DAWSONWEST

Mine Operating Procedure
Signs and Demarcation

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1. PURPOSE

The purpose of this procedure is to provide guidelines for the selection and placement of signs and demarcation so they can be easily recognized and understood.

This procedure has been developed to ensure compliance with the following section of the *CMSHR*:

- S128(3)(g) 'signs'.

2. SCOPE

This procedure is applicable to all persons at the Dawson West Mine including employees, contractors and visitors. The controls within this procedure are mandatory.

3. DEFINITIONS

Authorised Person	A person who has the required competencies and who has been appointed by the Site Senior Executive, or their appointed representative to carry out a designated scope of duties.
CMSHA	Coal Mining Safety and Health Act 1999.
CMSHR	Coal Mining Safety and Health Regulation 2017.
CMW	Coal Mine Worker.
Competent Person	A person who has, through a combination of training, education and experience, acquired knowledge and skills enabling that person to perform correctly a specified task.
DNRME	Department of Natural Resources, Mines and Energy.
JHA	Job Hazard Analysis.
SHMS	Safety and Health Management System.
SOP	Standard Operating Procedure.
Take 5	Personal Risk Assessment.

4. PROCEDURE

4.1. Mandatory Requirements

The core mandatory requirements and expectations of Dawson West Mine are that all workers (including internal employees, contractors and visitors) will follow the SHMS as it applies when working. Should a system gap be identified, a Supervisor must be notified immediately, and a risk assessment conducted before the work can continue.

Further mandatory requirements identified include the following:

- all workers will comply with CMSHA s. 39 Obligations of persons generally;
- all workers shall be trained, competent and authorised to be on site and to carry out those tasks

specific to their role;

- all workers must present themselves in a state fit for duty and unaffected by drugs, alcohol, fatigue and other physical or psychological impairment;
- all workers will conduct a personal risk assessment (i.e. Take 5) prior to undertaking tasks and in the event of a change to the conditions, process or environment;
- there are risk assessments (JHAs) in place under which tasks are being carried out. These risk assessments may indicate controls that go above and beyond the legislative or SHMS requirements and must be followed;
- errant behaviours are prevented through compliance to the training scheme, and managed appropriately through supervision and site discipline procedures;
- at any stage should a worker feel unsafe or at risk when undertaking a task, they are to stop work, make the area safe (if necessary and possible) and immediately report this to their Supervisor; and
- if a worker sights another worker undertaking a task, which they feel is unsafe or at risk, that work may be stopped, and a Supervisor immediately notified.

4.2. General

Signs and demarcation are provided in the workplace to aid in the safe and orderly movement of people and traffic, as well as to communicate rules and regulations that must be observed while working or entering a particular area. They may contain instructions which personnel are required to obey, warning of hazards which may not be self-evident, or information about routes, directions, destinations and points of interest.

Signs and demarcation must be recognised as such. The means employed to convey information which consists of a combination of a message and a distinctive shape and colour. The message may be either a legend or symbol, or both.

As signs are an essential part of site rules and regulations, their message should be consistent and their design and placement coordinated to achieve optimum visibility and benefit.

Uniformity in the design of signs facilitates identification by personnel. Standardisation of shape, colour and message is used, so that the various classes of sign can be promptly recognised.

As a minimum, signage shall be consistent with Recognised Standard 19.

4.3. Basic Element of a Sign

The basic elements used to identify signs are as follows:

- classification and function;
- shape;
- colour;
- lettering/text;
- symbols;
- reflectorised or illuminated; and
- size.

Although examples within the following sections are mainly related to traffic signs, there is general applicability that should be considered for all notices and signs at the Dawson West Mine.

