

# **ENVIRONMENTAL MANAGEMENT of COAL MINING**

## **SUMMARY**

*Office of the*  
**PARLIAMENTARY COMMISSIONER FOR THE ENVIRONMENT**  
**Te Kaitiaki Taiao a Te Whare Pāremata**

PO Box 10-241, Wellington, New Zealand

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This is a summary of the full report entitled "Environmental Management of Coal Mining",  
tabled in the House of Representatives on 15 December 1992.  
Copies of the report are available from the Office of the Parliamentary Commissioner for the Environment.  
Contents of the full report are shown in the appendix.



# 1.0 Introduction

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This report presents the results of an investigation by the Parliamentary Commissioner for the Environment into the government system of agencies and processes established for managing the environmental effects of coal mining operations.

## 1.1 Purpose of report

The investigation was undertaken in terms of Sections 16(1)(a,b & c) of the Environment Act 1986. It concentrates on how compliance and enforcement is achieved in relation to privately owned opencast coal mines. Terms of Reference used for the investigation are as follows:

## 1.2 Authority for investigation

1. Review the effectiveness of current legislation controlling mining activities with regard to the maintenance and improvement of the quality of the environment.
2. Investigate the effectiveness of public authority environmental planning and management with regard to the monitoring and enforcement of conditions attached to statutory permits, consents, licences, etc for ensuring protection of the environment.

During 1990/91 the residents of Roa community (near Greymouth) and the Maruia Society complained to public authorities on the West Coast about the management of the mining operations at Roa. A preliminary examination was carried out by the Office and meetings held with the relevant public authorities, the mining company and residents of the Roa community. As a result of this inquiry DSIR were retained to advise on:

## 1.3 Background

- (a) the environmental impact of the mining operations of Francis Mining at Roa and the appropriateness of opencast mining methods at this site;
- (b) the appropriateness and adequacy of the conditions imposed on the mining licence(s) and associated authorisations to mitigate against environmental degradation;
- (c) the adequacy of the implementation, monitoring and enforcement of the conditions.

The DSIR report concluded that if opencast mining continues at Roa, severe local environmental damage is inevitable. The consultants also considered that some of the conditions set in the licences were not relevant and some were unrealistic in terms of preventing environmental damage at the Roa Mine.

The finding that some of the conditions placed on the mining licences were unenforceable led to a decision to examine other mining practices in the Waikato and Southland. The Pirongia Mines in Waikato and the Newvale and Goodwin Mines in Southland were chosen as case studies. The current investigation also looked at procedures of local government, Ministry of Commerce and Department of Conservation across the three case study regions.

## 2.0 Conclusions and recommendations

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Comparison of mining activities in the West Coast, Waikato and Southland regions identified that mining on the West Coast occurs in difficult terrain and with difficult climatic conditions. In addition, the West Coast has many smaller mines (producing less than 7,000 tonnes per year) compared with those in the two other regions. This necessitates a different degree of control to that required in other regions.

The approach adopted by the various local authorities was found to be constrained by the uncertainties created through recent restructuring of central and local government and the advent of new legislation. The Crown Minerals Act 1991 and the Resource Management Act 1991 will make controlling the environmental effects of mining easier. However, a number of legislative and administrative procedures could be improved.

Provisions in the Resource Management Act 1991 greatly improve the ability of regional councils, district councils and other public authorities, exercising powers and duties under the Act, to obtain information on the environmental effects of mining proposals. Wide opportunities are provided by the Act for the public to participate in proceedings for the making of policy statements, plans and rules to control the effects of mining and for the consideration of resource consent applications for mining proposals. The Act also empowers local authorities to require an environmental effects assessment on a mining proposal to form part of the documentation accompanying applications for resource consents. The information provided from the exercise of these powers enables public authorities to develop, co-ordinate and monitor strategies for identifying and controlling the effects of mining operations from exploration to land rehabilitation.

