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LIST OF ABBREVIATIONS

AMC	Alandi Municipal Council
EMP	Environmental Management Plan
ESR	Elevated Storage Reservoir
GLSR	Ground Level Service Reservoir
GSI	Geological Survey of India
IMD	Indian Meteorological Department
IEIP	Integrated Environment Improvement Projects
LPCD	Litres Per Capita Per Day
MLD	Million Litres Per Day
MJP	Maharshtra Jeevan Pradhikaran
MPCB	Maharashtra Pollution Control Board
MPN	Most Probable Number
SOI	Survey of India
STP	Sewerage Treatment Plant
UA	Urban Agglomeration
WSAPL	Wilbur Smith Associates Private Limited

PREFACE

The religious places in India are the most important assets to be preserved since these are also the most favored destinations for the domestic as well as International tourists. The State of Maharashtra has a laudable history of saints and pilgrim places; hence it is rightfully called "Santanchi Bhoomi" (Land of Saints). The religious places in Maharashtra are mostly located in small cities or towns having population of less than 2 lakhs. The local authorities neither have adequate funds to protect the archaeological and heritage importance of such places nor do they have infrastructure that can manage the floating population that converges on the festive days or the religious occasions at such places. This puts a very heavy demand on the available, infrastructure and amenities in such towns and creates several environmental problems which adversely affect public health and environment.

The pollution problems arising out of the activities at these places include: water pollution of adjoining streams, rivers and lakes due to bathing, washing of clothes and human excreta; ground water pollution due to poor MSW management, noise and dust pollution due to unplanned vehicular traffic and poor road condition, visual pollution due to littering of plastic bags and containers and environment unfriendly landscapes etc. These problems are aggravated during the festive and other important days of religious celebrations due to poor / inadequate infrastructure management practices.

Considering the seriousness of the issues the Board considered implementation of project on environmental improvement of religious places in its 139th Meeting held on January 22, 2004. A conceptual paper regarding the environmental improvement at Shirdi, Shani-Shingnapur and Alandi Devasthan was presented at this meeting and the concept of undertaking such projects in Maharashtra was in principle approved by the Board. It is decided to engage the services of M/s. Wilber Smith Associates Pvt. Ltd., Bangalore (WSAPL) to undertake the study of Shirdi, Shani- Shingnapur and Alandi so that a detailed assessment of the environmental problems, infrastructure and financial resources required to tackle these issues at the above places can be worked out in the first phase before the actual implementation of the project can be considered by the Board. The project proposals are based on the concept of eco-city project being implemented by MoEF/CPCB at Mathura, Vrindavan etc.

Dr. D.B. Boralkar

Member Secretary
Maharashtra Pollution Control Board

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PROJECT TEAM

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1.0 PROJECT BRIEF

1.1 BACKGROUND OF THE PROJECT

The land of Maharashtra is blessed by the holy stay of many a great Saints and Spiritual Leaders. Some of the most important pilgrim destinations in Maharashtra are Pandharpur, Tulajapur, Shirdi, Shani Shinganapur, Alandi, Dehu, Ashta Vinayak etc. These pilgrim towns attract large number of pilgrims from various parts of the country. However, typically most of these places are small towns/villages with populations ranging about a few thousands and hence lack the necessary infrastructure to cater to the large of pilgrims visiting them every year. As a result this has put lot of stress on the local natural resources and there has been a steady degradation of the local environmental conditions.

Considering the seriousness of the issues, the Maharashtra Pollution Control Board (MPCB), considered the implementation of a project on environmental improvement of religious places in its 139th meeting held on January 22, 2004. A conceptual paper regarding the environmental improvement at Shirdi, Shani Shinganapur and Alandi was presented at this meeting and the concept of undertaking such a project in Maharashtra was in principle approved by the Board.

The objective of the project is to identify the environmental problems of these religious places identify the suitable projects, prepare the PFR & DPR for the priority projects and provide the logistic support for raising the financial support from Central/State Govt, Public-private partnerships, individual doner organisations, NGOs etc. MPCB may also consider financing some of the path breaking projects and provide logistic support for raising the financial, so as to improve the overall environment and serenity of these places of religious importance. The local bodies, Deosthan committees, NGOs are expected to, operate and maintain such infrastructure provided through MPCB / CPCB's assistance.

For this purpose, MPCB has engaged the services of WSAPL to carry out a detailed assessment of the environmental problems, infrastructure needs in Alandi, Shirdi and Shani Shinganapur and prepare a technical project report in line with the guidelines of Eco-City Project being implemented by CPCB.

1.2 ENVIRONMENTAL ISSUES IN RELIGIOUS TOWNS

Pilgrim towns are places developed around holy sites, usually associated with the exploits of the gods, the waters of sacred rivers or the presence of holy men, which attract people for pilgrimage and related religious activities. People travelling to these places (pilgrims) usually visit temples to experience the sacred (deity) through prescribed rituals in the religion that is supposed to be more satisfying on auspicious occasions.

Religious places in India are the most favoured destinations for domestic and international tourists and are the most important assets to be preserved by the country. Typically, pilgrim towns in India had been small towns situated in pristine environments to provide solace to the pilgrims seeking spiritual help away from worldly matters. Revered by pilgrims as sacred places, these places generally attract large number of pilgrims and tourists during the specific days / months of importance related to particular religious place. Congregation of such large number of people in a very short span of time leads to the collapse of basic infrastructure and associated health and environmental problems.

Today, many pilgrim towns have shown signs of rapid urbanisation, for example in Shirdi 'the process of modernisation, improvement in transport infrastructure and communication

has turned the city of pilgrimage to a place of modern tourism'. Problems in the pilgrim towns have become more complex that have changed from issues purely related to pilgrimage (with religious motivation) as 'occasional events' to problems of regular visits of floating population and urban expansion driven by such activity i.e. as a part of religious travel and tourism activities. The carrying capacities of such towns have been stressed by influx of visitors over a longer duration, leading to degradation of the very source of natural and religious environment that generated the activity of pilgrimage. It is also high time for considering the typical religious culture of these towns & avoiding the westernised approach towards modernisation of these places. The sheer volume of visitors makes such places vulnerable to severe environmental impacts seen in increased problems of disposal of solid waste and surface water, high levels of pollution (air, water and noise), constrained water supply, overcrowding, etc with rampant deforestation for provision of more amenities and facilities.

Generally these places are small towns with population barely about a lakh or so and the local authorities with inadequate funds and infrastructure can not manage such a sudden spurt of demand for basic infrastructure and amenities. In addition to inadequate infrastructure, these religious places also face the following environmental problems/issues due to the afflux of pilgrims and tourists.

- Pollution of rivers / lakes or other water bodies
- Disposal of untreated sewage and absence of sanitation facilities
- Indiscriminate disposal of solid waste
- Contamination of drinking water systems
- Risk of spreading water borne diseases due to the absence of health and sanitation facilities and
- Other problems such as noise pollution, dust pollution, etc.

1.3 ENVIRONMENTAL MANAGEMENT IN RELIGIOUS TOWNS

Environmental management in pilgrim towns primarily includes decision making on managing resources and minimising impacts of the visitors. Typical stakeholders in pilgrim towns are-

1.3.1 Government Agencies

These include the State Government, District Administration and Local Authority. District level administration is the main agency that works on behalf of the State Government in organising for peak pilgrimage (on important occasions).

1.3.2 Religious Institutions

The institutions established for religious purposes are important in a pilgrim town as most of the issues relate to religious activity of pilgrimage. Generally, there are three types of religious institutions in a pilgrim town, namely-

1.3.3 Temple Trusts

Primary functions of the trust are to maintain the temple, perform the rituals in worship of the deities and protect the temple properties.

1.3.4 Ashrams and Mutts

Their function is to perform spiritual activities besides pooja (worship) and provide lodging and boarding to their disciples of certain faith, cult or sect. Mutts are private properties usually managed by caretakers or managers with a focus to serve the pilgrims and visitors.

1.3.5 Charitable Organisations and Public Trusts for charitable purposes

These area set-up with a purpose to serve for the welfare of the communities.

13.6 Non- governmental Organisations (NGOs)

In general, NGOs are an important player in such places where social welfare activities are of great importance. Environmental concerns and initiatives are increasingly becoming a part of their agenda.

Many of the above-mentioned issues, associated with pilgrimage, are similar to those arising out of mass tourism. While the impacts from pilgrimage are inevitable and inseparable from local activities, it is important to look at how they are responded to, managed and minimised. A common belief is that the deity (God) will take care of all the problems and 'He does'. Thus, presence of religious institutions in such places renders high potential to realise their role in environmental management, as they are a key player in the religious activity of pilgrimage, which also happens to be the main cause of environmental problems.

Sections below presents the objectives, approach and methodology proposed to be adopted by the Consultants for the preparation of Project Report for Alandi.

1.4 APPROACH AND METHODOLOGY

The approach to the study is based on the experience of the consultants in working on the projects of similar nature in Tamil Nadu and Rajasthan and is organised in the following three major phases.

Phase – I	Preparation of Concept Plan for Environmental Improvement of Shirdi and
Phase – II	Feasibility study of the specific concepts.
Phase – III	Detailed Project Report for the proposed infrastructure improvements (with block cost estimates only)

In the first phase, a detailed analysis of the existing situation of Shirdi, in terms of civic amenities, tourist infrastructure and environmental features of the area will be conducted and a broad concept of improving the environmental condition of the town will be prepared. The concept prepared will then be discussed with all the stakeholder organisations for finalisation.

A feasibility study of the finalised concept plan will then be carried out in phase 2, to estimate the financial and environmental viability of the same. The feasibility study will provide all necessary cost estimates and conceptual designs for approaching CPCB for funding in the 3rd phase.

Since the proposed study is primarily in the interest of the Devasthan and the local people as well as the many pilgrims visiting Shirdi at large, the approach for the study has been all participatory. For this purpose, initially Stakeholders' meetings were organised at Alandi and on Janaury 19th, 2005. The respective Temple Trust authorities, Municipality authorities, officials from various concerned departments including MPCB officials as well local NGOs were invited for the meetings. These meetings helped in sensitising the Stakeholders about the project and their participation in the study. Also, their views on the local environmental issues and the mitigative measures were obtained during the meetings.

The meetings were followed by field studies by the Consultant Team through field reconnaissance surveys and collection of relevant data on demography, socio-economy, pilgrims, infrastructure available and the various schemes/project proposed from the concerned departments and the temple trust. Also, primary environmental monitoring was carried out to understand the baseline environmental status in the towns with respect to air, noise and water quality. The primary and secondary data has been used to assess the present environmental status in the towns and the adequacy of the available infrastructure such as

water supply & sanitation, transportation, roads etc., in the normal and peak tourist season. The outcome of the above exercise helped in identification of the key environmental issues and the interventions required for improving the environmental quality. The project, thus, identified were discussed with the concerned MPCB authorities and the Stakeholders and prioritised for preparation of the Feasibility Study Report in the second phase of the project.

1.5 STUDY OBJECTIVES

The present study aims at an integrated environmental improvement of Alandi by identification of the support infrastructure needs to minimise stress on the natural resources during normal and peak seasons and attain sustainable development of the pilgrim town. The primary objectives of the project are;.

- Identification of civic infrastructure needs for environmental improvement in Alandi
- Improvement of infrastructure facilities of Alandi
- Conservation/ protection and improvement of environmental and religious/historic assets of the town, thereby enhancing the tourism potential and
- To transform the pilgrimage to these towns as an environment friendly excursion

1.6 SCOPE OF WORK

The scope of the present study as per the Terms of Reference (ToR) consists of the following.

I. Study of the present environmental status and the available related infrastructure facilities and services in Alandi town.
II. Delineation of the study area.
III. Collection of primary and secondary environmental data/information and undertaking field reconnaissance surveys.
IV. Preliminary identification and prioritisation of projects for environmental improvement of the town.
V. Feasibility study for short-listed projects and preparation of block cost estimates.
VI. To suggest guidelines for preparation of DPRs for the identified priority projects.

1.7 REPORT ORGANISATION

This report is organised in Seven Chapters as below.

- The ***First Chapter*** of the report i.e. the present chapter discusses the background of the project, scope and objectives of the study and methodology adopted for the study.
- The town demographic, socio-economic and natural resource profile are discussed in detail in the ***Second Chapter*** on Town Profile.
- The ***Third Chapter*** on Civic Infrastructure deals with the infrastructure in the town, and assesses the current status of service delivery, system performance, and determines the key issues and problems.
- The various infrastructure facilities available for the convenience of the tourists visiting the project town as well as the additional facilities arranged during peak festive season are dealt with separately in the ***Forth Chapter*** on Tourist Infrastructure.
- The present status of the various environmental components such as air, water and noise, vis-a-vis the applicable CPCB standards, is presented in the ***Fifth Chapter*** on Baseline Environmental Status.
- The various environmental issues emerging out of the study are presented in this ***Sixth Chapter*** on Environment Related Issues.
- The ***Seventh Chapter*** summarises the environmental issues in the town and suggests the projects, which may help to for integrated environmental improvement of the town.

2.0 - TOWN PROFILE

2.1 INTRODUCTION

A brief profile of the project town and its salient features are discussed in this section. The chapter presents the religious and socio-economic background of Alandi, its physical and environmental setting, and discusses the trends, if any, in the growth of the town. The profile of the project area is based on the secondary information such as the Annual Report of the Municipality, data from the Census of India and the information gathered through discussions with the officials of the Alandi Municipality and the Temple Trust.

2.2 LOCATION AND ACCESSIBILITY

The Alandi town is situated on the banks of the River Indrayani in Khed taluka in Pune District of Maharashtra State. It is located at 18.67°N Latitude and 73.90°E Longitude. It is approximately 25 km from Pune and situated about 2 to 3 km off the Pune-Nashik National Highway No. 50 (NH-50). It is about 10 km from the Pimpri Chinchwad Industrial Complex. Alandi is connected to Pune, the District Head Quarter and nearby main urban centres by a Major District Road (MDR) called Pune-Chakan Road.

A location map of the Alandi town is presented in **Figure 2.1**. Similarly, a map showingthe regional setting of the town is presented as **Figure 2.2**.

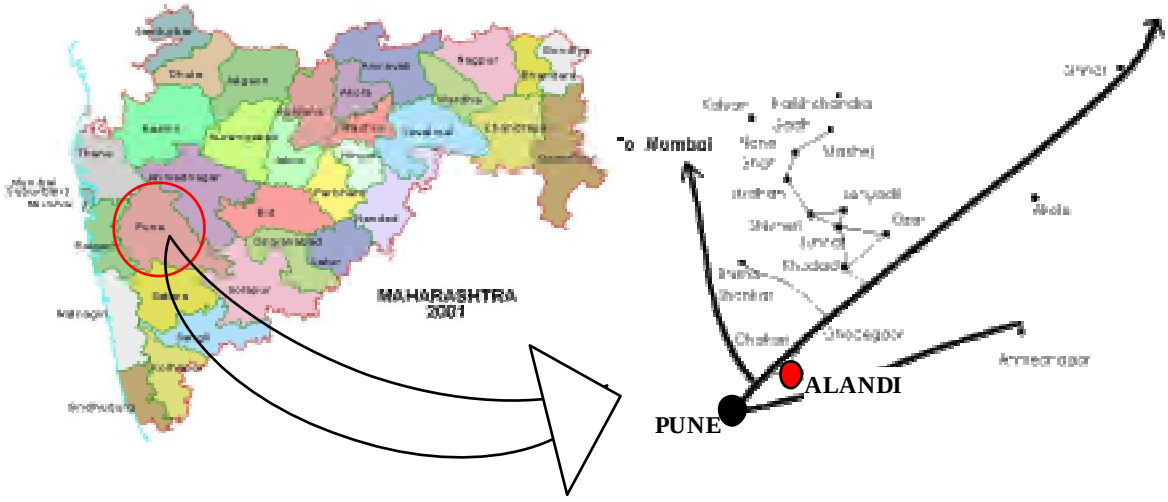


Figure 2.1: Location Map of Alandi

2.3 RELIGIOUS AND HISTORICAL BACKGROUND OF ALANDI

Alandi has a special place in the religious life of Maharashtra, as this is the place where the great Marathi Saint Poet "Sant Dnyaneshwar Maharaj" took 'Sajeeva Samadhi' at the age of twenty two in December 1296 AD after penning the most spirited work of Marathi the 'Dnyaneshwari', which is his Marathi commentary on the Bhagwat Geeta. Dnyaneshwari contains the essence of Vedas, Geeta and his own empirical knowledge.

Major Roads in Alandi

Important Junctions

Environmental Monitoring Stations

- Surface water Monitoring location
- Ambient air quality Monitoring location
- Noise Monitoring location

CONSULTANT: Wilbur Smith Associates Pvt. Ltd.

TITLE: Environmental Monitoring Locations

SCALE: Not to Scale

DATE

CLIENT: Maharashtra Pollution Control Board

PROJECT: Action Plan for Environmental Improvement in Alandi

DWG. NO:

The name of Sant Dnyaneshwar is on the lips of everyone in Maharashtra. He was a born Siddha. He was a Yogi of high attainments. He had control over the elements. His work Dnyaneshwari is the crest-jewel of Marathi literature. The simple style, the beautiful illustrations and the apt similes have rendered the book attractive, charming and extremely useful. Dnyaneshwari is to Maharashtrians what the Ramayan of Tulsidas is to the Hindi-speaking people. Dnyandev was a great social and religious reformer. He boldly criticised his predecessors.

Ghats on Left Bank of Indrayani River

Popularly known as "Devachi Alandi", Alandi has the samadhi and a temple of the Saint Poet Sant Dnyaneshwar. The temple was built in 1570. The Saint spent most part of his short lifespan in Alandi. He inspired the entire Maharashtra to worship Lord Panduranga. Like Pandharpur, Alandi is also a true a pilgrim center for every Maharashtrian.

Alandi has been an important religious destination for the *Varkari* sect and has been a seat of spirituality. Especially in context with Maharashtra's cultural and religious importance, Alandi has been a major destination with a large number of devotees of Vitthal Rakhumai visiting the town especially in the month of *Ashadha*.

In the ancient times, Alandi was a small hamlet, known as Alankapuri or Alankawati. Though neglected in the middle age for some time, Alandi has been famous from the time of Puranas and has mentions in the history since 768 AD. In the recent history, Chhatrapati Shivaji Maharaj had assigned income to the Shri Dnyaneshwar Maharaj Sansthan. During the British rule, a municipality was established here in the in the year 1869 AD.

2.3.1 Places of Interest in Alandi

The Temple and Samadhi of Sant Dnyaneshwar Maharaj

The temple and samadhi of Sant Dnyaneshwar Maharaj are situated on the left (north) bank of the Indrayani River. In addition to the Samadhi and temple of Sant Dnyaneshwar in the temple complex, called Devasthan, the other temples in the Devasthan Premises are;

- Haybatbaba Mandir
- Siddheswar Mandir
- Laxminath Mandir
- Muktai Mandir
- Vital Rukhmini Mandir
- Pundlik Mandir

- Dhyan Mandir
- Nath par
- Suvarna Pimpal
- Ajan Vruksh
- The famous wall on which Dnyaneshwar sat and flew the wall to meet Changdev (Holy Wall)
- Prasadalaya

The temple is more than 450 years old and is constructed in stones. The Samadhi temple is worth to see and creates a pleasant atmosphere. This temple was built in 1570. It has three entrance gateways, the West side entrance is called Pan Darvaja, East entrance is calledthe Ganesh Darvaja and the North entrance is called the Mahadwar. There are five 'Gabharas' (Sanctum Sanctorum) namely Mahadwar Mandap, Veena Gabhara, Karanja Gabhara, Pankha Gabhara and Mauli Gabhara. The Temple has three "Nagar Khana"; one of the Devasthan, second previously owned by the Shinde family but the name still continues and the thirdis of the Nizam of the erstwhile Hyderabad State.

