signage details relate to Ergon Energy Corporation Substation or Switchyard sites unless otherwise noted.
- Signs shall conform to the usage, details, references and all relevant documents as listed in this document.
- Signs may be listed under multiple categories for use in substations. The usage that alerts personnel to the greatest site danger to safety shall be the preferred use

#### 5.1 Sign materials

- Signage shall not be painted directly on to any existing surface.
- Sign materials shall be as shown on associated/referenced drawings

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### 5.2 Project safety barriers & signage

- The form of any temporary safety barrier e.g. vinyl tapes, netting, solid barriers or steel fence panels, shall be considered when placing any sign.
- The safety barrier must be capable of supporting a sign in such a manner as to be legible at all times, under adverse conditions, from all points of approach for the duration of project.
- Should a signed area be accessible to the general public, signs shall be placed to
  ensure site is signposted according to Ergon Energy Substation Standards for the full
  duration of the project.
- A risk assessment of such project should allow for the visibility and placement of signage for the full duration of a project.

#### 5.3 Invalid sign removal

- All signs should be removed immediately if the information or condition listed thereon is no longer relevant.
- Such signs should be replaced with a sign outlining updated information where conditions on project have changed.
- Particular importance should be placed upon the prompt removal of temporary hazard or safety exclusion zone signs when that hazard or danger ceases to exist.
- All sites should be restored to pre-signed status after removal of signs.

### 5.4 Safety conditions

All signage must be placed in such a manner that at a point face to face with a sign, the sign placement shall cause no breach of any safe working approach limits.

#### 5.5 Sign modification and changes

Any request for addition to, deletion from or changes to this suite of Substation signs shall be made through the Substation Design Standards Team to the Engineering Manager Substation Standards for processing, approval and ratification before enactment of changes.

### 6 Location & maintenance of signs

#### 6.1 Siting of signs

- Signs shall be prominently placed as close as practicable to an observer's line of sight in a vertical plane.
- For a standing adult this will be approximately 1500 mm above ground or floor level in front of the observer to the horizontal centre line of sign.
- A sign should be located so that an observer has time to read it (or at least extract the information essential to them) before reaching a point of hazard or decision.
- Signs which are free standing or mounted overhead shall be placed so that they are not a hazard to persons approaching to or working on site.
- Placement of signs should not compromise any safe approach limits.

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- Signs should not be placed where the possibility of becoming obscured exists.
- Materials should not be placed or stacked in a position that may obscure any signs.
- All signs should be mounted so that no visibility, safety or operational hazards are created by their placement.
- Signs should not be erected in contravention of any relevant laws or regulations or operational procedures.

### 6.2 Visibility of signs

Incorrect positioning of a sign can reduce its visibility and impact and may render it illegible. In selecting the most effective position for a sign the following needs to be considered.

- Visual obstructions between the sign and all locations from which it is intended to be read should be avoided. This includes temporary obstructions such as an open door, grass or tree growth.
- Signs should not be located against visually cluttered or confusing background, Shift position of sign or rearrange area to ensure sign is conspicuous.
- Signs should be located where the messages are visible and attract the attention of any person approaching or working at substation site.
- A contrasting colour surround may be used to enhance visibility of a sign where the predominant sign colour may blend in with that of immediate background colour.
- Where signs 'weathered beyond readability' are reported during substation inspections or audits, urgent replacement should be arranged.

#### 6.3 Signs on movable objects

Signs should not be mounted on moveable items, such as doors or windows, where a change in position of an object would void the intended purpose of sign or cause it to be out of sight. This does not apply to signs intended to have a portable or moveable application.

When a portable sign is moved, the new position should comply with all visibility and safety requirements for a fixed position sign.

#### 6.4 Regulatory & hazard signs

- Regulatory and Hazard signs should be sited in relation to the particular hazard to allow a person ample time after first viewing the sign to heed the posted warning. The positioning of signs will vary according to the application of sign.
- Signs warning against the touching of switches or other electrical equipment in operational areas should be placed close to the equipment.

#### 6.5 Illumination of signs

- Where natural lighting does not provide adequate illumination of signs, additional sources of illumination must be considered.
- Attention should be addressed to signs subject to some forms of artificial light which cause a change in the perception of colours and reduced sign visibility.

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### 6.6 Number of signs

Care should be taken in the placement of signs close together at the one position. The result of a congested placement may be that little information is absorbed or the visual impact may be confusing.

The total sign information should be easily read and understood.

### 7 Substation commissioning

- A pre-commissioning inspection shall be made to ensure that all signs required by this standard are made available in time for commissioning.
- Ensure all signs are legible, unambiguous, provide correct information, be placed in appropriate positions and securely fixed in place for commissioning.

### 8 Sign maintenance

For maximum effectiveness, signs should be maintained for good readability, they should be kept clean, and replacement of faded/unreadable/damaged signs should be actioned where necessary.

Ensure when inspecting/installing signs that they are legible, and in the correct location for the sign message to be understood.

# 9 Sign placement icons, drawing details, ergon energy stock code numbers

For standard sign design production details refer to listed Ergon Energy drawings as detailed in the following sub sections. Where multiple versions (sizes) of the sign type are available the preferred option should be selected provided that it meets the requirements of the preceding sections.

#### 9.1 Main entry gate or adjacent fence line

Table 1: Main entry gate or adjacent fence line

Main Entry Gate or Adjacent Fence Line	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Ergon Energy Corporation – Site Identification	EESS-10181-01 (450 x 300)	Order as required
OPERATIONAL NUMBER' OPERATIONAL NAME	EESS-10181-02 (600 x 450) - Preferred	Order as required
EMERGENCIES 13 16 70 PLANT NUMBER	EESS-10181-03 (1200 x1200)	Order as required
Personal Protective Equipment (PPE) -required for substation site entry.	EESS-10181-04 (900 x 600) - Preferred	002423028

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Main Entry Gate or Adjacent Fence Line	Drawing No (Dimensions mm)	Stock Code (if applicable)
4 Unit combination sign (head, protective clothing, footwear & eye protection)	EESS-10181-48 (450 x 300)	Order as required
THIS PROTECTIVE EQUIPMENT  MUST BE WORN  ON THIS SITE	EESS-10181-49 (300 x 225)	Order as required
Ergon Energy – Site entry conditions Check requirements for Sub Station Site before ordering. Note: For joint sites each party may place unique: - company sign company conditions for entry company contact details    Conditions for Entry to SITE	EESS-10181-12 (300 x 450)	002423044
Danger – High Voltage  DANGER	EESS-10181-10 (450 x 300) - Preferred	002423036
HIGH VOLTAGE	EESS-10181-11 (600 x 450)	Order as required
+ AMECITE SAFE V LIACL PARCOCC	EESS-10181-67 (250 x 180)	Order as required
Non-ionising Radiation-Warning  Non-ionising Radiation-Warning  Non-ionising Radiation-Warning	EESS-10181-13 (300 x 450)	002423051

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Main Entry Gate or Adjacent Fence Line	Drawing No (Dimensions mm)	Stock Code (if applicable)
Hazchem	EESS-10181-15 (600 x 125)	002423069
Combustible Liquid  COMBUSTIBLE LIQUID	EESS-10181-14 (1500 x 150)	002423077
Authorised Persons Only  Authorized  Persons  ONLY  MACCIONAL  Authorized	EESS-10181-16 (300 x 450) - Preferred	002423085
Authorised Persons Only  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Substation Road Traffic Advisory – Speed Advice – Symbolic 10km/h:	EESS-10181-18 (300 x 450)	Order as required
10	EESS-10181-19 (450 x 600) - Preferred	002423093