**NB** *Although recommendations are made to the West Coast Regional Council and/or the Grey District Council, these recommendations may also have relevance for other regional and district councils with responsibilities for managing the environmental effects of coal mining.*

### 2.1 Introduction

### 2.2 Capability of the resource management system

### **2.2.1**

#### ***Regional policy statements, regional and district plans***

The Resource Management Act 1991 requires regional councils, unitary authorities and territorial authorities to avoid, remedy or mitigate any adverse effects of activities on the environment. It is through the regional policy statement and regional and district plans that policies and controls are set to deal with adverse effects. The impacts of coal mining on the environment should be dealt with in the context of policies and environmental standards which are set out and given effect to in the regional policy statement and regional and district plans.

#### **Recommendation to the West Coast Regional Council and the Grey District Council**

1. The West Coast Regional Council, through its regional policy statement and regional plans, and the Grey District Council, through its district plan:
  - (a) Recognise and provide for the adverse effects of coal mining (which have been identified as impacts on the environment from mining at Roa and may occur from coal mining in other areas) on the following:
    - water quality
    - soil conservation
    - land stability
    - protection of indigenous vegetation and habitat for indigenous fauna
    - noise abatement
    - dust control
    - traffic hazard from coal transportation
  - (b) Specify
    - (i) the above matters for which regard is to be given in an environmental effects assessment; and
    - (ii) the consultation and review procedures to be followed in the preparation of an environmental effects assessment;
  - (c) Define the procedures which will be followed for monitoring and enforcing compliance with the conditions of resource consents for mining operations. (*section 5.4.2*)

Under the Crown Minerals Act 1991 regional councils, unitary authorities and territorial authorities took over the monitoring of conditions on mining privileges granted under the Coal Mines Act 1979 where the conditions relate to the council's or authority's functions under the Resource Management Act. The conditions have to be monitored as though the old legislation was still in place until the licences expire.

**2.2.2**  
***Crown Minerals Act***  
***1991 - Transitional***  
***provisions***

**Recommendation to the West Coast Regional Council and the Grey District Council**

2. The West Coast Regional Council and the Grey District Council define and document procedures which will be followed in the administration of responsibilities assumed under the transitional provisions of the Crown Minerals Act 1991. *(sections 5.2, 5.5)*

The regional councils involved in this study have developed a number of procedures for the administration of mining licences and related resource consents. These have proven effective in reducing the time taken to process applications and monitor compliance with licence and resource consent conditions.

**2.2.3**  
***Administrative***  
***procedures***

**Recommendation to the West Coast Regional Council and the Grey District Council**

3. That administrative procedures ensure:
  - (a) All information pertaining to a particular mining operation is held together; *(section 5.2.2)*
  - (b) Information held on complaints registers is available to staff dealing with resource consent applications; *(section 5.2.2)*
  - (c) Formalised procedures are adopted for dealing with applications and resource consents; *(section 5.2.2)*
  - (d) The responsibility within each Council for considering and approving resource consent applications is separated from the responsibility for resource use monitoring and enforcement; *(section 5.4.1)* and
  - (e) Training on environmental effects assessment and management of the effects of mining is provided to staff. *(section 5.2.2)*

### **Recommendation to the West Coast Regional Council**

4. That the Regional Council convene meetings with other public authorities administering statutory approvals and the mining industry in order that:
  - (a) Responsibilities of all agencies are clearly defined, possibly in a mining protocol; (*section 5.2.1*)
  - (b) Resources are used to best effect by exploring possible transfer of powers, liaison and co-operation arrangements between authorities for
    - (i) inspections and monitoring programmes; (*section 5.2.3*) and
    - (ii) receiving and processing resource consent applications; (*section 5.2.3*); and
  - (c) Communication between the community and mine operators be improved through facilitating
    - (i) the co-ordination, where appropriate, of landowner access arrangements (*section 5.3.2*); and
    - (ii) consultation with community liaison groups. (*section 5.3.1*)

#### **2.2.4**

#### ***Early planning***

A number of aspects in the management of mining operations would be greatly improved if they were considered when assessing environmental effects. One of these is the rehabilitation and restoration or other use proposed for the site at the cessation of mining.

### **Recommendation to the West Coast Regional Council and the Grey District Council**

5. That a rehabilitation plan should be an integral part of an environmental effects assessment accompanying an application for mining related resource consent(s). (*section 5.3.4*)



Significant changes in the scale and direction of activities and in operating technology often occur over the life of a coal mine. These can require corresponding significant changes in the management of environmental effects. Early advice about these changes would assist local authorities with coal mining related environmental management responsibilities.

