

**QGN 24**

**Guidance note for coal mines to develop and  
implement a management structure**

***Coal Mining Safety and Health Act 1999***

**July 2015, Version 1**

## Acknowledgements

This guidance note received input from and review by DNRM Mines Inspectorate (Occupational Hygiene) and the Coal Mine Safety and Health Advisory Committee (CMSHAC). The CMSHAC consists of nine members representing the mines inspectorate, coal mine workers and coal mine operators.

This publication has been compiled by the Mines Inspectorate, Department of Natural Resources and Mines.

© State of Queensland, 2015

The Queensland Government supports and encourages the dissemination and exchange of its information. The copyright in this publication is licensed under a Creative Commons Attribution 3.0 Australia (CC BY) licence.

Under this licence you are free, without having to seek our permission, to use this publication in accordance with the licence terms.



You must keep intact the copyright notice and attribute the State of Queensland as the source of the publication.

Note: Some content in this publication may have different licence terms as indicated.

For more information on this licence, visit <http://creativecommons.org/licenses/by/3.0/au/deed.en>

The information contained herein is subject to change without notice. The Queensland Government shall not be liable for technical or other errors or omissions contained herein. The reader/user accepts all risks and responsibility for losses, damages, costs and other consequences resulting directly or indirectly from using this information.

## Guidance Note – QGN 24

### Guidance note for coal mines to develop and implement a management structure

This guidance note has been issued by the Mines Inspectorate from the Department of Natural Resources and Mines (DNRM) to provide guidance to coal mines in developing and implementing a management structure.

This guidance note is not a Guideline as defined in the *Mining and Quarrying Safety and Health Act 1999* (MQSH Act) or a Recognised Standard as defined in the *Coal Mining Safety and Health Act 1999* (CMSH Act).

To ensure you have the latest version, check the DNRM website:

<https://www.business.qld.gov.au/industry/mining/safety-health/mining-safety-health/legislation-standards-guidelines/recognised-standards-guidelines-guidance-notes> or contact your local Inspector of Mines.

<b>North Region</b> PO Box 1752 Townsville Qld 4810 Ph (07) 4447 9248 Fax (07) 4447 9280	<b>North Region</b> PO Box 334 Mount Isa Qld 4825 Ph (07) 4747 2158 Fax (07) 4743 7165	<b>North Region</b> PO Box 210 Atherton Qld 4883 Ph (07) 4095 7023 Fax (07) 4091 2844
<b>South Region</b> PO Box 1475 Coorparoo Qld 4151 Ph (07) 3330 4272 Fax (07) 3405 5345	<b>Central Region</b> PO Box 3679 Red Hill, Rockhampton Qld 4701 Ph (07) 4936 0184 Fax (07) 4936 4805	<b>Central Region</b> PO Box 1801 Mackay Qld 4740 Ph (07) 4999 8512 Fax (07) 4999 8159

## Table of contents

<b>1. Purpose</b> .....	<b>5</b>
<b>2. Scope</b> .....	<b>5</b>
<b>3. General</b> .....	<b>5</b>
<b>4. Context</b> .....	<b>6</b>
4.1 Australian Qualifications Framework .....	7
4.2 Resources and Infrastructure Industry Training Package RII09 .....	8
4.3 Coal Mining Safety and Health Advisory Committee .....	9
<b>5. Process</b> .....	<b>9</b>
5.1 Conduct a risk assessment .....	9
5.2 Develop, implement and maintain a SHMS .....	10
5.3 Develop, implement and maintain a management structure .....	10
5.4 Undertake a training needs analysis .....	10
5.5 Develop and implement the training plan .....	10
<b>6. Notification of the management structure</b> .....	<b>10</b>
<b>7. Review of the management structure</b> .....	<b>11</b>
<b>Appendix 1</b> .....	<b>12</b>
<b>Appendix 2</b> .....	<b>15</b>
<b>Appendix 3</b> .....	<b>16</b>

## Glossary

AQF	Australian Qualifications Framework
BOE	Board of Examiners
CHPP	Coal handling preparation plant
CMSHA	<i>Coal Mine Safety and Health Act 1999</i>
CMSHR	Coal Mine Safety and Health Regulation 2001
CMW	Coal mine worker
DNRM	Department of Natural Resources and Mines
MAC	Mining Advisory Committee
NTQC	National Training Quality Council
SHMS	Safety and Health Management System
SSE	Site Senior Executive

## 1. Purpose

The purpose of this guidance note is to provide practical guidance to companies, employers and employees about developing and implementing a management structure at Queensland coal mines to enable the implementation of an effective Safety and Health Management System (SHMS).

