

Preparation of Work Plans and Work Plan Variations

GUIDELINE FOR MINERAL
EXPLORATION PROJECTS
September 2019 (version 1.2)



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Note:

Feedback or suggestions to improve this guideline may be emailed to
Workplan.Approvals@ecodev.vic.gov.au.

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Definitions

Term	Definition
Community	<p>A broad term used to define groups of people, whether they are stakeholders, interest groups or citizen groups. The community may surround a geographic location (community of place), be a community of similar interest (community of practice) or have a special interest or legal interest in the land (community of standing).</p> <p>Community may also refer to a community of flora and fauna i.e. an assemblage of organisms existing together in the wild.</p>
DJPR	Department of Jobs, Precincts and Regions
Disturbed footprint	The area or extent of un-rehabilitated land within the mining licence that has been altered by exploration and which has not yet been rehabilitated.
ERR	Earth Resources Regulation, the principal regulator of mines and quarries in Victoria
Exploration hazard[#]	Any exploration activity and circumstance that may pose a risk to the environment, to any member of the public or to land, property or infrastructure in the vicinity of work carried out under a licence.
Infrastructure Mining Licence*	A mining licence solely for the construction of a facility or other infrastructure to be used for the purpose of mining under another mining licence
Legacy site	A facility or former disturbed footprint within the exploration licence which is no longer part of the active operations
Mine*	Any land on which mining is taking place under a licence
Mineral*	<p>Any substance which occurs naturally as part of the earth's crust:</p> <p>a. Including:</p> <ul style="list-style-type: none"> i. oil shale and coal; and ii. hydrocarbons and mineral oils contained in oil shale or coal or extracted from oil shale or coal by chemical or industrial processes; iii. bentonite; fine clay; kaolin; lignite; minerals in alluvial form including those of titanium, zirconium, rare earth elements and platinoid group elements. iv. quartz crystals; zeolite. <p>b. Excluding water, stone, peat or petroleum.</p>
Minister	Victorian Minister for Resources
MRSDA	<i>Mineral Resources (Sustainable Development) Act 1990</i>
Plant*	Means buildings, structures, works or other machinery (whether fixed or mobile) and all other installations or equipment used in the doing of work under a licence or an extractive industry work authority.
Reasonably practicable	<p>'As far as reasonably practicable' under section 40(3)(c) of the MRSDA and Regulation 45 of the Regulations is based on the approach to precaution-based risk analysis under the <i>Occupational Health and Safety Act 2004</i>.</p> <p>Under section 20(2) of the <i>Occupational Health and Safety Act 2004</i>, reasonably practicable means:</p> <p>that which is, or was at a particular time, reasonably able to be done to ensure health and safety, taking into account and weighing up all relevant matters including:</p> <ul style="list-style-type: none"> a. the likelihood of the hazard or the risk concerned eventuating b. the degree of harm that would result if the hazard or risk eventuated c. what the person concerned knows, or ought reasonably to know, about the hazard or risk, and any ways of eliminating or reducing the hazard or risk d. the availability and suitability of ways to eliminate or reduce the hazard or risk e. the cost of eliminating or reducing the hazard or risk.
Regulations	Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2019

Term	Definition
Rehabilitation	The rehabilitation of any areas subject to surface disturbance from the exploration work undertaken including revegetation and, if relevant, the removal of plant and equipment.
Risk management plan	Regulation 45 of the Regulations states that a risk management plan is required in a work plan for exploration. The risk management plan consists of a risk treatment plan for each exploration hazard that is identified and a risk register.
Risk register	A risk register is a summary table of the risks identified for the exploration hazards and includes the inherent and residual risk ratings. It is a component of the risk management plan.
Risk treatment plan	<p>A risk treatment plan addresses the risks associated with each of the exploration hazards identified. It specifies:</p> <ol style="list-style-type: none"> The control measures to eliminate or minimise, as far as reasonably practicable, the identified risks associated with the particular exploration hazard; The objectives, standards or acceptance criteria for those control measures; The monitoring program that will measure performance against all the specified objectives, standards and acceptance criteria; and The arrangements for reporting on performance against all the specified objectives, standards and acceptance criteria. <p>Risk treatment plans for each of the identified exploration hazards and a risk register form the risk management plan.</p>
RRAM	Resource Rights Allocation and Management business portal is the ERR online software application used for the management of licences and work plans. Registered subscribers can use RRAM to apply for a licence, submit a work plan or report, track an application status and pay fees.
Secondary consent	<p>Secondary consent allows for an expeditious means of dealing with changes to Planning Permits, but the extent of changes which can be sought are limited and third parties are prevented from becoming involved in the process. Councils generally only allow a permit holder to use this option for minor changes to the Planning Permit.</p> <p>Secondary consent is made available under the wording of a permit which has already been granted and is permissible under permit conditions.</p>
Sensitive receptor	<p>Sensitive receptors are people or other organisms that may have an increased sensitivity or exposure to an emission by virtue of their age and health (e.g. schools, day care centres, hospitals, nursing homes), status (e.g. sensitive or endangered species), proximity to the contamination, dwelling construction, or the facilities they use (e.g. water supply).</p> <p>For the purposes of a work plan the sensitive receptors are described in relation to the environment, any member of the public, or land, property or infrastructure in the vicinity of the proposed work.</p>
Work plan	<p>The work plan is the primary document describing the permitted activities to be undertaken on a licence. It is intended to provide guidance to operations staff at the exploration site as well as informing other readers such as Council or Government officers in order to facilitate decisions, approvals, compliance, and enforcement functions. It must be clear, concise and contain sufficient detail to enable a reader to understand the activities proposed to be undertaken at the site, their potential risks and impacts, and the control or management actions required.</p> <p>For further information relating to a work plan refer to section 40 of the MRSDA.</p>
Work plan variation	If the original scope of work changes after the plan has been approved by ERR, then the work plan needs to be varied to include these changes; this is known as a work plan variation.
Work	Any activity that is connected to or is incidental to the exploration activities permitted under the approved mining licence and work plan

Note:

* definition in MRSDA

definition in Regulations

1. Background



1.1 What is exploration?

Exploration is looking for minerals by means of surveys, drilling and taking samples. This includes extracting minerals for purposes other than producing them commercially.

1.2 What do I need to commence exploration?

Before exploration work can commence, you will require:

- an exploration, retention, mining or prospecting licence;
- an **approved work plan**;
- a **rehabilitation bond**;
- any other approval(s) and/or permits required for the project under other planning and environment legislation;
- the consents of, and **compensation agreements** with, owners and occupiers of the land affected by the project;
- complied with all of the requirements of **section 43** (commencement of work under exploration licence or retention licence) and **section 44** (Particular consents etc. required) of the MRSDA
- provision of seven days' notice in writing to the Chief Inspector of Mines (ERR Director Regulatory Compliance, or delegate) and owners and occupiers of land affected of the **intention to commence work**.

Exceptions to these requirements are explained in Section 2 of this guideline.

Approval processes under the MRSDA are administered by Earth Resources Regulation (**ERR**) within the Department of Jobs, Precincts and Regions (**DJPR**). Further information about ERR, mining licences, work plans and other related matters is available on the ERR website at <http://earthresources.vic.gov.au/earth-resources-regulation>.

1.3 Purpose of this guideline

The purpose of this guideline is to provide guidance on the preparation of work plans, work plan variations and work plan notifications for mineral exploration projects to meet Victorian regulatory requirements.

1.4 Scope of this guideline

The scope of this guideline includes:

- when a work plan or work plan variation is required (Section 2);
- when, and with what information, it is recommended to engage with ERR (Section 3);
- the content that needs to be in a work plan (Section 4);
- the content that needs to be in a work plan variation (section 5);
- the steps to seeking assessment of a work plan or work plan variation (Section 6); and
- the notification (administrative update to a work plan) threshold and process (Section 7).

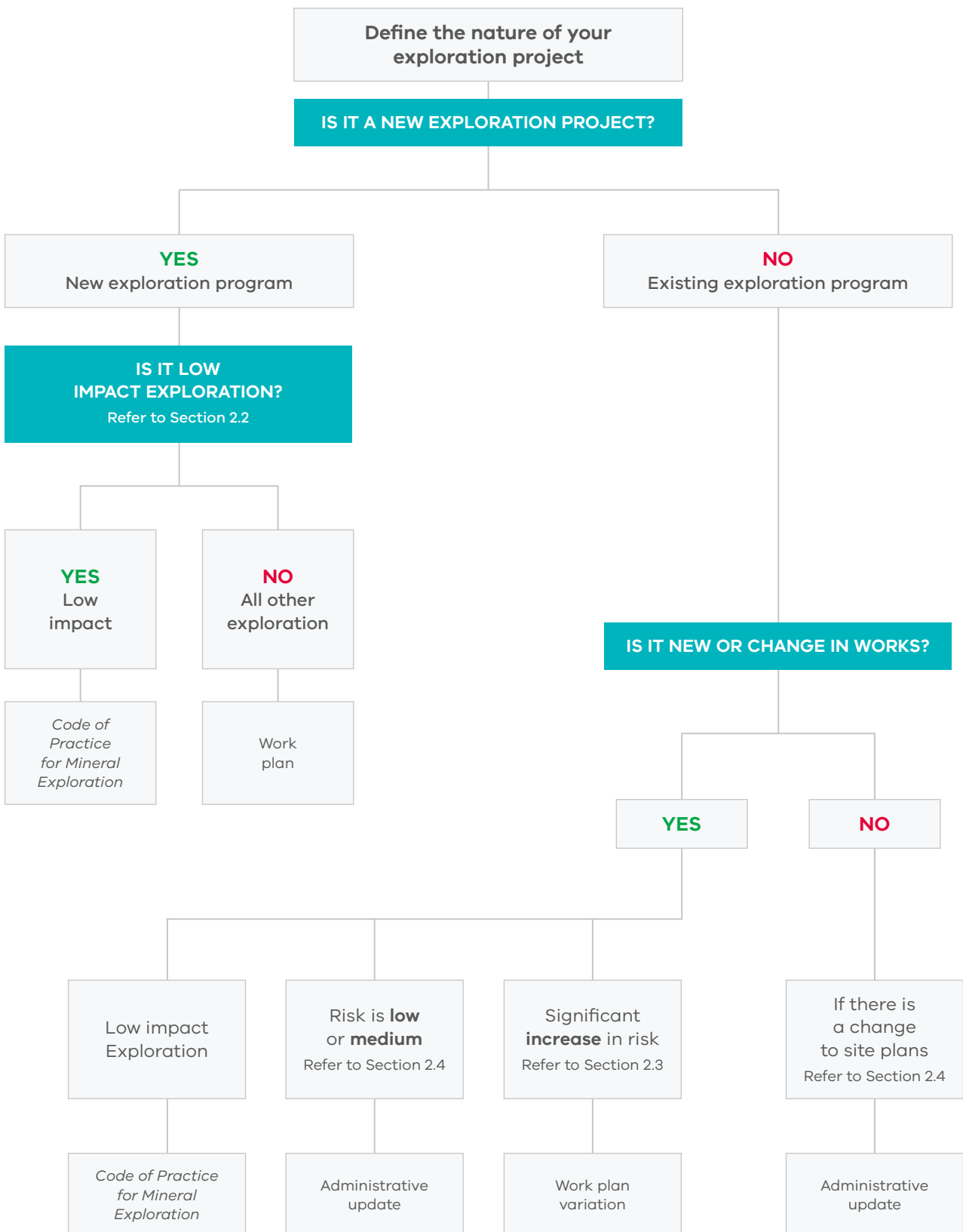
Figure 1 provides a flow chart that you can use to determine what type of application is appropriate in your case, and where to find the relevant information in this guideline.

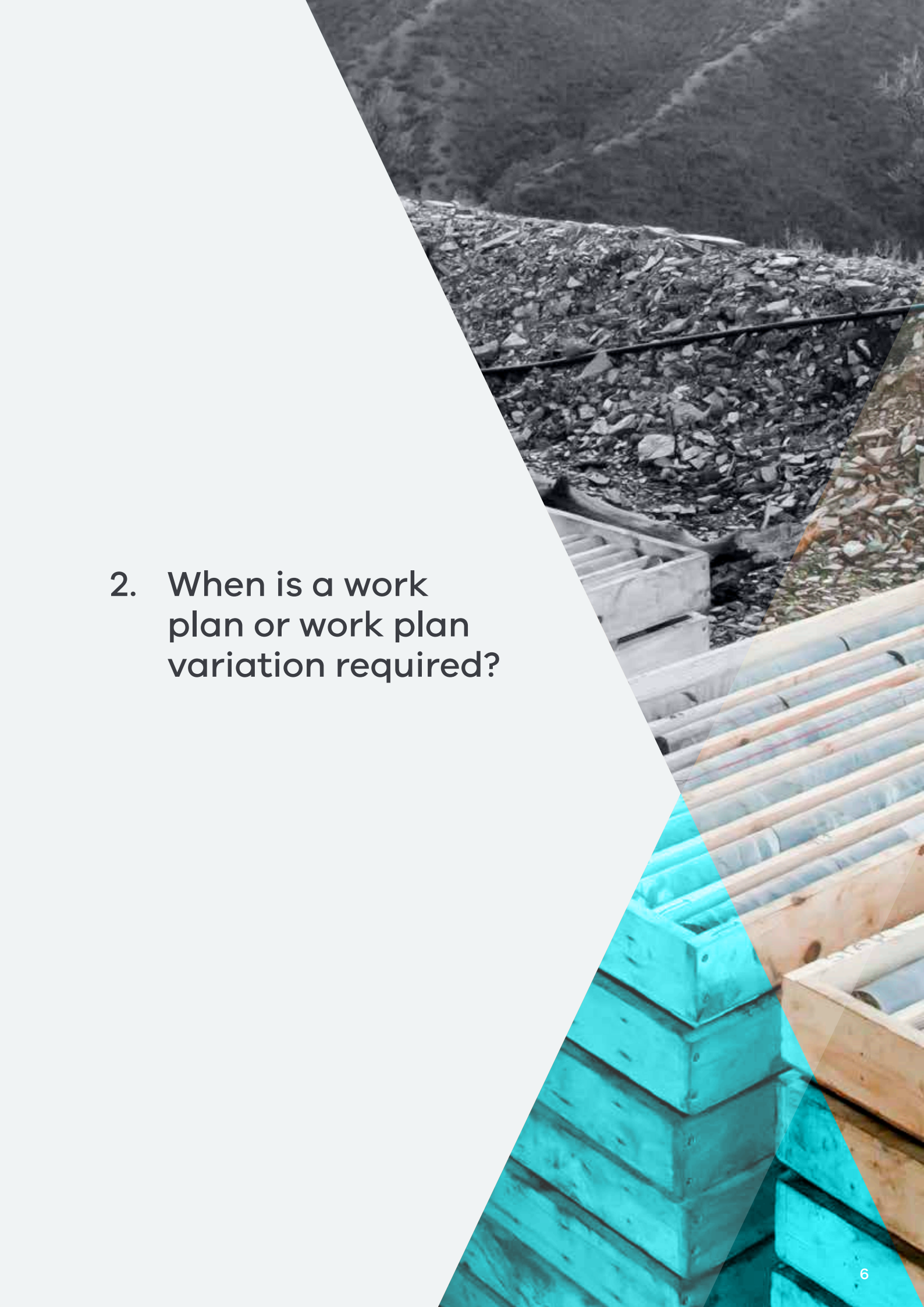
This scope of this guideline does **not** include:

- preparation of area work plans for mineral exploration;
- preparation of extractive industry or mining work plans;
- assessment of proposed changes to the boundary of an approved mining licence;
- preparation and assessment of rehabilitation bonds; and
- preparation of work plans as a direct outcome of an Environment Effects Statement.

If you are looking for assistance in these matters, please contact the ERR Licensing Team. Up-to-date contact details can be found at <http://earthresources.vic.gov.au/earth-resources/contact-us>.

Figure 1: Flow chart to determine your application type and relevant section of this guideline





2. When is a work plan or work plan variation required?

2.1 What is a work plan?

A **work plan** is a document that needs to:

- describe the nature and scale of the proposed mineral exploration activities
- identify and assess all risks the works may pose to the environment, to the public, or to nearby land, property or infrastructure (known as 'exploration hazard')
- include a risk management plan that specifies the measures the licence holder will use to eliminate or minimise identified risks and monitor performance
- include a description of the proposed arrangements for consultation with landowners, Crown land managers and local councils
- include a description of the proposed rehabilitation of any areas subject to surface disturbance including revegetation proposals and, if relevant, proposals for the removal of plant and equipment.

Section 4 of this guideline provides further detail on the content of a work plan.

2.2 When is a work plan required?

Any holder of a mining, retention, exploration or prospecting licence who proposes to carry out exploration must submit a work plan to ERR. The work plan must be approved before the exploration activity commences.

However, this requirement does not apply to low impact exploration as defined in the MRSDA and presented in Appendix A of this guideline.

If a work plan is **not** required, compliance with the *Code of Practice for Mineral Exploration (the Code)* will be required as a condition of the exploration licence.

<http://earthresources.vic.gov.au/earth-resources-regulation/licensing-and-approvals/minerals/guidelines-and-codes-of-practice/code-of-practice-mineral-exploration>

If ERR is satisfied that the work proposed does not trigger the need for a work plan, ERR will acknowledge in writing that only compliance with the Code is required.

2.3 What is a work plan variation?

A work plan variation is a document that seeks approval for changes in work that are not consistent with an existing approved work plan.

Section 5 of this guideline provides further detail on the content of a work plan variation.

2.4 When is a work plan variation required?

A work plan variation is required when there is a change in work, or new work is proposed that has not been approved under an existing work plan.

'**Work**' is any activity that is connected to or is incidental to the mineral exploration activities permitted under the approved work plan.

A '**change in work**' is work that is not consistent with an existing work plan.

'**New work**' is work that is not approved under the existing work plan, or mining/exploration licence.

Changes that trigger a work plan variation are those that involve:

- a significant increase in risk;
- a change to consultation description required as a result of new work or a change in work; **or**
- a change to the rehabilitation description required as a result of new work or a change in work.

A '**significant increase in risk**' is where the residual risk (assessed under ERR's risk matrix in Appendix B of this guideline) is categorised as greater than **medium** after factoring in the adequacy of existing controls and the proposed application of additional controls (where these additional controls are listed in guidance material published by ERR, such as those in Appendix D of this guideline).

Section 5.3 of this guideline presents ERR's risk framework and explains how to assess residual risk.

2.5 What changes do not require a work plan variation?

If you have an approved work plan, you may consider making a **notification** to ERR for changes to work or new work which do not trigger a work plan variation. Instances that do not trigger a work plan variation include:

- no new risks, and existing risks are categorised (after being assessed under ERR's risk matrix in Appendix B) as **low or medium**;
- changes to maps or drawings associated with a licence and/or work plan.

Examples of work that may not trigger a work plan variation and are therefore suitable for notification are provided in Appendix E. Section 7 of this guideline outlines the process and information required by ERR to accept a notification.

Modernising a work plan involves adding the key parts which would now be required in a new work plan, which are a hazard assessment and a risk management plan.

Modernising a work plan can also involve removing information that is no longer required, such as a lengthy detailed description of proposed work.

A modernised work plan can be approved by ERR without further consultation with a council or referral agencies, because there are no changes that would trigger a work plan variation.

Please contact the ERR Assessment Team prior to preparing your modernised work plan. Up-to-date contact details can be found at <https://earthresources.vic.gov.au/about-us/contact-us>

3. What is the recommended pre-submission process?



3.1 Background

Work under exploration licences does not require a planning permit. However, if the Minister for Resources considers that the proposed work will have a material impact on the environment, licence holders may be required to submit a statement which assesses these impacts.