4.3.1. Classification and Function

Table 1 : Classifications and Functions of Signs

Class	Function
Regulatory signs (Type R) 4.3.1.	To regulate the movement of traffic and to indicate when or where a legal requirement applies. Failure to comply constitutes an offence.
Warning signs (Type W)	To warn road users of unexpected or hazardous conditions on or adjacent to the road.
Guide signs (Type G)	To inform and advise road users of directions, distances, destinations, routes, the location of services for road users and points of interest.
Temporary signs (Type T)	To control, warn and guide road users safely through, around or past work sites on roads and footpaths, and to warn and advise of other temporary hazardous conditions which could endanger road users.
Hazard markers (Type D)	To delineate a marked change in the direction of travel or to emphasise the presence of an obstruction.

4.3.2. Reflectors and Illumination

Signs that are intended to convey their messages during the hours of darkness (except parking signs) should be either illuminated or reflectorised so their colours and shape are as recognisable by night, as by day.

Illumination may be required where reflectorisation is judged to be ineffective, e.g. on overhead signs.

Reflectorisation may also be ineffective in some areas with high intensity area lighting.

4.3.3. Size and Installation Requirements

Most of the signs are provided in a range of sizes designated A (smallest) up to B, C or D (largest).

Guidance in the selection of the size of sign for use in a particular location is given in the part of the Australian Standard covering the use of the sign.

The need for larger signs than those stated in the standard have been recognised within the mining areas because of the large mobile plant and equipment.

The signs will be larger than those indicated in the Australian Standard but will comply with the Australian Standard design, colours etc as indicated throughout this standard e.g. regulatory signs, hazard signs.

At the Dawson West Mine, it is a requirement that:

- all signs are kept clean and are clearly visible in the operational environment;
- all regulatory signs must be size B as a minimum standard;
- permanent signage shall be erected at least 1.5 metres (measured from underside of sign) in height from the ground;
- permanent signs in the operational environment will be mounted in the windrows or centre bunding as appropriate;
- regulatory signs must be erected on their own pole;
- all directional and traffic management signage must be erected on the left-hand side of approaching traffic;
- all delineators will be located so that red reflectors are located on the left-hand side of the road, and white reflectors on the right-hand side at 100-metre intervals on straight sections and 50 metre-intervals on corners. Delineators must be kept clean and visible; and
- all permanent mine roads must display applicable speed signs.

4.4. Traffic Control Signs

4.4.1. Regulatory Signs

Regulatory signs inform road users of traffic laws or regulations which would be an offence to disregard.

These signs indicate the application of legal requirements at particular locations, or situations in which the requirements may not otherwise be apparent, and to which the road users' attention should be drawn to. These must be adhered to at the Dawson West Mine.

Most regulatory signs are rectangular with the long axis vertical and have black legend on white background. For those signs having a special need for easy identification, other shapes and colours are specified. Details of signs are illustrated in AS 1743.

Wherever practical, use is made of symbols and arrows to:

- assist in identification;
- clarify the instruction; and
- increase legibility.



Figure 1 : Example Regulatory Signs

4.4.2. Warning Signs

Warning signs are used to warn traffic of potentially hazardous conditions on or adjacent to the road or area. Warning signs advise of conditions that require caution on the part of the driver or persons entering, and may call for a reduction in speed in the interest of the safety of the driver and of other road users.

In general, warning signs are diamond shaped (square with one diagonal vertical) with a black legend or symbol, or both, and a black border on a yellow reflectorised background. Exceptions to this general rule occur in Clauses 3.4.7 and 3.4.8 of AS 1742.1. Details of signs are illustrated in AS 1743.

The W8 series signs are used in conjunction with other signs in the Warning Series to supplement and clarify the message conveyed and are generally rectangular. The size used should correspond with the

size code A, B, C or D of the parent sign.



Figure 2 : Examples of Warning Signs

4.4.3. Hazard Signs (Traffic)

Hazard markers are used to emphasise to approaching traffic, a marked change in the direction of travel and the presence and width of an obstruction.

Hazard markers are rectangular and generally consist of a series of alternate black and white bands, as per Figure 3 below. The white portion is always reflectorised, but the reflective material may cover only the central portion of each white band to achieve a balance between the areas of black and white under headlight illumination. The bands may consist of either diagonal strips where only a target is required, or chevrons where directional, as well as target properties are desirable.