**Recommendation to the West Coast Regional Council and the Grey District Council**

6. That a process for ongoing environmental effects management, with reports submitted for consent authority approval in advance of work occurring, be a condition of resource consents granted for mining activities. (*sections 5.3.5, 5.5*)

Controlling the effects of a specific mining operation is dependent on the related licences or consents having conditions which have been established with due regard to the environmental values and constraints of the site and which are capable of reasonable compliance by the mine owner, employees and contractors.

**2.2.5**  
***Controlling  
effects of mining***

**Recommendation to the West Coast Regional Council and the Grey District Council**

7. That all conditions proposed for mining related resource consents are:
  - (a) site-specific; (*section 5.3.3*)
  - (b) assessed for their relevance and practicality of compliance; (*section 5.3.3*)
  - (c) provide for the review of conditions at specified intervals or whenever there is a specified change in the scale and method of extraction where the mine is intended to have a long life; (*section 5.5*)
  - (d) provide for a residual risk report prior to conclusion of mining and abandonment of the mine site. (*section 5.4.3*)

**Recommendation to the Minister for the Environment**

8. That consultations be held with appropriate local authorities and representatives of the mining industry and an information publication be produced that provides advice to landowners on the negotiation of mining access arrangements. (*section 5.3.2*)

### **2.2.6**

#### ***Compliance***

The West Coast Regional Council has a large number of mining licences and resource consents to administer but limited staff and financial resources for compliance monitoring and enforcement of mining licence and resource consent conditions. These resources would be used to the best effect by prioritising resource consents according to the level of environmental risk presented by the mining operation and having mine operators carry out self monitoring programmes and report on their environmental management.

#### **Recommendations to the West Coast Regional Council**

9. That, where appropriate, a self monitoring programme with an annual compliance report, signed by the chief executive of the organisation owning the mining operation, be a condition of resource consents. (*section 5.4.2*)
10. That criteria be established for determining the acceptability of compliance reports (*section 5.4.2*) and residual risk reports. (*section 5.4.3*)
11. That a programme of Council audits of self monitoring programmes be drawn up with priority given to high risk areas. (*section 5.4.1*)

### **2.2.7**

#### ***Mining licences, permits and resource consents***

Mining operations often involve owners wanting to extend mining to areas not covered by existing mining licences, permits and resource consents. Under current legislation a miner is able to make applications for new permits, licences and consents resulting in a single mining operation having multiple permits and consents. This can cause difficulties with compliance monitoring and achieving uniform environmental management over the mine site.

#### **Recommendation to the Minister of Energy and the Minister for the Environment**

12. That the Ministers jointly consult with the mining industry and local authorities to review ways and means of ensuring uniform environmental management of mine sites subject to multiple licences and/ or permits and associated consents by providing for the amalgamation of multiple coal mining licences and permits where applicable. (*section 5.5*)

When compliance with permit or resource consents is not occurring, enforcement should be carried out by the relevant authorities. However, there is no effective sanction available for authorities to use if a mine operator persistently breaches or fails to comply with conditions of a licence granted under the Coal Mines Act 1979.

**Recommendation to the Minister of Energy and the Minister for the Environment**

13. That s. 107 of the Crown Minerals Act 1991 be amended to:
- (a) Empower local authorities, exercising functions under s.108 of the Crown Minerals Act 1991, to use the provisions of Part XII of the Resource Management Act 1991; (*sections 5.4.2, 5.5*)
  - (b) Provide for existing coal mining licences (including licences held by the Coal Corporation of New Zealand Ltd) to contain a condition to the effect that all conditions in licences relating to environmental effects expire on 1 October 2001 and thereafter holders of licences shall be required to apply for resource consents under the Resource Management Act 1991. (*section 5.4.2*)

The procedures for setting bonds could be rationalised to assist all affected parties, including the miner. Bonds are effective when they cover the likely risk and provide an incentive for mine operators to practice good environmental management.

**Recommendation to the Minister for the Environment**

14. That consultations be held with appropriate local authorities and representatives of the mining industry to establish a process for determining and managing bonds required as a condition of resource consents.