This statement will be provided to the Minister for the *Planning & Environment Act 1987* and the Crown land Minister¹ for comment². Comments from the public may also be sought. The Minister for Resources must consider any comments received.

3.2 Recommended pre-submission steps

You are not required to undertake these pre-submission steps. However, these steps are recommended to avoid delays due to misunderstanding of council or non-statutory referral authority requirements.

The recommended work plan (or work plan variation) pre-submission steps aim to equip you with the information needed to prepare an application that meets statutory requirements.

The recommended pre-submission steps are outlined below and in Figure 2:

1. Contact ERR
2. Submit initial proposal
3. Arrange, conduct and record site meeting
4. Engage relevant agencies
5. Arrange pre-submission briefing with ERR (optional)
6. Submit work plan.

¹ Where the proposed work relates to Crown land.

² As set out in Section 41A of the MRSDA.

Figure 2: Recommended pre-submission steps



3.2.1 Contact Earth Resources Regulation

You may contact the ERR Assessments Team via phone or email to briefly outline the nature of your exploration project. A list of ERR contacts is available at <http://earthresources.vic.gov.au/earth-resources-regulation/Contact-us>.

An Assessments Officer will have a discussion with you to understand the nature of the proposed project and explain the process required.

The Assessments Officer will determine if the proposed project is exempt under the MRSDA and does not require a work plan or work plan variation.

If the project requires a work plan (or variation), then ERR will email you the relevant information, such as:

- an *Initial Proposal Information* request;
- ERR work plan expectations; and
- a community engagement plan template and guidance.

3.2.2 Submit initial proposal

You should return the completed initial proposal to ERR by email to Workplan.Approvals@ecodev.vic.gov.au prior to organising the initial site meeting (refer to Section 3.2.3).

When ERR receives the initial proposal an Assessments Officer will be nominated as your primary contact.

The **initial proposal information** to be submitted should include:

• Description of the operation

For a new application: a brief description of the proposed exploration scope and its location(s).

For work plan variations: a brief description of the existing exploration program, and details of the new or changing works.

You should include the following (where relevant) as part of the description of exploration:

- Maximum depth of works (drill hole, excavation)
- Method of surveying
- Containment dams (water/tailings)
- Predicted offsite discharges
- Impact to native vegetation
- Presence of waterways and potential waterway interception
- Groundwater interception
- Blasting.

The initial proposal should be a summary of the available information relevant to the proposal. Site investigations specific to the proposal are not a requirement.

• Agreements

- Evidence that you have reached a commercial and/or compensation agreement with the relevant landholder(s).

• Planning

- *Planning Property Report*: current report for all the properties included in the application/tenement area. All pages of the report must be included. Planning Property Reports can be obtained, free of charge, from <http://www.land.vic.gov.au>.

• Maps

A map(s) with scale and key showing the location of:

- The mining/exploration licence boundary
 - for a new work plan the map must also include GDA94 coordinates (easting and northing) for each corner defining the mining licence area
 - for a work plan variation, the map must include the current and proposed extent
- The extent of the activity footprint. If this area is changing as a result of a work plan variation, show the current and proposed extent
- Nearest sensitive offsite receptors
- Any relevant landform feature (e.g. river) and/or infrastructure (e.g. high voltage power line, road or freeway).

3.2.3 Arrange and conduct site meeting

Aims and objectives

For some mineral exploration projects an initial site meeting will be an effective way to progress your proposal. The objective of the site meeting is to discuss issues and requirements with the relevant agencies, to help you draft your work plan to successfully gain any required approvals and/or permits.

- The initial site meeting aims to bring you together with all the agencies whose areas of responsibility are potentially affected by your proposal, the relevant council and the relevant ERR staff based on your initial proposal information provided.

The purpose of the initial site meeting is to provide an opportunity for the relevant agencies to understand the potential impacts of your proposal on their area of responsibility, and for you to understand the requirements of each agency and council so that you can address these issues during development of your work plan (or work plan variation) documentation.

Each agency will be invited to point out their requirements regarding the proposed mineral exploration project (as required by relevant legislation, guidelines or policies). The meeting is often the starting point for ongoing discussions with you and further advice may be provided at a later date.

Attendance at the initial site meeting

The appointed Assessments Officer will review your initial proposal and provide you with an *Agency Consultation Checklist* with the contact details. The purpose of this checklist is to identify which parties you should invite to an initial site meeting to discuss the proposal.

In addition to providing the *Agency Consultation Checklist*, ERR will:

- Provide details of ERR staff that are recommended to attend the initial site meeting. Including representatives from:
 - the Assessments Team (who will be overseeing the application);
 - the Compliance Team; and
 - the Technical Services Team, depending on the issues and complexity of the proposal; and
- Suggest possible dates for the meeting to be held given ERR staff availability.

It is your responsibility to arrange a meeting with all the non-statutory referral authorities and other applicable agencies identified by ERR. Ideally this meeting will be conducted on-site, however, if the site is remote the meeting may be convened at the nearest suitable town with an optional site visit prior to the meeting. Sufficient notice should be provided to enable agencies to make arrangements in advance to attend the meeting.

Preparing for the initial site meeting

It is your responsibility to organise and conduct the initial site meeting. ERR generally recommends that the meeting is arranged about four weeks in advance to ensure that the various representatives are available.

You should provide the following information to ERR, council, the referral authorities and other agencies prior to the initial site meeting:

- Details of the meeting time and place
- Land tenure/status/allotment number
- Plan of exploration area(s)
- Commodity/resource type
- Number/depth/type of exploration activities proposed
- An initial site meeting agenda – an example is provided in Appendix F1.

A list of the potential questions that may be discussed at the initial site meeting is provided in Appendix F2.

Documentation of initial site meeting outcomes

You should record key outcomes of the initial site meeting and circulate them to all invitees.

The record should include:

- a list of attendees (and those who were an apology)
- a brief summary of the project as described during meeting
- key discussion points and/or issues raised (by each agency)
- key actions.

3.2.4 Engage with relevant agencies and regulators

Early engagement with ERR, relevant non-statutory referral authorities, other agencies and council is key to the efficient assessment of your proposal.

At the initial site meeting you should initiate discussions with these stakeholders to clarify their requirements and resolve any potential issues. You should notify your nominated ERR Assessments Officer if any agencies provide further advice regarding their requirements for a work plan after the meeting.

You may be required to undertake additional work (e.g. surveys, investigations, or assessments) as a result of comments provided during the meeting. You are responsible for consulting with the relevant stakeholders to ensure that your additional work meets their specific requirements.

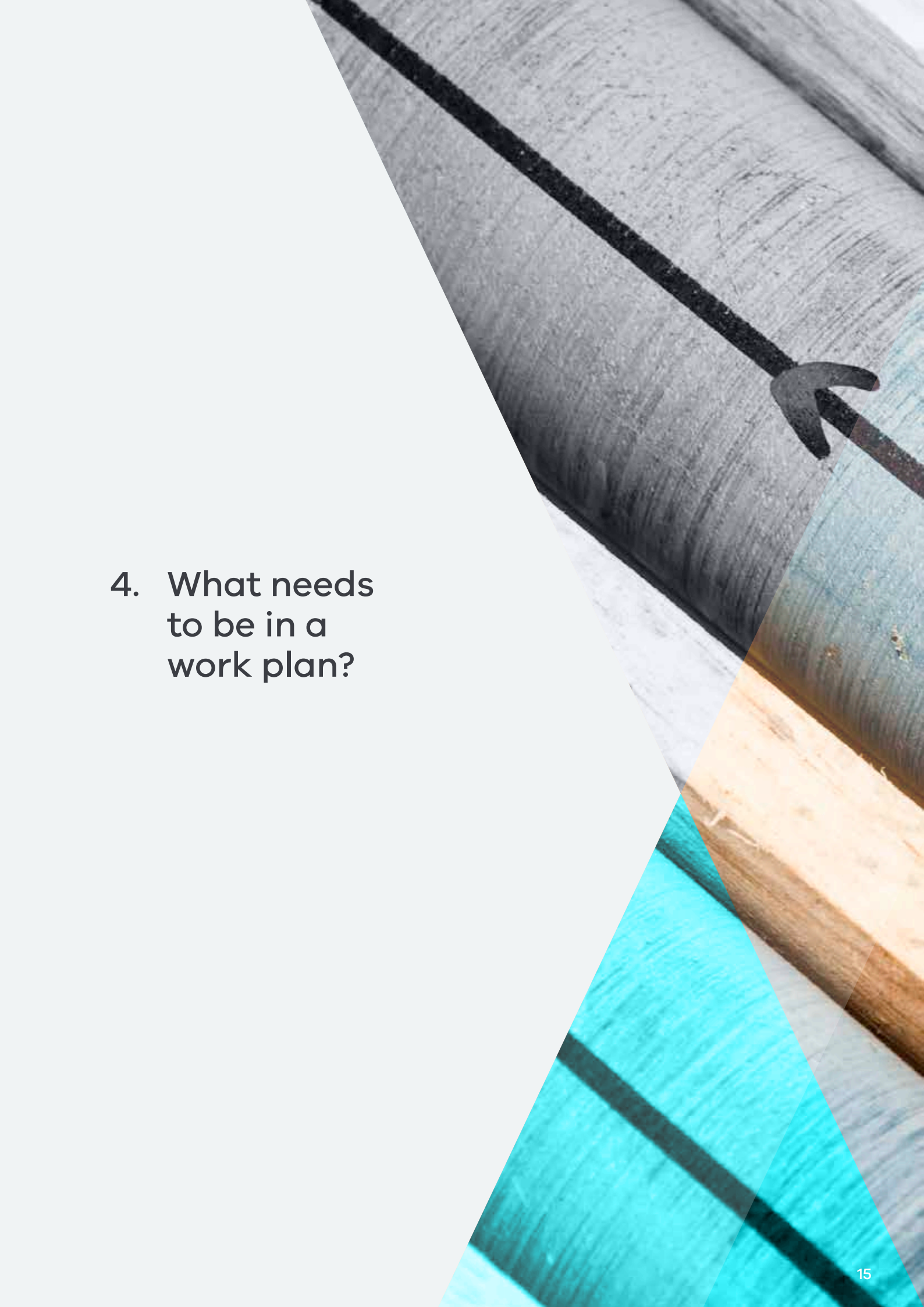
ERR recommends that your work plan or work plan variation is submitted within 12 months of the initial site meeting. Any longer and another site meeting is likely to be required to capture current information.

While preparing your work plan, you should progress applications for any other permits, licences or approvals required prior to seeking approval from ERR.

3.2.5 Pre-submission briefing to Earth Resources Regulation (optional)

For some complex work plans and work plan variations it may be beneficial to arrange a pre-submission briefing to ERR. The briefing should be no earlier than two to four weeks prior to submission, and cover details such as:

- modifications (if any) to the proposal since it was last discussed with ERR;
- engagement undertaken with non-statutory referral authorities and other agencies and the outcomes of that engagement (if any);
- risk assessment and management;
- community consultation; and
- rehabilitation.



4. What needs
to be in a
work plan?

4.1 Work plan objectives

Submission of a work plan serves two objectives:

1. **Assessment:** It enables ERR to assess whether your work plan should be approved and, if so, any conditions that need to be applied.
2. **Compliance:** It sets out the scope of the approved works and any requirements that you must meet, including monitoring and reporting obligations. It is important that these requirements are clearly described in your work plan, as any ambiguity could result in you inadvertently breaching the MRSDA.

To achieve these objectives, all work plans must include the following key components:

Table 1: Key components of a work plan

Component	Work plans
Description of the nature and scale of the proposed exploration activities	A description of all elements of the mineral exploration program and its setting within the landscape.
Identification and assessment of all risks the exploration project may pose to the environment, to the public, or to nearby land, property or infrastructure (known as 'exploration hazards')	Identification and assessment of all risks associated with the mineral exploration program during works and rehabilitation as defined in the definition of an exploration hazard under the Regulations.
Risk management plan that specifies the measures the proponent will use to eliminate or minimise identified risks and monitor performance	A risk management plan for the entire mineral exploration program, during works and rehabilitation. This should include a risk treatment plan for every exploration hazard identified.
Community engagement plan	A community engagement plan is a document that clearly identifies relevant communities and describes how, when, and what engagement will occur with those communities during all stages of a mining project.
Rehabilitation plan	A description of the proposed rehabilitation of any areas subject to surface disturbance including revegetation proposals and, if relevant, proposals for the removal of plant and equipment.

The information that you need to provide to ERR to meet these requirements is outlined in the following sections.

4.2 A description of the project

The aim of the project description is to define the nature and scale of the proposed exploration activities in sufficient detail to:

- set the scope of the approved works
- enable assessment and management of exploration hazard(s).

The exploration project description must include:

- exploration site(s) setting and location of works within the licence boundary
- location of sensitive receptors
- nature of the proposed mineral exploration works
- nature of any auxiliary works (e.g. supply bore).

Guidance on how to describe these aspects to comply with Regulations 40 and 41 of the Regulations is provided at Appendix C.

If the required information is not included, ERR may request changes to your work plan, or refuse it. It is essential that all required information is provided to enable an efficient assessment process.

4.3 Risks from proposed works

Your work plan must identify and assess all risks the proposed mineral exploration project may pose to the environment, to the public, or to nearby land, property or infrastructure (known as **exploration hazards**).

The identified risk(s) must be eliminated or minimised *as far as reasonably practicable* with risk treatment plan(s) that specify the measures you will use to eliminate or minimise those risks and monitor performance.

This section provides guidance on the identification, assessment and control of risks associated with proposed mineral exploration works. Further information about the risk assessment process and risk document templates are provided in Appendices B and D respectively.

Figure 3 provides a summary of the risk assessment process that you should undertake when preparing a work plan.

Figure 3: Risk assessment process for work plans



4.3.1 Identification of exploration hazards

You must first identify exploration and rehabilitation hazards relevant to the proposed program in accordance with Regulation 44 of the Regulations.

For each relevant exploration and rehabilitation hazard, a **risk event** or risk events should be identified and described based on your project description. For example, dust may be identified as a hazard relevant to the proposed activity. There may be one or many risk events associated with the hazard. A risk event associated with the dust hazard could be “unacceptable dust emissions generated at a sensitive receptor”.

For each risk event you must also identify the consequence(s) for public safety, the environment, public infrastructure, private infrastructure and community facilities (i.e. the sensitive receptors), should that risk event occur. Sensitive receptors may be located either inside (e.g. heritage, artefact) or outside (e.g. waterways, public roads, fauna) the licence boundary and the pathway from the source of the risk event to the receptor clearly shown.

During the risk assessment process, you must identify:

- the severity of the consequence(s) – i.e. harm or damage to the environment, to any member of the public, or to land, property or infrastructure as a result of your exploration program; and
- the likelihood of the risk event occurring.

Guidance on the suggested risk assessment process is provided at Appendix B.

4.3.2 Inherent and residual risk

During the risk assessment process you will produce a **risk register** that describes and collates the identified risk events, likelihoods and consequences associated with your proposed work plan. These are called **inherent risks** and should be based on the project description.

Effective risk management requires that all risks are eliminated or reduced as far as reasonably practicable. Therefore controls should be identified and applied to each risk to achieve this. This information, including any risks eliminated, should be recorded in the risk register and risk treatment plans. For risks which are inherently **low**, and which cannot be eliminated, the explanation of why they are **low** should be captured based on the project description.

The risk assessment process should then be conducted again, assuming implementation of the identified risk controls. The new likelihoods and consequences should produce a lower risk rating. These are the **residual risks** and should be based on the project description and listed controls. Where a **residual risks** are above medium, additional controls will need to be identified to reduce the risks to an acceptable level.

Both inherent and residual risk ratings should be included in your risk register. An example risk register is provided at Appendix D1.

4.3.3 Risk management plan

Your **risk management plan** should describe and address each exploration hazard relevant to your project and the controls for all identified risks (i.e. **risk treatment plans**). The plan should demonstrate that the control(s) are able to reduce the likelihood(s) and/or consequence(s) such that the residual risk is minimised as far as reasonably practicable.

The risk management plan should include:

- a summary of the project, including assumptions and sensitive receptors
- a description of the risk assessment process conducted
- a risk register
- risk treatment plan(s)
- accountable personnel for the implementation, management and review of the risk management plan.

Appendix D2 provides a template risk treatment plan and Appendix D3 provides an example, which sets out the following key elements:

- details of the exploration hazard
- a list of key sensitive receptors
- a list of risk events associated with the hazard
- compliance standards
- controls to address hazard
- a residual risk assessment and rating
- monitoring.

Many exploration hazards will be able to be managed by applying example controls published by ERR (refer to Appendix D4). These example controls have been developed to reflect acceptable industry practice for some hazards, where site-specific investigations and tailored controls are not required.

Appendix D4 provides example controls for:

- Dust and particulates
- Noise
- Erosion and sedimentation
- Soil biological activity
- Site access
- Fire
- Non-mineral waste
- Weeds and pests
- Water
- Imported materials
- Vehicle sediment transport.

You are encouraged to include applicable example controls in your risk treatment plan(s), and to supplement these controls where necessary to minimise your risk rating as far as reasonably practicable.

If your mineral exploration hazards are more complex (e.g. blasting, dewatering), they may require technical investigations to develop site-specific controls.

4.4 Community engagement

You have a duty to consult with the community under section 39A of the MRSDA throughout the period of the exploration licence.

The objective of your consultation with the community and stakeholders is to ensure that interested parties are informed of your proposed activities and given the opportunity to express how they may be affected. Stakeholder and community engagement is considered fundamental in determining agreed environmental outcomes. Early and continuous community and stakeholder engagement also enables you to understand and manage community and stakeholder expectations and mitigate potential risks which could impact your project.

Your work plan must include a description of how you consulted to achieve these objectives. It should be proportionate to the site-specific conditions such as scale, operational activities, and the size and proximity of local communities.

Your description of the consultation should include:

- a list of relevant community members and stakeholders
- a description of likely attitudes and expectations
- potential impacts on each of the identified community members/stakeholders
- how community members/stakeholders will be engaged (and at what level)
- a description of your proposed complaint/community feedback handling process, including when and how ERR will be notified
- a timeline for engagement throughout mineral exploration program.

For more information on community engagement, refer to ERR's guidelines at <http://earthresources.vic.gov.au/earth-resources-regulation/licensing-and-approvals/minerals/guidelines-and-codes-of-practice/community-engagement-guidelines-for-mining-and-mineral-exploration>.

4.5 Rehabilitation

Under section 26 and 78(2) of the MRSDA, the Minister will impose conditions on you to ensure rehabilitation is undertaken for any areas subject to surface disturbance including revegetation and, if relevant, the removal of plant and equipment.

The rehabilitation description in the work plan should include:

- a description of any areas subject to surface disturbance;
- revegetation proposals;
- and, if relevant, proposals for the removal of plant and equipment.

5. What needs to be in a work plan variation?



5.1 Work plan variation objectives

Submission of a work plan variation serves two objectives:

1. **Assessment:** It allows ERR to assess whether your work plan variation should be approved and, if so, any conditions that need to be applied.
2. **Compliance:** It sets out the scope of the approved works and any requirements you must meet, including monitoring and reporting obligations. It is important that these requirements are clearly described in your work plan variation as any ambiguity could result in you inadvertently breaching the MRSDA.

