



## ENVIRONMENTAL IMPACT ASSESSMENT

IN  
New South Wales, Australia

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## INTRODUCTION

- Project impacts
- Project planning
- Project construction
- Operational phase
- Mine decommissioning
- Mine closure

## INTRODUCTION WHAT IS MISSING

- Human relationships
  
- Working together

## EIA WHAT IS IT

- Existing environment
- Project description
- Project impacts
- Project management
- Project decommissioning
- Project rehabilitation
- When is EIA used
  - exploration ??
  - mining proposals

## WHERE IS EIA LIKELY TO FAIL

- Project planning
- Project construction
- Operational phase
- Mine decommissioning
- Mine closure
- Why
  - timing of the EIS
  - change in people
  - limited resources

## TERMINOLOGY

- EIS
- Assessment report
- Environmentally significance
- State significance
- Ecological sustainable development

## ENVIRONMENTAL IMPACT STATEMENT

- Outline objectives
- Project description
- Why is the project important
- Consequences of not proceeding
- Technical data - How Much ??
- Alternatives
- Project impact on the environment

## EIS continued

- Outline preferred options
- Project likely effect
  - impacts
  - standards
  - safeguards
  - monitoring

## EIA METHODOLOGY

- Information collection
  - early data collection
    - » physical
    - » ecological
    - » land use
    - » social
    - » infrastructure
    - » heritage and
    - » how the project fits into the above
- This is covered in more detail later

## COMMUNITY CONSULTATION

- During exploration
- Increases as project viability increases
- Pre project announcement
- Type of communication
  - face to face
  - informal gatherings
  - formal meeting
  - print, radio and TV
- Community acceptance is vital
- Use people with "people skills"
  - good listeners

## PLANNING FOCUS

- Formal project outline
- Meeting comprises
  - company & consultants
  - government agencies
  - local government
  - community groups
  - individuals
  - conservation groups
- Feed back on the project
  - verbal & written
- Issue identification

## GOVERNMENT AGENCIES CONSULTATION

- During exploration
- Pre planning focus
- Planning focus stage
- Post planning focus
- Draft EIS
- Final EIS
- Negotiating changes to conditions set by government

## Government Agencies Consultation continued

- Consultation on:-
  - policy
  - regulations
  - legislation
  - politics ???
- Government expert advise on:-
  - issues identified
  - baseline studies
  - mine planning
  - social issues
  - service corridors
  - assessment process

## THE BASIC ELEMENTS OF A EIS

- Project introduction & overview
  - brief project description
  - location within country & region

## DESCRIPTION OF THE EXISTING ENVIRONMENT

- Regional setting
- Land use and tenures
- Climate, geology and landforms
- Surface & groundwater quality and quantity
- Hydrology & hydrogeology
- Dust, noise, existing pollutants
- Fauna & flora domestic + native
- Infrastructure
- Heritage

## MINING PROJECT DESCRIPTION

- Construction phase
- Operating phase
- Decommissioning
- Rehabilitation
- Closure

## Project Description continued

- Ore body and surrounding halo
  - physical characteristics
  - chemical characteristics
- Stages in mine development
- On-site processing
- Down stream processing
- Chemical & waste risk assessment and management
  - tailings
  - acid rock drainage

### Project Description continued

- Power and transport corridors
- Water supply
- Water management
- Project infrastructure
- Workforce and accommodation
- Design of:-
  - waste rock emplacements
  - tailing storage facilities
  - final void
- Progressive rehabilitation

### ISSUES IDENTIFIED SHORT & LONG TERM

- Physical
- Biological
- Social
- Beneficial / detrimental impacts
- Issue uncertainty

### PHYSICAL ISSUES

- Erosion and sedimentation
- Subsidence
- Surface and groundwater  
quality and quantity
- Salinity
- Acid rock drainage
- Heavy metals

### ECOLOGICAL ISSUES

- Native vegetation
- Habitat
- Fauna
- Toxic and hazardous impacts
  - water
  - air

### LAND USE ISSUES

- Compatibility with surrounding  
land uses
- Creation of a new beneficial  
land use
  - conservation
  - recreation
  - agriculture
- Changes are normally minor  
compared to the large landscape

### SOCIAL ISSUES

- Mine workforce population
  - construction
  - mining
- Community infrastructure for an  
increased population
- Indirect employment
- Economic benefits

## INFRASTRUCTURE ISSUES

- Roads
- Power
- Water supply
- Housing
- Hospitals
- Education
- Social issues

## HERITAGE ISSUES

- Natural features
- Man made structures

## THE EIA APPROVAL PROCESS

- Public exhibition of the EIS
- Public hearings
- Project submissions
- Project assessment
- Project approval or non-approval
- Project conditioning

## PROJECT CONDITIONING

- Risk minimisation
- Role of management plans
- Type of management plans (see list in paper)

## Typical Management Plans

- MOP and AEMR
- Safety
- Archaeology & cultural
- Floral & fauna-native/domestic
- Weed & feral animals
- Erosion & sediment control
- Landscape
- Bushfire
- Site land management
- Compensatory wetlands

## Typical Management Plans continued

- Site water supply & discharge
- Site water management
- Cyanide management
- Hazardous waste & chemicals
- Dust & noise
- Blast & vibration
- Spontaneous combustion
- Mine subsidence
- Transport

### Typical Management Plans continued

- Radiation
- Final landform rehabilitation  
and management
- Tailings management
- Waste rock emplacement

### Summation

- The Department of Mineral Resources has the statutory responsibility for mine site environmental management in NSW, Australia
- The Department fulfils the role as a planning, assessment & approval agency
- The MREM Process meets the expectations of others
- The MREMP has lead to a co-operative and integrated approach
- The MREMP gives the public confidence