Other Places of Interest

The other religious places in Alandi are Vitthal – Rakhumai temple, Ram temple, Krishna temple, Muktai temple Math of Swami Hariharendra and Siddhabet in Indrayani. The Chaitanya Ashrama on the Sakhare Maharaj Ashram are two other important religious institutions on the right bank of the Indrayani River. A temple of Jalasan Baba, a famous Gujarathi Saint, is also situated in the Alandi town.

Dehu: Dehu is a place of Sant Tukaram - well known saint in Maharashtra. He livedhere and taught people how to pray the god. He and Sant Dnyaneshwar were the popular saints and both worshiped Lord Vitthal. The "Palakhi" in the month of "Ashadh" from Dehu is one of the main attractions of Dehu. Many people are taking part in it from so many years still now.

Dehu is a place where the "Abhang" of Sant Tukaram can be remembered. One can see his temple here on the banks of river. This temple was constructed by his younger son Narayanbaba in 1723. Various other temples near the worth to see. A rock where Sant Tukaram was on fast is also here.

Chakan: Maharashtra is a state of forts and one famous fort near Pune is Chakan. Last Maratha - British war took place in this fort. Now this fort is in real dilapidated state. The fort is built on the ground, which is a rare kind of fort seen in Maharashtra. Chakan is very famous for Oil Industry and various other industries as it is a part of industrial zone near Pune. One more place that can be visited in Chakan is the temple where "Varah Avatar" of Lord Vishnu is depicted is the stone carvings. Varah means pig. This was the third avatar of Lord Vishnu. Varah Avatar can be seen very rarely in India. This remains of the carvings are found in an ancient temple of Shri Chakreshwar which is inside the fort itself. These carvings are really worth seeing.

Vadhu – Tulapur: Vadhu and Tulapur are the places related with Sambhaji - the son of Shivaji Maharaj. Sambhaji was killed in Tulapur and his samadhi was built in Vadhu. Thus, both these places are historically very important.

Tulapur is situated on the banks of 3 rivers- Bhima, Bhama and Indrayani. It is famous for the temple of Lord Shiva. In this temple - known as Sangameshwar, Sambhaji was arrested by Aurangzeb and was later killed. Tulapur was originally known as ' Nagargaon'. A small temple here is very beautiful and must see. And next to the temple, the samadhi of Sambhaji Maharaj is built. It is really a place where one can remember the famous Maratha.

Vadhu is very near from Tulapur where the dead body of Sambhaji Maharaj was brought and then was cremated. So you can see the samadhi at both the places. An idol of Sambhaji Maharaj was put up in 1977 in Vadhu.

2.3.2 Festivals and Fairs

The most important festivals and events that are celebrated in Alandi are the "Palakhi from Alandi to Pandharpur" in the month of Ashadha, and the "Annual Fair on Kartik Purnima". These events are attended by thousands of devotees. The Palakhi, which is in the month of Ashadha, goes from Alandi to Pandharpur almost 150 km of distance by walk. Thousands of devotees take part in this Palakhi.

Palakhi, a unique feature of Maharashtrian culture, is a 1000-year-old tradition followed by the *Varkari* (people who follow the vari, a fundamental ritual). People collectively go singing and dancing, chanting "Dnyanba-Tukaram" in what are called as "*Dindi*" (organised group of *Varkaris*) to the holy town of Pandharpur in Hindu months of Ashadha (June-July) and Kartik (November-December).

The Palakhi starts in the month of Jyeshtha (June) and the whole process lasts a total of 22 days. Every year on the eleventh day of the first half of the month of Ashadh, the Palakhi reaches Pandharpur. The Ashadhi Ekadashi falls in the month of July – August, whereas the Kartiki Ekadashi falls in the month of November - December. (Period may vary slightly as per the Lunar Calendar). Annual fairs (melas) are held on the Ashadhi and Kartiki Ekadashi. A large number of the *Varkaris* gather on the banks of the Indrayani River during these festivals.

2.3.3 Religious Tourism

As mentioned earlier, Alandi is located in the Pune district, close to many of the famous religious places in Maharashtra for example, Ashta Vinayak, Bhima Shankar etc. Also, Dehu, the birthplace of another great Saint-Poet Sant Tukaram, is also located on the bank of the Indrayani River, about 15 km.s from Alandi.

From ancient times, the pilgrimage to Dehu and Alandi, alongwith the Vitthal-Rakhumai temple at Pandharpur, is considered to be the most pious religious tour (Teertha yatra) by the Maharashtrians. A walk to these destinations, popularly known as "Vari", is still an important part of the yearly ritual of many Maharashtrians, especially from rural Maharashtra.

Of late, due to the availability of faster modes of transport namely, expressway/highway, railway and airport, in its proximity, Alandi is well connected to the rest of the World. This has also seen increase in "Mass Tourism" in the region in the form of package tours, week-end tours from Pune and Mumbai etc., in addition to the normal flow of pilgrims throughout the year. As a result the daily number of pilgrims visiting Alandi has been increasing steadily. On important festival days / events, this number reaches to almost half a million.

A major part of the local economy is based on the religious activities in Alandi and Dehu. The town population is involved in transportation of devotees and shops selling religious items and memorabilia.

2.4 DEMOGRAPHIC PROFILE

2.4.1 Population

As per 2001 Census Alandi town has a population of 17,565 which increased from 10,249 in 1991. The last decade has shown substantial growth rate (71.34 percent) which is much more higher than the growth rate between 1981-91 which was only 36.24 percent. The same is also reflected in the increase in number of households in this period. The increase in the population since 1991 could be mainly due to the rise and expansion in the industrial and economic activities in and around Pune city. As per the Municipal Officials, the current population of the town is estimated to be 18600. The total municipal area of Alandi is 6.84 sq. km. The town is divided into 17 wards for the purpose of administration.

Table 2.1: Population Growth in Alandi

Year	Population			Decadal Growth	Households
	Male	*Female*	*Total*	*Percent*	*Nos.*
1901	-	-	2029		-
1911	-	-	1624	- 20.00	-
1921	-	-	1568	- 3.44	-
1931	-	-	1666	+ 5.88	-
1941	-	-	2170	+23.22	-
1951	-	-	2432	+12.07	-
1961	-	-	2029	- 16.57	-
1971	2546	2272	4788	+50.24	
1981	-	-	7523	+57.12	1804
1991	5601	4648	10249	+36.24	2539
2001	9825	7740	17565	+71.38	4383

Source: Census of India and DP 1988 – 1998, Alandi

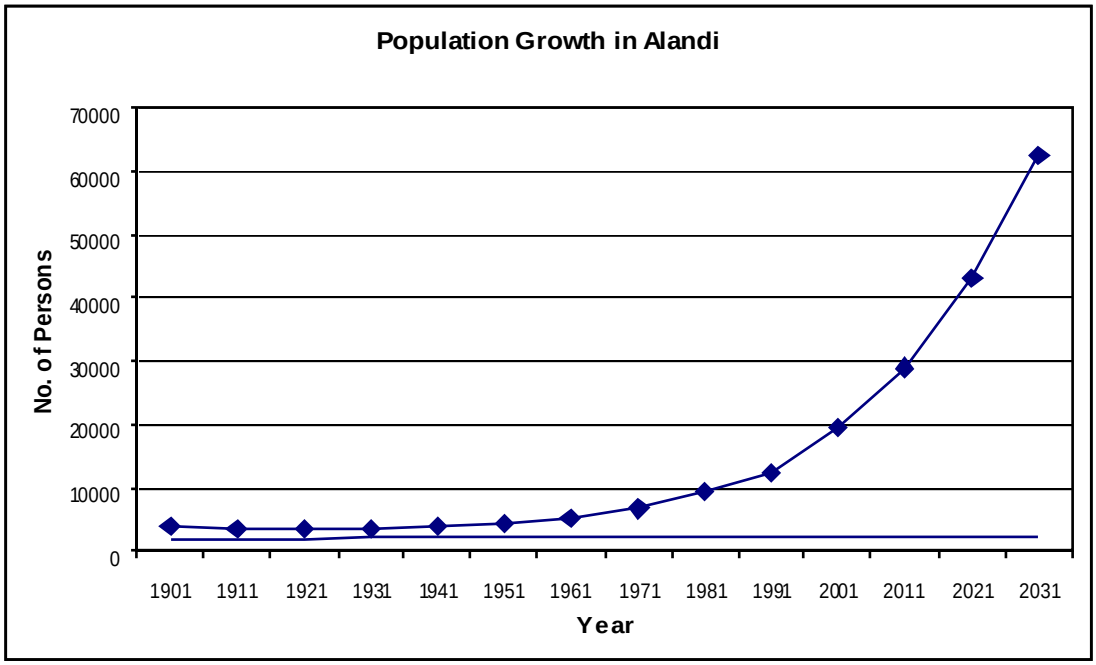


Table 2.2 : Ward wise Population in Alandi

Ward No	Population	
	1991	2001
Ward No.1	638	893
Ward No.2	1082	1876
Ward No.3	316	752
Ward No.4	332	1501
Ward No.5	574	1491
Ward No.6	582	1133
Ward No.7	640	864
Ward No.8	1046	470
Ward No.9	820	2420
Ward No.10	637	1923
Ward No.11	361	1040
Ward No.12	376	601
Ward No.13	307	449
Ward No.14	403	534
Ward No.15	325	726
Ward No.16	303	341
Ward No.17	391	551
Ward No. 18	388	-
Ward No. 19	438	-
Ward No. 20	290	-
Total	**10249**	**17565**

Source : Census of India 1991, 2001

The above wards have been regrouped into 5 wards or "Prabhags" for electoral and administrative purposes. In all Alandi has 17 councillors thus 3 are elected from 3 wards and 4 councillors are elected from the remaining 2. The details of the wards and their locations are given below. The details of ward boundaries and areas included are given in the annexure.

Table 2.3 : Electoral wards in Alandi

Sr. No.	Name of the Ward	No. of members elected
1	Fruit wala Dharmashala	3
2	Primary school no. 14	3
3	Shree Gajanan Maharaj Sansthan	3
4	Narsimha Maharaj Math and Dyaneshwar Maharj Bhinta (Holy Wall)	4
5	Shree Dyaneshwar Maharaj Mani and Hajeri Maruti Mandir	4

Source: Alandi Municipal Council

Sex ratio

Based on the 2001 Census data, the number of female per 1000 male in Alandi is 788, which has decreased from 829 females per 1000 male in 1991.

Population density

Based on the 2001 census data, the population density of the town is estimated to be 2567 persons per sq km. Most of the population is concentrated in the Gaothan area around the Dnyaneshwar Maharaj Samadhi Temple. The area of Gaothan is about 8 hectares. Following the trends of population growth, the population density has shown consistent growth in past three decades. As presented in **Table 2.3**, the density has more than doubled from about 1013 persons per sq.km in 1981 to 2567 persons per sq.km in 2001. The town's overall population density is quite high.

Table 2.4 : Population Density in Alandi

Year	Population	Area	Population Density.	Increase in Population Density
	Nos.	*Sq. km*	*Persons per Sq km.*	*Percent*
1981	6931	6.84	1013	
1991	10,249	6.84	1498	47.88 %
2001	17,561	6.84	2567	41.64 %

Source: Alandi Municipality Annual Report 2002-03

Slums

As per the Annual report (2002-03) of the Alandi Municipality, there are 325 illegal huts in the Alandi town, wherein about 360 families stay.

Table 2.5 : Slums in Alandi

Area	Status	No. of huts	Population	Facilities /Amenities					
				WS	Roads & Drainage	Power	Community centre	Educational institutes	Cultural centre
Vadgaon Rd - Padmavati Rd	Illegal	160	850	Available	NA	NA	NA	NA	NA
Chakan Chowk	Illegal	80	600	Available	NA	NA	NA	NA	NA
Kalewadi Road	Illegal	75	500	Available	NA	NA	NA	NA	NA

Literacy

Pune is a well-known Centre for Education in India. Alandi, due to its proximity to Pune and the developed Pune-Mumbai belt has many educational institutions in its vicinity. As per Census 2001, the overall literacy rate in Alandi Town is 73.12 %, which has gone up from about 69 % in 1991. The male literacy rate as per 2001 census is 80.65 % and female literacy rate is 63.58 %.

2.4.2 Floating Population

As mentioned earlier, Alandi is an important pilgrim centre in Maharashtra. The floating population in the town is attributable mainly to the large number of pilgrims visiting the town. On an average, 12-15 lakh pilgrims visit Alandi annually. On normal days, about 10,000 to 12,000 pilgrims visit Alandi daily. However, on Thursdays and weekends this figure goes to as high as 25000. On the Ekadashi days (twice in a month) about 60,000 to 70,000 people visit Alandi. On the two annual events of Ashadhi and Kartiki Ekadashi, as many as 3 to 5 lakh pilgrims visit Alandi.

Last one decade has seen significant increase in pilgrim flow to Alandi which may be attributed to the overall increase in religious tourism in the country, and also to the increase in the population of the Pune and Mumbai metropolitan regions, and hence the inflow of devotees from there.

Table 2.6 : Floating Population

Important Festivals	Months	No. of days	Devotees inflow
Ashadhi Palakhi Prasthan	July – Aug	2	3-5 Lakh
Kartiki Prasthan	Oct – Nov	5	3- 5 Lakh
Monthly Ekadashi (12)		1	60 – 70 Thousand
Makar Sankrant (Mainly Lady Devotees)	Jan	1	50 – 60 Thousand
Gokul Ashtami, Adhik Pornima	Aug - Sept	1	15- 20 Thousand

Important Festivals	Months	No. of days	Devotees inflow
Daily Floating Population		1	10 – 12 thousand
Thursdays and Weekends		1	25000
Yearly			12 – 15 lakh

Source: Alandi Devasthan

2.5 TRADE AND COMMERCE

2.5.1 Major Economic Activities

The economy of the Khed taluk is predominantly based on agriculture. However, the local economy of Alandi town also has a major share of the activities related to religious tourism. Locally, the main occupations include cultivation, agricultural labour, services in the temple complex, small businesses for sale of religious items and memorabilia and flowers, local transportation, small scale hotels & restaurants etc. In addition, the industrial units in the nearby industrial areas namely Chakan, also provide employment to some of the local people.

The major commercial and market areas are along the religious structures on the main roads. It's proximity to major city like Pune has helped it to become a one day tourist spot with large number of religious tourist on weekend fuelling the religious business activities near the temples. The regions around the town being rich in agriculture are established in sugarcane cultivation.

2.5.2 Workforce Participation

According to Census 2001, Alandi urban workforce participation rate (WPR) (percentage of main and marginal workers to the total population) is 52.26 percent.

Table 2.7 : Occupational Pattern

Sector	Workers	
	Nos.	*Percent*
Cultivators	339	5%
Agricultural Labour	540	9%
Manufacturing and Processing in Household Industries Labour	179	3%
Other services	5113	83%
Marginal Workers	-	
Total Main Workers	6171	100%
Non Workers	11390	

Source: Alandi Municipality Annual Report 2002-03

2.6 CLIMATE

Alandi is situated on the Deccan Plateau, on the top of the Sahyadri ranges. The Indrayani River flows through the town. These natural factors have provided a pleasant weather in the region throughout the year. Maximum temperature is generally attained in the month of April or May (in summer season) and the minimum temperature is generally recorded in the month of December-January (in winter season). Based on the available data for the period of 1931 to 1961, the maximum temperature recorded was 37.9°C whereas the minimum temperature recorded was 12°C. The main Kartiki Fair in the town takes place in the month of November or December when the temperature is minimum.

The relative humidity is generally maximum in the month of August and minimum in the month of March. The town is situated to the East of the Sahyadri mountains in the rain shadow area. The average annual rainfall is 603 mm. The Monsoon season is spread over the period of June to September. Maximum rainfall is in the month of July. The following table gives the climatological data for Alandi.

Table 2.8 : Climatological Data for Alandi (1931 to 1960) Monthly Average

Month	Rainfall mm	Temperature °C		Mean Relative Humidity (%)	
		Min	Max	Morning	Evening
January	1.9	12.0	30.7	74	30
February	10.3	13.3	32.9	64	23
March	3.1	16.8	36.1	52	20
April	17.6	20.6	37.9	50	26
May	34.7	22.6	37.2	58	36
June	102.8	23.0	31.9	74	63
July	186.8	22.0	27.8	83	78
August	106.4	21.5	27.7	85	77
September	127.3	20.8	29.2	82	71
October	91.9	19.3	31.8	79	52
November	87.0	15.0	30.8	73	40
December	4.9	12.0	30.1	75	35

Source: Development Plan of Alandi (1988-98) prepared by Directorate of Town and Country Planning, Maharashtra

2.7 TOPOGRAPHY AND GEOLOGY

2.7.1 Topography and Natural Drainage

Alandi is located at an altitude of 548 m above mean sea level on the Deccan Plateau. It is situated on the banks of the Indrayani River and the town is developed along both the banks of the river. The land is generally plain and the general slope is towards the East. The Gaothan area is sloping towards the South. There is a hill towards the southwest of the town situated in a revenue village called Charholi. The hill is without any vegetation.

2.7.2 Geology

The geology of the region is based on the Deccan Trap Basalts. The rock is dark grey to greenish grey in colour. Brownish to purplish tints is also met with. The specific gravity is 2.9 on an average. Generally two types are seen. The non-vesicular types are hard, tough, and compact and medium to fine grained, with conchoidal fracture. The vesicular or amygdular types are comparatively soft and break more easily.

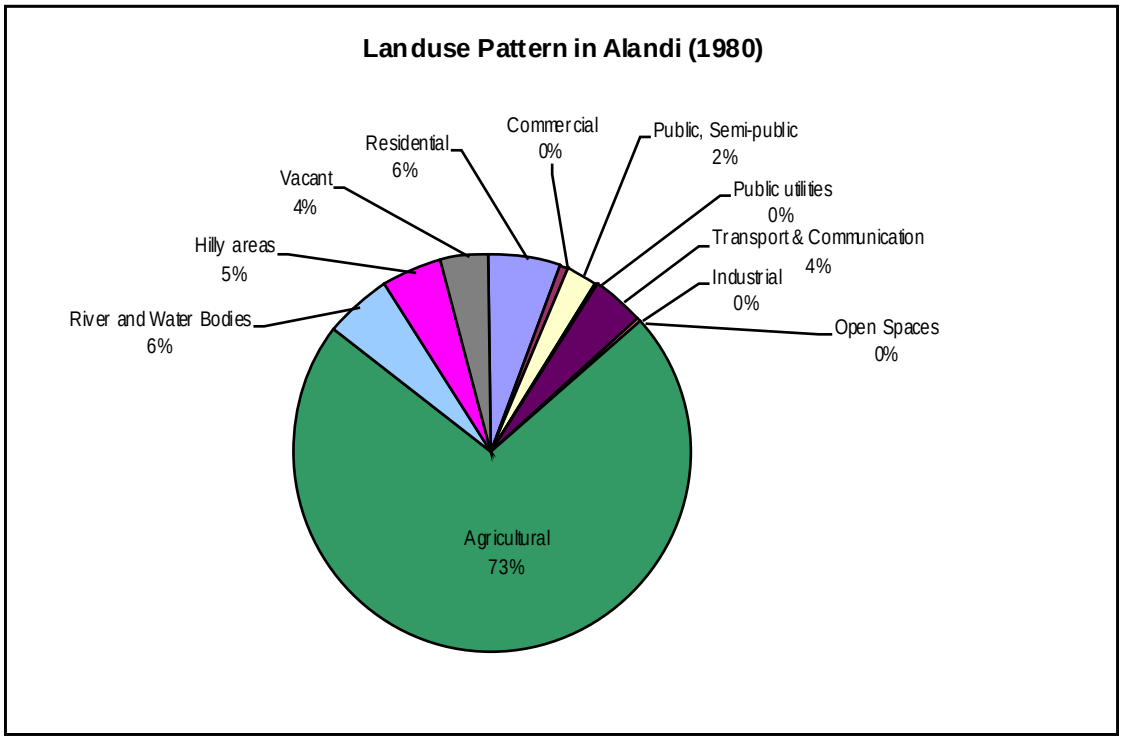
2.8 LANDUSE

The landuse plan of Alandi based on the 1988-98 Development Plan of Alandi prepared by the Town Planning Department of Alandi, is provided herewith in **Table 2.8**. The total municipal area as on 1980 was 2.73 sq. km (273.15 ha). The distribution of various landuses in 1980 is presented below. However, fresh landuse survey needs to be carried out to understand the present landuse.