To achieve these objectives all applications to vary a work plan must include the following key components, as required by Regulation 48 of the Regulations:

Table 2: Key components of a work plan variation

Component	Work plan variations
Description of how the proposed variation relates to the current approved work plan.	A description limited to the new or changing works and its setting within your licence boundary.
Description of new or changed exploration hazard arising from the proposed changes to the work set out in the work plan that increases the risk to the environment, to any member of the public, to land, property or infrastructure (known as 'exploration hazard').	A description of the mineral exploration hazards resulting from the new or any change in works.
Description of the proposed change(s) to the risks and risk management plan as a result of the new or changing works.	Consideration of the risks associated with the new or changing works. Updates to your risk management plan to cover the new or changing works, which includes new or updated risk treatment plan(s) associated with the new or changed risks.
Community engagement plan	Updates to your community engagement plan as required by the new or change in works.
Rehabilitation plan	Updates to your rehabilitation plan as required by the new or change in works.

The information that you need to provide to ERR to meet these requirements is outlined in the following sections:

5.2 A description of the proposed variation

The aim of the description of the proposed variation is to define the nature and scale of the new or changing mineral exploration activities in sufficient detail to:

- set the scope of the approved works
- enable the assessment and management of any exploration hazard(s).

The description of the proposed variation must include:

- the location of the new or changing works within your licence boundary
- the location of sensitive receptors relevant to the new or changing works
- the nature of the new or changing works proposed and how they relate to the existing approved work plan
- the nature of any new auxiliary works (e.g. supply bore).

Appendix C provides guidance on how you should describe these aspects to comply with Regulation 48 of the Regulations.

If the required information is not included, ERR may request changes to your work plan variation, or refuse it. It is essential that all required information is provided to enable an efficient assessment process.

5.3 Risks from proposed works

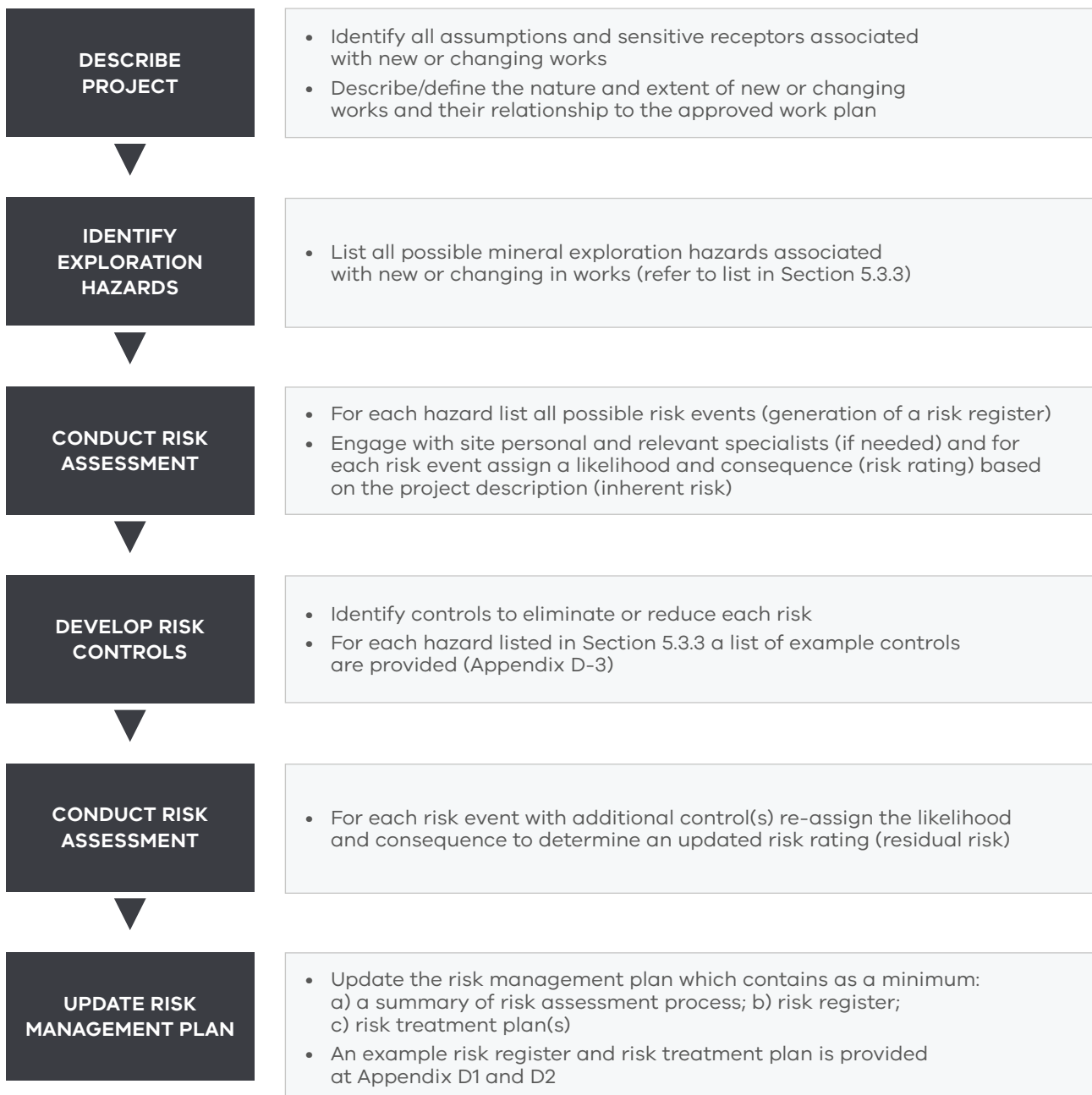
Your work plan variation must identify and assess all risks that the new or changing works may pose to the environment, to the public, or to nearby land, property or infrastructure (known as **exploration hazards**).

The identified risks then must be eliminated or minimised as *far as reasonably practicable* with risk treatment plan(s) that specify the measures you will use to eliminate or minimise those risks and monitor performance.

This section provides guidance on the identification, assessment and control of risks associated with proposed variations to works. Further information about the risk assessment process and risk document templates are provided in Appendices B and D respectively.

Figure 4 provides a summary of the risk assessment process that you must undertake when preparing a work plan variation.

Figure 4: Risk assessment process for work plan variations



5.3.1 Identification of exploration hazards

You must identify the mineral exploration hazards that may be relevant to the proposed new or changing exploration activities in accordance with the requirement of Regulation 48 of the Regulations.

For each relevant exploration hazard, a **risk event** or risk events should be described and identified based on the description of the new or changing works. For example, dust may be identified as a hazard relevant to your proposed new or changing works. There may be one or many risk events associated with this hazard. A risk event associated with the dust hazard could be “unacceptable dust emissions generated at the licence boundary.”

For each risk event you must also identify the consequence(s) for public safety, the environment, public infrastructure, private infrastructure and community facilities (i.e. the sensitive receptors), should that risk event occur. Sensitive receptors may be located either inside (e.g. heritage, artefact) or outside (e.g. waterways, public roads, fauna) the licence boundary and the pathway from the source of the risk event clearly shown.

During the risk assessment process, you must identify:

- the severity of the consequence(s) – i.e. harm or damage to the environment, to any member of the public, or to land, property or infrastructure due to your new or changing work
- the likelihood(s) of the risk event occurring.

Appendix B provides guidance on the suggested risk assessment process.

5.3.2 Inherent and residual risk

During the risk assessment process you will produce a **risk register** that describes and collates the identified risk events, likelihoods and consequences associated with your work plan variation. These are called **inherent risks** and should be based on the description of the proposed variation.

Effective risk management requires that all risks are eliminated or reduced as far as reasonably practicable. Therefore controls should be identified and applied to each risk to achieve this. This information, including any risks eliminated, should be recorded in the risk register and risk treatment plans. For risks which are inherently **low**, and which cannot be eliminated, the explanation of why they are **low** should be captured based on the project description.

The risk assessment process should then be conducted again, assuming implementation of the identified risk controls. The new likelihoods and consequences should produce a lower risk rating. These are the **residual risks** and should be based on the project description and listed controls. Where a **residual risks** are above medium, additional controls will need to be identified to reduce the risks to an acceptable level.

Both inherent and residual risk ratings should be included in your risk register. An example risk register is provided at Appendix D1.

5.3.3 Risk management plan

Your **risk management plan** should describe and address each exploration hazard relevant to your project and the risk controls for all identified risks (i.e. **risk treatment plans**). The plan should also demonstrate that the control(s) are able to reduce either the likelihood(s) and/or consequence(s) such that the residual risk is minimised as *far as reasonably practicable*.

The risk management plan should include:

- a summary of the project, including assumptions and sensitive receptors
- a description of the risk assessment process conducted
- a risk register
- risk treatment plan(s)
- accountable personnel for the implementation, management and review of the risk management plan.

Appendix D2 provides a template risk treatment plan and Appendix C3 provides an example, which sets out the following key elements:

- details of the exploration hazard
- a list of key sensitive receptors
- a list of risk events associated with the hazard
- compliance standards
- controls to address the hazard
- residual risk assessment and rating
- monitoring.

Many exploration hazards will be able to be managed by applying example controls published by ERR (refer to Appendix D4). These example controls have been developed to reflect acceptable industry practice for some exploration hazards, where site-specific investigations and tailored controls are not required.

Appendix D4 provides example controls for:

- Dust and particulates
- Noise
- Erosion and sedimentation
- Soil biological activity
- Site access
- Fire
- Non-mineral waste
- Weeds and pests
- Water
- Imported materials
- Vehicle sediment transport.

You are encouraged to include applicable example controls in your risk treatment plan(s), and to supplement these controls where necessary to minimise your risk rating as far as reasonably practicable.

If your mineral exploration hazards are more complex (e.g. blasting, dewatering), they may require technical investigations to develop site-specific controls.

5.4 Community engagement

You have a duty to consult with the community throughout the period of the exploration licence under section 39A of the MRSDA..

The objective of your consultation with the community and stakeholders is to ensure that interested parties are informed of the new or changing exploration activities and given the opportunity to express how they may be affected. Community engagement is considered fundamental in determining agreed environmental outcomes. Early and continuous community and stakeholder engagement also enables you to understand and manage community and stakeholder expectations and mitigate potential risks which could impact your project.

Your work plan variation must include an updated description of your consultation that achieves these objectives. It should be specific to the new or changing works and be proportionate to the site-specific conditions such as scale, operational activities, and the size and proximity of local communities.

The updated description of how you consult should include:

- a list of relevant community members and stakeholders
- a description of likely attitudes and expectations
- potential impacts on each of the identified community members/stakeholders
- how community members/stakeholders will be engaged (and at what level) for the new or changing works
- a description of your proposed complaint/ community feedback handling process, including when and how ERR will be notified
- a timeline for engagement throughout the mineral exploration program.


For more information on community engagement, refer to ERR's guidelines at <http://earthresources.vic.gov.au/earth-resources-regulation/licensing-and-approvals/minerals/guidelines-and-codes-of-practice/community-engagement-guidelines-for-mining-and-mineral-exploration>.

5.5 Rehabilitation

Under section 26 and 78(2) of the MRSDA, the Minister will impose conditions on you to ensure rehabilitation is undertaken for any areas subject to surface disturbance including revegetation and, if relevant, the removal of plant and equipment.

The rehabilitation description should include:

- a description of any areas subject to surface disturbance;
- revegetation proposals;
- and, if relevant, proposals for the removal of plant and equipment.



6. What is the assessment process?

6.1 Assessment steps

The steps for assessment of a work plan (or work plan variation) are outlined in Table 3.

Table 3: Assessment steps

Step	
1	You submit the work plan or work plan variation to ERR via RRAM
2	A fee is payable for submitting the plan (unless the Department Head has directed you to apply for a work plan variation)
3	ERR has 28 days to: a. approve the work plan with or without conditions; or b. require changes; or c. refuse the plan.

6.2 Post-approval steps

If your work plan (or work plan variation) is approved, you will receive:

1. a letter – DJPR letter from ERR with advice of the approval and next steps, including:
 - information about the rehabilitation bond assessment process
 - an application for licence (for work plans).
2. a statement of reasons – attachment to the letter which provides details on the reasons for the decision
3. conditions – a full list of conditions for approval
4. your work plan – stamped and signed.

7. What is the work plan notification process?



7.1 Background

If you have an approved work plan, a **notification** (administrative update) may be considered for new or changing work where:

- There is no **significant increase** in risk arising from the new or changing work
- Relevant referral agencies have been consulted and confirmed that the new or changing work can be categorised as **low** or **medium** risk.

A '**significant increase in risk**' is where the residual risk (assessed under ERR's risk matrix in Appendix B of this guideline) is categorised as greater than **medium** after factoring in the adequacy of existing controls and the proposed application of additional controls (where these additional controls are listed in guidance material published by ERR, such as those in Appendix D of this guideline).

A list of new or changing works that may be suitable for a notification is provided at Appendix E.

It is recommended that you seek guidance from ERR before preparing a notification to determine whether a notification is appropriate.

7.2 Pre-submission

7.2.1 Assessing risk

Before submitting a notification, you should identify and assess the risk (likelihood and consequence) associated with the new or changing work. The residual risk should be assessed based on the application of existing controls (i.e. those under an approved work plan or work plan variation) and any example controls provided in Appendix D4 of this guideline. Where the residual risk associated with the new or changing work is assessed as **low** or **medium**, then a notification may be appropriate.

7.2.2 Consultation with other agencies and regulators

Before submitting a notification, you should consult with other agencies and regulators regarding the new or changing work if it is within their jurisdiction. These other agencies and regulators could include catchment management authorities, the EPA, the Department of Environment, Land, Water and Planning and other government departments.

You should provide written confirmation from the relevant agencies and/or regulators that they agree that the new or changing work is low or medium risk and suitable to progress as a notification.

7.3 Submission

When a notification is submitted, ERR will review the new or changing work proposed, confirm the assessment of low or medium residual risk and note the supporting documents from council, other agencies and regulators.

ERR may require you to submit further information or evidence of consultation with these stakeholders.

7.4 Acknowledgement

If accepted, ERR will acknowledge the notification in writing.

7.5 Compliance

Accepted notifications will be included in your work plan for any site audits conducted by ERR during compliance activities.

If you are working outside of the approved notification then you are working outside of your work plan, which is an offence under the MRSDA. In such circumstances ERR has the power to stop work on the site and require the submission of a work plan variation.

Appendices

Appendix A

Definition of low impact exploration

Under Schedule 4A of the MRSDA, **low impact exploration** means exploration that does **not** involve any of the following:

- a. the use of explosives;
- b. the taking of flora listed under section 10 or Schedule 2 of the *Flora and Fauna Guarantee Act 1988*, unless that flora is taken from private land that is not owned by a public authority;
- c. the taking of flora from a community listed under section 10 or Schedule 2 of the *Flora and Fauna Guarantee Act 1988*, unless that community is found on private land that is not owned by a public authority;
- d. the taking of fauna listed under section 10 or Schedule 2 of the *Flora and Fauna Guarantee Act 1988*;
- e. the taking of any taxon or community of flora or fauna from any habitat or parts of habitat under section 20 of the *Flora and Fauna Guarantee Act 1988*;
- f. the removal or damaging of more than 1 hectare of native vegetation if that area does not contain any native trees during either the term of the licence or a period of 5 years from the grant of the licence, whichever ends first;
- g. the removal or damaging of more than 15 native trees that have a trunk diameter of less than 40 cm at a height of 1.3 metres above ground level during either the term of the licence or a period of 5 years from the grant of the licence, whichever ends first;
- h. the removal or damaging of more than 5 native trees that have a trunk diameter of 40 cm or more at a height of 1.3 metres above ground level during either the term of the licence or a period of 5 years from the grant of the licence, whichever ends first;
- i. the creation of any road, structure or hardstand area without the consent of the owner or occupier of the land on which it is created;
- j. the use of any closed road without the consent of the owner or occupier of the land on which the road is located or undertaking works on any road without the consent of the owner or occupier of the land on which the road is located;
- k. ground intrusive work that:
 - i. is within 200 metres of a waterway; or
 - ii. is on a slope steeper than 1 vertical : 3 horizontal; or
 - iii. is of greater than 2 hectares in an area of cultural heritage sensitivity during either the term of the licence or a period of 5 years from the grant of the licence, whichever ends first; or
- l. involves taking water from an aquifer, hydraulic fracturing, or excavation using heavy earth moving equipment.

Appendix B

Risk assessment process

B1 Introduction

The risk assessment process undertaken must be documented in your risk management plan. This is to ensure that all exploration hazards have been identified, and associated controls implemented to reduce the risk of harm or damage to the environment, any member of the public, to land, property or infrastructure in the vicinity of your work.

There are three important elements to understand when developing and implementing your risk management plan:

1. A hazard is an activity that poses risk at any time during the life of the exploration program, including set up, operations and rehabilitation.
2. Risk is the possibility of harm or damage that could happen as a result of an event. The level of risk is influenced by two factors, consequence and likelihood.
 - a. Consequence is the outcome or impact of an event
 - b. Likelihood is the probability of that event occurring.
3. A control is something which eliminates or reduces the consequence and/or likelihood of a risk. Controls can include work processes, engineering measures, and/or equipment.

For each relevant exploration hazard, a **risk event(s)** should be identified and described based on the project description (or the description of the proposed variation for a work plan variation). To assess the significance of a risk, its risk rating must be determined by considering its consequence and likelihood.

B2 Consequences

Consequence is the severity of harm the risk event could cause when it occurs. The following questions may assist in establishing the consequences of a risk event:

- What kinds of harm could be caused?
 - A risk event may impact on more than one of the sensitive receptors under consideration: any member of the public, land, property and infrastructure or the environment.
- What factors could influence the severity of harm?
 - The consequence of a risk may vary under different circumstances. For example, weather conditions may increase the consequences of the risk event.
- In what ways could any member of the public be harmed?
- In what ways could any land, property or infrastructure be harmed?
- In what ways could the air, water, soil, vegetation, or flora and fauna species be harmed?

Under the MRSDA ERR has a duty when determining the consequence of a risk event to consider the potential impacts to:

- Members of the public:
 - Public health, safety, amenity and Aboriginal heritage
- Land, property and infrastructure:
 - Neighbouring property, land use and nearby infrastructure such as highways, transmission lines, pipelines, schools and hospitals
- Environment:
 - Air, water, soil, vegetation, and flora and fauna species

The descriptions of the consequence criteria that ERR uses to assess the harm caused by a risk event are provided in Table B1.