## 2. Scope

This guidance note applies to all Queensland coal mining operations as defined under the *Coal Mining Safety and Health Act 1999* ('the Act'). This guidance note QGN 24 relates to the requirements of Section 55 of the Act, where the Senior Site Executive (SSE) must develop, maintain and document a management structure.

It is recommended that the following standards are read in conjunction with this guidance note:

- Recognised Standard – 02: **Control of risk management practices.**
- Recognised Standard – 11: **Training in coal mines.**
- AS/NZS 4804:2001 - **Occupational health and safety management systems –General guidelines on principles, systems and supporting techniques.**

## 3. General

The Act requires mine operators to ensure the risk to workers is at an acceptable level. The Act also provides a framework of minimum requirements that mines are required to meet to enable the management of the risks associated with a mining operation to an acceptable level.

To achieve this, the Act outlines a number of elements which make up the framework:

- The Safety and Health Management Systems (SHMS) – derived using risk management principles and is a documented process by which the risks are managed.
- The management structure – developed and maintained to ensure the development and implementation of the SHMS.
- The mines inspectorate – third parties monitoring and facilitating the implementation of the legislation at mining operations.
- Coal Mining Safety and Health Advisory Committee and Board of Examiners (BOE) – legislated bodies defining and adjusting, as required, the expectations of industry in relation to skills and competencies.

Under Section 42(d) of the Act the SSE has an obligation to develop, implement and maintain a management structure for the mine that helps ensure the safety and health of persons at the mine. The SSE is also required to provide for adequate planning, organisation, leadership and control of coal mining operations; and the carrying out of critical work at the mine that requires particular technical competencies, Section 42 (f)(i) and 42 (f)(ii) of the Act.

Under Section 55 of the Act the SSE has an obligation to document the management structure.

The development of the management structure should ensure that each risk and/or hazard management plan identified by the risk assessment used in the development of the SHMS is allocated to an individual in the management structure that has the responsibility and competence to implement and maintain that risk management plan as required under the SHMS.

There are three positions or categories of position identified in the management structure under Section 55 of the Act:

- SSE
- Senior positions; and
- Supervisory positions.

For the SSE the documented management structure must state:

- the responsibilities of the SSE, Section 55 (2) (a). and as a senior position
- the responsibilities and competencies required for the position, Section 55 (2) (b); and
- the name of the competencies held.

For each senior position the documented management structure must state:

- the responsibilities and competencies required for the position, Section 55 (2) (b); and
- the name and the competencies of the person appointed to the senior position, Section 55 (2) (c).

For each other supervisory position the documented management structure must state:

- the responsibilities and competencies required for each other supervisory position, Section 55 (2) (d); and
- the names and competencies of the persons authorised to carry out the responsibilities of the supervisory positions are not included in the Management Structure, but must be kept at the mine on a separate record, Section 55 (4).

The management structure for a coal mine operation is essentially about the management and control of the risks and management plans within the SHMS exercised by competent people.

## 4. Context

Throughout mining history there have been a number of disasters and incidents which have resulted in the loss of many lives. Many of the investigations into these incidents have concluded that the lack of knowledge of people (competence) was a key factor as to why controls failed to adequately manage the risks and hazards.

It was recommended following the Moura No. 2 Mine disaster:

- It is **recommended** .....” The ventilation officer appointed must have demonstrated competencies appropriate to the duties and responsibilities of the position” .....
- ..... it is **recommended** that certificates not be granted for life and that a system needs to be developed and put into effect as soon as practicable that requires certificate holders to demonstrate their fitness to retain the certificate of competency on a regular basis.....

The Foxleigh Coroners Inquiry:

- Shift Supervisors .....stated that they had achieved the required supervisor qualifications ..... but received no training beyond that. They were not given instruction on the SHMS.

- He stated that he had no training in relation to the safety obligations attached to his position other than the supervisor competencies. He was not provided with a list of his responsibilities under the SHMS.

As an industry it is critical to the safety of our coal mines that people assigned to roles in the management structure have the relevant competencies to perform their role effectively.