Table 2.9 : Landuse Details of Alandi (1988-98)

Sl No.	Landuse type	Area	
		Ha	%
1	Residential	16.31	5.97%
2	Commercial	1.15	0.42%
3	Public, Semi-public	6.63	2.43%
4	Public utilities	1.31	0.48%
5	Transport & Communication	10.89	3.99%
6	Industrial	0.56	0.21%
7	Open Spaces	0.06	0.02%
8	Agricultural	196.79	72.04%
9	River and Water Bodies	15.26	5.59%
10	Hilly areas	13.33	4.88%
11	Vacant	10.86	3.98%
12	TOTAL	273.15	100%

Source: Development Plan of Alandi 1988-98, Directorate of Town and Country Planning Maharashtra



The land included within the Municipal limits, except Gaothan (central area/old town), is mainly used for agricultural purpose. Major agricultural fields are located on the South and West side of the Indrayani River in Charholi village. The agricultural fields are also seen on the northern side of the Gaothan area along the roads leading to Chakan, Vadgaon, Bhoshi, Solu and Charholi. However, now development is taking place along the roads leading to Pune, Chakan, and Dehu.

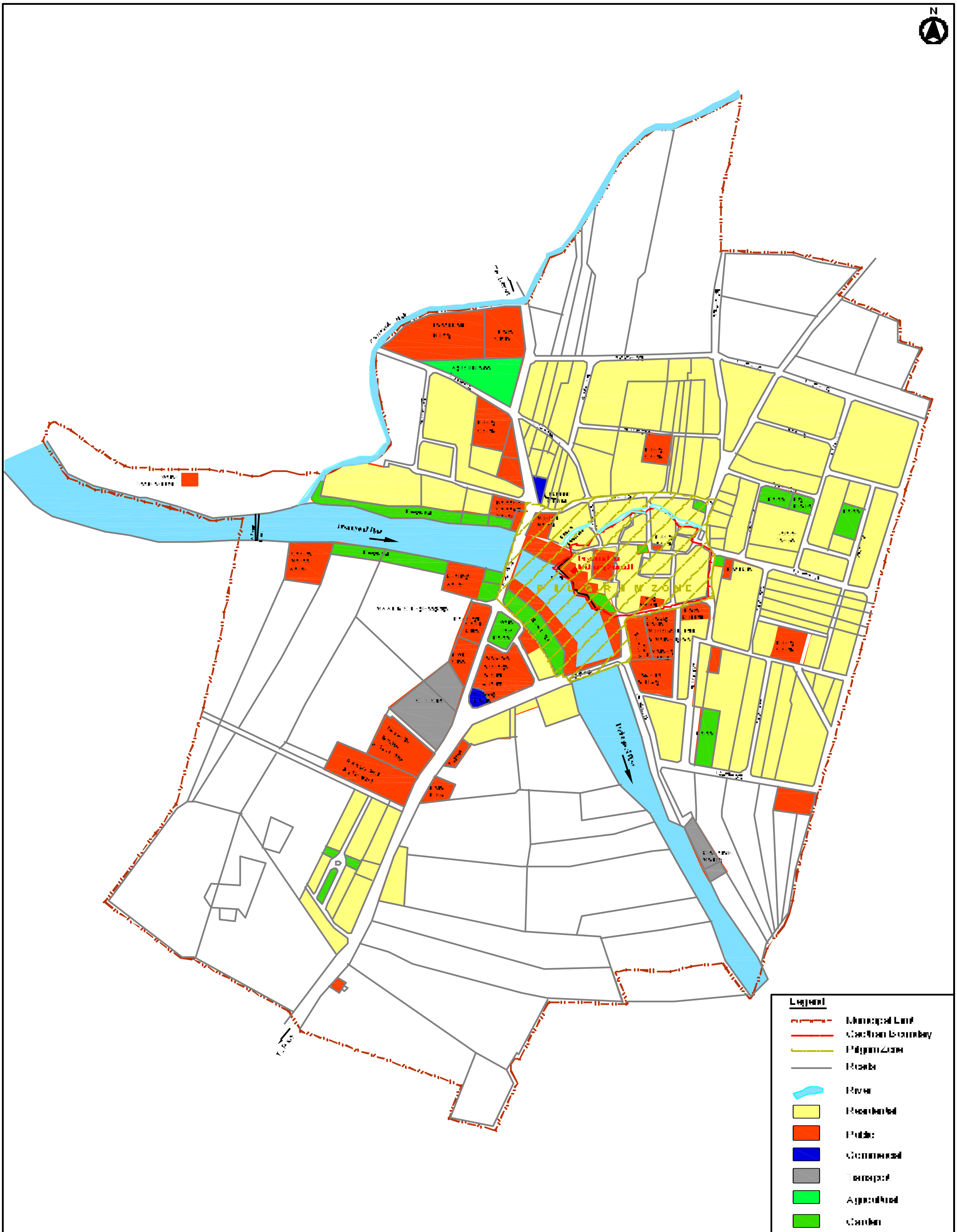
The landuse in the Gaothan area is mainly residential and public, semi-public due to the temple. However, presently mixed landuse can be seen in the Gaothan area due to concentration of the residential, commercial and public/semi-public (religious) areas. The main Temple Complex is situated in the centre of the town along the northern bank of the Indrayani River, and all the commercial activities are spread around the temple.

The Indrayani River separates the town into two parts. However, major developed sector

including the Dnyaneshwar temple complex and the Gaothan area, is situated on the left (northern) bank of the river. Scattered development/habitation has taken place on the remaining part of the land. On the Right Bank of Indrayani, development has taken place along the Alandi-Pune road and the road leading to Dehu.

It may be seen from the landuse data that the area under transport and communication activity is comparatively more because of the fact that the town is a pilgrimage centre and hence there are many connections to the town from the surrounding area. Alandi being an old historic town, the roads comprise mainly narrow lanes through continuous array of residential structures. The Pune-Chakan major district road is the major road passing through the town.

Percentage of commercial, industrial and open spaces is very meagre. Lack of open spaces in a major tourist place like Alandi is a matter of concern. No industrial use has been permitted in Alandi as per the policy framed under the sanctioned Regional Plan of Pune.



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Wilbur Smith Associates Pvt. Ltd.	Figure No 2.3 Landuse Map of Alandi - [illegible] - [illegible]	DATE:
CLIENT: Maharashtra Pollution Control Board	PROJECT: Action Plan for Environmental Improvement for Alandi	DWG. NO:

2.9 ENVIRONMENTAL RESOURCES

2.9.1 Indrayani River

Incomplete Sewer Line near Old bridge

The Indrayani River flowing through the Alandi town is the main surface waterbody in the area. The River is formed by the many small streams in monsoon in the Sahyadri ranges. It originates near Kurvande Village in the Sahyadri ranges, about three miles southwest of Lonavala, It flows on the whole east through the Nane maval and further down it is joined by the Andhra River on the left. It then enters the open country and passes via Dehu, a place of pilgrimage sacred to the Vani Saint "Sant Tukaram". From Dehu the river flows about 20 km south-east by the Alandi town, and after keeping south-east for about 32 km, turns and meets the Bhima near Tulapur after a course of about 100 km.

The Indrayani River is an important source of drinking water for the region. It is classified under Class A-1 (Unfiltered Public water supply after approved disinfection). There are two dams on the river near Alandi namely the Vadivale Dam, which is 3 km away, and the Alandi Dam, which is 1 km away from the town.

The Samadhi Temple of Dnyaneshwar Maharaj and other temples are located along the left bank of the river. Similarly, other important buildings such as the Municipality and the Town Hall and Library are located on the left bank of the river. The Alandi-Dehu Parisar Vikas Samiti has constructed a Coliseum along the right (southern) bank of the river. Both the banks of the river-stretch between the old bridge and the new bridge are developed as Bathing Ghats for the convenience of the devotees for taking bath and performing various religious rites.

The Bhagirath nala is another important surface water body in the town carrying the surface runoff and sewage from the town. It finally discharges into the intercepting sewer, near the parking area of AMC. The nala passes through the dense habitation of the gaothan area. The nala carrying sullage and wastewater created unhygienic condition within the densely habited gaothan area. This caused a lot problems such as stink, mosquito breeding and visual pollution to the nearby residents. Hence around 2000 – 01 the nala was covered with concrete slab within the habited area.

Another important stream joining the River is the Padmavati Nala, which also forms the northwestern boundary of the municipal limits. The width of the River within the town is around 55 m and its length is about 1.7 km.

2.9.2 Ground Water

The availability of ground water in Alandi is reported to be satisfactory. As per the 6th groundwater assessment (GEC 97) of the Groundwater Surveys And Development Agency, Pune the details of groundwater are as below.

Table 2.10 : Groundwater Profile of Alandi

Sr.No.	Particular	Details
1	Name of the Villages	Alandi
2	Watershed	BM 25
3	Area of watershed, ha	20295

Sr.No.	Particular	Details
4	GW Worthy Area of watershed, ha	20295
5	Total No.of Irrigation Wells Considered	1270
6	Net Annual GW Recharge, ha.m	2219.30
7	Net GW Withdrawal , ha.m	1354.36
8	Net Balance GW in ham	864.94
9	Stage of Development	61.03 %
10	Category of watershed	Safe
11	Net GW Available for Future Irrigation Use, ha.m	797.22

The groundwater level fluctuation during last 5 years in Alandi is reported as below.

Table 2.11 : Fluctuation of Groundwater Levels in Alandi

Year	Water Level in m	
	May	October
2000	7.90	6.45
2001	6.95	5.95
2002	7.32	6.28
2003	7.74	7.17
2004	7.69	5.54

2.9.3 Forest and Vegetation

Alandi is situated in the Khed taluk of the Pune district. The area of total reserved forest in this taluka is about 215 sq km (83 sq miles). Of this, an area of about 72.5 sq km (28 sq miles), situated along the Western Ghats, is of evergreen type, and no exploitations are carried out in this area due to transport difficulties. This tract contains a good deal of Hirda trees, whose fruit forms a valuable forest produce. There is also a valuable growth of bamboos in the Velhavli and Bhomale reserves of this area. The deciduous zone starts from Wada and stretches towards the east for about 16 km and reaches Khed in the centre of the taluka. The forest areas to the east of this belt are more or less open blanks and contain only thorny bushes.

The types of vegetation in the Pune district are governed mainly by rainfall and altitude. Most of the vegetation is of scrub type including species like Bor (Zizyphus jujuba), polati (Acasia latronum) Nephtad (Dichrostachys cinerea), Hinganbet (Balanites Roxburghii), Saundad (Prosopis spicigera), Vagati (Capparis aphylla). The growth of these species is usually small and stunted. Nim (Azadirachta indica) is the only tree yielding timber of suitable size. As a notable exception, where the soil is better and blacker and where additional soil moisture is obtained, Babhul (acacia arabica) occurs in pockets as a pure crop.

2.10 LOCAL ADMINISTRATION

2.10.1 Civil Administration

The civil administration of Alandi town is looked after by the Alandi Municipal Council (AMC). The AMC was established by the then Bombay Government in 1869. At present AMC is administered as 'C' class Municipal Council. The Council President heads the Council. The councillors are elected by the public. The total area under the jurisdiction of the Municipal Council is 6.84 sq.km. The AMC provides basic facilities to the citizens such as water supply, health, sanitation and lighting.

2.10.2 Temple Administration

The temple administration is looked after by the temple trust – "Shri Dnyaneshwar Maharaj

Sansthan Committee". The committee was established in 1870. The committee looks after the day to day activities and maintenance of the temple and the surroundings and providing facilities such as food and accommodation to the devotees. The trust also makes special arrangements for drinking water and solid waste management during the peak pilgrim season. The trust has its own shop in the temple premises, during festival time 2 to 4 additional shops are opened here. Besides this the trust has given 22 shops on rent outside the premises.

2.10.3 NGOs and Voluntary Agencies

The Alandi-Dehu Parisar Vikas Samiti, headed by Dr. V.D. Karad a leading educationist, is an important local voluntary agencies working towards environmental conservation and overall development of Alandi. It has also set-up a World Peace Centre on the bank of the Indrayani River. The Samiti has also taken up the work to construct 8 Ghats along the river bank and tree plantation in the town.

3.0 - CIVIC INFRASTRUCTURE

3.1 INTRODUCTION

This Chapter presents information on the present status of various infrastructure facilities and services such as, water supply, sanitation, roads, solid waste management etc, available in Alandi. The data is further analysed for the adequacy these infrastructure facilities with respect to the current population and pilgrim inflow to the town. The key issues emerging out of this analysis are presented separately under each section. The data/information was gathered from the official documents namely the Annual Report of the Municipality for 2002-03 and the Development Plan of Alandi 1988-98. In addition, discussions were held with the Officials of the Municipality to bring out the various issues in infrastructure facilities.

3.2 WATER SUPPLY

3.2.1 Source

Alandi town is supplied with treated drinking water. The source of water is Indrayani River. Water is sourced from the Alandi Dam constructed on the Indrayani River. The dam is about 1.5 km upstream from the new bridge. During festivals when additional watyer is required it is sourced from the Vadivale Dam further up stream. The dam has a storage capacity of 0.769 MCM. The dam has a length of 200m anda height of 5.60 m. The scheme has been functional from 1981.


Alandi Weir

Source Works. Indrayani, is an east flowing river that passes through the town. The river works include

Table 3.1: Components of Intake Works

Component	Details
Intake well	
Construction	RCC
Shape & size	Circular, 1.8 m diameter, 2.75m heigh
Connecting pipe	
Material	2.75 m diameter, 42.70 m length
Jack well	
Diameter	3.6 m diameter, 11 m deep
Pump house	
Location	Located above jack well
Shape	Rectangular

Source: AMC, Water supply Dept.

Raw Water Pumps: The pumps are in working condition however there is frequent power cut especially during the summers. This affects the pumping process as there is no generator for back up.

Table 3.2: Raw Water Pump Sets Details

Description	Details
Number of pump sets	3
Type	Submersible pump
HP of motor	15HP each
Diesel Generator	150 KVA

Source: AMC, Water Supply Dept.

Raw Water Pumping Main. Raw water is pumped through the main, laid from the river works to the water treatment plant near the Alandi Dam.

Table 3.3: Raw Water Pumping Main Details

Description	Details
Diameter	0.32 m
Length	15.50m
Material	Cast iron pipe line

Source: AMC, Water Supply Dept.

Water Treatment Plant. The plant is located near the Alandi Dam. Its capacity is 1.68 MLD. An additional settling tank of 1.68 MLD is provided. However, it is not used for daily water supply and does not form part of the WTP. It is an old treatment plant. The civil structures are in poor condition. The treatment plant has the following units described in **Table 3.5.** The treatment plant was constructed by Maharashtra Jeevan Pradhikaran (MJP) and handed over to the Municipality in 1993. However, it was informed that the WTP has not been cleaned since then. Also, the capacity of the WTP needs to be augmented for smooth supply of water.


Water Treatment Plant

Table 3.4: Components of Water Treatment Plant

Description	Details
Inlet chamber	10’ dia x 5’ deep
Alum tanks	1 of 10’ dia x 5’ deep
Flash mixer	6' x 6' x 10'
Flocculator	20’ dia x 40’ deep
Settling tanks	1 of 20' dia x 15' deep
Filters	2 bed of 10' x 15' x 12'
Filter house building	36' x 33'9" x 4'3"

Source: AMC, Water Supply Dept and MJP

3.2.3 Volume and supply level

At present 16.5 lakh litres per day (1.65 MLD) of water is being supplied to the town. The supply level during normal period is 80 to 90 LPCD (avg 85 lpcd); during summers, it is 70 LPCD. At the time of festivals 3.5 MLD of water is supplied to the town. The rate of supply for floating population is about 20 LPCD.

3.2.4 Coverage and Distribution


ESR & Vegetable Market on Markal Road

The town can be broadly divided into two zones for distribution of water. The Gaothan area and other residential areas on the left bank of the river, and Kalewadi, Dehu Phata and other newly developed areas on the right bank of the river. The clear water from the WTP is pumped into two ESR of 4 and 4.5 lakh litre capacities each. The water from the treatment plant is conveyed to the ESR by a 12" dia CI pipe of 2 km length. These are located at the Markal Chowk on the Pradakshina Marg. Supply to the town is through gravity from these ESR's. One GLSR of 38,000-litre capacity is located at Kalewadi, which takes care of the needs of the areas on the Right Bank of the town.

The water is supplied through piped network of about 50000 meters length. There are 1327 domestic connections and about 40 public taps catering to the needs of the devotees and general public.

The Gaothan Area is connected with house-to-house tap connection. The new developed area on the southern bank of the river also receives piped supply from the municipality. The total length of 50 km of pipeline includes some nearby villages outside the municipality limits also.

The municipality supplies drinking water to the Temple also. The temple also depends on an open well and a bore well for their water requirements. But the water from the borewell is hard water and they need a softening plant.

The entire water supply sourcing, treatment and distribution is looked after by the municipal administration. The MJP provides technical assistance to the Municipality, whenever required.