Table B1: ERR consequences descriptions

Severity	Consequence for “any member of the public” – public health, safety, amenity and Aboriginal heritage	Consequences for “land, property and infrastructure” beyond the boundary of the licence area	Consequences for “the environment” – air, water, soil, vegetation, flora and fauna species other than for planned and approved disturbances within the licence area
<p>Critical</p> <p>Hazard has critical impact, in terms of severity and/ or duration. Treatment or remediation effort is required, although some effects may be irreversible.</p> <p>Remediation of environmental contamination would require significant private and public resources.</p> <p>Hazard event would be the subject of widespread community outrage.</p>	<p>Public health and safety:</p> <p>One or more fatalities or life-threatening injuries or illness.</p> <p>Public exposed to a severely debilitating chronic health impact or life-threatening hazard.</p> <p>One or more injuries resulting in permanent disablement.</p> <p>Public amenity:</p> <p>Community or multiple individuals continuously experience major losses of amenity from dust, odour, fumes, noise, or other similar hazards over periods of weeks or longer.</p> <p>Aboriginal heritage:</p> <p>Harm to features and/or places of Indigenous cultural value.</p> <p>Heritage:</p> <p>Irreversible damage, or destruction of a place, object or historical archaeological site listed on the Commonwealth National Heritage List, Victorian Heritage Register, Victorian Heritage Inventory, or local Heritage Overlay.</p>	<p>Land and land uses:</p> <p>Permanent loss of production from primary production land >10 ha. Loss of annual-seasonal primary production from >100 ha of land.</p> <p>Irreversible or long-term environmental damage (with rehabilitation taking years or longer) to >1 ha of National Park or other conservation reserve.</p> <p>Public and private property:</p> <p>Total damage to private or public property or infrastructure or loss of income resulting from this damage >\$10 million.</p> <p>Total loss of value of private property equivalent to >\$10 million.</p> <p>Services provided by infrastructure:</p> <p>Important community services (e.g. transport, energy, health, telecommunications, education, water) suspended or significantly disrupted for extended period (weeks or longer).</p>	<p>Environmental contamination event:</p> <p>Environmental contamination event (of air, soil-land and/or water) of a magnitude that a State-level incident response is required. Incident response, clean-up and rehabilitation expected to run for years and/or cost ≥\$10 million.</p> <p>Native vegetation, flora species or fauna species:</p> <p>Environmental contamination event or other form of environmental damage leading to bioregional, State or national extinction of listed threatened species of native flora or fauna or vegetation community.</p> <p>Irreversible or long-term (years) damage or environment harm to ≥10 ha of native vegetation (not listed threatened vegetation community) or to ≥1 ha listed threatened native vegetation community. Deaths of hundreds (or more) of listed native flora or fauna species or native mammals.</p> <p>Contamination or other environmental damage leading to deaths of native fauna well beyond (>1 km) the boundaries of the operation.</p> <p>Surface water or groundwater:</p> <p>Contamination of surface water/ groundwater aquifer leading to disruption of beneficial uses as defined by SEPP (Waters) for more than year.</p>

Severity	Consequence for “any member of the public” – public health, safety, amenity and Aboriginal heritage	Consequences for “land, property and infrastructure” <i>beyond the boundary of the licence area</i>	Consequences for “the environment” – air, water, soil, vegetation, flora and fauna species <i>other than for planned and approved disturbances within the licence area</i>
<p>Major</p> <p>Hazard has major impact, in terms of severity, duration and/or frequency of occurrence. Treatment or remediation effort is required. Some effects may be irreversible.</p> <p>Remediation of environmental contamination would require significant private and public resources.</p> <p>Hazard event would be the subject of widespread community concern.</p>	<p>Public health and safety:</p> <p>One or more injuries or illness requiring surgery or resulting in long-term disablement.</p> <p>Public exposed to a hazard that results in hospitalisation for treatment from injury or illness.</p> <p>Public amenity:</p> <p>Community or multiple individuals regularly experience (weekly-monthly basis) major losses of amenity due to dust, odour, fumes, noise, or other similar hazards for multiple days on end.</p> <p>Heritage:</p> <p>Damage to a place, object or historical archaeological site listed on the Commonwealth National Heritage List, Victorian Heritage Register, Victorian Heritage Inventory, or local Heritage Overlay. Removal or relocation of elements associated with places, objects or historical archaeological sites.</p>	<p>Land and land uses:</p> <p>Permanent loss of production from primary production land <10 ha. Loss of annual-seasonal primary production from 10–100 ha of land.</p> <p>Irreversible or long-term environmental damage to <1 ha of National Park or other conservation reserve or to ≥10 ha of other public land. Reversible damage to ≥1 ha of National Park or other conservation reserve or to ≥10 ha of other public land.</p> <p>Public and private property:</p> <p>Total damage to private or public property or infrastructure or loss of income resulting from this damage \$1–10 million.</p> <p>Total loss of value of private property equivalent to \$1–10 million.</p> <p>Services provided by infrastructure:</p> <p>Important community services (e.g. transport, energy, health, telecommunications, education) suspended or significantly disrupted for days or experiencing minor disruptions for long periods (weeks or longer).</p>	<p>Environmental contamination event:</p> <p>Environmental contamination event (of air, soil-land and/or water) of a magnitude that would necessitate a regional emergency management incident response. Clean-up and rehabilitation expected to run for months and/or cost \$1–10 million.</p> <p>Native vegetation, flora species or fauna species:</p> <p>Environmental contamination event or other form of environmental damage leading to local extinction of listed threatened species of native flora or fauna or vegetation community. Deaths of up to ~100 listed threatened flora or fauna species or native mammals.</p> <p>Major damage or environment harm to 1–10 ha of native vegetation (not listed threatened vegetation community) or to <1 ha listed threatened native vegetation community that will be irreversible or take years to recover from.</p> <p>Surface water or groundwater:</p> <p>Contamination of surface water/ groundwater aquifer leading to disruption of beneficial uses as defined by SEPP (Waters) for up to one year.</p>

Severity	Consequence for “any member of the public” – public health, safety, amenity and Aboriginal heritage	Consequences for “land, property and infrastructure” <i>beyond the boundary of the licence area</i>	Consequences for “the environment” – air, water, soil, vegetation, flora and fauna species <i>other than for planned and approved disturbances within the licence area</i>
<p>Moderate</p> <p>Hazard has moderate, noticeable impact, in terms of severity, duration and/ or frequency of occurrence. Moderate treatment or remediation effort may be required.</p> <p>Hazard event would be the subject of limited community concern.</p>	<p>Public health and safety:</p> <p>One or more injuries or illness requiring treatment by a physician or hospitalisation.</p> <p>Public exposed to a hazard that results in injuries or health effects requiring treatment by a physician.</p> <p>Public amenity:</p> <p>Community or multiple individuals regularly (weekly-monthly basis) experience significant loss of amenity from dust, odour, fumes, light, noise, vibration or other similar hazards.</p> <p>Heritage:</p> <p>Works to a place, object or historical archaeological site that will not alter the cultural significance as stated on the Commonwealth National Heritage List, Victorian Heritage Register, Victorian Heritage Inventory, or local Heritage Overlay.</p>	<p>Land and land uses:</p> <p>Loss of annual-seasonal primary production from <10 ha of land. Short-term (days-weeks) disruption to 10–100 ha of primary production land.</p> <p>Reversible damage to <1 ha of National Park or other conservation reserve or to <10 ha of other public land.</p> <p>Public and private property:</p> <p>Individual hazard event causes total damage to private or public property or infrastructure or loss of income resulting from this damage \$50k–\$1 million.</p> <p>Individual hazard event causes total loss of value of private property equivalent to \$50k–\$1 million.</p> <p>Services provided by infrastructure:</p> <p>Important community services (e.g. transport, energy, health, telecommunications, education) suspended or significantly disrupted for up to 1 day or experiencing minor disruptions for weeks.</p>	<p>Environmental contamination event:</p> <p>Environmental contamination event (of air, soil-land and/ or water) with clean-up and rehabilitation expected to run for weeks and cost \$10k–\$1 million.</p> <p>Native vegetation, flora species or fauna species:</p> <p>Environmental contamination event or other form of environmental damage leading to deaths of a small number of listed threatened flora or fauna species or native mammals.</p> <p>Reversible damage or environmental harm to <10 ha of non-listed native vegetation community or <1 ha of listed native vegetation community.</p> <p>Surface water or groundwater:</p> <p>Localised contamination of surface water/groundwater aquifer leading to disruption of beneficial uses as defined by SEPP (Waters) for weeks to months.</p>

Severity	Consequence for “any member of the public” – public health, safety, amenity and Aboriginal heritage	Consequences for “land, property and infrastructure” <i>beyond the boundary of the licence area</i>	Consequences for “the environment” – air, water, soil, vegetation, flora and fauna species <i>other than for planned and approved disturbances within the licence area</i>
<p>Minor</p> <p>Hazard is perceived but has minor and typically temporary effects. Some remediation may be required.</p>	<p>Public health and safety:</p> <p>One or more injuries or illness requiring first aid treatment.</p> <p>Public exposed to a hazard that could cause injuries or adverse health effects requiring first aid treatment.</p> <p>Public amenity:</p> <p>Dust, odour, light, fumes, vibration or other similar hazards infrequently (no more than monthly) have a minor effect on the amenity of the community or individuals.</p> <p>Heritage:</p> <p>Isolated damage to regionally or locally significant natural or historic heritage features that is readily rectified.</p>	<p>Land and land uses:</p> <p>Minor damage to agricultural land or public land not requiring active rehabilitation. Temporary and small-scale disruption to agricultural production (days, 1–10 ha).</p> <p>Public and private property:</p> <p>Total damage to private or public property or infrastructure \$1–50k.</p> <p>Total loss of value of private property equivalent to \$1–50k.</p> <p>Services provided by infrastructure:</p> <p>Important community services (e.g. transport, energy, health, telecommunications, education) suspended or significantly disrupted for short period (hours).</p>	<p>Environmental contamination event:</p> <p>Minor environmental contamination event (of air, soil-land and/or water). Clean-up and rehabilitation may be required, but can be completed within days.</p> <p>Native vegetation, flora species or fauna species:</p> <p>Minor damage or environment harm to <1 ha of native vegetation (not listed threatened vegetation community) that can be recovered in weeks to months. Minor contamination or other environmental damage that affects native fauna populations, but does not kill individuals or disrupt breeding or other important ecological processes.</p> <p>Surface water or groundwater:</p> <p>Minor contamination of natural waterway or wetland occurs, but water quality remains within applicable EPA or ANZECC guidelines for existing beneficial uses.</p> <p>Water extraction or diversion reduces surface water flows or groundwater available for environmental uses, but with no detectable effect on dependent species or ecosystems and carried out within terms of water licence.</p>
<p>Insignificant</p> <p>Impacts are barely recognised and/or quickly recovered from. No specific remediation required.</p>	<p>Public health and safety:</p> <p>An injury or ailment that does not require medical or first aid treatment.</p> <p>Public amenity:</p> <p>Dust, odour, light, fumes, vibration or other similar hazards infrequently (no more than monthly) contribute to a small reduction in the amenity of the community or individuals.</p>	<p>Land and land uses:</p> <p>Minor, temporary disruption to primary production (<days) from <1 ha of land.</p> <p>Public and private property:</p> <p>Total damage to private or public property or infrastructure <\$1k.</p> <p>Total loss of value of private property equivalent to <\$1k.</p> <p>Services provided by infrastructure:</p> <p>Important community services (e.g. transport, energy, health, tele-communications, education) maintained, but experiencing minor disruptions or delays.</p>	<p>Hazard event with minimal environmental impact and no noticeable effect beyond the immediate occurrence or expression of the hazard.</p>

B3 Likelihood

The next step is to assess the likelihood of the risk event occurring and the associated consequence(s). Likelihood is based on what is known about the risk event and the way circumstances and activities affect the risk event and associated consequence(s).

The likelihood of a risk event occurring during the expected life of the operation is rated by ERR using the likelihood descriptions provided in Table B2.

Table B2: ERR likelihood descriptions

Severity	Description	Probability of event occurring
Almost certain	The risk event is expected to occur in most circumstances.	90–100%
Likely	The risk event will probably occur in most circumstances.	70–90%
Possible	The risk event might occur at some time.	30–70%
Unlikely	The risk event could occur at some time.	5–30%
Rare	Highly unlikely, but the risk event may occur in exceptional circumstances.	0–5%

In establishing the likelihood of an event, there are some key concepts to consider:

- Has there been a previous occurrence of this risk event?
 - Considering what has happened previously, such as incidents and near misses can assist in establishing the likelihood. It is important not to just consider your business but think about occurrences across the industry.
- Are there any design features of your project that increase or decrease the likelihood of this risk event occurring?
 - Consider how effective these features are.
- Are you operating or environmental conditions likely to change?
 - Operating or environmental conditions change over time and vary throughout the year. These changes can influence the likelihood of a risk event occurring.
- How does people's behaviour affect the likelihood?
 - The way people act or behave can affect the likelihood of a risk event occurring. For example, they can make mistakes, misuse items or act spontaneously.

B4 Risk Rating

After considering the consequences and likelihood of the risk event, they are used together to determine the risk rating. The risk matrix below is used by ERR to determine the risk rating for each risk event. The purpose of rating risk is to guide decision making on risk management to eliminate or otherwise reduce the risk to an acceptable level.

Figure B1: ERR Risk Matrix

Likelihood	Almost Certain	Medium	High	Very High	Very High	Very High
	Likely	Medium	Medium	High	Very High	Very High
	Possible	Low	Medium	Medium	High	Very High
	Unlikely	Low	Low	Medium	High	High
	Rare	Low	Low	Medium	Medium	High
		Insignificant	Minor	Moderate	Major	Critical
Consequence						

There may be multiple consequences for a single risk event. When this occurs, the highest risk rating (after assessment of consequence and likelihood for each consequence), should be used to categorise the risk rating of the risk event. For example, the risk event may have a consequence for a member of the public rated as **major** and with a likelihood of **rare**; a consequence of **moderate** for land, property and infrastructure and with a likelihood of **likely**; and a **minor** consequence for the environment and with a likelihood of **possible**. This results in individual risk ratings of **medium, high** and **medium** respectively. In this instance the overall rating for the risk event is **high**.

Once the risk rating has been established some risks will need to have controls in place to reduce them to an acceptable level. Higher risk levels should take priority. Table A3 provides guidance on what steps need to be taken depending on the risk rating.

Table B3: Risk Rating Acceptability

Risk level	Description
Very High	Totally unacceptable level of risk. Controls must be put in place to reduce the risk to lower levels.
High	Generally unacceptable level of risk. Controls must be put in place to reduce the risk to lower levels or seek specific guidance from ERR.
Medium	May be acceptable provided the risk has been minimised as far as reasonably practicable.
Low	Acceptable level of risk provided the risk cannot be eliminated.

Appendix C

C1 Work plan and work plan variation documentation requirements

Table C1: Work plan requirements

Regulation	Required Items	Guidance
41	Information required in work plans—exploration work and related rehabilitation	
41(a)	A description of the exploration work to be carried out under the licence.	<p>Site specific description, including but not limited to:</p> <ul style="list-style-type: none"> • Geology, structure, current and past land uses (such as contaminated land, old mining activities, underground voids) • The size of the work area in hectares, including the cumulative area of ground disturbing work • Locate roads, bridges, pipelines, power lines, easements, reserves, heritage sites and communities in the vicinity of the project area • Waterways (including intermittent streams) and depth to groundwater. <p>Operation design, development, staging and activities, including but not limited to:</p> <ul style="list-style-type: none"> • Exploration methods including, but not limited to – ground exploration (e.g. mapping); ground geophysics (e.g. seismic, gravity); geochemical surveying and sample collection (e.g. stream sediment, rock chip); sub-surface mapping & sampling (e.g. drilling, costeaning, bulk sampling); bulk sample processing/ testing/ analysis on site • Site set up, including hard stand, roads, structures (if applicable) • Proposed depth of extraction of trenches (if applicable), timing of rehabilitation (depths & slopes for sectors of the extraction area (if variable)) • General location of topsoil • Explosives to be used (if applicable) • Road closure and/or upgrades (if applicable) • Physical & chemical composition of waste materials, identifying potentially hazardous substances, including the presence of sulphides (if acid sulphate soil has been excavated and/or chemicals used in exploration / processing). <p>Water management</p> <ul style="list-style-type: none"> • Groundwater dewatering (if applicable), outline water sources for site operation (groundwater, dams etc.) • Wastewater from site activities including sewage & processing water • Management of surface water runoff from disturbed areas, waste dumps or top soil stockpiles. <p>Proposed dewatering of shafts or drives for underground access (if applicable).</p>

Regulation	Required Items	Guidance
41(a)(i)	A map showing the general location of drilling or other exploration works.	<p>Maps need to be provided so that ERR can assess the proposal in the context of the surrounding site setting, including the identification of sensitive receptors. A series of maps can be prepared to best represent the proposal and information to be presented.</p> <p>Maps as follows:</p> <ul style="list-style-type: none"> • Scale of 1:25,000 or at an appropriate scale for showing sensitive receptors within the vicinity (nominally 2 km) of the licence area • North direction, legend, bar scale, date of and revision date of drawing • The location of the anticipated extent of high impact exploration activities, including costeaning or bulk sampling (trenches or pits constructed with excavators, bulldozers or backhoes), significant excavation to establish drill pad (e.g. on steep slopes, greater than 10°), wide diameter drilling (Caldwell drilling), underground exploration and the general location of stockpiles for topsoil / excavated material • Crown lands, private lands, and private land allotments within the proposed work plan area, possibly occupied houses and community facilities, townships and Cadastral boundaries, including locations of features listed in section 45 of the MRSDA that restrict work when within 100 m • The location of infrastructure including major & minor roads (with names), bridges, rail lines, pipelines (water, gas, telecommunication), power lines, easements etc. <p>The location of areas of cultural heritage sensitivity and Aboriginal archaeological sites such as scar trees, stone arrangements and scatters, middens, mounds, quarries, burial sites and rock art, including locations of features listed in section 45 of the MRSDA that restrict work when within 100 m.</p>
41(a)(ii)	A description of sensitive receptors, in relation to the environment, any member of the public, or land, property or infrastructure in the vicinity of the work.	<p>Sensitive receptors are infrastructure and landscape features which may be impacted by the proposed exploration activity.</p> <ul style="list-style-type: none"> • Includes Township (also communities), public facilities, parks, reserves, minor roads, major roads, rail lines, reservoir, bridges, water ways, water pipeline, gas pipeline, telecommunications pipeline, power line, heritage site (historic), easements, other. • Biodiversity within the proposed area of exploration activity • Waterways within 200 m and around the area of exploration activity. Includes drilling, sub-surface mapping, sampling and ground intrusive work.
41(a)(iii)	The location of the sensitive receptors.	The location of all sensitive receptors must be identified and shown on a map with an appropriate scale for all receptors within vicinity of the proposed exploration area.

Regulation	Required Items	Guidance
41(b)	<p>Details of the proposed rehabilitation of areas disturbed as a result of exploration work under the licence, including—</p> <p>(i) proposals for revegetation; and</p> <p>(ii) if plant and equipment has been introduced to the area, proposals for the removal of plant and equipment.</p>	<p>The rehabilitation plan is to include:</p> <ul style="list-style-type: none"> • Methods of rehabilitation of any disturbed areas, including revegetation proposals • Details of any requirements for establishing and managing of any offsets required by applicable regulations • Procedures for removing material produced or introduced to the licence, such as drill core, cuttings, sample bags, flagging tape, grid pegs, plant, equipment and waste materials • Timing of rehabilitation • Any monitoring and reporting arrangements for assessing and documenting the effectiveness of progressive rehabilitation • Details for rehabilitation completion report that will include detail of the rehabilitation works completed (with photographs) for each disturbed site. <p>The rehabilitation plan is to be supported by maps and cross-sections which demonstrate the progressive and final rehabilitation strategy.</p> <p>Drawings and plans should show:</p> <ul style="list-style-type: none"> • northing direction, legend, bar scale, date of/revision of drawing • representative cross sections, tenement area boundaries • proposed general final rehabilitated land form • salient features of the land following rehabilitation (e.g. revegetated areas, roads, drainage lines and water bodies) • any conceptual progressive rehabilitation/staging. <p>plant and equipment, buildings, roads, hardstand, etc., to be removed or retained.</p>
44	Information required in work plans—identification of hazards and risks	
44(a)	<p>If exploration work is to be carried out under the licence, details of exploration hazards that may arise from the exploration work.</p>	<p>For requirements, refer to the guidance in Section 4.3 of the document above.</p>

Regulation	Required Items	Guidance
44(c)	Details of the rehabilitation hazards that may arise from rehabilitation under the licence.	For requirements, refer to the guidance in Section 4.3 of the document above.
44(d)	An explanation of how the identified hazards may harm or damage the sensitive receptors described in the work plan, including evidence to support the assessment of the potential for harm or damage to be caused.	For requirements, refer to the guidance in Section 4.3 of the document above.
44(e)	An assessment of the risks that the identified hazards may pose to identified sensitive receptors, having regard to— (i) the nature of the hazard; and (ii) the likelihood of the hazard causing, or contributing to, any harm or damage; and (iii) the severity or consequence of the harm or damage that may be caused.	For requirements, refer to the guidance in Section 4.3 of the document above.
45	Information required in work plans—risk management plan	
45	A risk management plan that sets out what the licensee will do to eliminate or minimise the identified risks as far as reasonably practicable.	For requirements, refer to the guidance in Section 4.3 of the document above.
45(a)	Measures to be applied to eliminate or minimise the risks as far as reasonably practicable.	For requirements, refer to the guidance in Section 4.3 of the document above.
45(b)	The performance standards to be achieved by either individual measures or some combination of measures.	For requirements, refer to the guidance in Section 4.3 of the document above.
45(c)	Management systems, practices and procedures that are to be applied to monitor and manage risks and compliance with performance standards.	For requirements, refer to the guidance in Section 4.3 of the document above.
45(d)	An outline of the roles and responsibilities of personnel accountable for the implementation, management and review of the risk management plan.	For requirements, refer to the guidance in Section 4.3 of the document above.