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Main Entry Gate or Adjacent Fence Line	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Network Access Restriction	EESS-10181-20	002438042
Applies at this Site	(450 x 300)	
Used only when an access restriction for safety reasons applies to some item of plant. Must be removed when safety exclusion no longer applies.		
NOTE: Item - drawing EESS-10181-58 may also be required in conjunction with the use of item below		
A NETWORK ACCESS RESTRICTION APPLIES AT THIS SITE  NO ENTRY UNLESS SPECIFIED CONTROL MEASURES ARE APPLIED AT ALL TIMES CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION		
Danger - Network Access Restriction Exists Tag	EESS-10181-58	002438059
Applies to Plant Item	(80 x 80)	
NOTE: This item may also be required in conjunction with the use of item above EESS-10181-20		
DANGER  NETWORK ACCESS RESTRICTION EXISTS		
Electric security fence warning	EESS-10181-21	N/A
Where electric security protection fence is fitted at this site this sign should be placed in conjunction with a 'DANGER HIGH VOLTAGE' sign.	(300 x 225)	
TAKE CARE ELECTRIC FENCE		

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### 9.2 Alternative to main entry gate or adjacent fence line

Table 2: Alternative to main entry gate or adjacent fence line

Alternative to Main Entry Gate or Adjacent Fence Line	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Ergon Energy Corporation – Site Identification	EESS-10181-01	Order as
	(450 x 300)	required
ERGON.	EESS-10181-02	Order as
OPERATIONAL NUMBER' OPERATIONAL NAME	(600 x 450) - Preferred	required
	EESS-10181-03	Order as
EMERGENCIES 13 16 70 PLANT NUMBER	(1200 x 1200)	required
Ergon Energy – Site entry conditions	EESS-10181-12	002423044
	(300 x 450)	
Note: For joint sites each party may place unique: -		
company logo sign		
company conditions for entry		
company contact details		
CONDITIONS FOR ENTRY TO SITE  Unattended gates shall remain closed and locked at all times.  Site entry procedures must be compiled with at all times  ON ENTRY TO A EXTING FROM SITE  Notify Control Centre  Note entry in site log book		
Personal Protective Equipment (PPE) - required for	EESS-10181-04	002423028
substation site entry.	(900 x 600) - Preferred	
4 Unit combination sign (head, protective clothing, footwear & eye protection.		
a eye protection.	EESS-10181-48	Order as
	(450 x 300)	required
THIS PROTECTIVE EQUIPMENT	EESS-10181-49	Order as
MUST BE WORN	(300 x 225)	required
ON THIS SITE		
Danger –High Voltage	EESS-10181-10	002423036
	(450 x 300) - Preferred	
	EESS-10181-11	Order as
	(600 x 450)	required

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Alternative to Main Entry Gate or Adjacent Fence Line	Drawing No (Dimensions mm)	Stock Code (if applicable)
HIGH VOLTAGE	EESS-10181-67 (250 x 180)	Order as required
Non-ionising Radiation-Warning  Non-ionising Radiation-Warning  Non-ionising Radiation-Warning	EESS-10181-13 (300 x 450)	002423051
Hazchem	EESS-10181-15 (600 x 125)	002423069
Combustible Liquid  Combustible Liquid  Combustible Liquid	EESS-10181-14 (1500 x 150)	002423077
Authorised Persons Only  Authorized Persons Only  AUTHORIZED PERSONS ONLY  MATTERIAL PROPERTY OF THE PROPERTY	EESS-901978-16 (300 x 450) - Preferred	002423085
Authorised Persons Only  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Substation Road Traffic Advisory – Speed Advice – Symbolic 10km/h	EESS-10181-18 (300 x 450)	Order as required

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Alternative to Main Entry Gate or Adjacent Fence Line	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
10	EESS-10181-19 (450 x 600) - Preferred	002423093
Network Access Restriction Applies at this Site	EESS-10181-20	002438042
Used only when an access restriction for safety reasons applies to some item of plant. Must be removed according to safety exclusion status.	(450 x 300)	
NOTE: Tag item EESS-10181-58 may also be required in conjunction with the use of item below.  DANGER  A NETWORK ACCESS RESTRICTION APPLIES AT THIS SITE  NO ENTRY UNLESS SPECIFIED CONTROL MEASURES ARE APPLIED AT ALL TIMES  CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION		
Danger - Network Access Restriction Exists Tag	EESS-10181-58	002438059
Applies to Plant Item	(80 x 80)	
NOTE: This item may also be required in conjunction with the use of item above EESS-10181-20.  DANGER  NETWORK ACCESS  RESTRICTION EXISTS		

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Alternative to Main Entry Gate or Adjacent Fence Line	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Electric security fence warning	EESS-10181-21	N/A
Where electric security protection fence is fitted at this site this sign should be placed in conjunction with a 'DANGER HIGH VOLTAGE' sign.  TAKE CARE ELECTRIC FENCE	(300 x 225)	

### 9.3 Direct entry personnel door/gate from public area to substation site

Table 3: Direct entry personnel door/gate from public area to substation site

Direct Entry Personnel Door/Gate from Public Area to	Drawing No	Stock Code
Substation Site	(Dimensions mm)	(if applicable)
Ergon Energy Corporation – Site Identification	EESS-10181-01	Order as
OPERATIONAL NUMBER	(450 x 300)	required
'OPERATIONAL NAME'	EESS-10181-02	Order as
EMERGENCIES 13 16 70 PLANT NUMBER	(600 x 450) - Preferred	required
Personal Protective Equipment (PPE)-required for	EESS-10181-04	002423028
substation site entry-	(900 x 600) - Preferred	
4 Unit combination sign (head, protective clothing, footwear		
& eye protection	EESS-10181-48	Order as
	(450 x 300)	required
THIS PROTECTIVE EQUIPMENT	EESS-10181-49	Order as
MUST BE WORN ON THIS SITE	(300 x 225)	required
Danger High Voltage	EESS-10181-10	002423036
	(450 x 300) - Preferred	
	EESS-10181-11	Order as
	(600 x 450)	required

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Direct Entry Personnel Door/Gate from Public Area to Substation Site	Drawing No (Dimensions mm)	Stock Code (if applicable)
HIGH VOLTAGE MANCHESAS	EESS-10181-67 (250 x 180)	Order as required
Ergon Energy — Site entry conditions  Note: For joint sites each party may place unique: - company logo sign companies agreed conditions for entry companies contact details	EESS-10181-12 (300x450)	002423044
Non-ionising Radiation-Warning  TOTAL TOTA	EESS-10181-13 (300 x 450)	002423051
Authorized Persons only  Authorized Persons only  AUTHORIZED  PERSONS  ONLY  MATTER  MATTE	EESS-10181-16 (300 x 450) - Preferred	002423085

