

Sponsored Thesis Project Competition on "Re-imagining Urban Rivers"

METAMORPHOSIS – Ecological Restoration and Development of ARAI Stone Quarry, Pune

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Course Discipline: B. Arch.

MAHARSHTRA -
Full of stone Quarry Holes and permanent scars left on environment.

The Poona Post

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* RECLAMATION AND REHABILITATION OF MINES MADE COMPULSORY

* NATIONAL MINERS DAY TO BE OBSERVED ON DECEMBER 6

First Column

Fact file:

Vetal Hill, Pune

- Reservation: **Forest**
- Type of forest: The natural dry vegetation has a **dry deciduous nature**, without tall trees and with medium sized trees and shrubs.
- Rock type: **Basalt**
- Site area: **5.9 Ha**
- Depth of quarry hole: **10 m**

Benefits of the project

- Effective **utilization of abandoned quarries**
- Water conservation
- Invitation to **migratory birds**
- Creating awareness about **nature conservation among citizens**
- **Revenue model** for Authorities

LUNGS OF THE CITY RESTORED

■ **Citizens overjoyed as an abandoned stone quarry site undergoes metamorphosis into a biodiversity park**

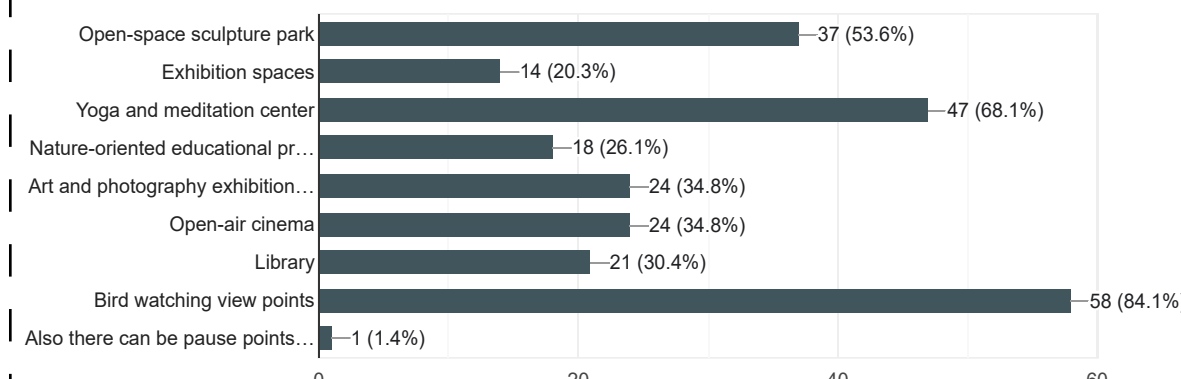
■ **This one of a kind project is a result of a joint initiative by National Institute of Urban Affairs - National Mission for Clean Ganga to revive, rejuvenate and beautify wetland eco - systems.**

■ **Citizens participated in an opinion survey citing the issues like lack of security and sanitation facilities on the nature trail, also suggesting interventions that would result in the metamorphosis**



Areal view of metamorphosis of ARAI Stone Quarry

What activities would you enjoy participating in ARAI?



Excerpt from the 'Citizen Opinion Survey'