Regulation	Required Items	Guidance
46	Information required in work plans—community consultation	
46	A community engagement plan that:	<p>The proponent has a duty to consult with the community under section 39A of the MRSDA throughout the period of the mining licence. The required consultation provides valuable information that contributes to the community engagement plan.</p> <p>The community engagement plan (CEP) should be proportionate to the site-specific conditions such as scale, operational activities, and the size and proximity of local communities.</p> <p>A CEP is to include:</p> <ul style="list-style-type: none"> • a title page that includes the report name, date, and author’s name and contact details • a table of contents and sub-headings • a brief overview of the proposed operations associated with the Work Authority • maps consistent with the requirements outlined in Regulation 41. <p>For more information, refer to the ERR guidelines Community Engagement Guidelines for Mining and Mineral Exploration in Victoria.</p>
46(a)	Identifies the community likely to be affected by the work under the licence.	Include a list of the community and any other stakeholders likely to be affected by the proposed operations, and/or interested in the proposed operations, including landholders, land owners, local government, community groups and Crown land managers.
46(b)	Sets out how the licensee will share information with the community.	<p>Include:</p> <ul style="list-style-type: none"> • how each of the identified community members/ stakeholders will be engaged (and at what level) • proposed information channels/types for the community (newsletters, meetings, facilitated events, web content, social media, dedicated contact person etc.)
46(c)	Sets out how the licensee will receive feedback from the community.	Include proposals for mechanisms to receive and collect feedback about the operations from the community (online, meetings, phone calls etc.)
46(d)	Sets out how the licensee will manage complaints and other communications from members of the community.	Include proposals for mechanisms to receive and collect complaints and communications about the operations from the community (online, meetings, phone calls etc.)

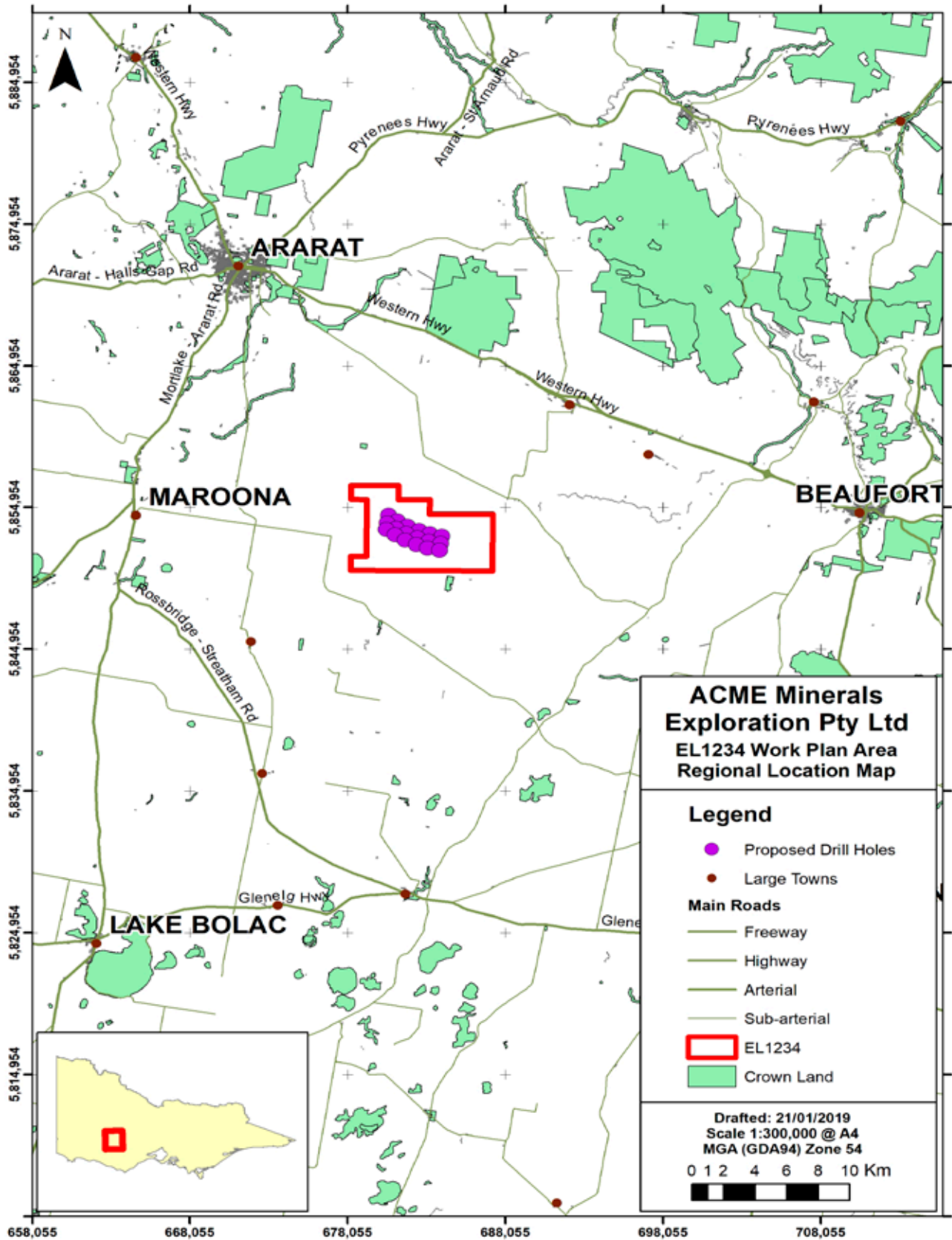
Table C2: Work plan variation requirements

Regulation Requirement	Required Items	Guidance
48	Information required in application for variation of work plan	
48(1)(a)	<p>If changes to the work or rehabilitation set out in the work plan are proposed, a description of any new or changed exploration hazard, mining hazard or rehabilitation hazard arising from the proposed changes that significantly increases the risks posed to—</p> <ul style="list-style-type: none"> (i) the environment; or (ii) any member of the public; or (iii) land, property or infrastructure in the vicinity of the work or rehabilitation relating to the new or changed hazard. 	<p>Describe the proposed change to the work plan, and any new or changing hazard. This may include a change in direction of extraction, moving closer to sensitive receptors, or removal of native vegetation not previously approved.</p>
48(1)(b)	<p>If any new or changed hazard is described under paragraph (a), the information specified in regulations 44 and 45 that relate to the new or changed hazard, including the resulting proposed changes to the work plan.</p>	<p>The hazard assessment and risk management plan must meet the requirements set out in regulations 44 and 45 of the Regulations. Refer to requirements for work plans in Table B1 above, and details provided in Section 5.3 of this guideline.</p> <p>This must include new or changing hazards as a result of the proposed change to operation.</p>
48(1)(c)	<p>If the proposed variation includes new or changed rehabilitation of areas disturbed by exploration work, the information specified in regulation 41(b) that relates to the new or changed rehabilitation, including the resulting proposed changes to the work plan.</p>	<p>Describe the proposed change to the rehabilitation approach in relation to revegetation of the site and removal of any plant and equipment.</p>
48(1)(g)	<p>If the proposed variation includes or gives rise to any changes relating to community consultation, the proposed changes to the work plan in relation to the information specified in regulation 46.</p>	<p>The community engagement plan must include a description of engagement for the planned changes, i.e. how the proposed changes will be communicated.</p> <p>The community engagement plan must meet the requirements set out in regulation 46 of the Regulations.</p> <p>Refer to Section 4 of this guideline for information about work plan requirements.</p>

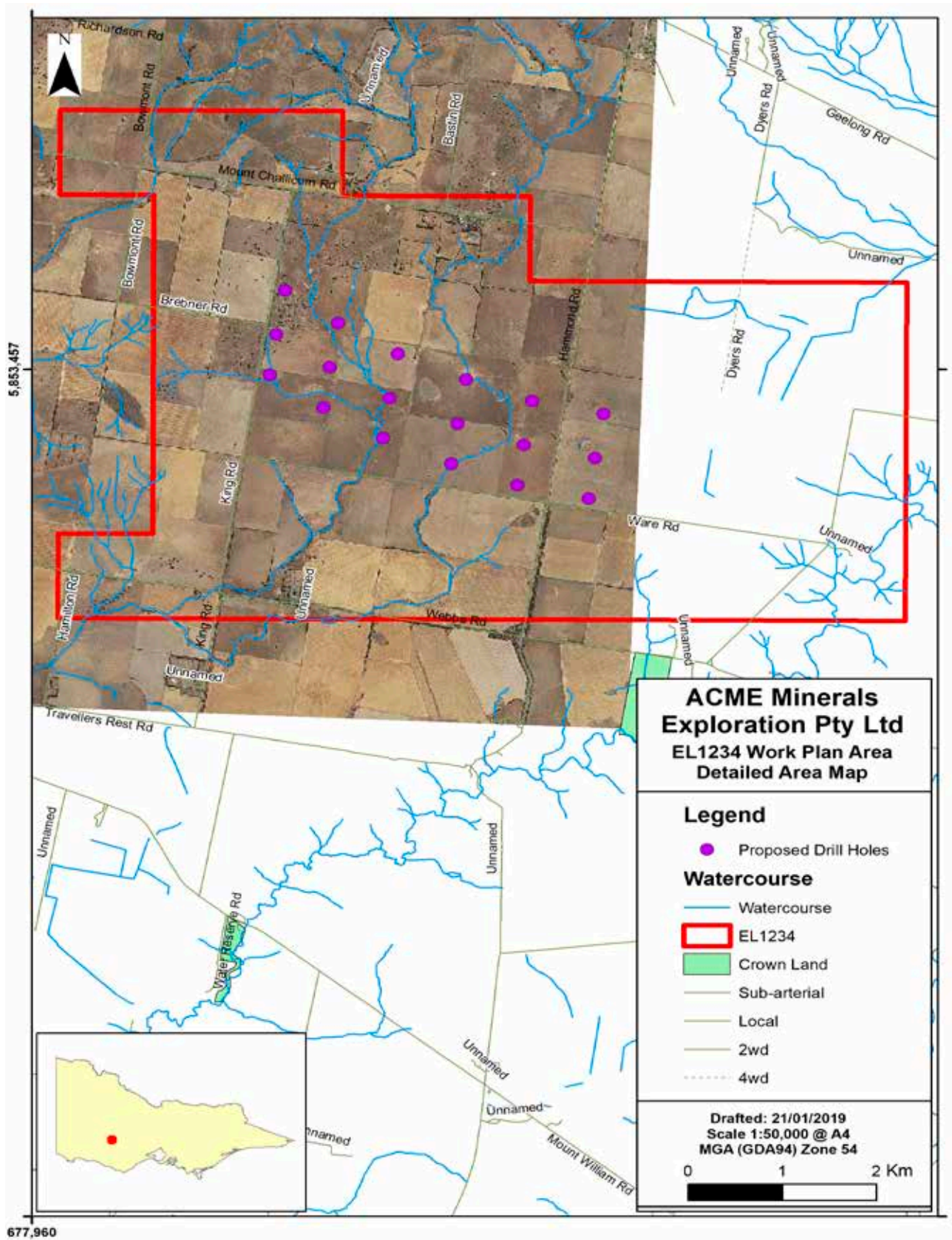
Regulation Requirement	Required Items	Guidance
48(1)(h)	If the proposed variation includes any new or changed work to be carried out at a declared mine, the information that relates to, and is applicable to, the proposed changes to the work plan in relation to the requirements and processes set out in Schedule 12.	Declared Mines Only Exploration work being carried out on Declared mine sites must include consideration of relevant stability requirements set out in Schedule 12.
48(1)(j)	A description of how the proposed variation to the work plan relates to the current approved work plan.	Provide summary of reason for plan, including reason for work plan variation, clear details of changes (e.g. change in lateral and vertical extent etc.) from the approved plan and relationship to the approved plan, in both the plan description and on supporting maps.

C2 Example site plans

C2-1 Example of a Regional Location Plan



C2-2 Example of a Work Plan Area – Detailed Plan



Appendix D

D1 Example risk register

D1.1 Inherent risk

During the risk identification and assessment process you should produce a **risk register** that describes and collates the identified risk events, likelihoods and consequences associated with the proposed work plan (or work plan variation). These are called **inherent risks** and should be based on the project description in your work plan, or the project description of the proposed variation in your work plan variation.

Table D1-1: Example risk register showing inherent risk

Hazard	Risk No	Risk Event	Causes/ Background	Receptors	Risk assessment prior to additional risk controls (project inherent risk)		
					Likelihood	Consequence	Risk rating
	1				Rare	Insignificant	Low

Any inherent risks that you have assessed to have a risk rating of medium or above, according to the ERR risk matrix in Appendix A3, will require additional controls to either eliminate the risk or minimise its rating as far as reasonably practicable. Inherent risks that are ranked as Low should include an explanation of the relevant mine design aspects (as outlined in the project or proposed variation description) that result in that low risk rating.

D1.2 Residual risk

The risk assessment process should then be conducted again, assuming implementation of the identified control(s) for the relevant risk events, with updated likelihoods and consequences. These are called **residual risks** and should be based on the project or proposed variation description and the listed controls.

Table D1-2: Example risk register showing inherent and residual risk

Hazard	Risk No	Risk Event	Causes/ Background	Receptors	Risk assessment prior to additional risk controls (project inherent risk)			Risk assessment after including risk controls (project residual risk)		
					Likelihood	Consequence	Risk rating	Likelihood	Consequence	Risk rating
	1				Rare	Insignificant	Low	Rare	Insignificant	Low

D1.3 Accountable Personnel

List personnel accountable for the implementation, management and review of the Risk Management Plan.

Table D1-3: Example accountable personnel

Personnel	Roles and Responsibilities

D2 Template risk treatment plan

Scope

This risk treatment plan is for the control of:

[Insert Hazard]

A exploration hazard means any exploration activity and circumstance that may pose a risk to the environment, to any member of the public or to land, property or infrastructure in the vicinity of work carried out at an exploration site..

Key sensitive receptors

Key sensitive receptors include the environment, any member of the public or land, property or infrastructure in the vicinity of an exploration activity that may be impacted or put at risk by the hazard associated with the exploration activity.

The key sensitive receptors associated with this hazard include:

#	Details of the sensitive receptor	Location and proximity to site	How hazard may harm or damage Sensitive Receptor	Evidence to support assessment
1				
2				
3				
4				
5				

[Add or delete rows from the above table as appropriate]

To determine the key sensitive receptors, consider:

- Members of the public – public health, safety, amenity and Aboriginal heritage
- Land, property and infrastructure: neighbouring property as well as nearby infrastructure such as highways, schools and hospitals
- Environment: air, water, soil, vegetation, flora and fauna outside the work area

Risk events

These are the risk events associated with the hazard. Include an inherent risk rating for each event considering the design proposal of the project.

The project phase options include construction, operation and closure, or a combination. If you feel that the inherent risk for the same risk event will differ in different project phases, then list the risk event for each project phase.

[The likelihood and consequence should be assessed using the descriptors provided by Earth Resources Regulation and the risk rating determined using Earth Resources Regulation's risk matrix.]

#	Details of the risk event	Project phase	Consequence	Likelihood	Inherent risk rating
1					
2					
3					
4					
5					

[Add or delete rows from the above table as appropriate]

Objectives

The objectives are the key aims or goals of the control measures that will be out in place to eliminate or minimise, as far as reasonably practicable, the identified risk events.

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each objective does not need to relate to all of the control measures.]

The key objectives of this risk treatment plan are to:

[Insert Objective]

[Insert Objective]

[Insert Objective]

Compliance standards

The compliance standards are the key best practice standards or guidelines that will be achieved with the control measures in place. These best practice standards or guidelines may come from the EPA, State Environment Protection Policy or other regulatory agencies.

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each compliance standard does not need to relate to all of the control measures.]

The compliance standards for this risk treatment plan are:

[Insert Compliance Standard]

[Insert Compliance Standard]

[Insert Compliance Standard]

Acceptance criteria

The acceptance criteria are the measures by which the control measures will be deemed to be effective in achieving the objective and eliminating or minimising, as far as reasonably practicable, the identified risk events. The acceptance criteria could be to achieve a best practice standard (e.g. an EPA standard).

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each acceptance criteria does not need to relate to all of the control measures.]

The acceptance criteria for this risk treatment plan are:

[Insert Acceptance Criteria]

[Insert Acceptance Criteria]

[Insert Acceptance Criteria]

Controls to address hazard

The control measures are to be designed to eliminate or minimise, as far as reasonably practicable, the identified risk events. The numbers of the risk events being managed by each control should be recorded against the control along with how the control will be implemented.

[Examples are included in the guidance sheets for managing hazards.]

The controls for this risk treatment plan are:

#	Details of controls being used	Risk events being managed (number from above)	Performance standards/measures (specifying how the control is being implemented – if not implicit in the control)
1			
2			
3			
4			
5			

[Add or delete rows from the above table as appropriate]

Residual risk assessment

Considering the controls being put in place the assessment of the residual risk associated with the risk events identified for this hazard is shown in the table below.

[The likelihood and consequence should be assessed using the descriptors provided by Earth Resources Regulation and the risk rating determined using Earth Resources Regulation's risk matrix.]

#	Details of the risk event	Phase	Consequence	Likelihood	Residual risk rating
1					
2					
3					
4					
5					

[Add or delete rows from the table below as appropriate]

Monitoring

[List the monitoring of the status or effectiveness of the controls associated with this hazard. Include the aspect being monitored and the detail of the monitoring. Monitoring includes management systems, practices and procedures that are to be applied to monitor and manage risks and compliance with performance standards.]

#	Aspect to be monitored	Details of monitoring
1		
2		
3		

[Add or delete rows from the table below as appropriate]

Reporting

[List the reporting of the monitoring, effectiveness or status of the controls associated with this hazard. Include to whom the reporting will be provided, the frequency of the reporting and how it will be used.]

#	Aspect being reported	Who will the information be reported to and at what frequency?	How will it be used?
1			
2			
3			

[Add or delete rows from the table below as appropriate]

Relevant industry publications

[List any relevant industry publications that support the management and monitoring of this hazard]

#	Document	Source (e.g. URL, appendix number)
1		
2		
3		

[Add or delete rows from the table below as appropriate]

Operator's reference documents

[List any relevant manuals, procedures or other documents that support the management and monitoring of this hazard]

#	Document	Location (e.g. work plan appendix number)
1		
2		
3		

[Add or delete rows from the table below as appropriate]

D3 Example risk treatment plans

Scope

This risk treatment plan is for the control of: *Dust*

A exploration hazard means any exploration activity and circumstance that may pose a risk to the environment, to any member of the public or to land, property or infrastructure in the vicinity of work carried out at an exploration site.

