



**Australian Government**

**Department of Education, Employment and Workplace Relations**

# **RIIMEX501A Implement pit plan**

**Release: 1**

## RIIMEX501A Implement pit plan

### Modification History

Not applicable.

### Unit Descriptor

This unit covers the implementation of pit plans in the coal and metalliferous mining and extractive industries. It includes preparation for, planning, initiating, monitoring and adjusting and reporting on the implementation of pit plans.

### Application of the Unit

This unit is appropriate for those working in a management or technical specialist roles, within:

- Coal mining
- Extractive industries
- Metalliferous mining

### Licensing/Regulatory Information

Refer to Unit Descriptor.

### Pre-Requisites

Not applicable.

### Employability Skills Information

This unit contains employability skills.

### Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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## Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Prepare for development of the pit plan	1.1. Access, interpret and apply <i>compliance documentation</i> relevant to the implementation of the <i>pit plan</i> 1.2. Confirm the <i>geological, geotechnical, hydrogeotechnical, hydrological and survey data</i> relevant to the implementation of the pit plan 1.3. Access, interpret and clarify the <i>pit development parameters and strategies</i> relevant to the implementation of the <i>pit plan</i>
2. Prepare the pit plan	2.1. Involve <i>internal and external stakeholders</i> in the planning process in a way that uses their contribution effectively and gains their support for the outcomes 2.2. Develop and document the pit plan in accordance with the pit development parameters and strategies, the confirmed geological, geotechnical, hydrogeotechnical, hydrological and survey data 2.3. Identify and acquire the <i>resource</i> required for the implementation of the pit plan 2.4. Identify and arrange any training required for personnel involved in the pit operations 2.5. Prepare and present the pit operations budget
3. Initiate, monitor and adjust the implementation of the pit plan	3.1. Issue and explain the pit plan to team members and others involved, for the safe, effective and efficient implementation of the pit development 3.2. Provide timely ongoing support and advice to those implementing the pit plan 3.3. Ensure records and reports are maintained and issued 3.4. Monitor the pit implementation of the pit plan against pit development parameters, strategies, the budget 3.5. Resolve anomalies in consultation with relevant stakeholders and issue appropriate instructions for adjustments to the plan

	and/or its implementation
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## Required Skills and Knowledge

This section describes the skills and knowledge required for this unit.

### Required skills

Specific skills are required to achieve the performance criteria in this unit, particularly for the application in the various circumstances in which this unit may be applied. This includes the ability to carry out the following as required to implement pit plans:

- apply legislative, organisation and site requirements and procedures
- interpret and apply legislative and organisational requirements
- interpret and apply geological, hydrological and survey data
- provide team leadership
- apply procedures for selecting construction techniques
- apply procedures for selecting and assigning plant and equipment
- apply procedures for selecting development strategies
- apply procedures for selecting plant and equipment
- apply procedures to develop, initiate and administer work plans
- interpret and apply operational performance data

### Required knowledge

Specific knowledge is required to achieve the Performance Criteria of this unit, particularly its application in a variety of circumstances in which the unit may be used. This includes knowledge of the following, as required to implement pit plans:

- site risk, statutory compliance, health, safety, environmental, quality and communication requirements and procedures
- geological data
- geotechnical
- hydrogeological data
- hydrological data
- survey data
- pit development strategic plan and its parameters and strategies
- pit development options and procedures
- operational techniques required for execution of the plan
- plant and equipment capabilities
- team leadership techniques
- work planning techniques/team leadership techniques
- consultative and coaching techniques
- work monitoring methods
- recording and reporting systems
- training systems
- emergency response and evacuation planning processes and techniques



## Evidence Guide

<p>The evidence guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
<p><b>Overview of assessment</b></p>	
<p><b>Critical aspects for assessment and evidence required to demonstrate competency in this unit</b></p>	<p>The evidence required to demonstrate competency in this unit must be relevant to worksite operations and satisfy all of the requirements of the performance criteria, required skills and knowledge and the range statement of this unit and include evidence of the following:</p> <ul style="list-style-type: none"> <li>• knowledge of the requirements, procedures and instructions for the implementation of pit plans</li> <li>• implementation of procedures and techniques for the safe, effective and efficient implementation of pit plans</li> <li>• the identification of the relevant information and scope of the work required to meet the required outcomes</li> <li>• the identification of viable options and the selection of options that best meet the required outcomes</li> <li>• working with others to undertake and complete the implementation of pit plans</li> <li>• consistent successful implementation of pit plans</li> </ul>
<p><b>Context of and specific resources for assessment</b></p>	<ul style="list-style-type: none"> <li>• This unit must be assessed in the context of the work environment. Where personal safety or environmental damage are limiting factors, assessment may occur in a simulated environment provided it is realistic and sufficiently rigorous to cover all aspects of workplace performance, including task skills, task management skills, contingency management skills and job role environment skills.</li> <li>• The assessment environment should not disadvantage the participant. For example, language, literacy and numeracy demands of assessment should not be greater than those required on the job.</li> <li>• Customisation of assessment and delivery environment to sensitively accommodate</li> </ul>