Table 3.5 : Water Supply Overview

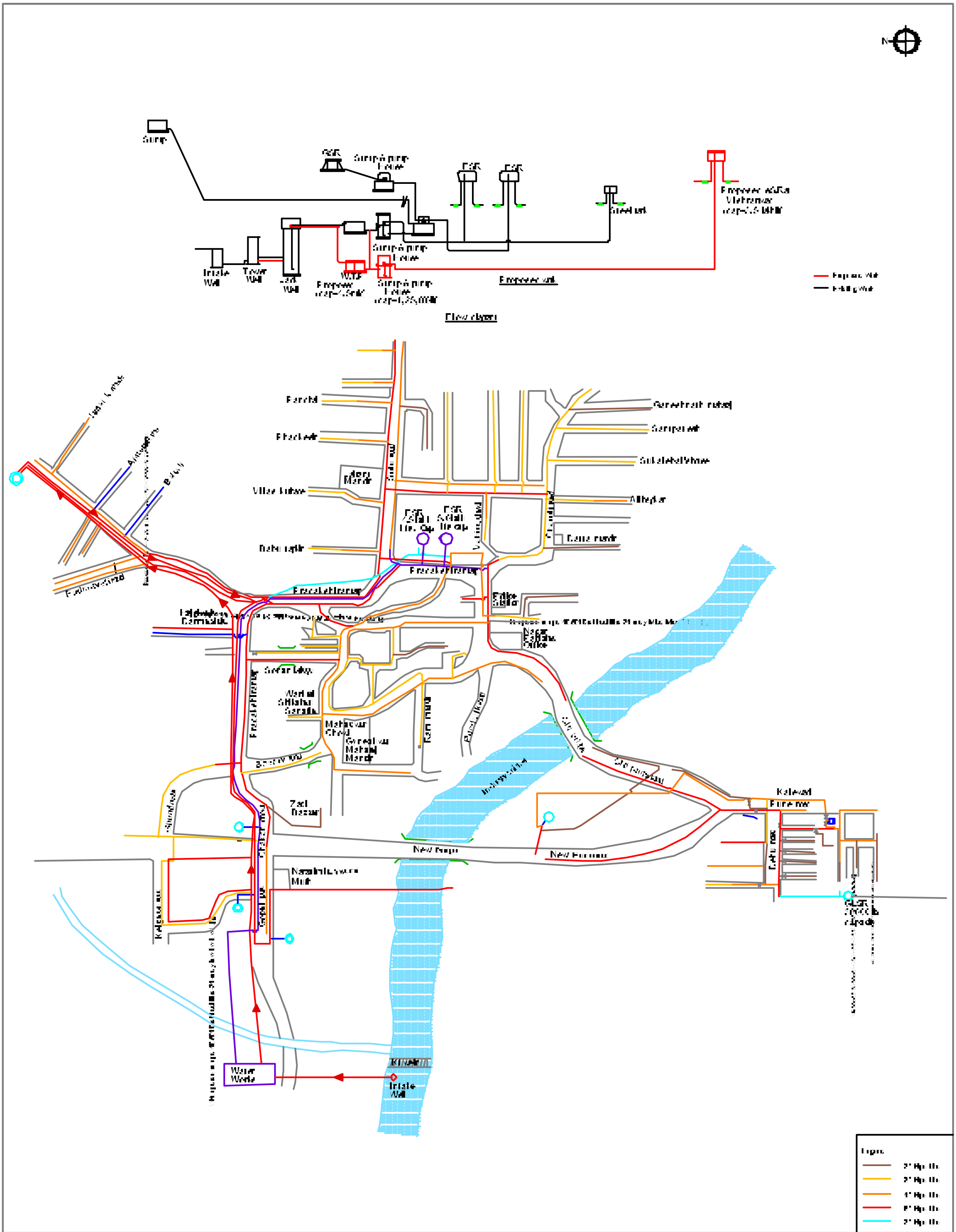
Description	Units	Values
Overhead Tanks / GLSR		2/1
Total Storage Capacity		9.88 lakh litres
Daily water Supply		1.65 MLD
Length of Distribution Network		Approximately 25 km
Duration of Water Supply (Normal Season)		6.00am to 9.00am 4.00 pm to 6.00 pm
House Connections		1723
Total area of Alandi	*Sq. km*	6.84
Total no. of households	*No.*	4383
Households covered by house service connections	*No*	1327
Percentage of households served by house service connections	*%*	30
Ground Water Use		15,000 to 20,000 Ltrs

Source: Alandi Municipality Annual Report 2002-03

3.2.5 Key Issues

- Increasing demand due to increasing floating population
- The temple depends on a well and a bore well for their requirements. However, the water from the borewell is hard water and they need a softening plant.

- Operation and maintenance of the WTP is poor. The plant was constructed by MJP and handed over to the municipality in 1993 but it has not been cleaned since then.
- A new WTP will have to be constructed with increased capacity.
- The present manpower looking after the water supply treatment and distribution is grossly inadequate. When the scheme was managed by MJP in 1981 there were 45 people working in the department including technically qualified engineers. Now the strength has reduced to 10 and all of them are on contract basis and have learnt the job through experience. There is not a single qualified engineer in the water supply department. The technical advice is provided by MJP, Pune, whenever required.
- The distribution network is old and its condition needs to be assessed.



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Wilbur Smith Associates Pvt. Ltd.

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Figure No.3.1

Water Distribution Network of Wai

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DATE

CLIENT:

Maharashtra Pollution Control Board

PROJECT:

Action Plan for Environmental Improvement

for Wai

DWG. NO:

3.3 SEWERAGE AND SANITATION

3.3.1 Existing sewerage system

There is no existing sewerage system in the town and the sewage disposal is based on septic tank system. A sullage scheme was developed and executed in the year 1985 consisting of collecting sewer, sump well, dry well and sump house, pumping machinery etc. The collecting sewer was laid along the left bank of the river and it received sewage sullage from the Bhagirath Nala and other parts of the town. However, the intercepting sewer is broken near the new bridge and the scheme is not functional now. The scheme had been planned to utilise the sullage water for agricultural purposes after primary treatment. A new intercepting sewer has been laid from behind the Samadhi Mandir near Dyaneshwar Ghat. The sewage and wastewater is let off in the Indrayani River near the old bridge.

3.3.2 Existing Sanitation System

The individual sanitation facilities (toilets) are available in only about 30% of the total household in the town. Open defecation is seen in parts of the town. There are 6 Sulabh Shauchalyas (public toilets) with total of 88 seats in Alandi out of which one is constructed by Alandi-Dehu Parisar Vikas Samiti and others constructed by the Municipality. There are 6 public urinals with 15 units. Disposal of the Night soil is made through hand carts and carried to solid waste disposal site on Vadgaon Road. The AMC also has vehicle for cleaning of septic tanks.

Location of Public Toilets

- Chavadi Chowk
- Vadgaon Road
- AMC Staff quarters behind AMC office
- On the river bank near the Nagar Parishad Chowk
- Primary school near on Kelgaon Road
- Near PMT bus stand new bridge

SW Collection Vehicles of AMC

There is toilet block at PCMT bus stand near the crematorium but it is presently not in use due to non-availability of water.

The present resident population and floating population of Alandi generate about 2.5 MLD of sewage and 1.7 MLD of sullage. This is either disposed on ground or most of it finds its way to the Indrayani River. This has lead to pollution of the river and poses health risks to the residents of Alandi as well as downstream villages. The unhygienic condition of the river can cause epidemics during fairs and festivals when lakhs of pilgrims visit the town.

Table 3.6 : Existing Sanitation Facilities

Type	Number
Individual facilities	1365
Public toilets	6 toilet blocks with 88 units
Public urinals	6 urinal blocks with 15 units

Source: Alandi Municipality Annual Report 2002-03

3.3.3 Drainage

The rainwater run-off is drained through open gutters on the roadside. The drains carry both sewage and storm water. The town has about 50 kms of drains on both sides of the road. The break up of drains is given below in the following **Table 3.3**.

The kutcha drains get blocked and led to spillage of sewage on the roads. The drains finally lead to Bhagirathi nalah and river Indrayani.

Table 3.7 : Type of Drains in Alandi

Type of drains	Length in Km
Open drains	25
Closed drains	15
Underground drains	10
Total drain length	50

Source: Alandi Municipality Annual Report 2002-03



3.3.4 Key Issues

- Alandi town does not have any underground sewerage system and sewage treatment facility.
- Individual septic tanks and dry latrines provide the disposal system for household night soil.
- The domestic untreated sewage flows through the roadside drains into the nallahs and pollutes the watercourses.
- The Bhagirathi Nala has been covered by concrete slabs /boxes recently. It is an important nala carrying sewage and sullage water.
- Existing storm water drains and nalas have been covered with slabs and at many places shops have been put on these slabs.
- Absence of sewerage system and high risk of pollution of groundwater by the existing system
- Disposal of sewage into the river without treatment resulting in high risk of water-borne diseases and skin diseases to the pilgrims taking bath in the river.
- The number of Public Toilets considering the daily pilgrim flow of about 7000 to 8000 is highly inadequate. Temporary toilets were made available by the government to the tune to 40 seats but only 20 were put up during last Vari.
- The main problem is identifying suitable location for putting up the public toilets in order to prevent open defecation along the river and at other places.

3.4 TRAFFIC & TRANSPORTATION

The issues of traffic and transportation comprise the available roads network and its adequacy, condition of the road surface, availability of footpaths, road width and traffic congestion, local transport system, maintenance of the roads etc.

3.4.1 Town Transport System / Public Transport

The Pune Municipal Transport (PMT) and Pimpri-Chinchwad Municipal Transport (PCMT) have local bus services for Alandi from Pune, Pimpri and Chinchwad, respectively. PCMT and PMT have their own parking for 5–6 buses. Details of PMT and PCMT routes are given below. PMT has three routes connecting different parts of Pune to Alandi and PCMT has 8 routes connecting different areas under the PCMC and nearby areas to Alandi.

PMT Bus Stand, Chakan Chowk

By virtue of the location of their bus stations the PCMT buses do not enter the core area of the town, whereas the PMT buses take the Pradakshina Marg to enter/exit the town.

The MSRTC bus station is located along the Pune Road before the new bridge on the Indrayani River. The old bus station of MSRTC was located in an area of about 900 sq. m near the municipality office.

Table 3.8 : Details of PMT and PCMT Bus routes

Name of the route	No. of buses	No. of trips
PMT Routes		
Alandi - Swargate	8	3
Alandi – PMC (Shivaji Nagar)	8	3
Alandi - Hadpsar	2	2
PCMT Routes		
Pimpri Gaon - Alandi	1	4
Chinchwad Gaon Alandi	1	3
Hinjawadi - Aandi	1	3
Balewadi – Alandi	1	3
Jambh – Alandi	1	2
Sangvi – Alandi	1	2
Pimple Nilak – Alandi	1	3
Bhosari - Alandi	2	14 (7 each)

Source: PMC and PCMT Bus Depot, Alandi

3.4.2 Existing Road Network and Developments

Alandi is connected to the District Head Quarter Pune and nearby main urban centres through the Pune-Nashik NH-50 and a Major District Road (MDR). It is also connected to the Moshi village on the NH-50 by a road leading to Dehu, another religious town. Chakan, a village also situated on the NH-50, is connected to Alandi by a MDR passing through the town.

Internally, the entire Alandi town is connected by various small roads and lanes. The internal roads are mostly 7 m wide. However, the effective width is significantly reduced due to

roadside parking, shops. Also, the roads are irregular and have awkward shape.

The major roads in the Alandi town are as below. These roads cater to the demand of the commercial traffic through the town.

Table 3.9 : Major Roads in Alandi

Sl No	Road	Type	Width (ft)
1	Pune-Chakan Road over new bridge	BT	60
2	Branch of Pune-Chakan Road to Alandi Nagar Parishad over old bridge	BT	60
3	Dehu Phata from Pune – Chakan Road	BT	60
4	Municipality office – Rath – Vadgaon Chowk - Bharav Road - (Pradakshina Marg)	BT	25 to 40
	Municipality office to Samadhi Temple (Mahadwar Road)	BT	25
5	Markal Road	BT	40
6	Vadgaon Road	BT	50
7	Padmavati Road	WBM	50
8	Charholi Road (Cosmos Bank to Municipal boundary)	WBM + BT	30
9	Chakan Chowk to Water Treatment Plant	WBM	20
10	Kelgaon Road	BT	30

Source : Development Plan of Alandi 1988-98 and field survey 2005

The Pune – Markal road, via the old river bridge-AMC office through the Alandi town, witnesses movement of heavy commercial vehicles such as trucks, trailers and containers, carrying goods, machinery and materials for the industrial area near Markal village. In addition, the vehicles going towards the temple via the Mahadwar Road, PMT buses andthe local traffic also move on this road. Many restaurants and shops as well as the AMC office, Police Station are located on this road. Indiscriminate parking of vehicles is seen alongthis road, particularly in front of the AMC office, where the road takes a sharp turn. As a result, traffic jams are common in this area even though the traffic volume could be relatively less.

Nagar Parishad Chowk

Pradakshina Marg

Similarly, the Pradakshina Road from the Vadgaon Chowk to Chakan Chowk witnesses traffic congestions due to indiscriminate parking of vehicles along roadside, movement of heavy vehicles and more pedestrian traffic due to location of the Holy Wall and other important temples as well as many Dharmashalas (Guest Houses) on this stretch.

The Pradakshina Marg is a 30 ft (9.14 m) wide tar road. It is the most important road in the town since it forms the circular route for the holy walk ("Pradakshina" in Marathi) around the temple and also has the other important temples, religious places and Dharmashalas located along the road. During the time of the Ashadhi and Kartiki Ekadashi lakhs of pilgrims take a walk along the Pradakshina Marg. The heavy vehicles to Markal and Chakan industrial area and the PMT buses also ply via the Pradakshina Marg.

The road network in Alandi is about 18 km, of which 10 km are Bitumen Topped (BT) roads and about 2 km are Concrete roads. About 4 km of roads are Water Bound Macadam (WBM) roads and another 2 km of roads are Kutcha roads. The narrow bylanes in the Gaothan area and two streets from the Charholi road have been concretised. The road from Vadgaon Chowk to Padmavati and its bylanes are WBM roads.

Table 3.10 : Existing Road Network.

Category of Roads	Length, km	Distribution %
Municipal Roads		
Surfaced Roads		
Bitumen Topped	10	55.56
Concrete	2	11.11
Un- surfaced Roads		
WBM	4	22.22
Earthen/Kutcha	2	11.11
Total Length	**18**	**100**

Source: Alandi Municipality Annual Report 2002-03

Table 3.11 : Roads Maintained by PWD and Zilla Parishad

Sl No.	Road	Type	Approx. Length (km)
	Roads maintained by PWD		
1	Pune road (from Municipal boundary to start of both the bridges)	BT	1.25
2	Dehu Road	BT	0.55
3	Markal Road	BT	0.4
4	Charholi Road (Cosmos Bank to Municipal boundary)	WBM + BT	0.5
5	Vadgaon Road (Vadgaon Chowk to Municipal boundary)	BT	0.5
	Sub-total PWD roads		**3.2**
	Roads maintained by Zilla Parishad		
1	Kelgaon Road	BT	0.4
2	Chakan Road (Chakan chowk to Municipal boundary)	BT	0.5
	Sub-total ZP roads		**0.9**
	Total		**4.1**

Source : Alandi Municipal Council

Within the municipal limits, the average width of the roads range between 3-18 m (10 to 60

ft). However, roads within the Gaothan area of the town, in particular within the ambit of the Pradakshina Marg, are narrow bylanes and have a width ranging from 3 to 8 m (10 to 25 ft). The road surface is either concrete or bituminous in nature.

Of the total 18 km of roads in Alandi, about 77 percent are maintained by the AMC, about 18 percent by the PWD, and the remaining 5 percent are maintained by the ZP. Cement concrete roads constitute only 11 percent of the roads. Most of the roads are black topped / tar and constitute about 55 percent of the existing roads. The density of roads in the town is 2.63 km/sq. km. The per-capita road length is 1.02 m, which is less than the standard of 1.75 m.


Vadgaon Chowk

The important traffic junctions in Alandi town are;

Table 3.12 : Important Traffic Junctions in Alandi

Sl No.	Name	No. of Roads
1	Junction in front of Municipality office (Nagar Parishad Chowk)	3
2	Markal Chowk	2
3	Rath	3
4	Vadgaon Chowk	3
5	Chakan Chowk	4
6	Y junction on Pune road bifurcating entry from old and new bridge	3
7	Dehu Road	2

Source: AMC and field Survey 2005

Of the above, the junctions at Nagar Parishad Chowk, Rath, Vadgaon Chowk and Chakan Chowk are prone to frequent traffic jams due to movement of heavy traffic, built up area, commercial activities, encroachments and haphazard parking.

3.4.3 Parking

Vehicle parking is a major area of concern in Alandi. At present there is only one parking lot owned by the Alandi Municipality located near the Chakan Chowk. The area of the parking lot is about 3300 sq.m. It is an open ground, which is also used for vehicle parking, and temporary vegetable shops and small restaurants along its boundary.

The PCMT buses are parked at the PCMT bus stand located near the old river bridge. This bus stand has a capacity to park 5 to 6 buses at a time. However, the bus stand is located on the designated road to the existing crematorium along the river bank.

The PMT buses are parked at the PMT bus stand at the Chakan Chowk. About 5 to 6 buses can be parked here.

In addition to the above, the open area in front of the Shri Dnyaneshwar Maharaj Samadhi Temple is also used for vehicle parking. It has an area of 150 to 180 sq.m (1600 to 2000 sq. ft) approximately.

Vehicles and auto rikshaws are also seen parked near the PCMT bus stand, Chakan chowk, Vadgaon chowk and also along the road sides.

At the time of the Ashadhi and Kartiki Ekadashi days, vehicles are not permitted within a radius of 3 km of the Dnyaneshwar Maharaj Temples. However, on normal days vehicles are permitted upto the temple entrance and can be seen parked in the small open area in front of the temple.


AMC Parking


Auto & Jeeps parked near PCMI Bus stand

Typical data on vehicles parked at the existing parking lot of the AMC near Chakan Chowk is given below.

Table 3.13: Details of Vehicle Parking at AMC Parking Area at Chakan Chowk in April 2005

Date	Day	2-Wheeler	4-Wheeler (Cars, Jeeps etc)	Heavy Vehicles (Buses, Mini Vans etc)
01-04-2005	Friday	98	76	10
02-04-2005	Saturday	60	81	9
03-04-2005	**Sunday**	**210**	**102**	**11**
04-04-2005	Monday	42	86	5
05-04-2005	**Tuesday**	**355**	**148**	**4**
06-04-2005	Wednesday	78	59	2
07-04-2005	**Thursday**	**123**	**88**	**5**
08-04-2005	Friday	47	46	2
09-04-2005	**Saturday**	**143**	**116**	**1**
10-04-2005	**Sunday**	**165**	**115**	**5**
11-04-2005	Monday	60	65	5
12-04-2005	Tuesday	72	77	0
13-04-2005	**Wednesday**	**125**	**94**	**8**
14-04-2005	**Thursday**	**193**	**96**	**5**
15-04-2005	Friday	57	93	3
16-04-2005	Saturday	44	120	17
17-04-2005	**Sunday**	**159**	**160**	**14**
18-04-2005	Monday	73	107	2
19-04-2005	Tuesday	49	158	17
20-04-2005	**Wednesday**	**170**	**157**	**10**
21-04-2005	**Thursday**	**134**	**158**	**7**
22-04-2005	**Friday**	**117**	**199**	**16**
23-04-2005	**Saturday**	**112**	**207**	**10**
24-04-2005	**Sunday**	**177**	**301**	**15**
25-04-2005	Monday	70	171	8
26-04-2005	**Tuesday**	**111**	**157**	**6**
27-04-2005	Wednesday	70	77	11
28-04-2005	**Thursday**	**156**	**94**	**14**
29-04-2005	**Friday**	**167**	**79**	**9**
30-04-2005	**Saturday**	**191**	**111**	**20**
Maximum		42	46	0
Minimum		355	301	20
Average		121	120	8

Source : Operator, AMC Parking

3.4.4 Street Lighting

Provision and maintenance of streetlights is an obligatory function of Alandi Municipality. The Alandi Municipality executes the work of installing new streetlight poles and cabling works. The Potentials of private sector participation in streetlight operation and maintenance need exploration.

Provision and maintenance of streetlights is an obligatory function of Alandi Municipality. There are 968 streetlights in the city, spaced at an average distance of 18.5m. Conventional fluorescent tube lights account for 85% of the total lights, and the Mercury and Sodium Vapour Lamps accounts for 15% of the total number of streetlights. High mast lighting and High-powered fixtures are absent in the town.

Table 3.14 : Street Lights

Luminary Type	Units	Distribution
	Nos	*%*
Halogen Lamps	-	
Mercury and Sodium Vapour Lamps	143	
Tube Lights	825	
Others	-	
Total	**968**	
Total road length, km	18	
Spacing of street lights, m	18.5	
Desired spacing		

Source: Alandi Municipality Annual Report 2002-03

3.4.5 Key Issues

Roads

- Roads in the Gaothan area are very narrow in width and are in awkward shape.
- Formation of bottlenecks in Gaothan area.
- Poor road surfaces quality, kuchha roads, resulting in wear and tear of vehicle tyres, slow traffic movement and dust pollution.
- Road encroachments effectively reducing the road width causing traffic jams and vehicular noise and air pollution
- No planned parking areas in the town. Haphazard parking causing reduction in effective road width and creating traffic hazards.
- Kuchha parking area resulting in dust pollution.
- The Pune-Chakan MDR passes through the town. This road is narrow and there are many acute angles to it. This results in creating accident spots and traffic jam.
- Residential development coming up outside the Gaothan does not have sufficient road link.