Key sensitive receptors

Key sensitive receptors include the environment, any member of the public or land, property or infrastructure in the vicinity of an exploration activity that may be impacted or put at risk by the hazard associated with the exploration activity.

The key sensitive receptors associated with this hazard include:

#	Details of the sensitive receptor	Location and proximity to site	How hazard may harm or damage Sensitive Receptor	Evidence to support assessment
1	Property	1km to the north west	Amenity	ERR consequence descriptors
2	Public Amenity		Amenity	ERR consequence descriptors
3				
4				
5				

[Add or delete rows from the above table as appropriate]

To determine the key sensitive receptors, consider:

- Members of the public – public health, safety, amenity and Aboriginal heritage
- Land, property and infrastructure: neighbouring property as well as nearby infrastructure such as highways, schools and hospitals
- Environment: air, water, soil, vegetation, flora and fauna outside the work area.

Risk events

These are the risk events associated with the hazard. Include an inherent risk rating for each event considering the design proposal of the project.

[The likelihood and consequence should be assessed using the descriptors provided by Earth Resources Regulation and the risk rating determined using Earth Resources Regulation's risk matrix.]

#	Details of the risk event	Phase	Consequence	Likelihood	Inherent risk rating
1	Generation of dust from plant and equipment	<ul style="list-style-type: none"> • Construction • Operation • Rehabilitation 	Moderate	Almost Certain	Very High
2	Generation of dust from overburden dumps and stockpiles	<ul style="list-style-type: none"> • Construction • Rehabilitation 	Moderate	Almost Certain	Very High
3	Generation of dust from imported fill material	<ul style="list-style-type: none"> • Operation 	Moderate	Almost Certain	Very High

[Add or delete rows from the above table as appropriate]

Project design

What parts of the project design will impact these risks and potentially reduce the risk rating?

- The activity areas are generally surrounded by trees. The trees reduce the wind speed at ground level which reduces the risk of dust being blown off site.

Objectives

The objectives are the key aims or goals of the control measures that will be out in place to eliminate or minimise, as far as reasonably practicable, the identified risk events.

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each objective does not need to relate to all of the control measures.]

The key objectives of this risk treatment plan are to:

- Reduce or prevent dust generation from onsite activities and materials transport, to the extent practicable.
- Minimise offsite dust impacts on nearby sensitive receptors, including members of the public, residential land uses, and other sensitive land uses or environments.
- Protect the beneficial uses of the air environment as defined in the SEPP (AQM).

Compliance standards

The compliance standards are the key best practice standards or guidelines that will be achieved with the control measures in place. These best practice standards or guidelines may come from the EPA, State Environment Protection Policy or other regulatory agencies.

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each compliance standard does not need to relate to all of the control measures.]

The compliance standards for this risk treatment plan are:

- EPA Protocol for Environmental Management – Mining and Extractive Industries.
- State Environment Protection Policy Air Quality Management (SEPP AQM).
- EPA Guideline: Recommended separation distances for industrial residual air emissions.

Acceptance criteria

The acceptance criteria are the measures by which the control measures will be deemed to be effective in achieving the objective and eliminating or minimising, as far as reasonably practicable, the identified risk events. The acceptance criteria could be to achieve a best practice standard (e.g. an EPA standard).

[Examples are included in the guidance sheets for managing hazards.]

[Note: Each acceptance criteria does not need to relate to all of the control measures.]

The acceptance criteria for this risk treatment plan are:

- No nuisance dust issues experienced by pre-existing, nearby sensitive receptors.
- Dust and particulate emissions do not exceed applicable EPA standards.

Controls to address hazard

The control measures are to be designed to eliminate or minimise, as far as reasonably practicable, the identified risk events. The numbers of the risk events being managed by each control should be recorded against the control along with how the control will be implemented.

[Examples are included in the guidance sheets for managing hazards.]

The controls for this risk treatment plan are:

#	Details of controls being used	Risk events being managed (number from above)	Performance standards/measures (specifying how the control is being implemented – if not implicit in the control)
1	Maintain separation between the activity boundary and the property or activity boundary of the nearest sensitive land uses as per EPA Publication 1518 – of 250 m or 500 m.	1, 2, 3	Ensure 250 m buffer retained between operational areas and sensitive receptors.
2	Enclose dust generating equipment (e.g. crushers, conveyors) or fit them with suppression devices to minimise dust emissions. Maintain enclosures or suppression devices to ensure they are operating effectively.	1	Dust suppression devices fitted to all operating dust-generating plant. High level of plant enclosure.
3	Stop dust generating activities (e.g. crushing) where dust suppression devices are not fitted or not operating correctly during very windy conditions.	1	Dust generating activities not undertaken when wind speeds ≥ 60 km/h.
4	Manage onsite roads located within 250 m of a sensitive receptor to minimise dust generation, for example, by sealing or gravelling the road or use of water, polymer or other chemical dust suppressants. Polymer or chemical suppressants to be subject to relevant environmental contamination controls.	1	Onsite roads <100 m from a sensitive receptor are sealed. Chemical dust suppressants are used on onsite roads between 100 m and 250 m from a sensitive receptor.
5	Stabilise soil and overburden stockpiles (e.g. seeded / roughened / mulched) if they will not be disturbed for an extended period. Water or use other dust suppressant agents to prevent dust generation prior to stabilisation.	2	Soil and overburden stockpiles stabilised if not used for 60 days.
6	Cover vehicles carrying dusty materials (soil, sand, rocks etc.) when transferring material to/from the site or treat with water or other dust suppressant to minimise dust generation.	1	Ensure all vehicles have loads covered when exiting site to transfer materials.
7	Install and use wheel wash and/or rumble grids for use by trucks at their main exit points.	1	Wheel wash / rumble grids installed at all site exits.
8	Limit vehicle movements on unsealed or untreated roads/areas to avoid dust generation during windy conditions.	1	Vehicle movements limited to sealed/ watered roads under windy conditions (≥ 50 km/h)
9	Establish, signpost and enforce speed limits to minimise dust generation from vehicles on roads that are prone to dust generation.	1	Set a 30 km/h speed limit on unsealed roads.

[Add or delete rows from the above table as appropriate]

Residual risk assessment

Considering the controls being put in place the assessment of the residual risk associated with the risk events identified for this hazard is shown in the table below.

[The likelihood and consequence should be assessed using the descriptors provided by Earth Resources Regulation and the risk rating determined using Earth Resources Regulation's risk matrix.]

#	Details of the risk event	Phase	Consequence	Likelihood	Residual risk rating
1	Generation of dust from plant and equipment	<ul style="list-style-type: none"> Construction Operation Rehabilitation 	Moderate	Possible	Medium
2	Generation of dust from overburden dumps and stockpiles	<ul style="list-style-type: none"> Construction Rehabilitation 	Moderate	Possible	Medium
3	Generation of dust from imported fill material	<ul style="list-style-type: none"> Operation 	Moderate	Possible	Medium

[Add or delete rows from the table below as appropriate]

Monitoring

[List the monitoring of the status or effectiveness of the controls associated with this hazard. Include the aspect being monitored and the detail of the monitoring. Monitoring includes management systems, practices and procedures that are to be applied to monitor and manage risks and compliance with performance standards.]

#	Aspect to be monitored	Details of monitoring
1	Dust deposition at nearest sensitive residential locations	Monitor continuously for 3 months following dust complaint, following applicable EPA guidance.
2	Excessive visible dust being generated on site	Visual observation during windy conditions

[Add or delete rows from the table below as appropriate]

Reporting

[List the reporting of the monitoring, effectiveness or status of the controls associated with this hazard. Include to whom the reporting will be provided, the frequency of the reporting and how it will be used.]

#	Aspect being reported	Who will the information be reported to and at what frequency?	How will it be used?
1	Dust deposition at nearest sensitive residential locations	Report to Community Reference Group quarterly.	Use data to confirm presence of dust issue and identify and manage key dust generation activities.
2	Excessive visible dust being generated on site.	Site management as requested	To manage dust generation activities

[Add or delete rows from the table below as appropriate]

Relevant industry publications

[List any relevant industry publications that support the management and monitoring of this hazard]

#	Document	Source (e.g. URL, appendix number)
1	CMPA Dust Management Guidelines	https://cmpavic.asn.au/downloads/F-PAS-97.pdf
2		

[Add or delete rows from the table below as appropriate]

Operator's reference documents

[List any relevant manuals, procedures or other documents that support the management and monitoring of this hazard]

#	Document	Location (e.g. work plan appendix number)
1	Site plan	Work plan figure 1
2		

[Add or delete rows from the table below as appropriate]

D4 Example controls

Dust

Scope

Guidance to assist applicants to prepare a risk treatment plan for the control of emissions of hazardous and/or nuisance dust or other particulates, particularly beyond the boundary of the licence area.

Key sensitive receptors

Example controls primarily address risks posed to members of the public and residential land uses. Some types of agricultural land use (e.g. wine grapes) and environmental features (e.g. protected flora) may also be highly sensitive to dust.

Objectives

- Reduce or prevent dust generation from onsite activities and materials transport, to the extent practicable.
- Minimise offsite dust impacts on nearby sensitive receptors, including members of the public, residential land uses, and other sensitive land uses or environments.
- Protect the beneficial uses of the air environment as defined in the SEPP (AQM).

Compliance standards

- EPA Protocol for Environmental Management – Mining and Extractive Industries.
- State Environment Protection Policy Air Quality Management (SEPP AQM).
- EPA Guideline: Recommended separation distances for industrial residual air emissions.

Acceptance criteria

- No nuisance dust issues experienced by pre-existing, nearby sensitive receptors.
- Dust and particulate emissions do not exceed applicable EPA standards.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Maintain separation between the dust source and the property or activity boundary of the nearest sensitive land uses as per EPA Publication 1518 – of 250 m or 500 m.	<i>e.g. Ensure x m buffer retained between operational areas and sensitive receptors.</i>
2	Enclose dust generating equipment (e.g. crushers, conveyors) or fit them with suppression devices to minimise dust emissions. Maintain enclosures or suppression devices to ensure they are operating effectively.	<i>e.g. Dust suppression devices fitted to all operating dust-generating plant. A high level of plant enclosure.</i>
3	Stop dust generating activities (e.g. crushing) where dust suppression devices are not fitted or not operating correctly during very windy conditions.	<i>e.g. Dust generating activities not undertaken when wind speeds \geq x km/h.</i>
4	Manage onsite roads located within 250 m of a sensitive receptor to minimise dust generation, for example, by sealing or gravelling the road or use of water, polymer or other chemical dust suppressants. Polymer or chemical suppressants to be subject to relevant environmental contamination controls.	<i>e.g. Onsite roads $<$x m from a sensitive receptor are sealed. Chemical dust suppressants are used on onsite roads between x m and y m from a sensitive receptor.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
5	Stabilise soil and overburden stockpiles (e.g. seeded / roughened / mulched) if they will not be disturbed for an extended period. Water or use other dust suppressant agents to prevent dust generation prior to stabilisation.	<i>e.g. Soil and overburden stockpiles stabilised if not used for x days.</i>
6	Cover vehicles carrying dusty materials (soil, sand, rocks etc.) when transferring material to/ from the site or treat with water or other dust suppressant to minimise dust generation.	<i>e.g. Ensure all vehicles have loads covered when exiting site to transfer materials.</i>
7	Install and use wheel wash and/or rumble grids for use by trucks at their main exit points.	<i>e.g. Wheel wash / rumble grids installed at all site exits.</i>
8	Limit vehicle movements on unsealed or untreated roads/areas to avoid dust generation during windy conditions.	<i>e.g. Vehicle movements limited to sealed/watered roads under windy conditions (≥ 30 km/h)</i>
9	Establish, signpost and enforce speed limits to minimise dust generation from vehicles on roads that are prone to dust generation.	<i>e.g. Set a x km/h speed limit on unsealed roads.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Dust deposition at nearest sensitive residential locations</i>	<i>e.g. Monitor continuously for 3 months following dust complaint, following applicable EPA guidance.</i>
2	<i>e.g. Excessive visible dust being generated on site.</i>	<i>e.g. visual observation during windy conditions</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Dust deposition at nearest sensitive residential locations.</i>	<i>e.g. Report to Community Reference Group quarterly.</i>	<i>e.g. Use data to confirm presence of dust issue and identify and manage key dust generation activities.</i>
2	<i>e.g. Excessive visible dust being generated on site.</i>	<i>e.g. Site management as requested.</i>	<i>e.g. To manage dust generation activities.</i>

Dust, silt and clay on roads

Scope

Guidance to assist applicants to prepare a risk treatment plan for the control of risks associated with the carriage and deposition of dust, silt and clay (mud) by vehicles exiting the licence area.

Key sensitive receptors

Example controls primarily address risks posed to members of the public, particularly those using or residing near roads used by traffic exiting the mining operation.

Objectives

- Avoid carriage of dust, silt and clay (mud) by vehicles leaving the licence area.
- Prevent road safety issues from hazards associated with the deposition of dust, silt and clay (mud) onto external roads by traffic from the licence area.

Compliance standards

- *Planning and Environment Act 1979*
- Planning permit.

Acceptance criteria

- Minimise dust, silt and clay (mud) carried by vehicles beyond the boundary of the licence area.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Install and use wheel wash and/or rumble grids for use by trucks at their main exit points.	e.g. Vehicle wash or rumble grids installed at the main site exits.
2	Paving or sealing access roads leaving wheel wash or rumble grids.	e.g. Paving or sealing installed and maintained.

Monitoring

#	Aspect to be monitored	Details of monitoring
1	e.g. Mud deposition on surrounding roads.	e.g. Daily observation.
2	e.g. Visible dust emissions on roads.	e.g. Daily observation.

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	e.g. Mud deposition on surrounding roads.	e.g. Weekly internal reporting increased to daily during wet weather.	e.g. Adaptive management during wet weather.
2	e.g. Visible dust emissions on roads.	e.g. Community Stakeholder Group six monthly.	e.g. To assess improvement or maintenance requirements.

Erosion and sedimentation

Scope

Guidance to assist applicants to prepare a risk treatment plan for the control of erosion and subsequent deposition of sediments. Erosion may take place from stockpiles, constructed embankments, natural slopes and rehabilitated landforms. Sediment deposition may affect the licence area or neighbouring lands and waterways.

Key sensitive receptors

Example controls primarily address risks posed to on and off site environmental features, particularly soils and waterways; as well as water and its beneficial consumptive and environmental uses.

Objectives

- Prevent erosion and sediment runoff from onsite activities.
- Minimise offsite impacts of erosion and sediment run-off on the surrounding environment.
- Protect the beneficial uses of water environments as defined in the SEPP (Waters)
- Minimise the risk of failure of on-site infrastructure (e.g. tailings or slime storages, water storages etc.) due to erosion.

Compliance standards

- State Environment Protection Policy (Waters) (SEPP Waters);
- EPA Guideline 1287 Risk Assessment of Wastewater Discharge to Waterways.
- *Water Act (1989)*.
- *Catchment and Land Protection Act (1994)*.

Acceptance criteria

- No delivery of sediment to land or waterways outside the licence area beyond what is permitted by the applicable SEPP, water discharge licence and/or appropriate water quality guidelines.
- No unmanaged areas of active soil erosion within the licence area or adjacent areas from site discharges.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Plan and stage vegetation clearing and earthworks to limit, to the extent practicable given operational requirements, the total surface area of land exposed at one time.	<i>e.g. < x ha of land disturbed at one time.</i>
2	Install interception drains upstream and downstream of areas of disturbed ground, including stockpiles and unsealed roads, to minimise surface water flow onto such areas. Contain water carrying sediments from roads or other disturbed areas for suitable treatment.	<i>e.g. Interception drains constructed and operating effectively.</i>
3	Design, size and maintain sediment control ponds or other structures to retain water until all sediment from the design storm event has fallen out of suspension.	<i>e.g. Temporary structures will be designed to accommodate a 1 in x year storm event of y hours. Permanent structures will provide for a 1 in z year storm.</i> <i>Compliance with the SEPP suspended particles requirements.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
4	Locate soil and overburden stockpiles away from waterways to minimise the risk of sediment discharge to waterways.	<i>e.g. Stockpiles located $\geq x$ m from any waterway.</i>
5	Stabilise soil and overburden stockpiles (e.g. seeded / roughened / mulched) and other disturbed areas as soon as practicable.	<i>e.g. Soil and overburden stockpiles and other disturbed areas stabilised if not used for 28 days.</i>
6	Maintain the angle and height of exposed working faces and/or stockpiles to minimise erosion and sediment generation to the extent practicable.	<i>e.g. Clay: slope of $< x:y$ (V:H) Sand: slope of $< x:y$ (V:H)</i>
7	Install effective velocity check and/or silt control structures in drainage lines to minimise scouring and sediment generation.	<i>e.g. Sandbag: drain $< x$ mm deep and $\leq y\%$ slope. Rock dam: drain $> x$ mm deep and $\leq y\%$ slope. Silt curtains installed.</i>
8	Plan and construct the final landform to minimise erosion and sediment run-off.	<i>e.g. Slopes graded to $< x:y$ (V:H). Stabilisation measures applied (e.g. mulch, seedlings, geotextiles, etc).</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Effectiveness of sediment control structures.</i>	<i>e.g. Condition and operating effectiveness pre-winter and following each major rainfall effectiveness.</i>
2	<i>e.g. Compliance with the EPA standard and/or requirements of a discharge licence.</i>	<i>e.g. As required by SEPP or discharge licence.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Effectiveness of sediment control structures.</i>	<i>e.g. Quarterly report to the Community Reference Group.</i>	<i>e.g. Use data to plan maintenance of drainage sediment control features.</i>
2	<i>e.g. Compliance with the EPA standard and/or requirements of a discharge licence.</i>	<i>e.g. Site management or EPA as required.</i>	<i>e.g. To ensure compliance with SEPP or discharge licence requirements.</i>

Fire

Scope

Guidance to assist applicants to prepare a risk treatment plan to mitigate risks from bushfires burning onto the licence area and from fires igniting on-site and escaping to surrounding areas.

Key sensitive receptors

Example controls address risks posed to members of the public, land and property and the environment.

Objectives

- Control potential sources of fire ignition and activities that could lead to fire ignition and escape on days of elevated fire danger.
- Minimise environmental and human safety risks associated with fires burning onto a licence area.

Compliance standards

- *County Fire Authority Act (1958)*
- Country Fire Authority Regulations (2015)
- *Planning and Environment Act (1987)*
- Code of Practice for Bushfire Management on Public Land (2012).