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Direct Entry Personnel Door/Gate from Public Area to	Drawing No	Stock Code
Substation Site	(Dimensions mm)	(if applicable)
Authorized Persons only  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Network Access Restriction Applies at this Site Used only when an access restriction for safety reasons applies to some item of plant. Must be removed according to safety exclusion status.  NOTE: Tag item EESS-10181-58 may also be required in conjunction with the use of item below  ANGER  A NETWORK ACCESS RESTRICTION APPLIES AT THIS SITE NO ENTRY UNLESS SPECIFIED CONTROL MEASURES ARE APPLIED AT ALL TIMES CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION	EESS-10181-20 (450 x 300)	002438042
Danger - Network Access Restriction Exists Tag  Applies to Plant Item —  NOTE: This item may also be required in conjunction with the use of item above EESS-10181-20  NETWORK ACCESS RESTRICTION EXISTS	EESS-10181-58 (80 x 80)	002438059
Hazchem	EESS-10181-15 (600 x 125)	002423069

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Direct Entry Personnel Door/Gate from Public Area to Substation Site	Drawing No (Dimensions mm)	Stock Code (if applicable)
Combustible Liquid	EESS-10181-14	002423077
<b>COMBUSTIBLE LIQUID</b>	(1500 x 150)	

### 9.4 External face of substation / asset site perimeter fence

Table 4: External face of substation / asset site perimeter fence

External Face of Substation / Asset Site Perimeter Fence	Drawing No (Dimensions mm)	Stock Code (if applicable)
Danger – High Voltage:  For long sided perimeter fences a sign should be placed at a distance no greater than 30 metres from a sign at	EESS-10181-10 (450 x 300) - Preferred	002423036
main entrance or alternative entrance gate and then at 30 metre intervals along fence line. Additional signs shall be placed on fence at each change of direction of fence line.	EESS-10181-11 (600 x 450)	Order as required
HIGH VOLTAGE	EESS-10181-67 (250 x 180)	Order as required

### 9.5 Internal to substation/asset site perimeter fence

Table 5: Internal to substation/asset site perimeter fence

Internal to Substation / Asset Site Perimeter Fence	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Vehicles are restricted to formed roadways.	EESS-10181-22	002423101
VEHICLES ARE RESTRICTED TO FORMED ROADWAYS WORK PURPOSES EXCEPTED	(300 x 450)	

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Internal to Substation / Asset Site Perimeter Fence	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Vehicles not to drive across cable ducts.	EESS-10181-23	002423119
VEHICLES MUST NOT BE DRIVEN ACROSS CABLE DUCTS	(300 x 450)	

### 9.6 Capacitor bank enclosure

Table 6: Capacitor bank enclosure

Capacitor Bank Enclosure	Drawing No (Dimensions mm)	Stock Code (if applicable)
Danger – High Voltage.	EESS-10181-10 (450 x 300) - Preferred	002423036
HIGH	EESS-10181-11 (600 x 450)	Order as required
VOLTAGE PARCINCAL	EESS-10181-67 (250 x 180)	Order as required
Danger - High Voltage at Ground Level For HV equipment mounted at ground level.	EESS-10181-88 (600 x 450)	002472348
HIGH VOLTAGE AT GROUND LEVEL  DO NOT ENTER UNLESS FOR SWITCHING OR SIGNED ONTO AN ACCESS OR TEST PERMIT		
ONTO AN ACCESS OR TEST PERMIT		

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Capacitor Bank Enclosure	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Capacitor can preparation for safe working:	EESS-10181-89	002472355
Note: Capacitor discharge time may vary with supplier/manufacturer.	(300 x 350)	
Check operating manual for required discharge time of capacitor cans prior to ordering sign.		
WORKING ON CAPACITOR BANK		
ISOLATE CAPACITOR BANK WAIT 10 MINUTES  PROVE DE-ENERGISED AND EARTH LINE SIDE OF CAPACITOR BANK  RECEIVE ACCESS OR TEST PERMIT  PLACE A CAPACITOR SHORTING/EARTH TO THE STAR POINT OF BANK, OR SHORT EACH CAPACITOR CAN  IF A CAPACITOR CAN IS TO BE REMOVED, THE CAN MUST BE SHORTED AT ALL TIMES.		

### 9.7 Reactor / other HV equipment enclosure

Table 7: Reactor / other HV equipment enclosure

Reactor/Other HV Equipment Enclosure	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Danger – High Voltage.	EESS-10181-10 (450 x 300) - Preferred	002423036
DANGER	EESS-10181-11 (600 x 450)	Order as required
HIGH VOLTAGE	EESS-10181-67 (250 x 180)	Order as required

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Reactor/Other HV Equipment Enclosure	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Danger - High Voltage at Ground Level	EESS-10181-88	002472348
For HV equipment mounted at ground level.	(600 x 450)	
HIGH VOLTAGE AT GROUND LEVEL  DO NOT ENTER UNLESS FOR SWITCHING OR SIGNED ONTO AN ACCESS OR TEST PERMIT		
Conditions for entry to Reactor/Other Equipment Enclosure.	EESS-10181-25	Order as
NO ENTRY  1. Do not eater enclasure whilst reactor is in service. 2. Ensure earths are applied before connencing work in entillabore.	(600 x 450)	required

### 9.8 Control / Switchroom building entrance door

Table 8: Control / Switchroom building entrance door

Control / Switchroom Building Entrance Door	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Danger – High Voltage.	EESS-10181-10 (450 x 300) - Preferred	002423036
HIGH	EESS-10181-11 (600 x 450)	Order as required
VOLTAGE NACCOLE	EESS-10181-67 (250 x 180)	Order as required

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Control / Switchroom Building Entrance Door	Drawing No (Dimensions mm)	Stock Code (if applicable)
Mobile phones and radio transceivers.	EESS-10181-26	002423135
Use for operational and/or other authorised purposes	(300 x 450)	
DO NOT USE MOBILE TELEPHONES OR TRANSCEIVERS IN THIS AREA 'OPERATIONAL' PURPOSES EXCEPTED		
Authorized Persons only.  Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-16 (300 x 450) - Preferred	002423085
Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-17 450 x 300	Order as required
No smoking in this area.  No smoking in this area.  No smoking in this area.	EESS-10181-27 (300 x 450)	002423143

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Control / Switchroom Building Entrance Door	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Asbestos materials advice –	EESS-10181-65	Order as
Asbestos Warning Sign / Warning Sticker.	(175 x 200)	required
ASBESTOS CONTAINING MATERIALS HAVE BEEN IDENTIFIED AT THESE PREMISES. ALL CONTRACTORS MUST REVIEW THE ASBESTOS REGISTER PRIOR TO COMMENCING WORKS AT THIS SITE.  Register and site details / execution administered by		
Energy Network Services		
Asbestos materials advice –	EESS-10181-66	Order as
Asbestos Warning Sign / Warning Sticker	(120 x 50)	required
Asbestos Sticker Sign.		
WARNING ASBESTOS CONTAINING MATERIAL CONTACT NOMINATED OFFICER AND CONSULT BUILDING MANAGEMENT PLAN OUEPBLANG LABORATORY PTY LTD PH: 1300 138 368  Register and site details / execution administered by		
Energy Network Services		
Asbestos materials advice	901978-41- Archived	N/A
This is an existing sign at some Ergon Energy sites.	(450 x 300)	
AN ASBESTOS MATERIALS REPORT AND REGISTER HAS BEEN COMPLETED FOR THIS BUILDING Prior to entry or undertaking any works, this register should be consulated Register is located adjacent to building entrance	Information Only  Not to be adopted as a replacement sign.	
Register and site details / execution administered by		
Energy Network Services		