Street lights

- Large spacing between streetlights,
- Inadequate coverage – The new residential development is not sufficiently covered by streetlights.
- Poor lighting quality of road junctions
- Inadequate lighting on the river banks

3.5 POWER SUPPLY

The Alandi town is supplied with electricity by the Maharashtra State Electricity Board (MSEB). A permanent sub-station of MSEB is set-up at Alandi. The consumption of electricity is as follows

Table 3.15: Power Consumption in Alandi

No	Purpose	Consumption K.W. H
1	Domestic	2053 per day
2	Industrial	1000 per day
3	Other	400 per day

Source: Alandi Municipality Annual Report 2002-03

3.6 SOLID WASTE

3.6.1 Sources and Type of Solid Waste

The sources of solid waste generation in Alandi include the waste generated at various religious places in the town, Dharmashalas, hotesl, restaurants, the domestic solid waste from residential areas, waste form the public places such as bus stand and commercial areas.

Since Alandi is a major tourist center the waste generated in the town would contain large quantities of organic waste. From the field survey it was observed that the solid waste from the town largely contains organic waste from religious offering and functions, flowers, food items, households and markets, commercial waste like paper, plastic, bags, etc. and inert material like sand, stones and silt from street sweeping and drain cleaning activities.

3.6.2 Quantity of Solid waste

As per the preliminary estimates and discussions with the officials, the solid waste generated in the town is about 5 tons per day including that generated by the temple area. Out of this, only 3.5 ton of the waste is collected and transported. Thus, substantial quantity of the waste remains unattended.

Table 3.16: Solid Waste Generation in Alandi

Source of Waste Generation	Quantity	Total
	(MT/day)	*%*
Samadhi Temple complex	0.5	10.0
Households	1.5	30.0
Hotels (Dharmashala), restaurants and commercial establishments	1.5	30.0
Vegetable markets	0.5	10.0
Street sweepings, drain de-silting and others	1.0	20.0
Hospital waste (non-infectious and non-hazardous)	0.004	0.1
Total	**5.0**	**100.0**

Source: Analysis and discussions with AMC officials

Padmavati Road SWD Site

3.6.3 Existing Solid Waste Management System

At present, the Alandi Municipality carries out the collection and disposal of the solid waste. The collection of the waste is done twice a day and it is disposed at a designated dumping yard at Vishrant Vad on Vadgaon Road located at one kms from the town boundary.
The total manpower employed for solid waste management in the town consists of 52 employees of which 17 people are AMC staff and the remaining 35 are on contract.

Collection

At present, AMC does not have any primary collection system. The individual households dispose their waste into dustbins along the streets by their own means. AMC has provided about 100 RCC dustbins at various locations covering the entire town of Alandi for effective collection of waste. Dustbins have been provided on all major and minor roads and the average spacing of the dustbins is about 150 to 200 m (average 180 m for a road length of 18 km). However, this spacing is not uniform through out the town and it varies from place to place depending on the density and locality.

The reconnaissance survey conducted in the town and discussion with the AMC officials reveal that many of the households, shops and commercial establishments throw the waste on to the streets, drains, open spaces and along the river banks creating unhealthy conditions. Further, the waste thrown into the open drains is leading to choking and as a result, the wastewater flows on the streets rather than in drains and forms wastewater pools at certain locations.

There is no structured secondary collection of the solid waste for the town. Being a small town the whole process of collection of the waste is handled at primary collection level where waste from the dustbins is directly loaded into the transport vehicles and carried to disposal site. There are no transfer points for the waste collection.

Transportation

The waste collected from the town is then transported to the dumping ground with a mini lorry (Tata 407) and a tractor having a capcity of 4 ton and 1 ton respectively. Each vechilce makes two trips daily. However, considering the bulk density of the solid waste as 0.35, the actual collection of the waste is only 3.5 tons per day.

Existing SWD Site on Vadgaon Road

Disposal

At present the municipality dumps solid waste at a site on the Vadgaon Road near Vishrant Vad. The site has an approximate area of 1500 sq. m. Prior to this waste was being dumped at two locations viz near the slums on Padmavati Road and near the crematorium at old bridge. The dumping on both these site was discontinued due to objections from local residents and environmental risks posed by them. The details of waste disposal sites in Alandi is given in Table 3.17

Table 3.17 : Details of Solid Waste Disposal Sites in Alandi

Location	Type of Disposal	Approx. Area (sq.m)	Distance from town	Year of Commissioning
Vishrantvad (Grazing land of Charholi Khurd village)	Land disposal	1500	1 km	2002-03
Padmavati road	Land disposal	900	Within town	Approximately since 1985
Crematorium along right bank of Indrayani river	Land disposal	700	Within town	Used only for 1 year in 2002

Source: AMC

No scientific disposal methods are being practiced at the site and the waste is just dumped in the open land. Neither the Municipality nor the Devasthan has any vermicomposting unit/ facility for the disposal of biodegradable waste. The site is also devoid of basic infrastructure facilities such as weigh-bridge, compound wall, etc. and watchman for monitoring vehicle arrivals.

Table 3.18 : Salient Features of Solid Waste Management System in Alandi

Item	Details
Estimated Quantity of waste generation ,tons/day	5
Quantity of waste collected, tons/day	3.5
Collection Efficiency, %	70
Frequency of waste collection	Daily twice
Sanitary manpower	
Sweepers	14
Sanitary Inspector	0
Drivers	2
Contract Staff	35
Equipment	
Trucks	1
Tractors	1
Push carts	15
Dust bins	100
Method of Disposal	Dumping in low land area
Area of Site 1	1500 Sq. m.

Source Alandi Municipal Council

Table 3.19 : Solid Waste Management Performance Indicators

Indicator	Norm	Existing Service Levels
Waste Collection Performance	90-95%	70%
Vehicle Capacity Adequacy Ratio	30% of total waste generation	100%
Spacing of Dust Bins	100 m	150 – 200 m (avg 180m)
Road Length per Sweeper	400 –600 m	900 m
Conservancy staff per 1000 population	3	2 (51 for 17565 + 8000 persons)

Source: Analysis.

3.6.4 Medical Facilities and Biomedical Waste

As per the Annual Report (2002-03) of the Alandi Municipality, there are in all 48 various types of medical facilities in the Alandi town, as below. The district administration runs a Primary Health Centre, which is located behind the AMC office. It has a capacity of 6 beds. The various institutions and trusts in Alandi also run charitable dispensaries and nursing homes.

Table 3.20 : Medical Facilities in Alandi

Type	Number
1. Government Hospital	01
2. Private Hospitals	10
3. Municipal Dispensary	01
4. Private Clinics	35
5. Government Family Welfare Centre / Maternity Home	01
Total	48

Source: Alandi Municipality Annual Report 2002-03

The administration runs 3 additional medical centers during festival congregations. A 30-bed hospital is proposed by the Town Administration but it has not yet been constructed due to non-availability of land.

Table 3.21: Alandi Health Data

Name of Disease	No. of Patients
1. Malaria	5 – 6 per year
2. Typhoid	10 – 15 per year
3. Gastro	Not found
4. T.B.	15 – 20 per year
5. Pneumonia	2 – 3 per month
6. Diarrhea	20 – 25 per month
7. Accident primary treatment	N.A.

Source : Alandi Municipality Annual Report 2002-03

In 2002- 2003 the Dengue and Malaria disease were found out in Alandi, but it was controlled by PHC and the Alandi Municipality. During that period, no death happened. In the period March – May 2005 jaundice cases were on rise. The PHC reported 75 cases and the D.Y. Patil Hospital reported 15 cases of jaundice. No deaths were recorded due to jaundice. The latest health record from the PHC is given below.

Table 3.22: Alandi Health Data for the period April 04 – March 05

Name of Disease	No. of Patients
1. Malaria	927
2. Leprosy	6
3. T.B.	18
4. Cold cough	125
5. Diarrhea	1065
6. Influenza	422
7. Jaundice	75
8. Kidney Nephritis	30

Source : PHC Alandi.

Generation of Biomedical Waste

The bio-medical waste generation is not very substantial in Alandi. It is estimated that about 3 to 4 kg of waste is generated daily at the hospital.

Disposal

The biomedical waste generated by PHC is either burned in open air, buried or is disposed with municipal waste. After that it is transported to the solid waste-dumping site of the Alandi Municipality for final disposal.

3.6.5 Key Issues

i. Inadequate equipment and manpower for collection of daily solid waste.
ii. The existing solid waste-dumping technique is unscientific. The waste is seen lying along the riverbanks and on the roadsides, which is not, only degrading aesthetically, but also is hazardous for public health.
iii. Identification of a separate solid waste disposal site considering future growth of the town.
iv. No scientific disposal of biomedical waste.
v. House to house, collection of garbage is not done in Alandi.
vi. Though a substantial amount of organic waste is generated, there is no composting plant in Alandi.
vii. There is need to create awareness among the people for better solid waste management.

3.7 COMMERCIAL AREA

The main shopping activity in the town is concentrated around the Dnyaneshwar Maharaj Temple, near the Municipality Office and the old ST Stand. Shops and other commercial establishments have also come-up along the Pune road on the right bank of the river. The commercial activities mainly include selling religious articles and hotel & restaurants. During the Kartiki Fair large scale commercial activities take place in the Zaddi Bazar area. About 600 shopkeepers establish their temporary shops in this area. There is no specific place for the vegetable market. Vegetables are sold on the roadside, particularly near the ST Stand, near the AMC parking lot and near the ESR at Markal Chowk.

Shops around Samadhi Temple

3.8 GARDENS, RECREATIONAL AREA, AND OPEN PLACES

It may be seen from the landuse map of Alandi that, the open spaces available in the town are negligible. There is only one Public Garden in the town. There is no playground or any recreation centre in the town. Considering the large congregation of devotees every year in the town, it is necessary to have adequate open spaces and gardens in the town.

The religious places in Alandi and the Indrayani riverbank are the main places of recreation in the town. The Coliseum developed by the Alandi Dehu Parisar Vikas Samiti is another important recreational activity centre in the town, wherein audio-visual display on various religious themes is shown.

Major Roads in Alandi

Important Junctions

Solid Waste Disposal Sites

- Public Toilet
- Parking

CONSULTANT:

Wilbur Smith Associates Pvt. Ltd.

TITLE:

Figure No. 12

Infrastructure Map of Alandi

SCALE : Not to Scale

DATE

CLIENT:

Maharashtra Pollution Control Board

PROJECT:

Action Plan for Environmental Improvement for Alandi

DWG. NO:

3.9 CREMATION GROUND

The cremation ground in the town is located along the northern (left) bank of the Indrayani River, downstream of Alandi near the old bridge. There is no electric crematorium. Disposal of posthumous ash is one of the causes of river water contamination.

3.9 FIRE AND EMERGENCY SERVICES

As per the Annual Report (2002-03) of the Alandi Municipality, there is no Fire Brigade in the town.

3.10 TOURIST ACCOMMODATION

There are about 80 registered Dharmashala and 10 hotels in the town, which cater to the need of the pilgrims visiting Alandi throughout the year and in particular during the Kartiki Fair. However discussion with temple officials, local residents and AMC officials revealed that there are about 350 Dharmashalas in the town. These include small houses and old "wadas" (Houses) converted into Dharmashalas.

3.11 INDUSTRIAL ACTIVITY

Alandi is a predominantly rural area. However, it is located in the shadow of a large industrial complex at Pimpri-Chinchwad and Markal. Alandi has a predominantly religious base. The sanctioned Regional Plan of the Pune Metropolitan Region has barred industrial activities in the town. No industrial activity of any kind is seen in the town.

However, a cantonment area of the Indian Army is located at Dehu, which is about 15 km from Alandi.

4.0 - PILGRIM INFRASTRUCTURE

4.1 PILGRIM PATTERN

As mentioned in Chapter 2 earlier, the pilgrimage to Alandi and Dehu, alongwith Pandharpur is considered to be the most pious religious tour (Teertha yatra) by the Maharashtrians. A walk to these destinations, popularly known as "Vari", is still an important part of the yearly ritual of many Maharashtrians. Every year many Maharshtrians, especially from rural Maharashtra visit Alandi. People visit Alandi generally on the Ekadashi days (twice in a month), and on the two annual events of Ashadhi (June – July) and Kartiki Ekadashi (November – December).

Of late, due to the availability of faster modes of transport namely, expressway/highway, railway and airport, in its proximity, Alandi is well connected to the rest of the World. This has also seen increase in "Mass Tourism" in the region in the form of package tours, week-end tours from Pune and Mumbai etc., in addition to the normal flow of pilgrims throughout the year. As a result the daily number of pilgrims visiting Alandi has been increasing steadily. On important festival days / events, this number reaches to almost half a million.

4.1.1 Inflow Characteristics, Itinerary & Stay Pattern

Since the devotees coming to Alandi are generally from Maharashtra only, they travel overnight to Alandi and return the same day. Due to the availability of better road, railway and air connection, people generally travel to Alandi via Pune, which is about 25 km from Alandi. From Pune one can reach Alandi even by taking city bus service. Therefore, the pilgrims generally take a day's visit from Pune to Alandi during normal period. Usually they do not stay back. Further, due to its proximity to Pune and availability of better accommodation facilities there, the tourists prefer to stay in Pune.

Most people visiting Alandi make it a point to visit Dehu and Pandharpur as well. The Dehu-Alandi- Pandharpur is a well-defined pilgrim circuit. Alandi is approximately 150 km from Pandharpur and it is 20 km from Dehu. However none of these have very good accommodation facilities and do not have direct rail connections (Pandharpur has got a broad gauge connection recently but frequency of trains is very less).

During normal days people visit Alandi to take 'Darshan' of the Samadhi and move on to other temples. The 'Darshan' begins at 5:30 AM in the morning. 'Darshan' is closed in the afternoon from 12 to 12:30.

During 'Vadya Ekadashi' and other festival occasions (including the Ashadhi and Kartiki Ekadashi) people first take bath in the Indrayani River, visit the Pundalik Temple and then take the 'Darshan' of the Samadhi Mandir.

Table 4.1 The daily programme of the Samadhi Mandir

No	Timing	Activity	Remarks
1	4:00Amto 4:15 AM	Kakad Aarti	Darshan Closed
2	4:15 AM to 5:15 AM	Pavman Abhishek & Mahapooja	Darshan Closed
3	5:15AM to 5:30 AM	Doodharti	
4	5:30 AM	-	Darshan Begins
5	6:00 AM to 7:00AM	Devotees Pooja	Darshan allowed
6	7:00 AM to 12:0 Noon	Devotees Mahapooja	Darshan allowed
7	12:00 Noon to 12:30	Mahanavidya	Darshan Closed

No	Timing	Activity	Remarks
	PM		
8	12:30 PM to 3:00 PM	-	Darshan
9	3:00 PM to 3:30 PM	Poshak for the lord	Darshan Closed
10	3:00 PM to 8 :00 PM	-	Dashan begins
11	8:00 PM to 9:00 PM	Dhooparti & Sayanpooja	Darshan Closed

The Darshan closes at 8:00 PM i.e no one is allowed in the sanctum sanctorum. The temple closes at 11:30 PM.

On Thursday the temple is closed 1:00 AM in the night. A palkhi is taken out between 9:30 PM to 12:00 in the night at Deolwada, which is next to the temple.

4.1.2 Type of Pilgrims (Catchment area, Budget, Socio-economic background)

The people coming to Alandi have a varied socio-economic background from poor to rich people. They include from ordinary citizens to popular artists, sports persons, industrialists and politicians. However, the major share of devotees comes from the rural areas of Maharashtra. These include families of the farmers and agricultural labours.

As regards the geographic spread, since the Saint Dnyaneshwar Maharaj is linked to history of Maharashtra and has produced one of the best pieces of literature in Marathi, the devotees coming to Alandi are from the Maharashtra State. Besides this, people from the neighbouring states such as Karnataka and Andhra Pradesh (Nizamabad, Adilabad etc ditricts) also visit the place. The World Peace Centre set up by the Alandi-Dehu Parisar Vikas Samiti at Alandi attracts foreigners also to Alandi.

4.2 TRANSPORTATION FACILITIES AND CONNECTIVITY

Alandi is well linked by road to the Pune- Nashik National Highway (NH-50). It is well connected by the Maharashtra State Road Transport Corporation's (MSRTC) bus services to all parts of Maharashtra.

The nearest railway station to Alandi is Dehu Road on the Pune-Mumbai board gauge line, which is about 15 km from Alandi. Pune is the major railway station, about 25 km from Alandi. Similarly, Pune (Lohegaon) is the nearest domestic airport to Alandi.

Vehicle parking is a major area of concern in Alandi. At present there is only one parking lot owned by the Alandi Municipality. It can accommodate 100 to 150 vehicles. The PMT and PCMT operate city bus services for Alandi. PCMT has its own parking for 5 –6 buses (near the Alandi Nagar Parishad and near the old bridge) and PMT has its own parking for 5 – 6 buses (towards Alandi- Chakan Road, about 500 m from temple). The small open area in front of the Samadhi Temple is also used as parking lot. This causes a lot of congestion in the area.

4.3 ACCOMMODATION FACILITIES

The Alandi Devsthan Trust has one Guesthouse, which is given only to donors and VIPS it has 4 rooms. The New Athithi Gruh has 20 rooms and a library hall, which are also given to VIP's, home guards, donors and government staff. Presently the ground floor is parking area but it is not used for anything, the construction has just finished. The trust plans to use it as dining area in the future. Devasthan has its own shop in the temple premises, during festival time 2 to 4 additional shops are opened here. Besides this the trust has given 22 shops on rent outside the premises.

P

Lodigng Facilities on Pune Road near New bridge Bridge

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above there are 350 Dharmashalas in Alandi and these are owned by the respective trusts or communities. Each Dharmashala belongs to a particular sect 'Phad' (sect) and during festival time, people of that particular 'Phad' only are allowed to stay in the Dharmashala. Each of the Dharmashala can accommodate around 100 to 150 people. Out of the 10 hotels, 5 were surveyed and it was found that together they have 57 rooms. The hotels provide very basic accommodation facilities. Some of the hotel owners said that there is no tourism in Alandi and hence there is no patronage for good hotels. Most of the time the hotels have very low occupancy. They have full occupancy only during the to annual festivals.

Due to the proximity of Pune many hotels and lodges have not come up in Alandi. Pune has a wide range of hotel facilities ranging from budget hotels to five star hotels. These also serve the purpose of high-end pilgrims visiting Alandi.

4.4 FACILITIES & AMENITIES AROUND TEMPLE AREA

The temple complex also houses other small temples as mentioned below. A wall on all sides encloses the temple. The eastern gate to the complex is called the 'Ganesh Darwaja'. The Sansthan has created one more gate near this gate. It is called the 'Hanuman Darwaja'.It is used as a Darshan Bari during the Yatra. The Western entrance is called the 'Pan Darwaja'. There is no gate on the souther side and the main entrance on the northern side is called the 'Mahadwar'. The Nagarkhana is built on this gate.

Suvarna Pimpal: This Pimpal tree is very close to main entrance People believe that Pimple tree is the Gods Vibhuti. Pilgrims revere it as Dyaneshwar's mother completed 1.25 lakh pradakshinas around the tree.