## 4.1 Australian Qualifications Framework

The Australian Qualifications Framework (AQF) was set up as a national standard for qualifications and associated skills. The framework outlines standards for levels of study or training offered to people in Australia by the various education and training providers.

The AQF has 10 defined levels, with level 1 being the lowest complexity and 10 the highest complexity. For each level the AQF there are defined criteria expressed as learning outcomes as follows:

- Knowledge
- Skills
- Performance criteria is the context in which a worker applies knowledge and skills.



Image: The Australian Qualification Framework, <http://www.aqf.edu.au/>

## 4.2 Resources and Infrastructure Industry Training Package RII09

A Training Package is an integrated set of nationally endorsed competency standards, assessment guidelines and Australian Qualifications Framework (AQF) qualifications for a specific industry, industry sector or enterprise.

Regulation 82(e) of the CMSHR 2001 requires that the mine training scheme uses the endorsed components of the coal industry training package that are relevant for training and assessing the mine's coal mine workers

The endorsed components of the coal industry training package are currently those listed in the Resources and Infrastructure Training Packages

Each training package:

- provides a consistent and reliable set of components for training, recognising and assessing peoples skills, and may also have optional support materials
- enables nationally recognised qualifications to be awarded through direct assessment of workplace competencies
- encourages the development and delivery of flexible training which suits individual and industry requirements
- encourages learning and assessment in a work-related environment which leads to verifiable workplace outcomes.

The National Skills Framework is endorsed by the Ministerial Council for Vocational and Technical Education, and comprises the Australian Quality Training Framework 2010 (AQTF 2010), and Training Packages endorsed by the National Quality Council (NQC).

Resources and Infrastructure Industry Training Package RII09 is the result of the rationalisation and consolidation of five Resources and Infrastructure Training Packages:

- RII06 Civil Construction Training Package, V1, release date 14 July 2006
- MNQ03 Extractive Industries Training Package, V1.1, release date 18 January 2008
- MNM05 Metalliferous Mining Training Package, Version 1.1, release date 6 April 2007
- DRT03 Drilling Training Package, Version 2, release date 25 May 2007
- MNC04 Coal Training Package, version 2, release date 16 January 2008; and
- BCC03 Civil Construction Training Package, version 3, release date 07 September 2007.

At the time of publishing this guidance note the current Resources and Infrastructure Industry Training Package RII09 was Version 3.2. Note Training Packages are not static documents; they are amended periodically to reflect latest industry practices and are version controlled. It is essential the latest version of the training package is always used.

The Resources and Infrastructure Industry Training Package RII09 covers Skill Sets and AQF level qualifications at Certificate I, Certificate II, Certificate III, Certificate IV, Diploma and Advanced Diploma.



## 4.3 Coal Mining Safety and Health Advisory Committee

The [Coal Mining Safety and Health Advisory Committee](#) provides advice and makes recommendations to the Minister about promoting and protecting the safety and health of persons at mines. To discharge its duties the committee must periodically review:

- (a) the effectiveness of the Act, regulations and recognised standards; and
- (b) the effectiveness of the control of risk to any person from coal mining operations.

The committee also has the function of recognising, establishing and publishing:

- (a) the competencies accepted by it as qualifying a person to perform the tasks prescribed under a regulation; or
- (b) the safety and health competencies required to perform the duties of a person under this Act.

The committee published the *Competencies recognised by the Coal Mining Safety and Health Advisory Committee* and specified the competencies required to obtain a Certificate of Competency issued by the Board of Examiners.

In stipulating the competencies required from the Resources and Infrastructure Industry Training Package RII09 for statutory roles, the committee has aligned the management level of the statutory role generally with the AQF qualification levels as illustrated in the following table:

AQF level	Example of workforce role	SHMS role
Level 1-2	Operator of plant	Assist
Level 3	Tradesman/Skilled mine worker	Conduct/advise
Level 4	Supervisor/Deputy/OCE	Apply and monitor
Level 5	Coordinator/Superintendent	Implement
Level 6	Manager/Superintendent	Establish and maintain

## 5. Process

### 5.1 Conduct a risk assessment.

Recognised Standard – 02: **Control of risk management practices** describes an auditable practise for mines to conduct formal risk management studies in the development and maintenance of the mines SHMS. The standard should be applied to risk assessments conducted in response to hazards being present at a mine which require the use of risk management activities to take place for the ongoing safe operation of a mine.