STAKEHOLDERS

Owner
Forest Department

Citizens

Nature Conservationists
NGOs

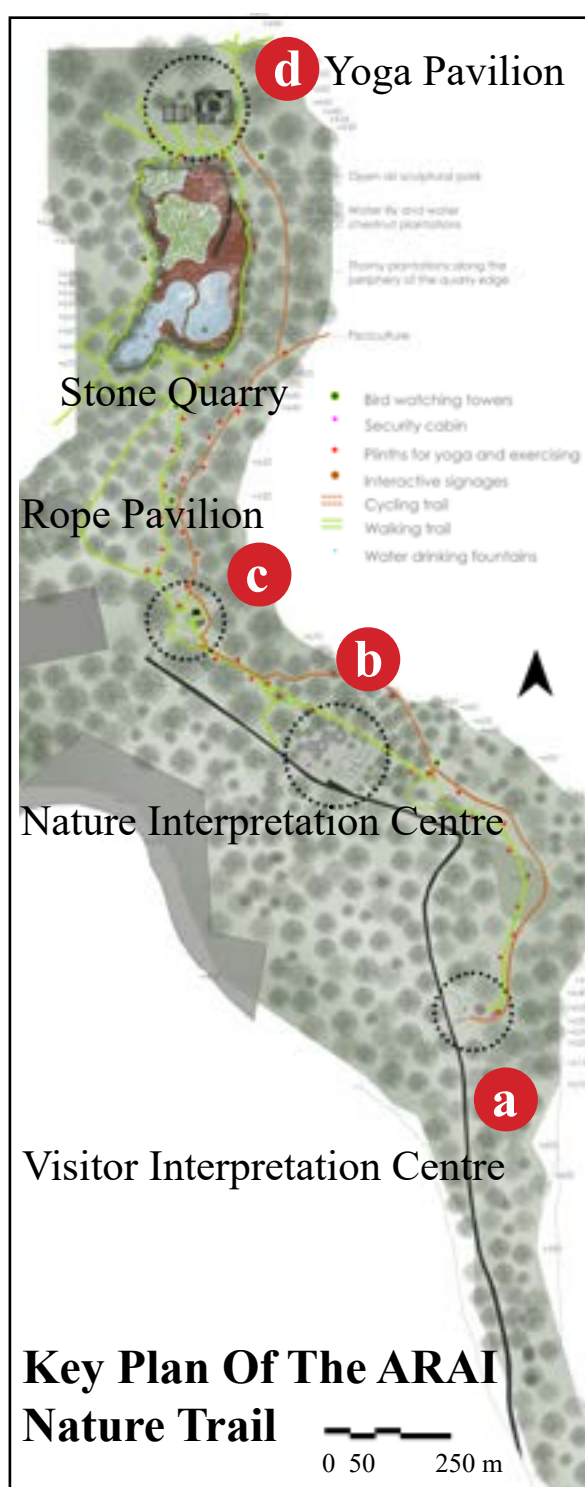
Construction team

Fishery Department

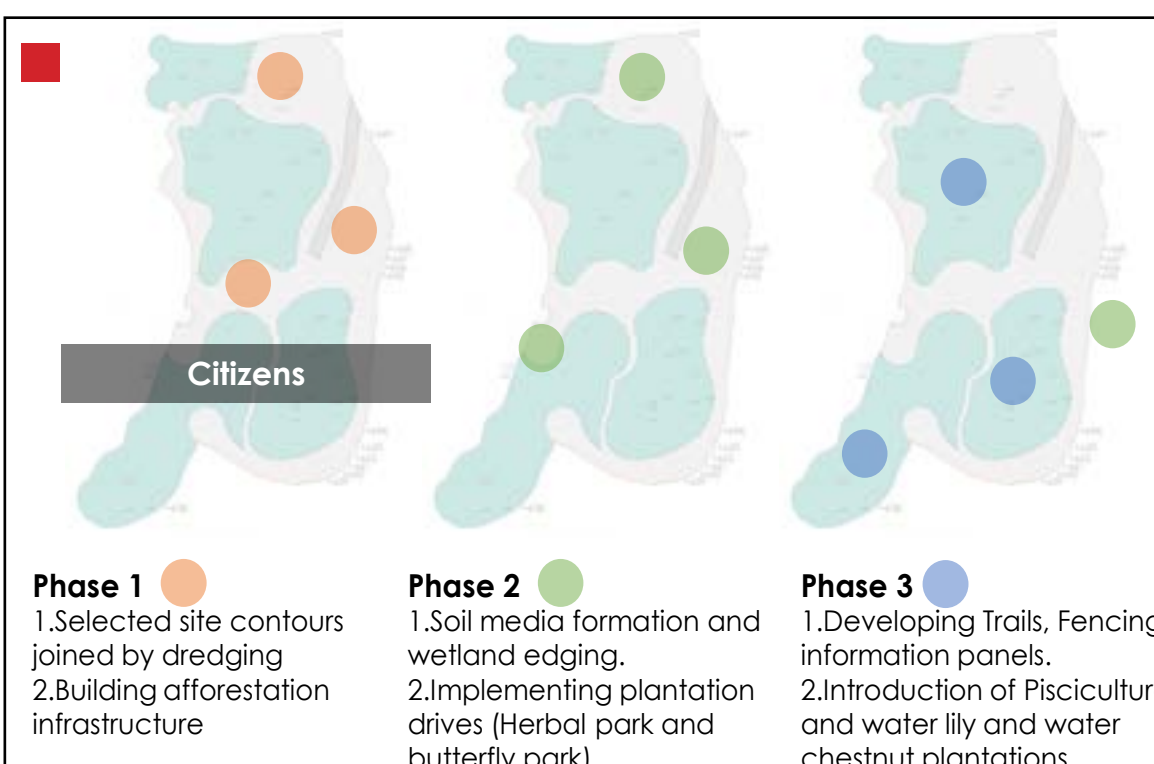
Fishing Agency

Investor

Adventure sports agency



Key Plan Of The ARAI Nature Trail



- **Capital Expenses: Rs. 14.0 Cr**
- **Maintenance: Rs 7.0 Cr for 10 years**
- **Expected Government Grant: Rs. 10.00 Cr**
- **Expenses over 10 Years (including capital cost – grant) = Rs. 11.00 Cr**
- **Per year Revenue: 1.72 Cr**

Return period = 7 years

Possible Funding –

Compensatory Afforestation Fund Management and Planning Authority (CAMPA) funds.

also be used to rejuvenate wetlands, and infrastructure development to support the rejuvenate.

Capital and Revenue Grants of Urban Local Bodies (Entry Fees)

Also The ULBs can make conditions and provisions to collect entry fee as their revenue to meet O&M costs of the facility created.

Assumption :
Operation and maintenance cost is increasing at the rate of inflation.
Entry fees shall be revised in proportion with rate of inflation.
Revenue from plantation shall be extra.

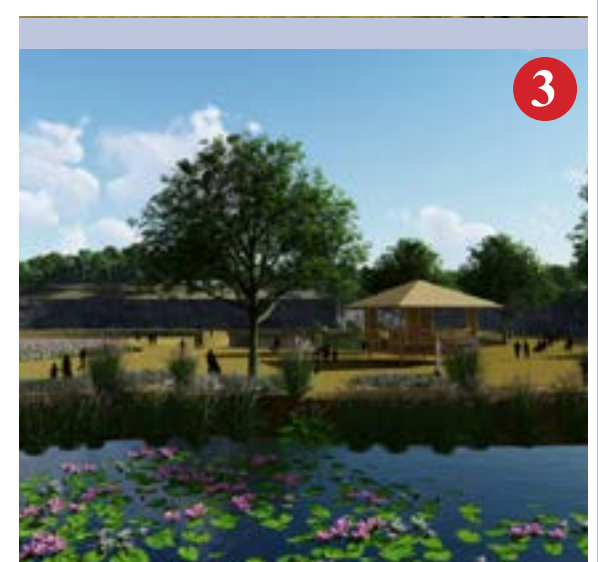
Proposed 3D views



Butterfly and Sculpture Park



Pisciculture (Decks for fishing)



Lotus Plantations



Visitor Interpretation Centre



Nature Interpretation Centre