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### 9.9 Control / Switchroom building – emergency exit doors

Table 9: Control / Switchroom building - emergency exit doors

Control/Switchroom Building – Emergency Exit Doors	Drawing No (Dimensions mm)	Stock Code (if applicable)
EMERGENCY EXIT – ALARM WILL SOUND NOTE:	No drawing available. (450 x 180)	Order as required
Applicable only where a Substation Security System is in place. Sign to be mounted on inside face of Alarmed Door.		
Procurement/Application		
by Operations Service Delivery Group		
EMERGENCY EXIT ALARM WILL SOUND		
EMERGENCY EXIT	No drawing available.	Order as
Not part of this suite of Signs.		required
Part of Substation Building Construction		
Procurement/Application		
by Operations Service Delivery Group		
EXIT		

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# 9.10 Portable earth device (PED) storage racks at substation site substation prospective fault level signage

Table 10: Portable earth device (PED) storage racks at substation site substation prospective fault level signage

			torage Racks at	Drawing No	Stock Code
Substation Signage	Site Sub Si	tation Pr	ospective Fault Level	(Dimensions mm)	(if applicable)
Zone Substa	ation Prospe	ctive Fau	ult Current	No drawing available	Create as
Auto - gener	ate System	for Requ	iired Sign		required via
Shown for M	IACK –Macl	kay T038	Substation		dedicated
SAMPLE ON	NLY:				spreadsheet
_			(xls) for this application dards Group		template
	·				Spreadsheet is managed by
PED Rating					Power System
kA/time-sing	• •				Management
kA/time-dual	• •				
KA/IIIIA-IIIN					
www.mo-uipie	е арр				
TO VIIITO-IIIPIO	е арр				
io varno-arpie	е арр				
	е арр	Region			
] (	o		ckay T038		
] (	MK ACK	Mac	ckay T038		
MAXIMU	MK ACK	Mac			
MAXIMU	MK ACK	Mac	ENT TO JUNE 2013		
MAXIMU SUBSI	MK ACK JM PROSPECTIVE TATION REGION	Mac	ENT TO JUNE 2013  Maximum Fault Current (kA)		
MAXIMU SUBSI	MK ACK JM PROSPECTIVE TATION REGION	Mac	ENT TO JUNE 2013  Maximum Fault Current (kA)		
MAXIMU SUBST	MK ACK  JM PROSPECTIVE TATION REGION MK	Mac	ENT TO JUNE 2013  Maximum Fault Current (kA)		
MAXIMU SUBSI Mackag T008  PED Selection Locate the vol	MK ACK  JM PROSPECTIVE TATION REGION  MK  Alage level to be earthed in in fault current tailing will be up	Mac FAULT CURRE VOLTAGE (KV) 33.0	Maximum Fault Current (kA)  36.68		
MAXIMU SUBSI Mackay TOOR Mackay TOOR Locate the vol The maximum PEDs may be PEDs may be	MK ACK  JM PROSPECTIVE TATION REGION  MK  Intege level to be earthed in in fault current to along will be up able to withstand the main	Mac FAULT CURRE VOLTAGE (KV) 33.0  be table above sed to select the PEE unum fault current for in	Maximum Fault Current (kA)  36.68  36.68		
MAXIMU SUBSI Mackay 7008  Mackay 7008  PED Selection Locate the vol The maximum PEDs must be PEDs may be of Check the kA The table belon The table belon	MK  ACK  JM PROSPECTIVE  TATION REGION  MK  Altage level to be earthed in fault current rating will be earthed to expand the maximum required to be paralleled to to.  What conversion factors if was a some sooper conduct we assume sooper conducts.	Mac  FAULT CURRE  VOLTAGE (kV)  33.0  he table above seed to select the PEE  sole obtain the required ra the PEED below a PED has a 8.5sec ro	Maximum Fault Current (kA)  36.68  36.68  1 Second tring. Consult PED bA Ratings tables below sping.		
MAXIMU SUBSI Mackas TOOR  PEO Selection Locate the vol The maximum PEDs may be e Check the AA The table belood The table ta	MK  ACK  JM PROSPECTIVE  TATION REGION  MK  Intege level to be earthed in in fault current raining will be re able to withktand the main what conversion factors if w assumes cooper conducts.  Raining Fe  Faul Yme(s)	Mac  FAULT CURRE  VOLTAGE (KV)  33.0  be table above sed to select the PEE num fault current for in the PED before applied that the PED before applied to the PEE D back at 8,55sec to or D back addings (2 in parallel moderner for pet l'imperionoceter feut l'imperio	Maximum Fault Current (kA)  36.68  36.68  3. Second ting. Consult PED IA Ratings tables below sing. atting plate  10) PED IA Ratings (2 in parallal)  (conductor   Fault Time (c)		
MAXIMU SUBSI Mackay T008  Mackay T008  PED Selection Locate the vol The maximum PEDs must be PEDs must be PEDs has the PED has the Conductor FEO has Conductor Sez (mm²)	MK  ACK  JM PROSPECTIVE  TATION REGION  MK  Intege level to be earthed in in fault current raining will be re able to withktand the main what conversion factors if w assumes cooper conducts.  Raining Fe  Faul Yme(s)	Mac  FAULT CURRE  VOLTAGE (kV)  33.0  he table above sed to select the PEE sed to select the required ra the PEED below a PEED as a 9.5see ro D has Relings (2 n paral	Maximum Fault Current (kA)  36.68  36.68  1 Second ting. Consult PED IA Ratings tables below sping. rating plate  1 PED IA Ratings (2 in paralle)  (2) Conductor Fault Time (c)  5 Sec (mm?) 0.5 1		
MAXIMU SUBSI Mackay T000  Mackay T000  PED Selection Locate the vol The maximum PEDs must be PEDs Maximum PED Maximu	MK  ACK  JM PROSPECTIVE  TATION REGION  MK  Integrated to be earthed in tale to winstand the main required to be paralleled to the paralle	Mac  FAULT CURRE  VOLTAGE (KV)  33.0  he table above sed to select the PEE sed to select the required rap to PEE bear of Data Attack Attack Data Attack Size of the PEE before Data Attack Taut Time a (mm) 0.5 25   15.5A, 10.5 35   22.6A, 15.5	Maximum Fault Current (kA)  36.68  36.68  36.68  1 second ting. Consult PED kA Ratings tables below sping. rating plate  1 be)  PED kA Ratings (2 in paralle)  Conductor   Fault Time (r)  Sec (mm?)   0.5   1.  GA   23.0 kA   23.0 kA		
MAXIMU SUBSI Mackay T008  Mackay T008  Mackay T008  PED Selection Locate the vol The maximum PEDs must be PEDs must be PEDs must be PEDs must be PEDs half Conductor f Size (mm²) 25 0 35 12 50 18	MK  ACK  JM PROSPECTIVE  TATION REGION  Mc  Alage level to be earthed in in fault current rating will be usable to withstand the main was able to withstand the main was conversion factors if w assumes cooper conductive failings FF  Fault Time (b)  0.5 1  SE  SE  SE  SE  SE  SE  SE  SE  SE  S	Mac  FAULT CURRE  VOLTAGE (KV)  33.0  Assume that the shower of the show	A		

# 9.11 Battery rooms, battery enclosures and mounting racks – secondary batteries – vented cells

These signs shall be in accordance with the requirement under the Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Vented Cells (AS 2676.1, 1992). To meet the requirements Safety Signs shall be designed and constructed to (AS1319, 1994) and should be permanently displayed in prominent positions.