This process will require local authorities to co-ordinate their environmental risk assessments and to provide for the following matters to be addressed when resource consent applications in respect of the same mining operation are being considered:

- (a) The level of total bond monies required each year to cover the overall environmental risk imposed by the mining operation in that year; (*section 5.4.3*)
- (b) A sliding time scale and criteria for varying the bond so as to reflect the total environmental risk imposed at the time

by the mining operation; (*section 5.4.3*)

- (c) Establishing an estimate of residual environmental risk to be covered at the end of mining; (*section 5.4.3*)
- (d) Whether bond monies required at the commencement of the mining operation should cover maximum environmental risk and be rebated as the risk diminishes or whether the total sum required be assessed at three year intervals so bond monies reflect the risk for the three year period immediately following the assessment; (*section 5.4.3*) and

- 15. That the agreed procedure for determining bonds is disseminated as a guide to local authorities. (*section 5.4.3*)

#### **Recommendation to the Minister of Energy**

- 16. That the appropriate local authorities be consulted before bonds provided as a condition of a coal mining licence are refunded. (*section 5.4.3*)

#### **2.2.10 Mining liabilities**

The effects of abandoned mine sites are a residual concern for public authorities. Because the Crown licensed these mines there remains a Crown responsibility to deal with the problem, particularly where no bonds were set to ensure restoration. Regional councils need to identify the location of these sites and the degree of environmental risk they impose. Sites with significant risk require a strategy as to how restoration might be achieved and who should pay.

#### **Recommendation to the Minister for the Environment**

- 17. That a policy is formulated for restoration of abandoned mine sites with significant environmental risk. (*section 5.6*)

## **2.3 Performance of public authorities on the West Coast**

The concerns expressed by Roa residents and the Maruia Society, regarding the actions taken and not taken by public authorities on the West Coast with statutory responsibilities affected by coal mining and processing operations at Roa, have been found by this investigation to be justified. The authorities failed to take appropriate action to identify, evaluate and manage the effects of these operations when the scale of activity increased significantly. They also failed to carry out appropriate monitoring programmes and to respond promptly to concerns expressed by other public authorities and by the local community.

Since advice was given to the Minister of Energy on these failings, improvements in mitigating environmental effects have been made by the company operating the Roa Mine, and the West Coast Regional Council and the Grey District Council have shown a greater awareness of their responsibilities. A proposal under consideration at the time this report was in preparation, for the Grey District Council to transfer resource consent application processing and monitoring powers to the West Coast Regional Council, would, if implemented, assist environmental planning and management (as would implementation of recommendations made in section 2.2 above).

### **Recommendation to West Coast Regional Council and Grey District Council**

18. That in controlling the environmental effects of existing coal mining and processing operations, the Councils take advantage of the provisions of s. 108 of the Crown Minerals Act 1991 which authorise the appropriate local authority as defined by s.30 or s.31 of the Resource Management Act 1991 to vary the terms and conditions of an existing licence in accordance with s.51 of the Coal Mines Act 1979. (*section 5.5*)

The Resource Management Act 1991 provides opportunities for improving public authority management of coal mining operations that were not available under previous legislation.

#### **Recommendation to the West Coast Regional Council**

19. That in controlling the environmental effects of future coal mining and processing operations the Council take advantage of provisions of the Resource Management Act 1991 which:
  - (a) Impose a duty on any person, including a mining operator, to avoid, remedy or mitigate adverse effects on the environment (s.17 Resource Management Act 1991); (*section 5.4.2*)
  - (b) Enable the Council to serve an abatement notice requiring the cessation of any mining or processing activity that is in contravention of any resource consent or which is objectionable to such an extent that it has adverse environmental effects (s.322 Resource Management Act 1991). (*section 5.5*)

#### **Recommendation to the Grey District Council**

20. That in controlling the effects of future coal mining and processing operations the Council take advantage of s. 33 of the Resource Management Act 1991 which authorises the transfer to the Regional Council of powers for processing resource consent applications and the enforcement of conditions attached to resource consents. (*section 5.4.2*)

In considering the exercise of their statutory responsibilities in relation to resource consents for mining activities, both Councils should note the provisions in the Resource Management Act 1991 which enable any person to apply to the Planning Tribunal for an enforcement order requiring compliance with the Act or a resource consent.

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