Acceptance criteria

- Any fire ignitions originating within the licence area are contained within it.
- Grass or bushfires burning onto the licence area do not cause health or safety incidents and result in minimal environmental harm.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	For sites located on bushfire prone land, develop and implement “hot work” procedures for the conduct of activities in the open that are a potential source of fire ignition.	<i>e.g. Written hot work procedures have been developed.</i>
2	No “hot work” to be undertaken in the open air on days of Total Fire Ban without a permit from the CFA.	<i>e.g. No ignition sources used on Total Fire ban days.</i>
3	Provide fire-fighting equipment in all on-site vehicles and mobile plant and maintain the equipment in good working order.	<i>e.g. Fire-fighting equipment in all vehicles and maintained as per the maintenance schedule.</i>
4	Relevant personnel working on sites in bushfire prone areas will be provided with information and training regarding the fire hazard conditions in the area, “hot work” procedures, relevant emergency response procedures and use of applicable equipment.	<i>e.g. x % of relevant personnel trained within Y month of commencement.</i>
5	Internal-combustion engines will be fitted with exhaust pipes, mufflers and spark arresters (where consistent with manufacturers specifications) and maintained in good working order.	<i>e.g. Where consistent with manufacturers specifications engines are fitted with spark arresting devices.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
6	Provide fire-fighting equipment in all site buildings and maintain it in good working order. Equip water carts with pressure pumps and fire fighting hose.	<i>e.g. Fire-fighting equipment in all site buildings.</i>
7	Flammable and combustible wastes are removed from the site as soon as practicable.	<i>e.g. No flammable waste is stockpiled onsite.</i>
8	For sites located on bushfire prone land, check the National Fire Danger Rating for the area of the site each work day during the prescribed fire danger period. Communicate the hazard rating and any specific instructions to site personnel.	<i>e.g. Fire Danger Rating checked daily and communicated to site personnel.</i>
9	Establish and maintain fire breaks around site boundaries in high risk fire areas.	<i>e.g. Fire breaks installed and maintained. Audit before high risk season.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Hot work approvals.</i>	<i>e.g. Establish and maintain a register of hot work approvals and hot works undertaken.</i>
2	<i>e.g. Training of personnel in high fire risk area.</i>	<i>e.g. Numbers of staff trained.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Hot work approvals.</i>	<i>e.g. Monthly internal reporting and safety compliance assurance.</i>	<i>e.g. To ensure risks are being managed.</i>
2	<i>e.g. Training of personnel in high fire risk area.</i>	<i>e.g. Site management annually prior to fire season.</i>	<i>e.g. Availability of trained personnel to assist in fire emergency.</i>

Relevant industry publications

- CFA Bushfire Management Template: Pathway 2 (<https://www.cfa.vic.gov.au/plan-prepare/bushfire-management-statement-bms-templates>)

Fuel, lubricants and hazardous materials

Scope

Guidance to assist applicants to prepare a risk treatment plan to manage risks associated with the storage, use and handling of fuel, lubricants and hazardous materials to minimise risks to the environment.

Key sensitive receptors

Example controls primarily address risks posed to the environment.

Objectives

- Minimise the risk of fuels, lubricants and hazardous materials released into the environment through leaks, spills and through stormwater runoff.

Compliance standards

- State Environment Protection Policy (Waters). [SEPP Waters]
- State Environment Protection Policy (Prevention and Management of Contaminated Land). [SEPP Contam Land]
- Environment Protection (Scheduled Premises & Exemptions) Regulation (2007)
- Environment Protection (Industrial Waste Resource) Regulations (2009)
- AS1940 – Storage and Handling of Flammable and Combustible Liquids.

Acceptance criteria

- Fuels, lubricants and hazardous materials are stored in accordance with AS 1940
- Compliance with relevant SEPPs.

Example Controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Design and install bunding and surface sealing of storage area sufficient to hold 125% of the total volume of the hazardous material.	<i>e.g. Bund height, volume of the bunded area in relation to the amount of substances stored, imperviousness of the bunded area i.e. Impervious material used for lining.</i>
2	Locate the storage area away from the waterways or areas prone to flooding.	<i>e.g. Buffer distance between the storage area and the sensitive receptors.</i>
3	Minimise the amount of fuels, lubricants and hazardous materials stored on site by limiting the volume of hazardous substances stored onsite to the minimum required for the activity.	<i>e.g. Register established and maintained Not more than x L of fuel or hazardous material stored onsite.</i>
4	Provide spill and leakage protection around areas where fuels, lubricants and hazardous substances are stored and handled. Controls may include: <ul style="list-style-type: none"> • locating activities on compacted sealed ground; • use of drip trays; • installation of oil/water interceptors in drainage lines; • sedimentation filters / ponds in drainage lines; • construction of earthen bunds etc. 	<i>e.g. All areas protected against spills and leaks.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
5	Underground tanks / sumps for the storage of hazardous substances (such as fuel, waste oils, effluent) are not installed at the site.	<i>e.g. No underground storage structures are present.</i>
6	Inspect and maintain spill control equipment.	<i>e.g. Daily visual inspection and inspection records maintained.</i>
7	Ensure appropriate clean-up equipment and materials are available.	<i>e.g. Equipment and materials are available and accessible to all the sites and all the time.</i>
8	Notify relevant authorities of significant spills or leaks.	<i>Record of all spill reports maintained.</i>
9	Ensure drainage from areas where spills may occur is diverted through a sump or interceptor.	<i>e.g. Sumps/interceptors of adequate capacity are in place.</i>
10	Manage water and stormwater runoff in and surrounding site to reduce the potential for impacts on environment.	<i>e.g. Construction and maintenance of onsite drainage.</i>
11	Provision of fire control equipment and maintained in areas where flammable / combustible hazardous substances are stored.	<i>e.g. Records of regular maintenance.</i>

[Note: Values in the performance measure examples are intended to be defined for the site, but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Volume of fuels, lubricants and hazardous materials available at the site.</i>	<i>e.g. Regular periodic stocktake (e.g. monthly).</i>
2	<i>e.g. Pollution control devices maintained and serviced.</i>	<i>e.g. Six monthly audit.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Volume of fuels, lubricants and hazardous materials available at the site .</i>	<i>e.g. Register established and maintained, monthly internal reporting.</i>	<i>e.g. To determine when higher volumes are being stored on site and further precautions are to be taken.</i>
2	<i>e.g. Pollution control devices maintained and serviced.</i>	<i>e.g. Results of six monthly audits.</i>	<i>e.g. Plan maintenance upgrades as required.</i>

Imported materials

Scope

Guidance to assist applicants to prepare a risk treatment plan to manage risks associated with the import, storage and/or management of hazardous or non-hazardous solid materials to the licence area.

Key sensitive receptors

Example controls primarily address risks posed to the environment, particularly soils, waterways and related terrestrial and aquatic ecosystems.

Objectives

- Prevent contamination of the site by importing hazardous materials or soils carrying seeds of declared weeds or infested with soil-borne plant diseases.
- Prevent unlicensed importation and storage of domestic or industrial wastes and hazardous materials.

Compliance standards

- *Environment Protection Act (1970)*
- *Catchment and Land Protection Act (1994)*
- *Planning and Environment Act (1979)*
- *Mineral Resources (Sustainable Development) Act (1990)*
- State Environment Protection Policy (Waters) (SEPP Waters)
- Earth Resources Regulation Imported Materials Management Guidelines for Mine and Quarry Operations.
- EPA Publication No. IWRG621 Industrial Waste Resource Guidelines – Soil hazard categorisation and management.
- EPA Publication No. IWRG631 Industrial Waste Resource Guidelines – Solid industrial waste hazard categorisation and management.
- EPA Publication No. IWRG600.2 Industrial Waste Resource Guidelines – Waste Categorisation.
- EPA Publication No. 655.1 Acid Sulfate Soil and Rock.

Acceptance criteria

- The management of imported materials does not detract from beneficial uses of soil, surface water or groundwater within or near the licence area.
- Importation and management of imported materials fully complies with applicable legislative and regulatory requirements.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Obtain any required approvals for the import of materials from local government (via a planning permit) and/or ERR (via a work plan or work plan variation) prior to the commencement of importation of materials.	<i>e.g. All permits and approvals in place before commencement.</i>
2	Obtain certification from supplier that imported material meet the requirements for clean fill as defined in the Industrial Waste Resource Regulations (IWRG). Spot check loads to confirm their composition is consistent with their classification.	<i>e.g. Imported materials meets criteria for clean fill and has appropriate certificates.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
3	Prohibit the import of domestic waste, prescribed industrial wastes and acid sulfate soils or other acid-forming rocks to the site.	<i>e.g. No domestic or prescribed waste imported to the Work Authority area.</i>
4	Weigh and visually inspect each load of material imported to site and record tonnage and source. Segregate materials imported from different sources until they are confirmed as clean and suitable for use.	<i>e.g. Materials receipt records are maintained. Imported materials are segregated until confirmation of their suitability for use within the Licence area.</i>
5	Only import soil from sites that are known to be free of pathogens and declared weeds (and their seeds). Maintain a register of this information for any soil, fill or similar material imported onto the licence area.	<i>e.g. Imported soil is verified as weed and pathogen free.</i>

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Composition of loads of imported materials.</i>	<i>e.g. Inspect to confirm material composition is consistent with clean fill definition.</i>
2	<i>e.g. Obtain relevant certificates for imported materials.</i>	<i>e.g. Maintain a register of certificates for imported material.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Composition of loads of imported materials.</i>	<i>e.g. Monthly internal recording and annual external reporting of compliance with work authority.</i>	<i>e.g. To ensure compliance with work authority.</i>
2	<i>e.g. Obtain relevant certificates for imported materials.</i>	<i>e.g. Community Stakeholder Group every six months.</i>	<i>e.g. Provide assurance that no waste or hazardous materials are being deposited on site.</i>

Noise

Scope

Guidance to assist applicants to prepare a risk treatment plan for the control of noise, particularly as it has potential to affect sensitive receptors beyond the boundary of the licence area.

Key sensitive receptors

Example controls primarily address risks posed to members of the public and residential land uses. Some types of agricultural land use (e.g. horses) and environmental features (e.g. migratory bird breeding areas) may also be highly sensitive to noise.

Objectives

- Reduce noise generation from onsite activities and materials handling to the extent practicable.
- Minimise offsite noise impacts on nearby sensitive receptors, including members of the public, residential land uses and other sensitive land uses or environments.
- Protect the beneficial uses of the air environment as defined in the SEPP N-1.
- Noise experienced by nearby sensitive receptors is within specifications of SEPP N-1 or NIRV guideline.

Compliance standards

- EPA Guideline 1411 – Noise from Industry in Regional Victoria (NIRV).
- State Environment Protection Policy (Control of Noise from Commerce, Industry and Trade) (SEPP N-1).

Acceptance criteria

- Noises levels at nearby sensitive receptors do not exceed applicable EPA standards.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Locate noise generating plant and equipment away from noise sensitive receptors.	<i>e.g. Minimum x m buffer distance maintained between operational areas and noise sensitive receptors.</i>
2	Plan the site layout to screen operational areas from noise sensitive receptors. Where possible: <ul style="list-style-type: none"> • Locate site access roads away from sensitive receptors; • Use existing features (i.e. topography, vegetation) and/or stockpiles or other constructed features as noise barriers; • Locate noisy equipment away from sensitive receptors; Maintain the minimum buffer / set-back distances specified in the planning permit.	<i>e.g. Locations with noise generating activities effectively screened from noise sensitive receptors. Install vegetated bund walls where required.</i>
3	To the extent practicable, specify low noise generating equipment when selecting equipment for on-site use.	<i>e.g. As far as practical all equipment used on site will have a low noise rating</i>
4	Maintain (active) site roads in good condition to minimise noise from vehicle traffic over corrugations and pot holes.	<i>e.g. Corrugations and potholes are remedied as soon as possible to minimise their presence. Implement maintenance grading plan</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
5	Where practicable and consistent with manufacturer's specifications, fit (or retain) mobile noise-generating equipment, pneumatic equipment and/ fixed internal combustion engines with noise attenuation devices (e.g. enclosures, baffles, silencers, mufflers etc.) and maintain equipment in good repair.	<i>e.g. Noise abatement devices fitted to all operational noise generating plant.</i>
6	Limit materials haulage from the work authority area to licenced operating hours and minimise excessive noise levels from dusk to dawn, e.g. drilling.	<i>e.g. Licenced operating hours:</i> <ul style="list-style-type: none"> • <i>X am – Y pm Mon to Fri.</i> • <i>X am till Z pm on Sat.</i> • <i>No work on Sun or public holidays.</i>
7	Turn off plant, equipment and vehicles when not in use for an extended period.	<i>e.g. No plant, equipment or vehicles remain on when not in use.</i>
8	Broadcast or loudspeaker system, telephone ringer or other external alarm are not routinely used (except as a warning alarm e.g. for blasting).	<i>e.g. No external broadcast systems are used.</i>
9	Fit low frequency reversing noise signals to all applicable mobile plant.	<i>e.g. All applicable mobile fitted with low frequency reversing noise signals.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Noise at nearest sensitive residential locations comply with the SEPP requirements.</i>	<i>e.g. Monitor regularly for 3 months following noise complaint.</i>
2	<i>e.g. After hours noise levels (dusk to dawn).</i>	<i>Assess all after hours noise sources.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Noise at nearest sensitive residential locations.</i>	<i>e.g. Monthly Internal reporting for management following a complaint.</i>	<i>e.g. Use data to confirm presence of noise issue and identify and manage key noise generation activities.</i>
2	<i>e.g. After hours noise levels (dusk to dawn).</i>	<i>e.g. Site management as required.</i>	<i>e.g. To reduce after hours noise emissions.</i>

Pests, weeds and diseases

Scope

Guidance to assist applicants to prepare a risk treatment plan to control and avoid introducing weeds, pest animals and/or soil-borne disease to the site of an exploration activity and threatening biodiversity and/or agricultural production values associated with the site and surrounding areas.

Key sensitive receptors

Example controls primarily address risks posed to the environment and primary production land uses.

Objectives

- Protect biodiversity values associated with the licence area.
- Prevent site activities contributing to the proliferation of noxious weeds, plant diseases or pest animals, on or off the licence area.

Compliance standards

- *Catchment and Land Protection Act (1994)*
- *Planning and Environment Act (1987)*
- *Public Health and Wellbeing Act (2008)*
- *Agricultural and Veterinary Chemicals (Control of Use) Act (1992)*
- Agricultural and Veterinary Chemicals (Control of Use) Regulations (2007).

Acceptance criteria

- Site operator complies with legislative requirements relating to the control and management of declared noxious weeds and pest animals.
- The mining or extractives operation does not contribute to the spread or proliferation of soil-borne plant diseases.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Eradicate or manage any declared noxious weeds or established pest animals present on the Licence area.	<i>e.g. Infestations of declared noxious weeds and established pest animals are eradicated or controlled.</i>
2	Identify pest species habitats within the licence boundary and remove refuge areas (burrows, hollow logs) where practicable and consistent with native vegetation protection requirements.	<i>e.g. Pest animal habitats are removed or destroyed.</i>
3	Any soil imported to the site is to be from a location that is known to be free of pathogens, disease and noxious weeds (and their seeds).	<i>e.g. Imported soil is verified as weed and pathogen free.</i>
4	Disinfect equipment moved from areas known or suspected to contain <i>Phytophthora cinnamomi</i> . Disinfection is to be carried so that water or other materials from disinfection cannot reach a waterway or contaminate native vegetation habitats.	<i>e.g. Hygiene procedures are in place and followed in areas with known or suspected <i>Phytophthora cinnamomi</i> presence.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
5	Identify and map areas within the licence boundary that contain declared noxious weeds (under the CaLP Act) and establish exclusion zones until the weeds are controlled and/or the area is fully disturbed by the activity.	<i>e.g. Areas containing declared weed species are not disturbed by site activities.</i>
6	Limit vegetation clearing and surface disturbance activities to the minimum required operationally.	<i>e.g. Limit clearing to ≤ x m in advance of operational areas.</i>
7	Engage appropriately licenced personnel to conduct any required pesticide application to control weeds and/or pest animals.	<i>e.g. Only licensed personnel are permitted to apply pesticides.</i>
8	Stockpile and manage soils from areas with noxious weed infestations separately to other soils to avoid cross contamination.	
9	Vermin management mitigated by the removal of waste, rubbish, etc. by licensed contractor.	<i>e.g. Regular waste and rubbish collection services in place.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Site flora and fauna for noxious weeds and pests.</i>	<i>e.g. Inspect all areas to assess the health of the vegetation and to check for erosion, pest animal browsing damage and weed infestation.</i>
2		

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Site flora and fauna for noxious weeds and pests.</i>	<i>e.g. Monthly internal reporting for management.</i>	<i>e.g. For management intervention if rehabilitation areas have emerging weed or pest animal issues.</i>
2			

Rubbish

Scope

Guidance to assist applicants to prepare a risk treatment plan to manage risks to the environment from the storage and/or management of rubbish or industrial wastes (as defined by EPA) within a licence area. These controls do not apply to prescribed industrial wastes, acid-forming rocks or acid sulphate soils.

Key sensitive receptors

Example controls primarily address risks posed to the environment, but also address amenity for members of the public and nearby residents.

Objectives

- Prevent rubbish and industrial wastes generated by site activities from adversely affecting soil, water or other aspects of the environment.
- Protect the beneficial uses of water and soil environment as defined in relevant State Environment Protection Policies (SEPPs).

Compliance standards

- SEPP (Waters)
- SEPP (Prevention and Management of Contaminated Land).
- Environment Protection (Scheduled Premises & Exemptions) Regulation (2007)
- Environment Protection (Industrial Waste Resource) Regulations (2009).

Acceptance criteria

- Beneficial uses of soil, water and air within and near the licence area are not detrimentally affected by the storage and/or management of rubbish or industrial wastes.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Segregate wastes generated on-site (by type and hazard) for recycling or disposal. Recover and reuse site generated wastes where possible (e.g. mulching of green waste for use in rehabilitation).	<i>e.g. Waste is segregated at source and is re-used on-site where practicable.</i>
2	No on-site disposal (or burning) of rubbish and/or prescribed wastes generated from site activities. Use appropriately licenced off-site services / facilities to recycle or dispose of site generated wastes.	<i>e.g. No domestic or prescribed industrial wastes disposed on-site.</i>
3	Assess all rubbish and industrial wastes for potential for contamination and manage/dispose in accordance with EPA requirements.	<i>e.g. Licensed contractors are used for the disposal of all rubbish and waste material.</i>
4	Limit the volume and permitted timeframe for wastes to be stored onsite.	<i>e.g. Waste materials not held on-site for more than x month.</i>
5	Protect waste storage areas from rainfall and stormwater or flood ingress.	<i>e.g. Covered waste storage areas and/or bins.</i>
6	Locate waste storage away from areas of protected habitat and/or waterways.	<i>e.g. x m buffer distance maintained between waste storage areas and protected habitat and/or waterways.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
7	Develop and implement appropriate training on waste management measures to limit the generation and accumulation of waste on site.	
8	Provide covered bins for temporary on-site storage of rubbish and domestic wastes.	<i>e.g. Sealed bins provided.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Wastes stored on site.</i>	<i>e.g. Quantities, types and location of prescribed wastes stored on site.</i>
2	<i>e.g. Approved disposal of wastes.</i>	<i>e.g. Register of licensed contractors.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Wastes stored on site.</i>	<i>e.g. Monthly internal reporting and safety compliance assurance.</i>	<i>e.g. Use in case of fire or other emergency.</i>
2	<i>e.g. Approved disposal of wastes.</i>	<i>e.g. Regulatory authorities six monthly or as required.</i>	<i>e.g. Compliance with SEPP or regulations.</i>

Site access

Scope

Guidance to assist applicants to prepare a risk treatment plan for unauthorised access to the licence area by members of the public and to provide for safe authorised access.

Key sensitive receptors

Example controls primarily address risks posed to members of the public.

Objectives

- Provide for the safety of members of the public when accessing a licence area.
- Prevent unauthorised access to the licence area by members of the public.

Compliance standards

- Mineral Resources (Sustainable Development) (Mineral Industries) Regulations 2013
- *Safety on Public Land Act (2004)*
- Licence conditions.