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- a) The signs are of the following three types:
- b) Restricted Access & Regulatory
- c) WARNING signs
- d) Emergency related information signs

Restricted Access, Regulatory & Warning signs should be placed on every door giving access to a battery room or enclosure and in a prominent position on a wall within a Battery Room.

Emergency related information signs should be placed in a prominent position within a battery room and on the inside of the door on a battery enclosure.

The following sub sections detail the signs for use in applications containing vented battery cells in the context of Battery Rooms, Batter Enclosures and Mounting Racks – Secondary Cells

#### 9.11.1 Vented cells - site access

Table 11: Vented cells - site access

Vented Cells - Site Access	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Authorized Persons only.	EESS-10181-16	002423085
AUTHORIZED PERSONS ONLY	(300 x 450) - Preferred	
Authorized Persons only.	EESS-10181-17	Order as
AUTHORIZED PERSONS ONLY	(450 x 300)	required
Fire, naked flame and smoking prohibited.	EESS-10181-28	002423150
FIRE NAKED FLAMES AND SMOKING PROHIBITED THANAGEMENT PROHIBITED	(300 x 450)	

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Vented Cells - Site Access	Drawing No (Dimensions mm)	Stock Code (if applicable)
Mobile telephone and radio transceivers prohibited  MOBILE TELEPHONES AND RADIO TRANSCEIVERS PROHIBITED	EESS-10181-74 (300 x 450)	Order as required

### 9.11.2 Vented cells - PPE and warnings

Table 12: Vented cells - PPE and warnings

Vented Cells – PPE and Warnings	Drawing No (Dimensions mm)	Stock Code (if applicable)
Hand protection must be worn.	EESS-10181-29 (180 x 250)	Order as required
HAND PROTECTION MUST BE WORN IN THIS AREA	EESS-10181-30 (300 x 450)	Order as required
Safety goggles must be worn in this area.  Safety goggles must be worn in this area.  Safety goggles must be worn in this area.	EESS-10181-06 (300 x 450)	Order as required

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Vented Cells – PPE and Warnings	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Protective Clothing must be worn in this area.  PROTECTIVE CLOTHING MUST BE WORN IN THIS AREA	EESS-10181-08 (300 x 450)	Order as required
Battery Bank Voltage and Fault Current Warning Fit sign as close as practicable to battery set/cubicle. Confirm battery bank voltage and short circuit current details before ordering sign.  NNN V DC BATTERY BANK PROSPECTIVE SHORT-CIRCUIT CURRENT MM MMM A	EESS-10181-44 (450 x 150)	Order as required
Battery Bank (cubicle-based bank) Specific PPE/Access conditions in addition to standard field requirements may be required.  Authorized Persons ONLY  SAFETY GOGGLES MUST BE WORN IN THIS AREA  PROHIBITED  PROHIBITED	EESS-10181-45 (380 x 180)	Order as required

#### 9.11.3 Vented cells – emergency related information

To meet the relevant Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Vented Cells (Standards Australia, 1992) the following should be used.

The specific direction from 'AS 2676.1 SAFETY' is as follows:

'Emergency Related Information Signs (ERIS) should give instructions for dealing with Electrolyte burns.

A permanently installed fresh water supply should be provided for all battery rooms.

Where water supply for flushing is not provided disposable sterile eye irrigators or saline solution should be provided at each battery room/set. Care should be taken to ensure the sterile solutions are changed on a regular basis in accordance with manufacturer's instructions as the sterility security has a marked time limit.

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NOTE: Where a water supply system is installed in the vicinity of any part of an electrical installation, care shall be taken to ensure that the requirements of (AS/NZS 3000, 2007) are met.

Table 13: Vented cells – emergency related information

Vented Cells – Emergency Related Information	Drawing No (Dimensions mm)	Stock Code (if applicable)
Emergency shower and eyewash — Attention: Signs should be mounted in a prominent position within a battery room and on the inside of the door of a battery enclosure.  EMERGENCY SHOWER AND EYE WASH  IN CASE OF CHESICAL SPLASH NUMBER FOR 15 HINDETES PRO R TO NED CALL TREATMENT  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MINISTES PRO R TO NED CALL TREATMENT  MANUEL DELL'ALL SPLASH NUMBER FOR 15  MANUEL DELL'ALL SPLAS	ESS-10181-31 (450 x 300)	Order as required
Attention: Signs should be mounted in a prominent position within a battery room and on the inside of the door of a battery enclosure.  ** ELECTROLYTE BURNS**  Immediately wash affected area with plenty of water, then  SKIN BURNS**  SKIN BURNS**  EYE BURNS**  1. Immediately wash affected area with plenty of water, then  SKIN BURNS**  EYE BURNS**  1. Immediately wash system to large amounts of wash router using contaminated	EESS-10181-32 (450 x 300)	Order as required

#### 9.11.4 Vented cells – firefighting equipment

To meet the relevant Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Vented Cells (AS 2676.1, 1992) the following should be used.

The specific direction from 'AS 2676.1 FIREFIGHTING EQUIPMENT' is as follows:

'All battery installations should be provided with portable fire extinguishers suitable for use on acid and alkaline solutions and electrical fires, e.g. CO2 and BCF.

Fire appliances/Signs should be sited adjacent to entrances of rooms or convenient to battery enclosures.

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The number of appliances and installation should be in accordance with the requirements of the Building Code and appropriate regulatory authority/codes.'

Type, placement, administration and maintenance of these signs is administered by Civil Group For further details on substation fire and explosion protection refer to Ergon Energy Standards (STNW3035).

Table 14: Vented cells – firefighting equipment

Vented Cells – Fire Fighting Equipment	Drawing No (Dimensions mm)	Stock Code (if applicable)
Fire appliance –Generic symbol.  FIRE EXTINGUISHER	Production/Application via Civil Group	Order as required
Fire appliance – Carbon dioxide CO <sub>2</sub> :  Listed in AS 2676.1 – 1992 as being suitable for acid and alkaline solutions and electrical fires.  FRE EXTINGUISHER  CO2  FLAMMABLE UQUID  AND ELECTRICAL  FIRES	Production/Application via Civil Group	Order as required

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Vented Cells – Fire Fighting Equipment	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Fire appliance – Powder (BCF):	Production/Application	Order as
Listed in (AS 2676.1, 1992) as being suitable for acid	via	required
and alkaline solutions and electrical fires.	Civil Group	
FIRE EXTINGUISHER		
POWDER  (SEE STANGED FOR SEE S		

# 9.12 Battery room / battery enclosure / mounting rack – secondary batteries - sealed cells – section 8 safety

These signs shall be in accordance with the requirement under the Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Sealed Cells (AS 2676.1, 1992). To meet the requirements Safety Signs shall be designed and constructed to (AS1319, 1994)and should be permanently displayed in prominent positions.

The signs are of the following two types:

- Restricted Access & Regulatory
- WARNING signs

Signs should be displayed in the following locations;

Restricted Access, Regulatory & Warning signs should be placed on every door giving access to a battery room or enclosure and in a prominent position on a wall within a Battery Room.

A caution (Warning) Signage is applicable where battery capacity exceeds 100 Ah at the 3h rate or nominal voltage is in excess of extra low voltage. Caution signage should be placed on every door giving access to a battery room or enclosure and in a prominent position on a wall within a Battery Room.