For the shapes illustrated, both the size of the board and the number and spacing of the bands or chevrons may be varied to suit visibility requirements. Details of signs are illustrated in AS 1743.



Figure 3 : Example Hazard Marker

4.5. General and Customised Signs

4.5.1. Mandatory (PPE) Signs

Mandatory signs will generally adopt the same shape as the regulatory signs, i.e. rectangular sign with the long side facing vertically. The examples in Figure 4 below are for mandatory requirements of PPE. These signs consist of a blue circle with white symbol on a white background with blue legend describing the mandatory requirement.



Figure 4 : Examples of Mandatory PPE Signs

4.5.2. Hazard and Warning Signs

Hazard and warning signs will generally adopt the same shape as the traffic warning signs, i.e. rectangular sign with the long side facing horizontally. The examples in Figure 5 are warning signs highlighting the inherent danger in a particular area. These signs consist of a red danger or warning symbol on a white background with black legend describing the danger or hazard.



Figure 5 : Example Hazard and Warning Signs

4.5.3. First Aid and Emergency Services Signs

First aid and emergency service signs notices may take the form of legends or symbols, or a combination.



Figure 6 - First Aid and Emergency Services Signs

4.5.4. General Signs

General information signs should consist of the blue background with white legend, as illustrated in examples below. General information signs should be displayed on a rectangular sign with long side horizontal.



Figure 7 : Examples of General Signs

4.5.5. Use of Non-Standard Signs

Personnel responsible for the erection of signs are not to develop signs for their own particular use. However, there will be instances where there is no suitable standard sign. In such cases, the sign developed should comply with the design requirements specified in relevant Australian Standards for the particular sign classification. All signage should be purchased from an approved supplier.

5. ROLES AND RESPONSIBILITIES

SSE	Shall review and approve this procedure.
HSET Superintendent	Shall ensure that all provisions of this procedure are implemented, and that compliance is achieved.
Managers/Superintendents	Shall be responsible for their area of operations and the implementation and application of this procedure; Provide adequate training, information, structure and supervision to ensure that this procedure is implemented; Carry-out a periodic review of activities to ensure the appropriate application and understanding of this procedure; and Ensure immediate and appropriate steps are taken to investigate and rectify any risks to health and safety arising from these activities.
Supervisors	Ensure all CMWs are familiar with, have access to and comply with the requirements set out in this procedure.
All CMWs (including visitors and contactor)	Shall comply with the requirements of this procedure.

6. REFERENCES

- Coal Mining Safety & Health Act 1999 (Qld)
- Coal Mining Safety & Health Regulation 2017 (Qld)
- AS 1319-1994 (R2018) Safety signs for the occupational environment
- AS 1742.1:2014 Manual of uniform traffic control devices - General introduction and index of signs
- AS 1742.2-2009 Manual of uniform traffic control devices – Traffic control devices for general use
- AS 1742.3:2019 Manual of uniform traffic control devices - Traffic control for works on roads

- AS 1742.4-2008 Manual of uniform traffic control devices - Speed controls
- AS 1742.7:2016 Manual of uniform traffic control devices - Railway crossings
- AS 1742.11:2016 Manual of uniform traffic control devices - Parking Controls
- AS 1743:2018 Road signs – Specifications
- AS ISO 14004:2018 Environmental management systems - General guidelines on implementation
- DNRME Recognised Standard 19: Design and construction of mine roads

7. REVIEW

This document shall be reviewed at a minimum two (2) yearly, or as follows:

- when there is a change of method and/or technology and/or legal or other requirement that may affect the accuracy of this document;
- when operational changes occur that effect the currency of the document;
- when there has been a significant event to which this document was relevant; and
- as a result of relevant audit findings.

8. DOCUMENT CONTROL

Version	Date	Description	Document Controller
01	15/08/2022	Initial draft	James Pallas