Maruti Mandir: This is located on the right side of the Mahadwar.

Garud Mandir: This is located left side of the Mahadwar.

Haibatbaba Mandir: The mandir is located towards east side of main temple. He was a very ardent devotee of Saint Dyaneshwar. He started the present ritual of carrying the **image of** Saint Dyaneshwar and His 'Paduka' in a 'Palkhi' along with agrand procession to Pandharpur.

Samadhi Mandir: This is the main temple where Saint Dyanenshwar took Samadhi.

Vitthal Rukmini Statues: These are installed on the backside of Samadi Mandir.

Muktai mandir: Muktai is the Younger sister of Dyaneshwar and this temple is right side of the exit from the Samadhi Mandir.

Ganesh Mandir: This is located in Sixteen Stone Column Mandup. Here a ten days festival

is arranged during period from Ganesh Chaturdashi to Anant Chaturdashi.

Sidheshwar Mandir: The mandir situated near the Muktai mandir. It is one of the oldest temples and Saint Dyaneshwar used to pray here regularly.

Ajan Vruksh: It is very close to Samadhi Mandir. Nivarutinath elder brother of the Dyaneshwar planted a dry twig of the plant at the place where Sant Dyanenshwar took Samadhi. Astime elapsed the twig flowered and it has grown into a big tree and is known as Ajan Vruksh. Many devotees sit under the tree for 'Parayan'. There are 10 –12 trees of the Ajan Vruksh and the area is also called Ajan Bagh.

Dhyan Mandir: This is on the right side of Samadhi Mandir and very close to Devasthan Office. It is a subterranean structure used for meditation. It was constructed by the Peshwas.

Holy Wall: This is located out side the Main temple. It is said that Saint Dynaneshwar sat on this wall along with his brothers and flew along with it to meet Saint Changdev.

The temple has access from the river as well as the main road. However both the access are narrow with shops on either side.

Bhairoba Temple & Holy Wall

Indrayani River: There are four bathing Ghats two on either bank for bathing of the pilgrims. Small check dams have been constructed on the upstream and down stream to store water all year round for bathing of pilgrims. Covered 'Darshan Baris' are being constructed on the banks of the Indrayani River. The Dehu Alandi Parisar Vikas Samiti has a major share in developing these facilities. Many devotees also drink the water from Indrayani as 'Teerth'. The Samiti has set up a filtration plant by which water from the River is collected, filtered and let out in a drinking water spout near the main Dyaneshwar Ghat.

The Devsthan Trust runs a common dining facility in the temple complex. It provides free meals to devotees. This facility is closed during festival congregations, as it is difficult to manage the large crowds.

Samadhi Mandir temple complex: The temple is a very old structure over 700 years old. The sanctum sanctorum is very small and stuffy. When large number of people gather here it can lead to suffocation. The Devsthan has therefore installed an air purifier in the sanctum to prevent any such calamity. The area around the temple is paved with tiles and is properly illuminated.

Sound and Light Show: The Dehu Alandi Parisar Vikas Samiti has constructed a big screen on the western bank of the river. This Ghats around the river form a nice seating and the stage and screen are used for cultural activities and for conducting sound and light shows depicting the spiritual and cultural importance of Alandi.

4.5 FAIRS AND FESTIVALS

The two most important festivals in Alandi are the Ashadi Ekadashi and the Kartiki Ekadashi. The take place in the month of July and November respectively. Each of these attracts about 3 to 5 lakh people to Alandi.

Ashadhi Ekadashi: The festival of Ashadi Ekadashi is actually celebrated with great pomp and fervour in Pandharpur and not in Alandi. However the image and 'Paduka' of Saint Dyaneshwar are carried to Pandharpur in a 'Palkhi' (palanquin) kept in a bullock cart. The whole procession moves to Pandharpur by foot and en route people keep joining the procession. The procession begins from Alandi on 'Jyestha Vadya Asthami' (approximately 17 days before Ashadhi Ekadshi). It is for this event that people come to Alandi. The procession begins at 4 PM on that day and halts at Gandhiwada in Alandi. On the next day 6:00 AM the procession moves towards Pune to begin its journey for Pandharpur. It follows the following route Pune, Saswad, Jejuri, Valhe, Nira, Lonanad, Taradgaon, Phaltan, Barad, Nateopute, Malshiras, Velapur, Bhende Shegaon, Vakhri (here other 'Palkhis' of Saint Tukaram and Namdev etc meet). The Palkhi reaches Pandharpur on 'Ashad Shudh Dashmi' at night. The festival ends on 'Ashad Vadya Dashmi' at Alandi. However on the return journey very few people accompany the 'Palkhi'.

Kartiki Ekadashi: This yatra starts on 'Kartik Vadya Ekadashi'. It continues for 4 days up to 'Chaturdashi'. The third day ('Trayodashi') is the day on which Saint Dyaneshwar took Samadhi. This day attracts maximum crowd. On Ekadsahi day the 'Palkhi' of Saint Dyanesnhwar is taken out around the town. This phenomenon is called the 'Nagar Pradakshina' and it has a designated route called the 'Palkhi Marg'. On the last day (Chaturdashi) 'Dahi Handi Utsav' is celebrated and the festival ends on this day. Maximum people start leaving by the third day. The others leave on the last day after the celebration.

Monthly Wari: This takes place on the 'Vadya Ekadashi' of every month and people come here to take darshan of the samadhi. Very few people stay over and most people leave immediately after taking darshan. The 'darshan' starts as usual at 5:30 in the morning and closes at 3:30 AM next day night. During the period from 12: 00 to 3:30 AM 'Jagar' activity is carried out.

Makarsankranti: This festival is mainly for the ladies and they come in groups. They take 'darshan' and leave immediately. Very few groups stay back.

Besides this more people come on festivals such as Ramnavmi (April), Narsigh Jayanti, Gokulasthami (September) and Mahashivratri (February). On these days Devotee's Mahapooja, Abhishekh etc. is not performed. On Chaitra Shudh Padwa (March) Paduka Darshan is allowed.

4.6 FESTIVAL ARRANGEMENT

Two months before festival (Kartiki and Ashadhi utsav) a meeting of various agencies involved in the festival arrangement is held. These agencies include the Alandi Devasthan, Alandi Municipality, District Collector, Police stations (from Pune, Chakan, Vishrantwadi and Khed), PMT, PCMT, MSRTC, Prantadhikari, Medical officers, Telephone Exchange, MSEB, Tahasildar, Talathi, Homeguards etc. The responsibilities of the agencies are identified and allotted in this meeting.

4.6.1 Water Supply & Sanitation

Water supply, Sanitation and Lighting facility is given by the municipality.
Water supply: During festival days there is 24 hour water supply is made available. In low-pressure areas, water is supplied by tankers.
Sanitation: During festival time, the municipality cleans all the roads and DDT powder is sprayed surrounding the roads and toilets.
Lighting: Lighting is provided in the town and temples surrounding area.

4.6.2 Health & Medical Facilities

During festival the PHC arranges three medical booths. Each booth has a doctor, two nurses and one compounder. One booth is at the new ST stand, second is at Chakan chowk and third is at the temple complex. Extra medical facilities are supplied by the Zilha Parishad during festival period. In all three ambulances are available; two are provided by the Rural Hospital and one from the Temple. According to the PHC skin diseases arise during the festival period. The Alandi Municipality also arranges 10 doctors and 10 workers. Also few NGOs and voluntary agencies are involved. These include Aurvedik Centre Rukadikar Trust, Kolhapur, Pune Government hospital, Dr. Badave's unit.

4.6.3 Traffic and Transport

Pune Municipal Transport (PMT), Pimpri-Chinchwad Municipal Transport (PCMT) and MSRTC are involved in the arrangement of traffic and transport during the festival time. PMT and PCMT arrange 50 to 60 buses for Alandi from Swargate, Pune Muncipal Corporation, Bhosari, Nigadi etc. The PMT and PCMT buses are parked in the area near the new MSRTC stand at Alandi. The MSRTC arranges 150 to 160 buses during festival days from Pandharpur, Dehu, Junnar, Pune Station and from Khed (Rajgurunagar) etc. Almost 10 buses depart for Alandi from each of the above places.

4.6.4 Police and Home Guards

During festival time there are 5 police booth/ stations arranged viz. Indrayani Jalram chauk, Chakan chauk, Wadgaon chauk, Markal chauk and Nagar Parishad Chauk. All roads entering Alandi are closed for vehicular traffic within 1 Km. radius of the town viz. Markal road, Wadgaon road and Chakan Road.

Table 4.2 : Police Protection during Festival

Officer	Kartiki Festival	Ashadi Festival	Ekadashi
DYSP	1	1	----
Police officers	25	15 - 25	----
Police	300	200	15 – 25
Ladies Police	50 – 75	25 – 30	10 – 15
Home guards	300	200	-----
Ladies Home guards	100	50	-----
Traffic Police	10	10	-----

Source: AMC and Police Station Alandi

4.6.5 Arrangements by Alandi Devasthan Trust

On the day of festival, the temple is open for 24 hour darshan for devotees. During festival time 70 to 80 workers are involved in the sanitation work. The solid waste generated during festivals is transported by tractor at solid waste dumping site of the Municipality. 30 to 40 halogen lamps are arranged at the temple and surrounding area by trust. The Temple Trust arranges drinking water and also arranges 30 mobile toilets for the pilgrims. The Darshan queue is arranged towards Dehu road. PCMC arranges 100 workers as Karsevak as part of sanitation work (cleanliness drive) after the festival.

4.7 ISSUES AND AREAS OF CONCERN

The inflow of pilgrims during festivals is very high and adequate number of public toilets is not available for the devotees. The AMC and the Devsthan Trust put up temporary toilets at various locations; last year the AMC had provided 20 temporary toile seats. However the

crowd is very so large that there is shortage of place for putting up toilets, requisite number of toilets and the manpower for erecting them is also not available. As a result people defecate in the open along the riverbank. This creates visual pollution as well, as it is major health hazard as it pollutes the water and can spread diseases. It is to be noted that the toilet facility is required by most people in the same time slot starting from morning 5:00 AM to 8: 00 AM. Thus siting and providing toilets for such a large congregation is a major issue. Most pilgrim come from a rural background hence there is lack of awareness among them towards maintaining hygienic conditions.

In certain areas water supply becomes inadequate and hence water has to be provided by tankers. The quality of the water to be supplied needs to be monitored before it is distributed to the people.

Lot of solid waste; both organic and plastic waste is generated due to the floating population visiting Alandi. Disposal of plastic waste is always a problem and it can be solved only by reduction in the use of plastic through awareness generation. But in case of Alandi there is no vermiculture plant or any waste to fertiliser project implemented in Alandi. As a result the collection and disposal of the solid waste generated is an important issue in Alandi. Uncollected waste strewn around the town poses health risks to the pilgrims as well as local population.

During festival times all roads leading to Alandi in 1 km radius are closed for traffic. However there is very little alternative arrangement for the parking of vehicles on the outskirts of the town. The ANP has recently developed a parking area near the approach from Pune.

Almost pilgrims take the holy bath in the river during the festivals but the sheer number and timing is such that the four Ghats constructed at present prove to be inadequate to cater to the needs of the pilgrims. The 'Darshan queue' also goes a long way and people have to stand in the open air under rains and sun in the queue.

During congregations most of the Dharmashalas are reserved for their respective 'Phads' or 'Dindis'. These are occupied to their fullest capacity and hence the rest of the people are left to stay in the open grounds and along roads. The problem is more critical during the Ashadhi Ekadashi as it falls in the rainy season.

Major Roads in Alandi

Important Junctions

Environmental Monitoring Stations

- Surface water Monitoring Location
- Ambient Air Quality Monitoring Location
- Noise Monitoring Location
- Existing Pumping Sewer (Approx. Location)

CONSULTANT: Wilbur Smith Associates Pvt. Ltd.	TITLE: Environmental Monitoring Locations	SCALE: Not to Scale
		DATE
CLIENT: Maharashtra Pollution Control Board	PROJECT: Action Plan for Environmental Improvement In Alandi	DWG. NO:

A Steering Committee would be formed involving Dr. Karad, Executive President, Shri Kshetra Alandi-Dehu Perisar Vikas Samitee,. Dr. Joshi, Trustee, Shri Kshetra Alandi Devasthan; President, Alandi Nagar Parishad, Principal, MIT Engg. College, Alandi, Regional Officer, MPCB, Pune and Dr. A. R. Supate, Project Leader, MPCB, Mumbai (Convenor) to monitor and shape the project). Convenor may invite other key resource persons, for the meetings, if required . The MPCB would act as a facilitator and shall recommend/consider the priority projects for implementation.

He mentioned that the project is on the highest priority of the MPCB and is time bound. He also expressed a strong desire to start implementing the project by June 5th, which is the World Environment Day. At MPCB level a project monitoring team will be constituted consisting of senior officers of the Board and Mr. Raghu Babu, Sr. Advisor, AESM, GTZ, CPCB, Delhi will be invited as an expert advisor for the project.

- **Dr. A.R. Supate,** Project Leader Zoning Atlas Division MPCB made a presentation on the background and genesis of the project. He mentioned that the MPCB Board in its 139th Board meeting has approved the proposed project of `Integrated Environmental Improvement Of Religious Places in Maharashtra'. In the first phase 8 places have been identified. Out of the 8 places Shirdi, Shani Shingnapur and Alandi have been prioritized to begin with. He briefly explained the problems of water pollution and solid waste in Alandi. This was followed by the approach and methodology of the study. The study would be carried out in three phases as follows:

  Phase I – Reconnaissance Survey and Concept Plan Prep
  Phase II – Feasibility Study of the Concept Plan
  PhaseIII – Detailed Project Report for the Proposed Infrastructure Improvements

  Role of MPCB is more of a facilitator and the project is for the people of Alandi hence sought their involvement and participation to the fullest.

- **Mr. Vilas Kurhade**, President Alandi Nagar Parisahd thanked the MPCB for taking up such a project and arranging the meeting. He highlighted some of the problems faced by the local people. These include scarcity of drinking water, traffic congestion due to small roads and adjoining two MIDC estates to Alandi namely Chakan and Markal. The drainage system of the town is as old as laid during the British Rule in spite of new development having taken place. He suggested that an area of 50m around temple should be kept open and free from encroachments.

- **Dr. Sarang Joshi**, Chief Trustee Alandi Devasthan also thanked the MPCB for taking up the project and all the participants for attending the meeting. He said that the Temple Trust would cooperate in every possible way to take the project ahead. He would involve the local NGO's and provide necessary manpower for cleanliness drive etc. The temple trust is working on solving the problems of the devotees. The Samadhi Mandir is 700 years old and the Sanctum Sanctorum is very small. As a first step to address the problems of devotees they have installed an air purifier in the Sanctum Sanctorum of the Samadhi Mandir to prevent suffocation of people. He also

5.0 – BASELINE ENVIRONMENTAL STATUS

5.1 INTRODUCTION

In order to understand the existing environmental quality of Alandi and surrounding area, field environmental monitoring of the environmental components namely, ambient air, ambient noise, surface and groundwater, and soil was carried out. The monitoring was carried out in the month of February 2005 and the samples were analysed in laboratory as per CPCB guidelines. Results of the environmental monitoring are presented summarily and discussed in this section.

5.2 IMPORTANT ENVIRONMENTAL FEATURES IN AND AROUND ALANDI

Alandi is situated on a fairly even terrain. The Indrayani River, Bhagirath nalla, and a hill towards the southwest of the town at the Charholi village are the major environmental features in the area. There are no reserved forests or wildlife sanctuaries around Alandi.

5.3 AMBIENT AIR QUALITY

Methodology - In order to monitor the ambient air quality in Alandi, an air quality monitoring station was set up near the Temple Premises (Shani Maruti Mandir) and near Alandi Nagar Parishad Office 24 hourly air samples were collected for the Suspended Particulate Matter (SPM), Respirable Particulate Matter (RPM), Oxides of Nitrogen (NOx), Sulphur di-oxide (SO2) and 8 hourly samples were collected for Carbon Monoxide (CO). The results of monitoring are given below.

Table 5.1: Ambient Air Quality in Alandi near Shani Temple

Sl.No.	Description	Unit	Result-1	Result-2	NAAQS
1	Date of Sampling		03,04 & 05 Feb 2005	03,04 & 05 Feb 2005	
2	Test location		Near Shani Temple Alandi	Near Shani Temple Alandi	
3	Time of Sampling	Hrs	**12.30 pm 03/02/2005**	**13.00 PM 04/02/2005**	
4	Ambient Temperature	^{0}C	32	32	
5	Dry Bulb Temperature	^{0}C	32	32	
6	Wet Bulb Temperature	^{0}C	25	25	
7	Relative Humidity	% RH	54	54	
8	Sampling Duration	Min	1440	1440	
9	SPM	ug/M^3	212.37	198.37	200
10	RSPM	ug/M^3	165.64	152.13	100
11	Sulphur Dioxide	ug/M^3	81.33	77.14	80
12	Oxide of Nitrogen	ug/M^3	102.14	89.12	80
13	Carbon Monoxide	mg/M3	B. D. L.	B. D. L.	-----

Note - NAAQ – National Ambient Air Quality

Table 5.2: Ambient Air Quality in Alandi near ANP

Sl.No.	Description	Unit	Result-1	Result-2	NAAQS
1	Date of Sampling		03,04 & 05 Feb 2005	03,04 & 05 Feb 2005	
2	Test location		Near Alandi Nagarparishad	Near Alandi Nagarparishad	
3	Time of Sampling	Hrs	**13.00 pm 03/02/2005**	**13.30 PM 04/02/2005**	
4	Ambient Temperature	^{0}C	31	31	
5	Dry Bulb Temperature	^{0}C	31	31	
6	Wet Bulb Temperature	^{0}C	25	25	
7	Relative Humidity	% RH	52	52	
8	Sampling Duration	Min	1440	1440	
9	SPM	ug/M^3	202.11	224.97	200
10	RSPM	ug/M^3	149.13	162.14	100
11	Sulphur Dioxide	ug/M^3	87.16	81.37	80
12	Oxide of Nitrogen	ug/M^3	101.18	99.14	80
13	Carbon Monoxide	mg/M3	B. D. L.	B. D. L.	-----

Note - NAAQ – National Ambient Air Quality

It is seen from the above results that the ambient air quality in the town is generally within the NAAQ standards prescribed by the CPCB. The SPM and RSPM levels are slightly high. This is due to the dust generated from vehicles plying on kutcha roads.

5.4 AMBIENT NOISE QUALITY

Methodology – The ambient noise levels in the town were measured at two locations in the town namely Temple Premises (Shani Maruti Mandir) and near Alandi Nagar Parishad, covering the Pilgrim Zone and the Alandi Town area. The noise levels were monitored on hourly basis continuously for 24 hours; covering both the day and night time noise levels. The same are compared with the CPCB standards for ambient noise levels in residential area.

Table 5.3: Ambient Noise Levels in Alandi

Location	Leq (day)	Leq (night)
Near Shani Temple	82	61
Near Alandi Nagar Parishad	96.29	62.72
CPCB Standards in dB (A)	55	45

Source: Field monitoring results 2005

Source of pollution – The main source of noise is the vehicular movement in the town. As mentioned earlier, jeeps ply between Alandi and Pune, in addition Passenger buses come to the town every day.

5.5 WATER RESOURCES

The Indrayani River is the most important waterbody in the Alandi town. It is also an important source of drinking water supply for many towns in the Pune region. The Sant Dnyaneshwar Maharaj Samadhi Temple is situated on the bank of the Indrayani. A large gathering of the Varkari pilgrims takes place on the banks of the river during the annual Ashadhi and Kartiki Fairs. Various religious activities are carried out on the banks of the river

during these fairs as well as during the whole of the year.