Emergency related information signs should be placed in a prominent position within a battery room and on the inside of the door on a battery enclosure.

The following sub sections detail the signs for use in applications containing sealed battery cells in the context of Battery Rooms, Batter Enclosures and Mounting Racks – Secondary Cells

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### 9.12.1 Sealed Cells - Restricted Access

Table 15: Sealed Cells – Restricted Access

Sealed Cells – Restricted Access	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Authorized Persons only.  Authorized Persons only.  Authorized Persons only.  Authorized Persons only.  Authorized Persons only.	EESS-10181-16 (300 x 450) - Preferred	Order as required
Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Fire, naked flame and smoking prohibited.  Fire NAKED FLAMES AND SMOKING PROHIBITED	EESS-10181-28 (300 x 450)	002423150
Mobile telephone and radio transceivers prohibited  MOBILE TELEPHONES AND RADIO TRANSCEIVERS PROHIBITED	EESS-10181-74 (300 x 450)	

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### 9.12.2 Sealed cells - PPE & warnings

Table 16: Sealed cells – PPE & warnings

Sealed Cells – PPE & Warnings	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Hand protection must be worn.	A4 901978-29 (180 x 250)	Order as required
HAND PROTECTION MUST BE WORN IN THIS AREA	A4-901978-30 (300 x 450)	Order as required
Safety goggles must be worn in this area.  Safety goggles must be worn in this area.  Safety goggles must be worn in this area.	EESS-10181-06 (300 x 450)	Order as required
Protective Clothing must be worn in this area.  PROTECTIVE CLOTHING MUST BE WORN IN THIS AREA	EESS-10181-08 (300 x 450)	Order as required
Battery Bank Voltage and Fault Current Warning.  Fit sign as close as practicable to battery set/cubicle.  Confirm battery bank voltage and short circuit current details before ordering sign.  NNN V DC BATTERY BANK PROSPECTIVE SHORT-CIRCUIT CURRENT MM MMM A	EESS-10181-44 (450 x 150)	Order as required

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Sealed Cells – PPE & Warnings	Drawing No (Dimensions mm)	Stock Code (if applicable)
Battery Bank (cubicle-based bank).  Specific PPE/Access conditions in addition to standard field requirements.	EESS-10181-45	Order as required
AUTHORIZED SAFETY GOGGLES PERSONS MUST BE WORN ONLY IN THIS AREA PROHIBITED		

#### 9.12.3 Sealed cells - emergency related information

To meet the relevant Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Sealed Cells (Standards Australia, 1992) the following should be used.

The specific direction from 'AS 2676.2 SAFETY' is as follows:

'Emergency Related Information Signs (ERIS), if any, should give instructions for dealing with issues related to the type of batteries installed in battery room/enclosure/mounting rack and may be specific to the installed batteries.

Any such signs should be displayed in a prominent position within a battery room and on the inside of the door on a battery enclosure.'

(AS2676.2 - 1992) Secondary Batteries in Buildings – Sealed Cells - does not state any signage requirement for Sealed Cells.

It may be possible during charging with incorrect control or faulty charger may result in the discharge of a combustible mixture of hydrogen and oxygen. Ignition sources should not be allowed / located in close proximity to the tops of cells.

#### 9.12.4 Sealed cells – firefighting equipment

To meet the relevant Australian Standards for Guidance for the installation, maintenance, testing and replacement of secondary batteries in buildings – Sealed Cells (Standards Australia, 1992) the following should be used.

The specific direction from 'AS 2676.2 FIREFIGHTING EQUIPMENT is as follows:

All battery installations should be provided with portable fire extinguishers suitable for use on acid and alkaline solutions and electrical fires, e.g. CO2 and BCF

Fire appliances/Signs should be sited adjacent to entrances of rooms or convenient to battery enclosures.

The number of appliances and installation should be in accordance with the requirements of the Building Code and appropriate regulatory authority/codes.

Type, placement, administration and maintenance of these signs is administered by Civil Group

For further details on substation fire and explosion protection refer to Ergon Energy Standards (STNW3035).

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Table 17: Sealed cells - firefighting equipment

Sealed Cells – Fire Fighting Equipment	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Fire appliance –Generic symbol.	Production/Application via Civil Group	Order as required
Fire appliance – Carbon dioxide CO <sub>2</sub> .  Listed in (AS 2676.1, 1992) as being suitable.  FRE EXTINGUISHER  CO <sub>2</sub> FLAMMABLE UNUID  AND ELECTRICAL  FIRES	Production/Application via Civil Group	Order as required
Fire appliance –Powder (BCF): Listed in (AS 2676.1, 1992) as being suitable for acid and alkaline solutions and electrical fires.  FRE EXTINGUSHER  OIL LIQUID AND ELECTRICAL FIRES	Production/Application via Civil Group	Order as required

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#### 9.13 SCADA / Communications room door zone substation site

Table 18: SCADA / Communications room door zone substation site

SCADA / Communications Room Door Zone Substation Site	Drawing No (Dimensions mm)	Stock Code (if applicable)
Authorized Persons only.  Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-16 (300 x 450) - Preferred	002423085
Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Fire, naked flame and smoking prohibited.  Fire NAKED FLAMES AND SMOKING PROHIBITED	EESS-10181-28 (300 x 450)	002423150
Personal Protective Equipment (PPE)-required for substation site entry.  4 Unit combination sign (head, protective clothing, footwear & eye protection.	EESS-10181-04 (900 x 600) EESS-10181-48 (450 x 300)	002423028  Order as required
THIS PROTECTIVE EQUIPMENT  MUST BE WORN  ON THIS SITE	EESS-10181-49 (300 x 225) - Preferred	Order as required

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SCADA / Communications Room Door Zone	Drawing No	Stock Code
Substation Site	(Dimensions mm)	(if applicable)
Non-ionising Radiation-Warning.	EESS-10181-13	002423051
NON - IONISING RADIATION MOTORS	(300 x 450)	

#### 9.14 SCADA / Communications room door - Network Control Centre

Table 19: SCADA / Communications room door - Network Control Centre

SCADA / Communications Room Door Network Control Centre	Drawing No (Dimensions mm)	Stock Code (if applicable)
Authorized Persons only.  Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-16 (300 x 450) - Preferred	002423085
Authorized Persons only.  AUTHORIZED PERSONS ONLY	EESS-10181-17 (450 x 300)	Order as required
Fire, naked flame and smoking prohibited.  Fire Naked Flames AND SMOKING PROHIBITED	EESS-10181-28 (300 x 450)	002423150

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SCADA / Communications Room Door Network Control Centre	Drawing No (Dimensions mm)	Stock Code (if applicable)
Personal Protective Equipment (PPE)-required for substation site entry.  4 Unit combination sign (head, protective clothing, footwear & eye protection.	EESS-10181-04 (900 x 600)	002423028
THIS PROTECTIVE EQUIPMENT	EESS-10181-48 (450 x 300)	Order as required
MUST BE WORN ON THIS SITE	EESS-10181-49 (300 x 225) - Preferred	Order as required
Non-ionising Radiation-Warning.  Non-ionising Radiation-Warning.  Non-ionising Radiation-Warning.	EESS-10181-13 (450 x 300)	002423051

### 9.15 Entry points to an area classed as – 'Confined Space'

Table 20: Entry points to an area classed as - 'Confined Space'