Technical guidance is provided by Recognised Standard – 02: **Control of risk management practices** in regards to the steps associated with conducting a risk assessment, which is as follows:

- A. Establish the context
- B. Risk identification
- C. Risk analysis and evaluation
- D. Risk treatment
- E. Monitor and review.

## 5.2 Develop, implement and maintain a SHMS

The result of the risk assessment for the operation will be the identification of hazards which may affect the safety and health of mine workers. The SSE is required to develop and implement a single SHMS, Section 42(c) of the Act and described in Section 62.

## 5.3 Develop, implement and maintain a management structure

The SSE is required to develop, implement and maintain a management structure that helps to ensure the safety and health of persons at the mine, Section 42(d) of the Act.

In the technical guidance provided by Recognised Standard – 02: **Control of risk management practices**; in the risk treatment for identified hazards persons are to be identified who are a necessary part of the safety control activities. This is the genesis of the management structure. Each of the hazards and management plans should be delegated to a position or combination of positions in the management structure.

Once the SSE has established which position or combination of positions in the management structure are responsible for managing each hazard at the operation and each component of the SHMS, the SSE should then ensure the competencies required of those positions are identified via a training needs analysis.

## 5.4 Undertake a training needs analysis

Recognised Standard – 11: **Training in coal mines** describes the process of conducting a training needs analysis in section 6. **Establishing training needs and pathways.**

A Training Needs Analysis will identify the competencies needed, the competencies held and the training gap for each individual against their positions requirements. The Resources and Infrastructure Industry Training Package RII09 can be used to identify competencies required for each role in the management structure. When an employee commences with the site, this analysis is to be undertaken to establish a training plan in line with the requirements.

An individual appointed as a senior person responsible may hold competencies from another jurisdiction and or in advance of the relevant AQF level to manage hazard management plans assigned to his role. Where this occurs it is incumbent on the SSE to ensure that the individual's competencies are tested against the performance criteria of the relevant AQF competencies which should include challenge testing where appropriate.

## 5.5 Develop and implement the training plan

After completing the training needs analysis a training plan with a corresponding schedule can be developed. The plan will include anticipated time frames and where possible accountabilities for each aspect of the plan.

## 6. Notification of the management structure

Notification of the management structure to the Inspector for the region in which the mine is situated is required. The SSE is required to give the Inspector for the region a copy of the management structure before coal mining operations start, Section 51 of the Act.

The SSE must also include the management structure in the mine record, Section 66 of the Act.

The notification should include:

- The responsibilities of the SSE
- The responsibilities and competencies required for senior positions

- The names of each person holding senior positions and their competencies
- The competencies required and responsibilities for each other supervisory position.

Any changes in the management structure are required to be updated in the Mine Record within 7 days and notified to the Inspector within 14 days.

## **7. Review of the management structure**

Once the management structure is implemented and notified the focus should then be moved to maintaining the structure and ensuring that it is effective. Reviewing the plan periodically and when events demand is the normal process for review.

There are many other triggers which may call for the review of the management structure including:

- An incident which occurs at the mine may identify a gap in competency or reporting lines
- Changes in legislation i.e. new statutory positions
- Introduction of new machines or technology
- Introduction of a new work process.

This is not an exhaustive list.

The review should seek to find the most effective structure to ensure that the new or modified SHMS can be enforced or implemented. The paramount and overriding aim is to ensure that the SHMS is effective in ensuring the operation is running at an acceptable level of risk.

## Appendix 1

### Competencies in the Resources and Infrastructure Industry Training Package RII09

The table below is an example of competencies in the Resources and Infrastructure Industry Training Package RII09 to manage specific hazards in a mining operation. The competencies listed are for the level of “Establish and Maintain” or in some cases “Implement”. This is not an exhaustive list but is designed to provide an insight into the scope of the RII package. All of these competencies have lower level competencies associated with them to facilitate an integrated structure of management.