In order to assess the present water quality of the river and the changes in the water quality while it flow through the Alandi town, the river water samples were collected at 3 locations in Alandi namely, at Alandi Dam in front of Dynaneshwar Ghat and Sewerage discharge point (near old bridge), The river water quality is also regularly monitored by the Pune Region Office of the MPCB. The results of analysis of the river water carried out by MPCB in the month of December 2004 have also been presented and studied in this section.

Similarly, the ground water from open wells and bore wells is also used as alternate drinking water source in parts of the Alandi Town. In order to assess the quality of ground water in Alandi, samples were collected at the well of the Devsthan. A water sample from a common tap used for drinking purpose in the Gaothan area was also collected. The results of surface and ground water quality analysis are presented below in **Table 5.3.** The surface water quality (Indrayani River) is compared with the applicable standards for its category as A-II, whereas the ground water quality is compared with Indian Drinking Water Standards IS: 10500.

The water quality of river shows high content of Faecal Coliforms in all the three locations. The hardness content of the water is also high behind the temple and below the new bridge. It is important to note this as the water from the upstream is used for drinking purposes and so is is the case behind the temple where pilgrims drink it as "Tirth".

Source of pollution – There is no underground sewerage system in Alandi. The domestic sewage generated in the town is directly discharged into the Indrayani River without any treatment, which is a major source of contamination of the river water. The problem becomes severe considering the large number of pilgrims visiting the town daily and lakhs of devotees visiting the town during the Ekadashi festivals. The absence of adequate public sanitation systems has resulted in people defecating along the riverbanks. Similarly, the solid waste generated in the town including biomedical waste is disposed off indiscriminately along the riverbank. There is no standard Municipal Solid Waste Management System in the town. Thus, the untreated sewage and solid waste are the major sources of contamination of the river water.

Table 5.4 : Water Quality of Indrayani River in Alandi

	U/s of Indrayani River, Talawade (SW-1)				Middle point of Indrayani at Alandi Ghat (SW-2)				D/s of Indrayani River (SW-3)				Stdndards
	07/12/04	08/12/04	09/12/04	10/12/04	07/12/04	08/12/04	09/12/04	10/12/04	07/12/04	08/12/04	09/12/04	10/12/04	6.0 to 8.5
pH	7.31	7.39	7.51	7.52	7.09	7.38	7.29	7.03	7.42	7.23	7.32	7.48	4.0 mg/l
DO	6.85	3.18	4.16	5.98	4.83	3.12	5.12	1.06	5.17	4.65	6.0	5.49	5.0 mg/l
BOD (27o3days)	9.0	17.3	9.0	11.4	9.3	10.7	7.5	22.0	9.45	8.6	10.4	9.0	-
COD	32.0	48.0	32.0	36.0	36.0	40.0	28.0	72.0	32.0	36.0	32.0	36.0	-
TSS	6.0	9.0	22.0	32.0	14.0	16.0	21.0	18.0	14.0	21.0	20.0	16.0	-
Turbidity	2.0	3.0	1.0	2.0	3.0	2.0	3.0	1.0	2.0	1.0	2.0	2.0	-
Alkalinity	132.0	130.0	132.0	130.0	136.0	138.0	124.0	122.0	142.0	126.0	134.0	126.0	400 mg/l
Sulphates	11.0	56.0	58.0	43.0	8.0	44.0	51.0	25.0	4.0	7.0	47.0	40.0	600 mg/l
Chlorides	30.0	105.0	95.0	84.0	82.0	88.0	92.0	68.0	80.0	90.0	78.0	72.0	45 mg/l
Nitrate	4.0	8.0	6.0	8.0	5.0	10.0	7.0	16.0	7.0	6.0	5.0	7.0	-
Hardness	108.0	88.0	92.0	78.0	112.0	102.0	120.0	66.0	98.0	112.0	86.0	70.0	-
Calcium	56.8	68.0	73.6	52.0	44.0	72.0	44.0	36.0	49.6	61.6	40.8	31.2	6.0 to 8.5

Note : All values except pH in PPM. NA indicates Not Received.
Source : MPCB, Pune

Table 5.5 : Surface and Groundwater Quality in Alandi compare with MPCB standards

Parameters		**L - 1**	**L - 2**	**L – 5 (GW)**	**MPCB Standards**	**L - 3**	**MPCB Standards**	**L - 4**	**MPCB Standards**
	Unit								
Essential characteristics									
Colour, Max	Hazen units	Colourless	Colourless	Colourless		Colourless		Colourless	
Odour		Odourless	Odourless	Odourless		Odourless		Odourless	
Taste		Agreeable	Not done	Agreeable		Not done		Agreeable	
pH Value		8.6	8.9	8.8	6.5 – 8.5	8.6	6.0 – 8.5	8.6	6.5 – 9.0

Parameters		L - 1	L - 2	L – 5 (GW)	MPCB Standards	L - 3	MPCB Standards	L - 4	MPCB Standards
Total Hardness (as CaCo3) Max	mg/l	156	389	96	50	482		110	
Iron (as Fe) Max	mg/l	0.1	0.2	BDL	1.0	0.3	5	BDL	
Chlorides (as Cl) Max.	mg/l	130	140	83	600	139	600	93	600
Residual, free chlorine, Min	mg/l	0.01	0.02	0.1		0.04		0.008	
Alkalinity	mg/l	150	205	110	-	165		123	
Desirable Characteristics									
Total Dissolved solids, Max	mg/l	160	600	140	-	728	T.D.S.	150	
Calcium (as Ca), Max	mg/l	117	302	60	-	330		70	
Magnesium as Mg	mg/l	30	85	35	-	145		35	
Sodium as Na	mg/l	BDL	BDL	BDL	-	BDL		BDL	
Sulfate (as SO4), Max	mg/l	51.2	161.4	47.2	400	63.8	400	51.2	1000
Nitrate (as NO3), Max	mg/l	0.5	0.7	0.4	45	0.8	45	0.7	
Fluoride (as F), Max	mg/l	1.2	1.1	0.8	1.5	1.2	1.5	0.9	1.0
Ammonical Nitrogen	mg/l	0.8	0.8	0.2	1.5	0.7	1.5	0.4	50
Phenolic Compounds (as C6 H5OH), Max.	mg/l	BDL	BDL	BDL	0.002	BDL	0.002	BDL	
Dissolved Oxygen	mg/l	6.8	6.9	6.8	Not less than 5	6.8	4.0	6.9	Not less than 2
C.O.D	mg/l	87	90	60		88		70	150
Bacteriological Parameters									
Total Coliforms	No./ 100 ml	900	≥ 1600	23	-	900		20	
Faecal Coliforms	No./ 100 ml	240	500	07	-	240		< 2	

Source : Analysis

BDL- Below desirable limit, NS- Not shown

Table 5.6 : Surface and Groundwater Quality in Alandi compared with National water quality standards

Parameters		L - 1	L - 2	L - 3	L - 4	L – 5 (GW)	National Water quality Stds.
	Unit						
Essential characteristics							
Colour, Max	Hazen units	Colourless	Colourless	Colourless	Colourless	Colourless	5.0
Odour		Odourless	Odourless	Odourless	Odourless	Odourless	Unobjectionable
Taste		Agreeable	Not done	Not done	Agreeable	Agreeable	Agreeable
pH Value		8.6	8.9	8.6	8.6	8.8	6.5 - 8.5
Total Hardness (as CaCo3) Max	mg/l	156	389	482	110	96	300
Iron (as Fe) Max	mg/l	0.1	0.2	0.3	BDL	BDL	0.3
Chlorides (as Cl) Max.	mg/l	130	140	139	93	83	250
Residual, free chlorine, Min	mg/l	0.01	0.02	0.04	0.008	0.1	0.2
Alkalinity	mg/l	150	205	165	123	110	200
Desirable Characteristics							
Total Dissolved solids, Max	mg/l	160	600	728	150	140	500
Calcium (as Ca), Max	mg/l	117	302	330	70	60	75
Magnesium as Mg	mg/l	30	85	145	35	35	30
Sodium as Na	mg/l	BDL	BDL	BDL	BDL	BDL	75
Sulfate (as SO4), Max	mg/l	51.2	161.4	63.8	51.2	47.2	200
Nitrate (as NO3), Max	mg/l	0.5	0.7	0.8	0.7	0.4	45
Fluoride (as F), Max	mg/l	1.2	1.1	1.2	0.9	0.8	1.0
Ammonical Nitrogen	mg/l	0.8	0.8	0.7	0.4	0.2	1.0
Phenolic Compounds (as C6 H5OH), Max.	mg/l	BDL	BDL	BDL	BDL	BDL	0.001
Dissolved Oxygen	mg/l	6.8	6.9	6.8	6.9	6.8	NS
C.O.D	mg/l	87	90	88	70	60	NS
Bacteriological Parameters							
Total Coliforms	No./ 100 ml	900	≥ 1600	900	20	23	00
Faecal Coliforms	No./ 100 ml	240	500	240	< 2	07	10

Source : Analysis

BDL- Below desirable limit, NS- Not shown

Locations

L-1: Upper Stream of Indrayani River

L-2: Behind Temple, Indrayani River (Near Dyaneshwar Ghat)

L-3: Down Stream of Indrayani River

L-4: Public Tap water

L-5: Well water from Temple premises

5.6 SOIL CHARACTERISTIC

Alandi lies in the area popularly known as the sugar belt of the region. It is part of the Indrayani watershed, which is part of the Bhima watershed. It is one of the most fertile parts of the district. Soils in the region vary from Medium Soil to Deep Black Soil. These two types of soils have good depths and thereby good moisture retention capacity. Medium Soils are 22 to 65 cm deep and have moisture saturation of 65 to 67 mm. The Deep Black Soils have depths above 60 cm and moisture retention up to 140 mm. The details of soil types and cropping pattern are given below.

Table 5.7 : Soil Characteristics In and Around Alandi

Soil type	Rainfall	Soil Status	Water Drainage	Nutrient status		
				N	P	K
Medium and Deep soil (Black soil)	Medium	Saline-alkaline soil	Low	Low	Low	High

Source : Agriculture office and Panchayat Samiti Office Khed and ANP

The main crops of the area are Bajari, Groundnut, Sugarcane and Soyabin in Rabi seasons and Wheat, Jawar, Maize and Sunflower in Kharif season. Sugarcane is the main cash crop

6.0 ENVIRONMENT RELATED ISSUES

6.1 INTRODUCTION

The steady inflow of pilgrims in Alandi causes a stress on the existing infrastructure of the town. Looking at the figures the resident population of Alandi is about 17000 persons and almost 8000 floating population comes to the town daily i.e. 50% of the resident population. Besides this it is quite likely that people from near by areas come here to seek employment in the hotels, commercial activities and other service facilities.

6.2 INFRASTRUCTURE PROVISION & MANAGEMENT

6.1.1 Water Supply

The Indrayani River is the main source of water to the town. At present there are no complaints regarding the shortage of water or sourcing of water. However the filtration plant near the intake has not been cleaned and it does not work to its full capacity. Due to this there irregularities in the water supply. The town also uses considerable ground water to meet its requirement. The ground water profile received from the GSDA does not show any major depletion of ground water. But it is in the larger environmental interest to reduce the dependency on ground water or at least develop mechanisms to recharge the same.

The ground water is hard water; the Devsthan is substantially dependent on the same for its water requirements. This hard water is affecting the electric instruments such as geysers installed by the Devsthan in the guesthouses.

6.1.2 Sewerage and sanitation

The town does not have a proper underground drainage system and at present the storm water drains carry the sullage as well as seweage water. These have been covered by putting concrete slabs in many areas. In some areas shops have been built over these slabs. Thus the maintenance of the drains is a major problem. In areas where drains have been laid it has been in a piecemeal manner and there is no comprehensive plan for the drainage network.

All the sewerage is let into the Indrayani River without any treatment; this pollutes the river and poses health risk to the people. The sanitation facility is almost thrown out of gear during festival congregations. This results in people defecating in the open on the bank of Indrayani River.

6.1.3 Solid waste

The solid waste generated in Alandi is to the tune of 1 to 2 tons per day. The ANP looks after the collection and disposal of the solid waste. The ANP does not provide door-to-door collection. This was started a few years ago and handcarts were purchased but it did not work due to poor response from the people.

The ANP does not have a proper landfill site. The present one at Padmavati measuring 5 – 6 gunthas is exceeding the capacity. At present ANP dumps solid waste at a site on the road to Vishrant Wadi measuring 2 to 2.5 acres (this is area of part used for dumping). The Devsthan owns the land and at times there are conflicts between Devsthan and ANP over dumping of waste. There is a problem of landfill site as the government owned land available as landfill

are technically not feasible. The land, which is technically feasible, has a private owner.

At present no vermicomposting is carried out by the Devsthan or the ANP to take care of the biodegradable waste, which forms a significant component of the solid waste generated in the town.

The biomedical waste generated in Alandi is also not disposed off in a scientific manner. The mechanism for the same will have to be developed.

6.1.4 Transport and Communication

During festival time adequate and organized parking needs to be provided on the outskirts of the town. There are six seaters running between Alandi and Vishrantwadi. These have been banned in Pune City due to the pollution and traffic problems created by these. Applying the same logic they should not be allowed in the core town or alternative fuel / mode of transport worked out.

6.3 OTHER ENVIRONMENTAL ISSUES

The Alandi town lacks in open areas and gardens and there is very little greenery in the town. Trees need to be planted along the Palkhi route and the pedestrian route. This would also help in curbing the air pollution. Awareness creation amongst the pilgrims and the local population to prevent use of plastic, preventing pollution of the Indrayani River and protecting the environment is very important.

6.4 INSTITUTIONAL ARRANGEMENTS

In Alandi the Devsthan and the Nagar Parishad are the two key organization engaged in providing and maintaining facilities for the pilgrims as well as the locals. The Devsthan takes care of the needs of the pilgrims where as the Nagar Parishad takes care of the rest of the town. But these are broad classification. As regards environmental aspects are concerned both need to work in closer co-ordination in addressing the issues and other state government agencies and departments also need to be involved. Voluntary organizations or citizens groups or pilgrims bodies are not very active in the area. The warkaris usually visit in groups called ‘Dindi’s’ and the structure of the same is quite dependent on the groups of villages, community etc and is followed for generations. However the man power of these groups is not leveraged effectively for conserving and protecting the environment.

The shops and establishment acts is not applicable in Alandi. The town is governed by Development Control Rules of the ‘C’ Class Municipal towns for all construction purposes. The funding for infrastructure is decided on the basis of local population but the increasing popularity of the temple invites substantial floating population daily. This stresses the infrastructure of the town.

7.0 – INTEGRATED ENVIRONMENTAL IMPROVEMENT PROJECTS

7.1 INTRODUCTION

In the present study various elements of the environmental infrastructure in Alandi have been studied and the projects for integrated improvement of the environmental infrastructure have been identified. For the purpose of identification and implementation of the projects, the Alandi town has been broadly divided into two zones based on the concentration of the pilgrim and civic activities.

7.1.1 Pilgrim Zone

The pilgrim activities in Alandi are linked to the Dyaneshwar Maharaj Samadhi Temple, the Indrayani River and other religious places in the Gaothan area of the town. This area has been identified as the core zone.

7.1.2 Alandi Town

The rest of the town area including the new developing areas is classified as buffer zone.

Following this, project-specific "Detail Project Report (DPR)" for the selected projects should be prepared through a separate exercise. For each of the short listed projects, detail survey and engineering design & analysis would be required to be undertaken in the DPR Stage to arrive at final designs and cost estimates.

The identified projects for preparing the Pre-Feasibility Reports have been prioritised as Immediate, Medium and Long term in both, pilgrim and Alandi town. The summary of the identified projects is given below followed by details of PFR components for each project.

Table 7.1: Summary of Integrated Environmental Improvement Projects for Alandi for Preparing Pre Feasibility Reports (PFR's)

PHYSICAL INFRASTRUCTURE DEVELOPMENT			PRIORITY	
Sector		**Projects Identified**	**Core Zone**	**Buffer Zone**
A	Landuse Planning	Analysis of existing development plan on eco-city principles.	Immediate	Medium
B	Traffic & Transport	Road condition improvement for 18 km road length	Immediate	Medium
		Comprehensive traffic and transport study		
		Vehicle parking plan for Alandi		
C	Waste Management	Preparation of solid waste management plan for solid waste generation of 20T/day, (collection, treatment and disposal) for 10 acres composting and landfill site.	Immediate	Medium
		Preparation of a bio medical waste management plan.	Medium	Medium
D	Sewerage & Sanitation	Preparation of a comprehensive plan for sewerage, sewage treatment and disposal for 10 MLD capacity STP	Immediate	Medium
PILGRIM INFRASTRUCTURE DEVELOPMENT				
Sector		**Projects Identified**	**Core Zone**	**Buffer Zone**
A	Riverfront Development	Water quality improvement and beautification of Indrayani riverfront in Alandi	Immediate	-
B	Religious Tourism Development	Development of Eco-Pilgrimage package plan for Alandi and surrounding region	Medium	-

7.2 PHYSICAL INFRASTRUCTURE DEVELOPMENT

The projects identified under this category are related to the improvement of the civic infrastructure in the town. The need for these projects is derived from the discussions on the level civic infrastructure as mentioned in chapter 3. However for each project the priority in the pilgrim zone and Alandi Town has been mentioned separately.

7.2.1 Landuse Planning

PROJECT: **Review of existing development plan on eco-city guidelines and preparing concept Eco city development plan**

PRIORITY: **Immediate**

PFR Components

Policy Measures

- Creating a core zone (Pilgrim Zone) and Buffer zone (non-pilgrim)
- Formulating Development control regulations on Eco city principles
- Zoning Regulations for educational, recreational, meditation etc use along the River Bank
- Shifting of non-pilgrimage activities out of Pilgrim Zone
- Providing and developing adequate open spaces as per the Planning Standards
- Allocation of land for Public utilities such as toilets, cremation ground etc.
- Recommendations for modification or revision of Development Control Regulations and Zoning Guidelines.

7.2.2 Sewerage & Sanitation

PROJECT: **Preparation of a sullage utilization plan for Alandi Town**

PRIORITY: Pilgrim Zone – **Immediate,** Alandi Town **– Medium**

PFR Components

Policy Measures

- Measures to prevent pollution of the Indrayani River
- Levying fine on releasing sewage or waste water or any pollutant into River

Management Techniques

- Preventing sewage from entering the River by providing sewerage network.
- Sensitising the pilgrims for hygienic practices such as avoiding open defecation and urination.
- Involvement of NGOs in public awareness and in providing and maintenance of public toilets and urinals to keep them in hygienic condition during festival time.
- Regular Desilting of existing storm water drains.
- Review of technology options for sewage treatment

- Signs & signage creating awareness on cleanliness at strategic locations such as
  - Entry Point to the town from Pune side along with a welcome arch
  - Steps of Bathing Ghats above the water level
  - Railings of New & Old Bridge on Indrayani River
  - Public places such as MSRTC Bus Stand, PMT & PCMT Bus stand, Taxi Stand near Old Bridge
  - On kiosks near Indrayani River and the Temple

Infrastructure Development

- Connecting Public toilets to the sewerage network
- Providing mobile toilets during festival period
- Providing sewerage network to all areas within the Municipal Limits with immediate priority for area near the Temple, Indrayani River and Gaothan area.