Acceptance criteria

- Boundary of licence area is appropriately marked and secured
- Operating area for an exploration activity is secured to minimise chances of unauthorised entry.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Identify, mark and fence the boundary of the licence area in compliance with the MRSD (Mineral Industries) Regulations 2013.	<i>e.g. The site boundary is identified with compliant boundary markers and fully fenced with lockable access gates.</i>
2	Lock all gates when site is unattended. Control access to site when site is attended.	<i>e.g. Site gates locked or otherwise secured.</i>
3	Design and construct onsite roads to safely accommodate the size and type of vehicles accessing and travelling within the site. Separate any general traffic from any internal haul routes.	<i>e.g. For one-way traffic, the track should be twice the width of the widest vehicle. For two-way traffic, the track should be three times the width of the widest vehicle.</i>
4	Install site access safety signage around boundary fence and at all access points.	<i>e.g. Hazard warnings against unauthorised access.</i>

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Site entry by members of the public.</i>	<i>e.g. Register of all visitors to site.</i>
2	<i>e.g. Site security breaches (unauthorised access).</i>	<i>e.g. Records kept of site security breaches.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Site entry by members of the public.</i>	<i>e.g. Daily internal reporting.</i>	<i>e.g. Ensure all visitors have exited site prior to end of operating hours.</i>
2	<i>e.g. Site security breaches (unauthorised access).</i>	<i>e.g. Reported to site management and regulatory authority as required or six monthly.</i>	<i>e.g. Improve site security to limit unauthorised site access.</i>

Soil biological activity

Scope

Guidance to assist applicants to prepare a risk treatment plan to help maintain the biological activity of undisturbed and stockpiled soils within the licence area. It does not address the storage of contaminated soils or potential acid sulphate soils.

Key sensitive receptors

Example controls primarily address risks posed to on-site soils and the successful rehabilitation of the exploration site.

Objectives

- Protect existing soil structure, nutrient levels and biological activity in onsite soils.
- Facilitate the rehabilitation of the exploration site by maintaining biological activity in stockpiled soils.

Compliance standards

- *Catchment and Land Protection Act (1994)*

Acceptance criteria

- The health of biologically active soil is maintained while it is stockpiled and reused in rehabilitation.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Install and use wheel wash and/or rumble grids for use by trucks at their main exit points.	<i>e.g. Wheel wash and/or rumble grids are installed for use by trucks at their main exit points.</i>
2	As applicable to the site, segregate each soil layer / type into individual stockpiles for future reuse. This must include surface organic matter and larger woody debris.	<i>e.g. Individual soil strata (topsoil, overburden, gravel, humus etc) are retained in separate stockpiles.</i>
3	If possible do not strip soil when it is very dry or saturated.	<i>e.g. Condition of soil stockpile maintained.</i>
4	Maintain soil stockpiles at no more than 2m height.	<i>e.g. Stockpiles ≤ x m height.</i>
5	Replace stockpiled soil strata (during rehabilitation) in their original order to maintain the natural soil profile.	<i>e.g. The soil's original profile is restored during rehabilitation.</i>
6	Stabilise soil and overburden stockpiles (e.g. seeded / roughened / mulched) if they will not be disturbed for an extended period.	<i>e.g. Soil and overburden stockpiles are stabilised if not used for x days.</i>
7	Any soil imported to site must be from a location that is known to be free of pathogens, disease and noxious weeds (and their seeds).	<i>e.g. Imported soil is verified as weed and pathogen free.</i>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Maintenance of site soil stockpiles.</i>	<i>e.g. Quality of stockpile maintained for future reuse on site.</i>
2	<i>e.g. Soils imported to the site.</i>	<i>e.g. Register of point of origin, location of storage and confirmation of the weed and disease free status of the origin.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Maintenance of site soil stockpiles.</i>	<i>e.g. Site management environmental officer on a six monthly basis.</i>	<i>e.g. Quality of stockpile maintained for future reuse on site.</i>
2	<i>e.g. Soils imported to the site.</i>	<i>e.g. Monthly internal reporting.</i>	<i>e.g. Trace soils if disease or weed outbreak occurs.</i>

Stormwater

Scope

Guidance to assist applicants to prepare a risk treatment plan to manage risks associated with the stormwater generated within the site to minimise its impacts on environment and infrastructure.

Key sensitive receptors

Example controls primarily address risks posed to environment, particularly waterways and related ecosystems from the stormwater runoff and the site infrastructure such as roads.

Objectives

- Protect the beneficial uses of the local water environment as defined in the SEPP (Waters)
- Minimise the impact to the onsite roads and other infrastructure due to stormwater runoff.

Compliance standards

- *Water Act (1989)*
- *Catchment and Land Protection Act (1994)*
- *Planning and Environment Act (1979)*
- State Environment Protection Policy (Waters) (SEPP Waters)
- EPA Guideline 1287 Risk Assessment of Wastewater Discharge to Waterways.

Acceptance criteria

- Stormwater is managed to meet the SEPP
- No nuisance stormwater flooding/inundation of roads and other infrastructure

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such things buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Construct roads with sufficient diversion drains and culverts to ensure that clean stormwater is diverted away from roads.	<i>e.g. Survey set out of roads and designs where necessary employ surface treatment to reduce erosion.</i>
2	Ensure that the gradient and orientation of tracks do not cause runoff to be fast flowing.	<i>e.g. Maintenance of tracks to minimise erosion.</i>
3	Arrange drainage of roads to be a vegetated area through erosion protection structures	<i>e.g. Side and angled drain off collection drains protected against erosion.</i>
4	Ensure that drainage from an area where fuels/ lubricants/ hazardous material are stored/used is directed to a sump or an interceptor trap.	

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. storm water culverts and discharge points.</i>	<i>e.g. Inspect outlet area to assess the potential for contaminated stormwater to exit the site.</i>
2	<i>e.g. Erosion control structures</i>	<i>e.g. Inspect and maintain erosion control structures.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. storm water discharge points.</i>	<i>e.g. Monthly internal and external reporting.</i>	<i>e.g. Management intervention depending on the severity of the incident. For example, notify DJPR as soon as practicable after they become aware of a Reportable Event at the site (as defined in the ERR Guidance Note).</i>
2	<i>e.g. Erosion control structures.</i>	<i>Site management after significant rainfall event or six monthly.</i>	<i>e.g. Upgrade or maintain control structures.</i>

Water

Scope

Guidance to assist applicants to prepare a risk treatment plan for the management of risks associated with the diversion or disturbance of natural path of flows along waterways or drainage lines. It does not deal with the extraction of water from waterways or groundwater, nor the discharge of process water to the environment.

Key sensitive receptors

Example controls primarily address risks posed to the environment, particularly waterways and related ecosystems.

Objectives

- Prevent site activities from adversely affecting local surface and groundwater sources.
- Protect the beneficial uses of the local water environment as defined in the SEPP (Waters).

Compliance standards

- *Water Act (1989)*
- *Catchment and Land Protection Act (1994)*
- *Planning and Environment Act (1979)*
- State Environment Protection Policy (Waters) (SEPP Waters)
- EPA Guideline 1287 Risk Assessment of Wastewater Discharge to Waterways.

Acceptance criteria

- The diversion and return of diverted water to the environment does not detract from beneficial uses of surface water or groundwater.

Example controls to address hazard

These controls are **suggestions for consideration** by applicants. Some or all may be used, with or without additional controls. Performance measures should be determined by the applicant to specify how the control is to be implemented, where this is not implicit in the details of the control. Performance measures should include relevant specifics such as buffer distances, vehicle speed, the decibel range or the range of particulate matter as appropriate.

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
1	Where reasonably practicable, locate the activity outside of areas designated as a floodplain and/or Land Subject to Inundation.	<i>e.g. Site located outside designated flood zones.</i>
2	Install diversion drainage structures up-gradient of working areas to prevent clean surface water from entering the site and becoming contaminated.	<i>e.g. Surface water diversion structures installed and effectively intercepting surface water before it reaches operating areas.</i>
3	Construct and maintain diversion structures to limit impacts on downstream / offsite surface water flows. (e.g. alteration of drainage pathways, change in flow), including installing scour protection on the outlet of surface water diversion drains.	<i>e.g. Downstream environmental flow is maintained.</i>
4	Design onsite diversion drains to accommodate the surface water flows for a 1 in 10 year storm event (10% AEP), based on the area of the up-gradient catchment area.	<i>e.g. Diversion drains designed for 1 in 10 year storm event.</i>

#	Details of controls being used	Performance measures (specifying how the control is being implemented – examples shown below)
5	<p>If diversions of water activities require:</p> <ul style="list-style-type: none"> extraction of water from a waterway or existing dam; construction of a dam on a waterway; <p>Ensure an appropriate 'Take & Use Licence' is obtained from the relevant Rural Water Corporation. A "Works on Waterways" approval must be obtained from a Catchment Management Authority for activities involving works on waterways.</p>	<p><i>e.g. Ensure an appropriate 'Take & Use Licence' is obtained from the relevant Rural Water Corporation.</i></p> <p><i>Ensure A "Works on Waterways" approval is obtained from a Catchment Management Authority for activities involving works on waterways.</i></p>

[Note: Values in the performance measure examples are intended to be defined for the site but should take into account any compliance standards or acceptance criteria.]

Monitoring

#	Aspect to be monitored	Details of monitoring
1	<i>e.g. Condition of waterway at outlet of diversion drain.</i>	<i>e.g. Inspect outlet area to assess the potential for erosion and the effectiveness of scour protection features.</i>
2	<i>e.g. Effectiveness of upstream diversion drainage structures</i>	<i>e.g. Inspected and maintained as required.</i>

Reporting

#	Aspect to be reported	Who will the information be reported to and at what frequency?	How will it be used?
1	<i>e.g. Condition of waterway at outlet of diversion drain.</i>	<i>e.g. Internal reporting for site management after significant rainfall event or six monthly.</i>	<i>e.g. intervention if erosion issues emerge.</i>
2	<i>e.g. Effectiveness of upstream diversion drainage structures</i>	<i>e.g. Internal reporting for site management after significant rainfall event or six monthly.</i>	<i>e.g. Assess effectiveness and maintenance requirements</i>

Relevant industry publications

- CMPA Guidance on Water Management Strategies for the Quarrying Industry

Appendix E

Example works for notification

Examples where no variation to a work plan is triggered:

a. Increasing the volume of the onsite fuel storage

An exploration company were using a mobile fuel service truck for refuelling the equipment onsite. The size of the fuel service truck was inadequate, requiring it to be refilled every day. The company requested installing a larger diesel storage tank onsite to replace the mobile fuel service truck. Following assessment regarding the storage of hazardous materials and consultation with the EPA this request was accepted as a notification.

b. Alteration of the location of drill holes

An exploration company wished to move the location of the drill holes documented in the work plan and located on Crown Land. After confirmation that the Crown Land Manager had no concerns regarding moving the drill hole locations ERR accepted this request as a notification.

Appendix F

F1 Site meeting agenda

Site:	
Location (address):	
Date:	
Time:	

Attendees:

Organisation	Name	Position title
Applicant		
Consultant		
ERR		
Council		
DELWP		
EPA		
CMA		
AV		
Heritage Vic		
Water Authority		
Other		

Note: the applicant/consultant will record key site meeting outcomes and circulate them to all invitees.

Agenda:

#	Item	Who
1	Welcome and introduction of attendees	Applicant/Consultant/All
2	Roles and responsibilities	Applicant/Consultant/All
3	Proposal overview	Applicant/Consultant
4	Site description <ul style="list-style-type: none">• Current use• Geology• Reserves• Sensitive receptors	Applicant/Consultant
5	Current approvals or licences in place	Applicant/Consultant
6	Proposed exploration method <ul style="list-style-type: none">• Locations of equipment• Blasting requirements• Batter angles	Applicant/Consultant
7	Proposed rehabilitation	Applicant/Consultant

#	Item	Who
8	<p>Earth Resources Regulation (ERR) comments and requirements</p> <ul style="list-style-type: none"> • Work plan requirements? • Potential hazards and risks? <ul style="list-style-type: none"> – Member of the public – Land, property and infrastructure – Environment • Surface water and groundwater? • Other management plans? <ul style="list-style-type: none"> – Blast management? – Ground control? – Community engagement? – Rehabilitation? • Other? 	ERR Representative
9	<p>Council comments and requirements</p> <ul style="list-style-type: none"> • Planning Permit Requirements? • Road Access and Traffic Management? • Community Consultation? 	Council Representative
10	<p>Department of Environment, Land, Water and Planning comments (DELWP) and requirements</p> <ul style="list-style-type: none"> • Planning overlays? • Flora and fauna reports? • <i>Environment Protection and Biodiversity Conservation Act 1999</i>? 	DELWP Representative
11	<p>Other regulator/agency comments and requirements</p> <ul style="list-style-type: none"> • EPA • Local Catchment Management Authority • Aboriginal Affairs Victoria • Heritage Victoria <ul style="list-style-type: none"> – Heritage overlay? • Other? 	Agency Representatives
12	<p>Work plan assessment process</p> <ul style="list-style-type: none"> • Submitting the work plan • Fees • Assessment • Further information • Reassessment • Referral • Endorsement • Planning permit • Approval • Application for work authority & rehabilitation bond • Grant of work authority • Start work 	ERR Representative
13	Next steps	Applicant/Consultant

F2 Potential site meeting questions

The following questions or issues may be discussed at the initial site meeting. This checklist will help the Tenement holder identify the information to provide in the work plan.

Discussion Topic	Details
Extraction proposal	<ul style="list-style-type: none"> • What is the estimated life of the activity? • What is the estimated/anticipated volume of resource per annum (output in tonnes or cubic metres)? • What is the estimated volume of soils and overburden to be disturbed? • What are the operating hours?
General location information	<ul style="list-style-type: none"> • What road(s) are proposed to be used for entering/exiting the activity area? • Are there any known inherited issues as a result of past or current land use?
Blasting	<ul style="list-style-type: none"> • Will blasting take place? If so, is it possible that blasting related activity could cause vibrations/noise/fly rock at the boundary of (or beyond) the activity area impacting sensitive receptors or infrastructure, including pipelines?
Noise	<ul style="list-style-type: none"> • Is it likely that activity area-based noise will be heard at any sensitive receptor?
Dust	<ul style="list-style-type: none"> • Is it likely the operations will generate dust or spray that will be deposited or emitted outside of the activity area boundary? • Is it likely the operations will generate any other substances listed as Class 1, 2 or 3 indicators under Protocol for Environmental Management (2007) that will be emitted outside of the activity area boundary?
Community facility/ private and public infrastructure	<ul style="list-style-type: none"> • Are there known above and below ground infrastructure (electricity networks, water mains, designated waters etc.) located near the activity area? • Are there known public roads, bridges or train lines located near the activity area?
Aboriginal Heritage	<ul style="list-style-type: none"> • Are there any areas of cultural heritage sensitivity or other protected areas in the proposed activity area? • Are any caves or dunes identified in the activity area? • Is a CHMP is required?
Historic heritage	<ul style="list-style-type: none"> • Does the activity area contain places, sites or objects on the: <ul style="list-style-type: none"> • Heritage overlay of the relevant planning scheme • Victorian Heritage Register • Victorian Heritage Inventory? • Are there historical heritage sites, structures or artefacts that must be retained as part of the post closure land form?
Flora and fauna	<ul style="list-style-type: none"> • Is any flora or fauna, including native vegetation, within the activity area to be removed or impacted? • Are there weeds, pests or feral animals within the activity area, or from surrounding areas, that could impact rehabilitation activities and/or potential land uses after closure?

Discussion Topic	Details
Groundwater	<ul style="list-style-type: none"> • What is the depth to groundwater and water quality objectives as defined in the SEPP Groundwaters of Victoria? • Where are nearest groundwater users or groundwater sensitive ecosystems? • Will de-watering be required (e.g. lowering the groundwater levels), or will the activity pit intersect the water table? • Will there be any potential effects on existing groundwater quality, and are there third party users of groundwater surrounding the activity? • Are there groundwater-dependent ecosystems located within the specified distances surrounding the activity area? • Is the activity within a Groundwater Restricted Quality Usage Zone, a Water Supply Protection area, or a Groundwater Management Area?
Surface water	<ul style="list-style-type: none"> • What are the water quality objectives for the area defined in the SEPP Waters of Victoria? • Where are nearest water users or water sensitive ecosystems? • Are alterations to surface drainage required (e.g. waterway diversion) and if so, are they going to increase the potential for flooding of adjacent land? • Are soil, overburden or proposed extracted materials (e.g. soils etc.) susceptible to erosion (e.g. caused by clearing of vegetation, problem soils)? • Is there potential for soil and overburden stockpile to cause sedimentation outside of the activity boundary? • Is the activity area located within a potable water catchment?
Dams	<ul style="list-style-type: none"> • Will there be water storages (e.g. settlement pond, water storage, evaporation pond, bio-retention basin, etc.) or slimes dams on the activity area? • If yes, what is the type, area and embankment height of water storages or slimes dams? • Will the storage or dam be located on a waterway? • Will the dam receive runoff from a catchment upslope of the storage or dam? • Will any of the above storages hold water that is unlikely to meet the SEPP guidelines for surface water or groundwater (or the ANZECC guidelines where a constituent is not specified)? • Will any of the storages meet the criteria of a large dam in accordance with ANCOLD Guidelines? If yes, what is the type, area and embankment height of water storages or slimes dams and it's possible consequence category? • What impact could failure of a water storage or slimes dam have on public safety, infrastructure or the environment?

Discussion Topic	Details
Geotechnical	<ul style="list-style-type: none"> • How will slope instability affect public safety, public infrastructure or environmental elements? • How can the site's lithology/geology and structural geology impact on slope stability? E.g. are there any active faults, dykes or shear zones (including adverse jointing) which may affect slope stability? • Is the overburden dispersive which may lead to long term erosion problems around the site? • What influence may seismic activity in the area have on slope stability? • Can elevated water levels in the batters have an impact on slope stability? • Are there areas where a perched water table may exist? • Could the proposed activity operation and excavation methods heighten the potential for slope instability, and would such instability have any impact outside the activity area? • Are there any historical voids (old mine underground workings, shafts, etc.) within the activity area? • Are there other adjacent land uses or features that could create triggers for land instability (e.g. neighbouring property performing blasting, surface water drainage near batter crest etc.)? • Will there be any crest loading, which may affect slope stability, such as an overburden dump or plant equipment situated near the crest of the open pit?
Environment – visual amenity (overburden/ waste rock)	<ul style="list-style-type: none"> • Will stockpiles and overburden dump be located within the activity area? • If yes, what is the volume of material and what is the proposed height of the largest stockpile/overburden dump?
Waste	<ul style="list-style-type: none"> • Will process wastewater be stored and treated within the activity area? • Will the operations (extraction and processing) generate hazardous wastes (e.g. grease, oils, putrescible waste, and batteries)?
Fuel	<ul style="list-style-type: none"> • Will fuel (e.g. petrol, diesel) or other chemicals/additives be stored within the activity area? • Will refuelling, fuel storage and maintenance of machinery and equipment occur within activity area.
Acid mine drainage	<ul style="list-style-type: none"> • Will acid sulphate soils be exposed/oxygenated during the proposed activities? • Is there potential for sulphide minerals to be present or exposed during the proposed activity (such as from overburden, waste and remnant pit shells surfaces)?
Radiation	<ul style="list-style-type: none"> • Is any part of the operation (extracted or processed material) going to be legally radioactive in accordance with the <i>Radiation Act 2005</i>?
Site rehabilitation	<ul style="list-style-type: none"> • What is proposed for site rehabilitation and closure, and subsequent land use? • What is proposed for pit batter rehabilitation? • How will water storages and slimes dam facilities be rehabilitated? • What is proposed for surface water drainage and discharge from the activity area? • What land management or maintenance activities will be required after closure?