Entry Points to an Area Classed as – 'Confined Space'	Drawing No (Dimensions mm)	Stock Code (if applicable)
No entry without a confined space permit.  No entry without a confined space permit.  NO ENTRY WITHOUT A CONFINED SPACE PERMIT MATTER  LANGE MATTER AND THE PERMIT	EESS-10181-33 (300 x 450)	Order as required

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#### 9.16 Adjacent to 'Un-Potable Water Tap' in substation switchyard (external)

Table 21: Adjacent to 'Un-Potable Water Tap' in substation switchyard (external)

Adjacent to 'Un-Potable Water Tap' in Substation	Drawing No	Stock Code
Switchyard (external)	(Dimensions mm)	(if applicable)
Do not drink.	EESS-10181-34	Order as
DO NOT DRINK	(300 x 450)	required

#### 9.17 Adjacent to 'Un-Potable Water Tap' in substation amenities Area

Table 22: Adjacent to 'Un-Potable Water Tap' in substation amenities Area

Adjacent to 'Un-Potable Water Tap' in Substation Amenities Area	Drawing No (Dimensions mm)	Stock Code (if applicable)
Do not drink.  DO NOT DRINK	EESS-10181-34 (300 x 450)	Order as required

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### 9.18 Restricted site main entrance adjacent to restricted area / item within substation

Table 23: Restricted site main entrance adjacent to restricted area / item within substation

Restricted Site – Main Entrance Adjacent to	Drawing No.	Stock Code
Restricted Area/Item within Substation	(Dimensions mm)	(if applicable)
Danger - Network Access Restriction	EESS-10181-20	002438042
Applies at this Site.	(450 x 300)	
Used only when an access restriction for safety reasons applies to some item of plant. Must be removed when safety exclusion no longer applies.		
NOTE: Item - drawing EESS-10181-58 may also be required in conjunction with the use of item below.		
A NETWORK ACCESS RESTRICTION APPLIES AT THIS SITE  NO ENTRY UNLESS SPECIFIED CONTROL MEASURES ARE APPLIED AT ALL TIMES CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION  CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION		
Danger - Network Access Restriction Exists Tag	EESS-10181-58	002438059
Applies to Plant Item.	(80 x 80)	
NOTE: This item may also be required in conjunction with the use of the above sign EESS-10181-20.  DANGER  NETWORK ACCESS RESTRICTION EXISTS		

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### 9.19 Substation / Control building access doors (interior / exterior)

Table 24: Substation / Control building access doors (interior / exterior)

Substation / Control Building	Drawing No.	Stock Code
Access Doors (Interior / Exterior)	(Dimensions mm)	(if applicable)
Fire exit doors/external – Keep clear at all times.  FIRE EXIT DOORS KEEP CLEAR AT ALL TIMES	EESS-10181-39 (450 x 300)  Procurement/Application By Civil Group	Order as required
No parking – Substation entrance.  NO PARKING SUBSTATION ENTRANCE	EESS-10181-37 (300 x 450)  Procurement/Application By Civil Group	002423127
Building entrance (substation located within).  NO PARKING BUILDING ENTRANCE	EESS-10181-36 (300 x 450)  Procurement/Application By Civil Group	Order as required
Fire door – Do not block.  FIRE DOOR  DO NOT BLOCK	Production/Application via Civil Group	Order as required

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### 9.20 Fire appliance signs – general

Table 25: Fire appliance signs – general

Fire Appliance Signs – General	Drawing No.	Stock Code
	(Dimensions mm)	(if applicable)
Fire Appliance - Generic Sign.  FIRE EXTINGUISHER	Production/Application via Civil Group	Order as required
Fire appliance – Carbon Dioxide CO <sub>2</sub> , Flammable Liquid & Electrical Fires.  FIRE EXTINGUISHER  CO <sub>2</sub> FLAMMABLE LIQUID  AND ELECTRICAL  FIRES	Production/Application via Civil Group	Order as required
Fire Appliance – Powder, Oil/ILiquid & Electrical Fires.  FRE EXTINGUISHER  POWDER  TO BE SEED FOR OIL, LIQUID AND ELECTRICAL FIRES	Production/Application via Civil Group	Order as required

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Fire Appliance Signs – General	Drawing No.	Stock Code
	(Dimensions mm)	(if applicable)
Fire Appliance – Foam, Petrol,Oil & Other Flamable Liquid Fires – Not for Electrical Fires.  FIRE EXTINGUISHER  FOAM  PETROL, OIL AND DITHER  FRANKABLE LIQUID FIRES  NOT FOR ELECTRICAL  FIRES	Production/Application via Civil Group	Order as required
Fire Appliance –Water, To be used for Wood, Paper and Fabric Fires– Not for Electrical or Flammable Liquid Fires.	Production/Application via Civil Group	Order as required

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### 9.21 Regulatory - Mandatory

Table 26: Regulatory – Mandatory

Regulatory – Mandatory	Drawing No.	Stock Code
regulatory – manuatory	(Dimensions mm)	(if applicable)
Development Destroit of Eq. (1994) (PDE) and (1994)		
Personal Protective Equipment (PPE) advice sign -	EESS-10181-05	Order as required
Eye Protection - (single sign alternative).	(300 x 450)	required
EYE PROTECTION MUST BE WORN IN THIS AREA		
Personal Protective Equipment (PPE) advice sign -	EESS-10181-06	Order as
Safety Goggles (Single sign alternative).	(300 x 450)	required
SAFETY GOGGLES MUST BE WORN IN THIS AREA		
Personal Protective Equipment (PPE) advice sign -	EESS-10181-07	Order as
Head Protection - (single sign alternative).	(300 x 450)	required
THIS IS A HARD HAT AREA SAFETY HELMETS MUST BE WORN		
Personal Protective Equipment (PPE) advice sign -	EESS-10181-29	Order as
Hand Protection - (single sign alternative).	(180 x 250)	required

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Regulatory – Mandatory	Drawing No.	Stock Code
	(Dimensions mm)	(if applicable)
HAND PROTECTION	EESS-10181-30 (300 x 450)	Order as required
MUST BE WORN IN THIS AREA		
Personal Protective Equipment (PPE) advice sign -	EESS-10181-08	Order as
Protective Clothing (single sign alternative).	(300 x 450)	required
PROTECTIVE CLOTHING MUST BE WORN IN THIS AREA		
Personal Protective Equipment(PPE) advice sign	EESS-10181-09	Order as
Foot Protection (single sign alternative).  FOOT PROTECTION MUST BE WORN IN THIS AREA  MACHINETICS  MUST BE WORN IN THIS AREA	(300 x 450)	required
Personal Protective Equipment (PPE)-required for	EESS-10181-04	002423028
substation site entry- 4 Unit combination sign(head, protective clothing, footwear & eye protection.	(900 x 600)	
	EESS-10181-48	Order as
	(450 x 300)	required
THIS PROTECTIVE EQUIPMENT	EESS-10181-49	Order as
MUST BE WORN ON THIS SITE	(300 x 225) - Preferred	required