Competency Ref	Name of competency	Hazard
RIIBLA601A	Design surface blasts	Explosives
RIIBLA602A	Establish and maintain a blasting system	Explosives
RIIERR601A	Establish and maintain mine emergency preparedness and response systems	Emergency response
RIIERR602A	Establish and maintain underground coal mine emergency preparedness	Emergency response
RIIMCU601A	Establish and maintain the spontaneous combustion management plan	Spontaneous combustion
RIIMCU602A	Establish and maintain the gas management System	Gas
RIIMCU603A	Establish and maintain the gas drainage management plan	Gas
RIIMCU604A	Establish and maintain the outburst management plan	Outburst
RIIMCU605A	Establish and maintain the inrush management plan	Inrush
RIIMCU606A	Establish and maintain the mining method and strata management systems	Strata failure
RIIMEX503A	Manage dredging operations	Drowning
RIIMEX601A	Plan pit development	Pit failure
RIIMEX602A	Establish and maintain surface mining ground control and stable mining systems	Strata
RIIMEX603A	Establish and maintain underground mining ground control and stable mining systems	Strata

<b>Competency Ref</b>	<b>Name of competency</b>	<b>Hazard</b>
RIIMEX604A	Establish and maintain surface product haulage and transport systems	Interaction/collision
RIIMEX605A	Establish, implement and maintain operational management plans	Management
RIIOGD601A	Manage multiple drilling operations	Drilling
RIIPRM501A	Implement, monitor, rectify and report on contracts	Contractor management
RIIRAI601A	Establish and maintain the site infrastructure and fixed plant systems	Plant
RIIRAI602A	Establish and maintain the mine mechanical plant, services and infrastructure systems	Plant
RIIRAI603A	Establish and maintain the mine transport system and production equipment	Transport
RIIRAI604A	Establish and maintain mine services and Infrastructure systems	Plant
RIIRAI605A	Establish and maintain an underground mine mechanical plant management system	Plant
RIIRAI606A	Establish and maintain mine closure management systems	Decommissioning
RIIRAI607A	Establish quarry operations	Mining
RIIRAI608A	Establish quarry development	Mining
RIIRAI609A	Establish and maintain electrical installations, reticulation and protection system	Plant
RIIRAI6010A	Establish and maintain mechanical standard and engineering practices for transport and production equipment	Plant
RIIRAI6011A	Establish and maintain a surface mine mechanical plant management system	Plant
RIIRAI6012A	Establish and maintain underground production haulage and transport systems	Transport
RIIRIS601A	Establish and maintain the risk management system	Risk management

<b>Competency Ref</b>	<b>Name of competency</b>	<b>Hazard</b>
RIISAM601A	Establish and maintain plant, equipment and infrastructure maintenance system	Plant
RIISAM602A	Establish and maintain maintenance management system for mechanical plant and equipment	Plant
RIISRM601A	Establish and maintain the stockpile management system	Stockpile failure
RIIUND601A	Establish and maintain the ventilation management system	Ventilation
RIIUND602A	Establish and maintain the mine services systems	Services
RIIUND603A	Manage, operate and maintain the mine ventilation system.	Ventilation

## Appendix 2

### Key requirements of the management structure

- An organisational chart showing each of the senior positions delegated with responsibility for control and management of the mine and the risks associated with the operation and the relevant reporting lines. This will include those positions required by the Act.
- A description of the roles and responsibilities of each of the senior positions is required. Note: Each position should have its individual role based on the responsibilities assigned. There are a number of sections within the CMSHR that require that the “Coal mines SHMS must provide for”. The responsibility for controlling and managing these should be clearly identified in the position roles.
- Each of the positions will have a suite of competencies, based on their specific areas of responsibility, including those mandatory competencies required by the advisory committee.
- The names of each of the individuals appointed to the senior positions along with the competencies held by them.
- A description of the roles of each supervisory position and its responsibilities. These need to be specific for the individual work streams within the mine.
- If contract labour is used at the mine then sufficient senior persons must be appointed and named in the management structure to ensure:
  - Familiarisation and training of the contractors workers in implementing the relevant parts of the mine's SHMS.
  - Machinery and plant used by contractors as being fit for purpose.
  - Compliance with the relevant parts of the mine's SHMS. Particular attention should be given to ensure compliance with this directive in the event of persons being temporarily appointed due to the absence of the appointed senior person.
- The names of persons delegated to carry out the responsibilities during the absences of senior persons including their competencies.
- Temporary absences.

The Act requires the SSE to appoint another competent person to perform the duties of a position while the person is absent if:

- a) Is mentioned in the management structure for a coal mine documented under section 55; and
- b) Actively supervises coal mine workers where there is a risk to the workers; and
- c) Is temporarily absent from duty.

## Appendix 3

### Framework for developing an effective management structure