	<p>cultural diversity.</p> <ul style="list-style-type: none"> <li>• Aboriginal people and other people from a non English speaking background may have second language issues.</li> <li>• Assessment of this competency requires typical resources normally used in the work environment. Selection and use of resources for particular worksites may differ due to site circumstances.</li> <li>• Where applicable, physical resources should include equipment modified for people with disabilities.</li> <li>• Access must be provided to appropriate learning and/or assessment support when required.</li> </ul>
<b>Method of assessment</b>	<p>This unit may be assessed in a holistic way with other units of competency. The assessment strategy for this unit must verify required knowledge and skill and practical application using more than one of the following assessment methods:</p> <ul style="list-style-type: none"> <li>• written and/or oral assessment of the candidate's required knowledge to apply in undertaking of the implementation of pit plans</li> <li>• observed, documented and/or first hand testimonial evidence of the candidate's: <ul style="list-style-type: none"> <li>• implementation of appropriate procedures and techniques for the safe, effective and efficient achievement of the required outcomes</li> <li>• identification of the relevant information and scope of the work required to meet the required outcomes</li> <li>• identification of viable options and the selection of options that best meet the required outcomes</li> <li>• consistently achieving the required outcomes</li> </ul> </li> <li>• first hand testimonial and documentary evidence of the candidate's: <ul style="list-style-type: none"> <li>• working with others to undertake and complete the implementation of pit plans</li> <li>• provision of clear and timely required support and advice on the implementation of pit plans</li> </ul> </li> </ul>



<b>Guidance information for assessment</b>	Consult the SkillsDMC User Guide for further information on assessment including access and equity issues.
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## Range Statement

<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<p><b>Relevant compliance documentation</b> may include:</p>	<ul style="list-style-type: none"> <li>• legislative, organisation and site requirements and procedures</li> <li>• manufacturer's guidelines and specifications</li> <li>• Australian standards</li> <li>• code of practice</li> <li>• Employment and Workplace Relations;</li> <li>• Equal Employment Opportunity, Disability Discrimination</li> </ul>
<p><b>The pit plan</b> is:</p>	<ul style="list-style-type: none"> <li>• the operational plan for the execution of part of the pit development in accordance with the sites pit development requirements parameters and strategies. It may cover a single stage in a multi-staged development or a specific period of time, such as a budget period</li> </ul>
<p><b>Pit plan</b> may include site procedures and/or work instructions regarding:</p>	<ul style="list-style-type: none"> <li>• risk management requirements</li> <li>• occupational health, safety and environmental requirements</li> <li>• marking out of extraction area and ensuring extraction is within these limits</li> <li>• land clearing and overburden stripping and stockpiling requirements</li> <li>• raw feed extraction requirements (such as sequencing, face heights, bench widths)</li> <li>• raw feed blending requirements</li> <li>• bank, face and slope stability criteria, risk management and supervision requirements</li> <li>• access and in-pit road requirements (such as grades, widths, turning and passing areas)</li> <li>• dewatering and water management requirements and procedures</li> <li>• extraction area finished shape and face requirements</li> <li>• rehabilitation and environmental works requirements (progressive and final)</li> <li>• tailings deposition/treatment requirements and procedures</li> </ul>

	<ul style="list-style-type: none"> <li>roads maintenance requirements and procedures</li> <li>reporting and record requirements and procedures</li> </ul>
<b>Geological data</b> may include:	<ul style="list-style-type: none"> <li>limits of the deposit</li> <li>rock (or other resource) types and characteristics, which may include: <ul style="list-style-type: none"> <li>ore and coal quality variations</li> <li>coal, overburden, inter seam thicknesses and properties</li> <li>parting or inter seams</li> <li>faults and joints</li> </ul> </li> </ul>
<b>Geotechnical data</b> may include:	<ul style="list-style-type: none"> <li>material strengths</li> <li>weak planes</li> <li>stresses</li> <li>rock mass strength</li> <li>failure mode analysis</li> </ul>
<b>Hydrogeological data</b> may include:	<ul style="list-style-type: none"> <li>groundwater</li> <li>artesian water</li> </ul>
<b>Hydrological data</b> may include:	<ul style="list-style-type: none"> <li>rainfall</li> <li>surface water, existing streams and dams</li> <li>catchment areas and runoff characteristics</li> <li>groundwater and bores</li> </ul>
<b>Survey data</b> may include:	<ul style="list-style-type: none"> <li>site and neighbouring land form</li> <li>site and neighbouring boundaries and structures</li> <li>site and neighbouring roads and other infrastructure</li> <li>approved limits of extraction</li> <li>title details</li> <li>blasting layouts</li> <li>earth movement surveys</li> </ul>
<b>Pit development parameters and strategies</b> may include:	<ul style="list-style-type: none"> <li>limits of extraction</li> <li>minimum operating distances from other operations or neighbouring structures or land use</li> <li>raw feed requirements to meet product need</li> <li>raw feed blending requirements</li> <li>annual extraction or sales limitations</li> <li>environmental works</li> <li>processing plant location</li> <li>haulage requirements</li> </ul>

	<ul style="list-style-type: none"> <li>• land clearance</li> <li>• stripping and stockpiling soil</li> <li>• progressive and final rehabilitation requirements</li> <li>• final landform and use</li> <li>• maximum instantaneous charge</li> <li>• bench heights</li> <li>• safe slopes</li> <li>• water management requirements</li> </ul>
<b>Internal and external stakeholders</b> may include:	<ul style="list-style-type: none"> <li>• site and off-site employees</li> <li>• contractors</li> <li>• equipment suppliers</li> <li>• geologists, surveyors and/or draughtspersons</li> <li>• regulatory authorities representatives</li> <li>• community representatives</li> <li>• site neighbours</li> <li>• customers</li> </ul>
<b>Resources</b> may include:	<ul style="list-style-type: none"> <li>• financial</li> <li>• labour</li> <li>• materials</li> <li>• services</li> <li>• plant</li> <li>• equipment</li> <li>• computer models</li> <li>• plan preparation</li> </ul>

## Unit Sector(s)

Materials Extraction

## Competency field

Refer to Unit Sector(s).

## Co-requisite units

Not applicable.