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### 9.22 Hazard – Danger

Table 27: Hazard - Danger

Hazard – Danger	Drawing No. (Dimensions mm)	Stock Code (if applicable)
Danger – Equipment starts automatically.  THIS EQUIPMENT STARTS AUTOMATICALLY	EESS-10181-38 (450 x 300)	Order as required
Danger – High Voltage Testing Keep Clear.  HIGH VOLTAGE TESTING KEEP CLEAR	EESS-10181-72 (450 x 300)	Order as required
Danger - Do not operate Tag –  Referenced in Appendix B - Sample Signs & tags of  Q.E.E. Procedures for Safe Access to High  VoltageApparatus.  DO NOT  OPERATE	EESS-10181-41 (150 x 75)	2401684 Use Item Stock Code as per Q.E.E. Appendix B Sample Signs & tags for application
Danger - Network Access Restriction Applies at this Site — Used only when an access restriction for safety reasons applies to some item of plant. Must be removed when safety exclusion no longer applies.  NOTE: Tag item EESS-10181-58 may also be required in conjunction with the use of item below.  A NETWORK ACCESS RESTRICTION APPLIES AT THIS SITE NO ENTRY UNLESS SPECIFIED CONTROL MEASURES ARE APPLIED AT ALL TIMES CONTACT OPERATIONAL CONTROL CENTRE FOR MORE INFORMATION	EESS-10181-20 (450 x 300)	002438042

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Hazard – Danger	Drawing No.	Stock Code
_	(Dimensions mm)	(if applicable)
Danger - Network Access Restriction Exists Tag	EESS-10181-58	002438059
Applies to Plant Item	(80 x 80)	
NOTE: This item may also be required in conjunction with the use of the above sign EESS-10181-20.		
DANGER  NETWORK ACCESS RESTRICTION EXISTS		
Cable screen earth bonding – earth bonded at this end.	EESS-10181-68	Order as
DANGER	(250 x 180)	required
	EESS-10181-77	Order as
CABLE SCREEN IS EARTH BONDED AT THIS END DO NOT OPEN OR DISCONNECT SCREEN BONDING	(80 x 60)	required
	EESS-10181-80	Order as
	(150 x 75)	required
Cable screen earth bonding - not earth bonded at this	EESS-10181-69	Order as
end.	(250 x 180)	required
DANGER	EESS-10181-78	Order as
CABLE SCREEN IS NOT	(80 x 60)	required
EARTH BONDED AT THIS END DO NOT BOND THIS END	EESS-10181-81	Order as
HAZARDOUS VOLTAGE MAY EXIST ON CABLE SCREEN	(150 x 75)	required
Cable screen earth bonding – HV Sheath Voltage	EESS-10181-70	Order as
Limiters.	(250 x 180)	required
DANGER	EESS-10181-79	Order as
CABLE SCREEN IS EARTH BONDED	(80 x 60)	required
THROUGH HV SHEATH VOLTAGE LIMITERS AT THIS END	EESS-10181-82	Order as
HAZARDOUS VOLTAGE MAY EXIST ON CABLE SCREEN	(150 x 75)	required

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Hazard – Danger	Drawing No.	Stock Code
	(Dimensions mm)	(if applicable)
Cable screen earth bonding – Refer to EDMS.  CABLE SCREEN EARTH BONDING FOR THIS CIRCUIT SHALL REFER TO AN EARTH SCHEMATIC DRAWING LOCATED IN CURRENT CORPORATE ELECTRONIC DRAWING MANAGEMENT SYSTEM	EESS-10181-71 (250 x 180)	Order as required
Generator Star Point To Be Connected To Earth Grid.  DANGER  GENERATOR STAR POINT TO BE CONNECTED TO EARTH GRID DURING OPERATION	EESS-10181-73 (140 x 100)	Order as required

#### 9.23 Hazard – Warning

Table 28- Hazard – Warning

Hazard - Warning	Drawing No (Dimensions mm)	Stock Code (if applicable)
Warning –Exhaust Ducts may Vent on Fault at any Time-POSITIONED AT REAR OF PANELS.	EESS-10181-52 (250 x 180)	Order as required
DO NOT STAND BEHIND SWITCHGEAR - EXHAUST DUCTS MAY VENT ON FAULT AT ANY TIME	EESS-10181-53 (125 x 90)	Order as required
Warning –Exhaust Ducts may Vent on Fault at any Time-LEFT HANDED ORIENTATION (on L H side of panels).  NO STANDING AT REAR-EXHAUST DUCTS MAY VENT ON FAULT AT ANY TIME	EESS-10181-50 (300 x 225)	Order as required

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Hazard - Warning	Drawing No	Stock Code
	(Dimensions mm)	(if applicable)
Warning –Exhaust Ducts may Vent on Fault at any Time-RIGHT HANDED ORIENTATION (on R H side of panels).  NO STANDING AT REAR-EXHAUST DUCTS MAY VENT ON FAULT AT ANY TIME	EESS-10181-51 (300 x 225)	Order as required
Warning – Frame leakage Protection.    CONSULTANIAN	EESS-10181-47 (180 x 120)	Order as required
Switchgear contains SF6 Gas.  SWITCHGEAR CONTAINS SF6 GAS	EESS-10181-43 (450 x 300)	Order as required

### 9.24 Sustainable forestry plantations

Table 29: Sustainable forestry plantations

Sustainable Forestry Plantations	Drawing No.	Stock Code
	(Dimensions mm)	(if applicable)
Sustainable Forestry Plantation - Pole Supply Site Name & Fire Risk Contact Details – 600 x450 Eagle Rock Mount Marsh Miva Gundiah Boomerang   EAGLE ROCK SUSTAINABLE POLE SUPPLY PROJECT Managed by Ergon Energy to ensure a future supply of hardwood power poles. ACCESS AUTHORISED PERSONS ONLY	EESS-10181-55 EESS-10181-59 EESS-10181-60 EESS-10181-61 EESS-10181-62 (600 x450)	Order as required

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### 9.25 General purpose - Notice

Table 30: General purpose - Notice

General Purpose - Notice	Drawing No. (and Dimensions)	Stock Code (if applicable)
Notice – Illegal Dumping & Contact Details.  ILLEGAL DUMPING  SEVERE PENALTIES APPLY  AREA UNDER SURVEILLANCE  AND PATROLS  REPORT DUMPING TELEPHONE 131046	EESS-10181-56 (600 x 450)	Order as required
Notice – Logbook Location.	EESS-10181-54 (150 x 80)	Order as required

#### 9.26 Substation Telephone – Emergency information

Table 31: Substation Telephone – Emergency information

Control/Switchroom Building – Emergency	Drawing No	Stock Code
Information Sheet	(and Dimensions)	(if applicable)
Sign is to be printed on an A4 sheet and housed in a photo frame with a white border and a Perspex protective cover.	EESS-10181-76 A4	Create as required via
Sign is to be mounted as per 7.1 of this standard. Located indoors adjacent to the public network telephone.		dedicated template.
This sign shall be Jade green with white text only.		Modify addresses and
Information shall cover all shown in example below.  Modify information to suit individual sites.		phone numbers to suit.
** Some sites may need to dial (0) to get an external line.  Example:		Do not adjust
EMERGERICY SERVICES PHONE LIST  AITKENVALE (AITK, SUBSTATION  2022 AND A ADDRESS  SUBSTATION PROSITE COMMERCE AIRCRAFT AND COMMERCE AIRCRAFT AIRCRAFT AND COMMERCE AIRCRAFT AIRCRAFT AND COMMERCE AIRCRAFT AIRCRAFT AND COMMERCE AIRCRAFT AIRCR		colours.

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