

Annexure 8.3: Guidelines for New Quarry Management

1. Management Plan for New Quarry

The concessionaire shall prepare a quarry management plan for operation of new quarries and submit it to the IC for approval and necessary actions. The plan shall consist of the following:

1.1 Selection Details

1.1.1 Location and Layout

Sketch plans and photographs to be provided along with adequate details:

- ⌚ A map and sketch plan of the area showing the location of the proposed quarry site with respect to the project road, nearby villages, crusher plants and worker accommodation locations along with indicative distances of the different sites from each other and from the road.
- ⌚ A detailed sketch plan of the quarry area showing approach and haulage roads, location of the rock outcrops to be quarried, indicating which sites will be quarried in which year or phase, location of stock piles, location of guard house, perimeter fence, location of water sources, amenities, and any further details.
- ⌚ Photographs of the site

1.1.2 Selection Criteria

- ⌚ A brief statement as to how the site was chosen.
- ⌚ Alternative sites that were considered to be mentioned.
- ⌚ Record any public consultations involved while choosing and what the public concerns were, if any.

1.1.3 Agreement with landowners

- ⌚ Statement of ownership of the land along with lease / purchase agreements.

1.1.4 Licenses and permits

- ⌚ Concessionaire to state the licences and permits that are necessary for operation, and attach them as appropriate.

1.2 Operation

1.1.1 Method of extraction

- ⌚ A brief method statement of extraction indicating the techniques to be used, use of explosives if any, if so how are the charges laid, how often the blasting shall be done, etc.

- ⌚ Appropriate reference should be made to the concessionaire's safety manual.
- ⌚ A copy of the operator's licence to handle explosives should be submitted to the IC.

1.1.2 Loading and haulage

- ⌚ Concessionaire to describe the process in a few sentences of loading of rocks fragments; means of transportation to the crusher, and from the crusher to the site.

1.1.3 Crusher Plant

- ⌚ Type, manufacturer, date of manufacture and principal specifications of the plant, details on testing and commissioning (by whom, to what standard, and when).

1.1.4 Storage of explosives

- ⌚ Concessionaire to state where these are to be procured from, where they will be stored and how the supply of explosives will be kept secure (if they are to be kept off site, state what precautions will be given for transportation).

1.1.5 Products

- ⌚ A list of aggregate sizes and any other products from the quarry. Make sure the sketch map states where these will be stock piled.

1.1.6 Testing and quality assurance

- ⌚ Refer quality assurance plan of concessionaire if any.
- ⌚ If not, concessionaire to provide details of sampling frequency, who takes the does the testing, which standards are to be complied with, and any further pertinent details.

1.1.7 Water sourcing

- ⌚ Concessionaire to indicate the operations that shall need water, and its source (an indication on the sketch map will suffice).

1.1.8 Safety

- ⌚ Concessionaire to divulge safety measures to the IC.
- ⌚ Ensure that workers at the quarry sites are aware of the appropriate sections of the safety plan.

1.1.9 Workers Accommodation

- ⌚ Concessionaire to provide details of how many workers will be accommodated on site and what the accommodation arrangements and standard will be.

2. Environmental Management

2.1 Environmental Management during Operation

1.1.10 Removal of trees and plants

- ⌚ Concessionaire to describe briefly the floral species that have had to be removed (it will be helpful give local names if English or scientific names are not known), and roughly how many.

1.1.11 Overburden

- ⌚ Concessionaire to state where this will be deposited (indicate on the sketch map), and what methods will be taken to contain it, if any.

1.1.12 Silt management

- ⌚ Concessionaire to state how silt arising from quarry operations will be managed, e.g. provision of a silt retention pond, and show where this is on the sketch map. Say how the silt retention pond will be managed (i.e. how often it will be dredged).

1.1.13 Surface water drainage

- ⌚ If it will be necessary to provide drainage channels, concessionaire to show on the sketch map where these are and confirm that they will be kept free of blockages.

1.1.14 Soil and water contamination

- ⌚ Concessionaire to list sources of possible contaminants to the soil (fuel stores, etc) and what will be done to control it (minimise spillages, control leaks from plant, etc).

1.1.15 Air pollution

- ⌚ What are the sources of air pollution?
- ⌚ Details of air pollution control measures in each case.
- ⌚ Details of worker protection equipment along with appropriate reference to the safety plan.

1.1.16 Noise

- ⌚ Sources of noise, distance from settlement, labour camp and proposed mitigation to the population / workers exposed.

1.1.17 Traffic

- ⌚ Impact of quarry operations on traffic and how this may be controlled.

1.1.18 Approach road

- ⌚ Concessionaire to state whether this will be maintained, and if so in what condition.

2.2 Environmental Management at Closure of the site

1.1.19 Dismantling and removal of machinery

- ⌚ Concessionaire to state whether and when this shall be done.

1.1.20 Slope stabilisation and / or protection

- ⌚ Measures taken to protect the slope and to guard against any possible serious rockfall, or any measures to safeguard against hazards like this.

1.1.21 Rehabilitation

- ⌚ Rehabilitation plan of the quarry.
- ⌚ The concessionaire shall be responsible for the Redevelopment Plan prior to completion after five years, during the defect liability period. The IC and the APRDC shall be responsible for reviewing this case of redevelopment prior to the issuing the defect liability certificate.

1.1.22 Hand-over

- ⌚ Terms of hand-over of the quarry site to the owner/authority at the end of its use.

1.1.23 Removal of debris and solid waste

- ⌚ Confirmation of Concessionaire in removal of debris and solid wastes and disposal at a suitable site.

For each aggregate-cum-quarry sand source, the plan should be the same. The table below gives the format:

Sl. No.	Item	Unit	Details	Remarks by IC, if any
1.	Name / identity of the location			
2.	Nearest project road Chainage.			
3.	Name of the owner			
4.	Area involved	m ²		
5.	Existing land use (verification from land records with revenue department)			
6.	Land use of the area surrounding the proposed site including a map			
7.	Access roads – existing conditions, proposed development and maintenance			
8.	Tree cutting and vegetation clearance if any, along with compensation measures	Nos.		
9.	Arrangement with the owner (agreement with land owner should be attached as an Annexure)			
10.	Quantity of material to be withdrawn vis-a-vis the material available	Cum		
11.	Particular areas to be quarried should be clearly identified			
12.	Machinery & equipment to be used			
13.	Drainage plans			
14.	Top soil management			
15.	Description of the operating practices to be adopted.			
16.	Health facilities			
17.	Safety provisions made including fire protection systems and the availability of different personal protective equipment			
18.	Monitoring plans for air, noise and water quality			
19.	Copy of the consents to establish and operate should be attached as an Annexure.			
20.	Copy of the license from Mining & Geology, Police & Fire dept.			
21.	Conditions laid down in the clearances / licenses and plans to ensure compliance			
22.	Information on whether or not the quarry will be closed under this project. If yes, the proposed closure & restoration plan.			
23.	Concerns of the local people living in the immediate / near vicinity should be identified and appropriate measures should be reflected			
24.	Photograph of the quarry prior to commencing operations.			
25.	Sketch of the layout of the quarry			

Attach Photograph of Proposed Site, Location Map, Consents, licenses, safety plan, tree compensation plan, restoration plan, drainage plan, monitoring plan, Agreement with land owner etc. as annexure

Submitted

Checked & Approved

Signature

Signature

Name

Name

Designation

Designation

Concessionaire

Independent Consultant