7.2.3 Solid Waste Management

PROJECT: **Preparation of solid waste management plan for solid waste generation of 20 T/day (year 2031), (collection, treatment and disposal) for 10 acres composting and landfill site.**

PRIORITY: Pilgrim Zone – **Immediate,** Alandi Town **– Medium**

PFR Components

Policy Measures

- Ban on sale & use of plastic bags in the town.
- Ban on sale of Prasad, offerings for temple etc in plastic bags
- Awareness generation amongst pilgrims to prevent littering in town especially near River bank
- Awareness generation amongst shopkeepers for discouraging use of plastic bags
- Engagement of local agencies in developing various recycling techniques for the solid waste

Management Techniques

- Maintenance of equipments and vehicles used for solid waste collection.
- Preventing dustbins and other equipments from vandalism
- Organising cleanliness drives through Govt. and NGOs at periodic intervals involving locals and pilgrims.
- Segregation of organic, inorganic & recyclable waste at source.

Infrastructure Development

- Identification of solid waste disposal site(s) considering future growth of the town
- Identification of an appropriate treatment technique(s) such as composting, vermiculture, for the solid waste.
- Setting up of a composting plant/ vermiculture unit for organic waste, especially that received from the Temple

- Providing adequate vehicles and equipments for waste collection
- Allocation of manpower and appropriate equipment to increase efficiency, for daily sweeping of streets and public places and coverage of all areas, particularly in the Pilgrim Zone.
- Providing standard containers for separate collection of organic and inorganic wastes from commercial establishments such as hotels & restaurants, vegetable markets shops, marriage and community halls etc.
- Providing additional dust bins at public places

PROJECT: **Preparing a Bio Medical waste Management Plan.**

PRIORITY: Pilgrim Zone – **Medium,** Alandi Town **– Medium**

PFR Components

Policy Measures

- Sensitising Govt. & Pvt. hospitals & clinics to prevent unauthorised disposal of bio medical waste

Infrastructure Development

- Setting-up a scientific collection system for collection of biomedical waste from all health facilities in the town, as per the Bio-medical Waste (Management and Handling) Rules, 1998.

7.2.4 Traffic and Transport Planning

PROJECT: **Road condition improvement**

PRIORITY: Pilgrim Zone – **Immediate,** Alandi Town **– Medium**

PFR Components

Policy Measures

- All roads in Alandi Town should be BT roads with adequate footpaths.
- Road network to be planned keeping in mind future needs of the town, inflow of pilgrims and surrounding developments.

Management Techniques

- All the important roads to be kept encroachment free.
- Hawking zones to be identified

Infrastructure Development

- Widening of roads to at least 2 lanes in the Pilgrim Zone (Gaothan area) and clearing of bottlenecks.
- Junction improvement of the road entering the town near Old Bridge.
- Relocation of PMT bus stand & Share Taxi Stand
- Improvement of surface condition of the existing roads by repairing the marginally damaged roads and relaying new roads where necessary.

- Construction of a 4 lane Bypass Road for diversion of Pune-Chakan heavy vehicle traffic.
- Ring road proposed in Development Plan of Alandi to be taken up on immediate priority
- Providing additional roads connecting the various newly developing parts of the town, which could be useful during the peak pilgrim season of Kartiki Fair.
- Feasibility of constructing a footpath along Mahadwar Road as it is used as Parikrama Marg by Pilgrims.
- Junction improvement for other important traffic junctions such as Chakan Chowk, Vadgaon Chowk, Nagarparishad Chowk and Rath

PROJECT: **Comprehensive traffic and transport study**

PRIORITY: Pilgrim Zone – **Immediate,** Alandi Town **– Medium**

PFR Components

Policy Measures

- Undertaking a Comprehensive Transport Study for the town for normal & festival season and keeping in mind the future growth and development of the town with the regional context.
- Developing Eco-friendly Public Transport(PT) and Intermediate Public transport (IPT) systems such as
  - Buses running on Compressed Natural Gas (CNG)/ Liquefied Petroleum Gas (LPG)
  - Auto rickshaw running on CNG / LPG
  - Electric/ battery operated vehicles for routes such as Alandi – Dehu, Alandi – Pune, Alandi – Chakan etc.
- Traffic regulation during normal days & festival days
- Designating the road in front of Alandi Municipal Council and surrounding area as "Zero Tolerance Zone".

Management Techniques

- Identification of traffic routes for "one-way traffic" to ease traffic movement and minimize air and noise pollution.
- Providing adequate number of traffic signs, traffic signals, construction of traffic islands, and road dividers at appropriate places.
- Designation roads/ areas for vehicle types based on available width, area served & activity/ land use.
  - Pedestrians Zone / Roads
  - Pedestrian & slow moving (cycle, animal drawn etc)
  - Two wheelers & three wheelers
  - Four wheelers (car, jeeps etc)
  - Heavy vehicle (Buses, Trucks, Tankers etc)
- Collecting toll from vehicles entering the town (Starting with Private Tourists Vehicles)

Infrastructure Development

- Develop supporting infrastructure for smooth running of Eco-friendly PT/IPT vehicles (CNG filling stations, break down services, maintenance workshops etc)

- Developing Traffic Junctions/ Islands, Signalling Systems etc at important junctions such as Dehu Phata, Nagarparishad Chowk, Markal Chowk, Chakan Chowk, Rath and Vadgaon Chowk.
- Landscaping and beautification of traffic island(s)

PROJECT: **Vehicle Parking Plan for Alandi Town**

PRIORITY: Pilgrim Zone – **Immediate,** Alandi Town **– Medium**

PFR Components

Policy Measures

- Identification and strict implementation of 'No- Parking Zones'
- Identifying land for parking area for different users such as Tourist Buses, Government Buses, Auto rickshaw etc) in the town
- Developing 'Pay and Park' facility for pilgrims / tourists

Management Techniques

- Identification of streets/ roads with less traffic for short term parking
- Parking Management plan for festival days.

Infrastructure Development

- Developing of parking lots including paving, landscaping & beautification.
- Exploring the feasibility of developing basement parking and developing gardens/seating area above the parking.
- Parking lots to be designed to serve as rainwater harvesting areas.

7.3 PILGRIM INFRASTRUCTURE DEVELOPMENT

The projects in this category are identified keeping in mind the specific needs and requirements of the pilgrims visiting Alandi. The projects when developed would however be an asset to the town and would also benefit the local residents. The need for this project is arrived at based on the discussions in chapter 4. These projects would also be instrumental in giving visibility to Alandi and making it an important national & international pilgrim destination.

7.3.1 Riverfront Development

PROJECT: **Water quality improvement and beautification of Indrayani riverfront in Alandi**

PRIORITY: **Immediate**

PFR Components

Policy Measures

- Awareness generation amongst people to maintain clean & hygienic conditions on the river banks

Management Techniques

- Strict implementation of the zoning regulations for land use along the riverbank.
- Preventing unauthorised structures from coming up near the river bank

Infrastructure Development

- Construction of an underground sewerage system for Alandi and discharge of treated sewage downstream of Alandi town.
- Constructing an Interceptor drain along both the banks of the river for collection of surface runoff and wastewater discharges presently directly entering into the river, and directing them downstream of Alandi town.
- Strengthening of riverbanks through Alandi town, construction of flood protection walls. Construction of Bathing Ghats on both the banks of the Indrayani river

7.3.2 Religious Tourism Development

PROJECT: **Development of Eco-Pilgrimage package plan for Alandi and surrounding region**

PRIORITY: **Immediate**

PFR Components

Policy Measures & Infrastructure Development

- Developing adequate clean & hygienic accommodation facilities for all socioeconomic groups
- Promoting local cuisine in tune with the religious setting of Alandi in the hotels and restaurants
- Preparing a Pilgrim Circuit Plan & Itinerary for Alandi taking into consideration the nearby destinations such as Dehu, Jejuri, Some of the Ashtavinayaks etc
- Preparing a tourist map & information Brochure of Alandi showing important places within the town, their distances, history, legends, surrounding places, information on hotels, their pricing etc.
- Opening a MTDC information counter and hotel at Alandi for providing information to Pilgrims.
- Compiling information related to disaster management such as availability of health facilities, risk prone areas of town emergency Numbers etc.
- Training of various stakeholders such as tour operators, hotel owners, tourist guides' etc for promoting environment friendly and socially acceptable tourism in Alandi.
- Preparing an environment & social code of conduct for pilgrims and tourism stakeholders.
- Urban design guidelines for location and siting of hoardings and banners.

ANNEXURE

Minutes of the Meeting

Inception Meeting for the Project on
"Environment Improvement of Religious Places in Maharashtra - Alandi"
Date: 19-01-2005
Time: 10:30 AM
Venue: Conference Hall, Maharashtra Academy of Engineering, Alandi

The meeting convened by M/s. Wilbur Smith Associates Pvt. Ltd. (WSAPL), Bangalore was presided over by, Dr. D.B. Boralkar, Member Secretary, Maharashtra Pollution Control Board (MPCB) Mumbai. Dr. S. B. Katoley, Technical Advisor, MPCB Mumbai, Dr. A.R. Supate Project Leader, Zoning Atlas Division, MPCB Mumbai, Dr. Vishwanath Karad, Founder & Executive Vice President, Maharashtra Institute of Technology, Pune and Dr. Sarang Joshi, Chief Trustee, Alandi Devsthan, Alandi were among the other dignitaries on the dais to guide the gathering. A list of participants is enclosed at the end.

- A meeting was held at Alandi to start off the project **"Environment Improvement of Religious Places in Maharashtra-Alandi"** sponsored by the MPCB. The purpose of the meeting was to sensitize the different stakeholders and project beneficiaries about the project on making Alandi as model religious tourism destination with special reference to the environmental issues and take into account the ideas, issues & problems of all the stakeholders.

- The meeting began with a brief introduction by Dr. B. A. Giridhar, Project Consultant, WSAPL about the purpose of the meeting and the proposed study.

- **Dr. D. B. Boralkar**, Member Secretary, MPCB explained to all the participants in detail about the project background. He mentioned that the religious places experience significant inflow of floating population. Usually, being small towns or villages with little infrastructure to cope with such huge number of pilgrims, these places lead to a deterioration of the overall environment of the town and thereby the quality of life. He mentioned that such situations also give rise to health problems and public health & sanitation is not a high priority area in most initiatives. Hence, the said study has been taken up on the lines of the Eco-city projects promoted by the Central Pollution Control Board (CPCB) for places like Mathura, Vrindavan and Puri. MPCB has appointed WSAPL to carry out the survey of the area and identify the priority areas for environmental improvement and come out with projects that can be implemented. He mentioned that though WSAPL are the consultants the project is a People's Action Programme and local people will be involved in all the stages of the project. The students from MIT would also be involved, as it would give them a unique learning experience.

drew attention of the participants to the fact that the temple is a stone structure and due to its old age the stone is disintegrating. He pointed out the three basic needs of the Warkaris (devotees) coming to Alandi that are safe drinking water, shelter for staying and clean surroundings. These should be addressed in the course of the study.

- **Dr. Vishwanath Karad**, Executive President, Shri Kshetra Alandi-Dehu Perisar Vikas Samitee welcomed Dr. Boralkar's initiative to address the issues of religious places in Maharashtra and especially taking up Alandi on a priority basis. Dr. Karad has formed an NGO called the Shri Kshetra Alandi Dehu Parisar Vikas Samiti and through it they have been actively involved in the development of Alandi since 1987. He presented the initiatives taken up by the Samiti and one of the important initiative was to prevent the sewerage water from entering the river at the place where people drink it as holy "Teerth".

  He stressed on the importance of the involvement and role of the Town Planning Authority for reserving land for wide roads, open spaces and keeping the temple area free form encroachment. He urged that the Development Plan should take into account all the surrounding activities & developments existing & proposed in and around Alandi. He made a special reference to the situation arising out of the International Airport proposed at Chakan. Located around 15 km from Alandi, Chakan already has a MIDC estate; an airport close to it will boost the accessibility and growth of Alandi. The town should be geared up to take on the additional pressure.

  Being the hometown of the famous saint Shri Dyaneshwar who preached universal peace and harmony, Alandi deserved to be on the world map for spreading spiritualism and peace. He said that Alandi couldn't be dealt in isolation without Dehu. Both are twin towns 15 km apart and the entire area should be developed in an integrated manner.

  He mentioned that the British had established Municipal Council in Alandi 135 years ago realizing the importance of the town, however we in the present generation have failed to realize its importance and allowed to degenerate it. He stressed that any infrastructure development in Alandi should be of high quality and durability. The town is 700 years old and all new additions should last equally long.

  In his concluding remarks he welcomed all initiatives to boost the tourism in the area and the socio economic profile of the region but these should be at the cost of the essence of the town i.e. faith, spiritualism and peace. There should be no erosion of ethics or pollution of minds in the people visiting Alandi.

- During the discussions Dr. Katoley suggested need of Nirmalya Bins in the temple premises. Similarly, Mr. Nimbarte, expressed the need of electric crematoria & restricting throwing of bones of departed body in the river & construction of a spot for last rituals. Need for Sewage treatment was felt the priority area for consideration & hence Dr. Boralkar instructed RO, Pune to consider appropriate proposal on priority.

Member Secretary instructed SRO, Pune-II to carry out river monitoring at the appropriate spots periodically and make detailed inventorization of the same.

- **Dr. Giridhar**, Practice Area Leader, WSAPL thanked all the speakers and the participants for attending the meeting. He also invited for suggestions from the participants and any issues they wanted to be discussed.

- **Dr. Karad** on behalf of Shri Kshetra Alandi Dehu Parisar Vikas Samiti and Dr. Sarang Joshi on behalf of the Temple Trust felicitated all the guests. The participants then went for site visit to Ghats on Indrayani River and Temple area where Dr. Karad briefed them about the various works undertaken and completed by the Samiti. Dr. Joshi showed the Temple area to the participants and briefed them about the issues and problems. The meeting concluded with thanks to all for their participation & valuable contributions.

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List of Invitees for the Meeting to be held at Alandi on 19th Jan 2005

1	**District Collector** Dist. Pune	10	**Regional Transport Officer** Pune, Sangam Bridge, Pune.
2	**CHIEF OFFICER** Alandi Nagar Parishad PO: Devachi Alandi Tal. Khed Dist. Pune-412105 Tel No: 02135 – 233615 / 232223	11	**Tahsildar** Khed Taluka Tashildar Office Khed, Dist Pune
3	Dr. Chachare K. B. **Chief Medical Officer** Z.P. Hospital, PO: Devachi Alandi Tal. Khed Dist. Pune-412105 Tel No: 020 – 22951674	12	**Chief Engineer** Irrigation Department Sinchan Bhavan, Barne Road, Pune 411001, Maharashtra Phone: 0212-620505, 368259
4	Mr. Ashokrao Chandgude **CHIEF TRUSTEE** Shri Kshetra Alandi Devasthan PO: Devachi Alandi Tal. Khed Dist. Pune-412105 Tel No: 020– 24213787	13	**Superintendent Engineer** Pune Irrigation Circle, Sinchan Bhavan, Barne Road Pune 411001, Maharashtra Phone: 0212-626941 Fax: 0212-626289
5	Mr. Shridhar Sarnaik **Administrative Officer** Shri Kshetra Alandi Devasthan PO: Devachi Alandi Tal. Khed Dist. Pune-412105 Tel No: 02135 – 232234	14	**Mr. Vilas Kurhade** Nagaradhyksha, ANP Alandi Devachi, Taluka Khed, Pune – 4122105 Tel: 233606, 232377
6	Dr. Sarang Joshi **TRUSTEE** Shri Kshetra Alandi Devasthan PO: Devachi Alandi Tal. Khed Dist. Pune- 412105 Tel No: 02135 – 232458 / 232148	15	**Chief Engineer** Public Works Department Central Building, Pune-411001 Tel: 26124540,26124295
7	Mr. Suresh Garsole **TRUSTEE** Shri Kshetra Alandi Devasthan PO: Devachi Alandi Tal. Khed Dist. Pune- 412105 Tel No: 020 – 25433482	16	**Superintending Engineer** Public Works Department Central Building, Pune-411001 Tel: 26124540,26124295
8	Dr. Vishvanath Karad **Executive President, Shri Kshetra Alandi-Dehu Perisar Vikas Samitee and Director General MIT** 124, Paud Road, Kothrud, Pune – 411308 Tel: 020 – 25437682, 25432767	17	**Chief Engineer** Maharashtra Jeevan Pradhikaran, Central Building (East Zone) Pune – 411001. Phone - 020-26127866 Fax - 9520-26126596
9	Mr. A. B. Kendre **Co-Ordinator. Shri Kshetra Alandi Perisar Vikas Samitee** PO: Devachi Alandi Tal. Khed Dist. Pune-412105 Tel No: 020-2331795 / 2332767 Fax: 020-2342770	18	**Police Inspector** Vishrantwadi Police Station Vishrantwadi, Pune

List of Participants for the Meeting to be held at Alandi on 19th Jan 2005

Sr. No.	Name	Organization/ Department
1	Dr. D.B. Boralkar	Member Secretary, Maharashtra Pollution Control Board, Mumbai
2	Dr. Vishwanath Karad	Executive President, Alandi Dehu Parisar Vikas Samiti, Alandi, Pune
3	Dr. S.B. Katoley	Technical Advisor, Maharashtra Pollution Control Board, Mumbai
4	Dr. A.R. Supate	Project Leader, Zoning Atlas Division, MPCB, Mumbai
5	Mr. V.N. Munde	Regional Officer, Maharashtra Pollution Control Board, Pune
6	Mr. Bharat Nimbharte	Regional Officer, HQ, Maharashtra Pollution Control Board, Mumbai
7	Mr. Vilas Kurhade	President, Alandi Nagar Parishad, Alandi
8	Dr. Sarang Joshi	Chief Trustee, Shri Alandi Devsthan Trust, Alandi
9	Dr. Rahul Karad	Executive Director, MAE, Alandi
10	Dr. N.G. Joag	Principal, MAE, Alandi
11	Mr. S.C. Kollur	Project Scientist, Zoning Atlas, MPCB, Mumbai
12	Mr. P.P. Dhayagude	Sub-Regional Officer, Maharashtra Pollution Control Board, Pune
13	Mr. P.D. Barbole	Sub-Regional Officer, Maharashtra Pollution Control Board, Pune
14	Ms S.V. Kapre	Field Officer, Maharashtra Pollution Control Board, Pune
15	Mr. A.B. Kendre	Coordinator, Alandi Dehu Parisar Vikas Samiti, Alandi
16	Dr. Pratibha Kulkarni	Medical Officer, PHC, Alandi
17	Mr. M.P. Jadhav	Alandi Nagar Parishad
18	Mr. Rajendra Madaney	Dy. Regional Transport Officer, Pimpri, Pune
19	Mr. Dhananjay Kathe	Section Engineer, PWD (North Divison), Pune
20	Mr. S.T. Pawse	Executive Engineer, Pune Irrigation Division, Pune
21	Mr. A.S. Basrur	Sub- Divisional Engineer, Pune Irrigation Division, Pune
22	Mr. Adiwrekar	Executive Engineer, MJP, Pune
23	Mr. Renukadas	MJP, Pune
24	Dr. B.A. Giridhar	Practice Area Leader, Wilbur Smith Associates Pvt. Ltd.
25	Mr. A.S. Kulkarni	Manager, Energy & Environment, Wilbur Smith Associates Pvt. Ltd.

Minutes of the Meeting

Steering Committee
"Environment Improvement of Religious Places in Maharashtra –Alandi"

Date - 5th May, 2005 Time: 11.00 a.m. - 2.00 p.m.
Venue- Conference Hall, MIT College of Engg., Paud Rd., Kothrud, Pune

Steering Committee Meeting for the Project on " Environment Improvement of Religious Places in Maharashtra – Alandi" was convened by MPCB at MIT College of Engg., Paud Road, Kothrud, Pune – 411 038 on 5th May, 2005 at 11.00 a.m. to discuss the issues of :

1) Presentation of 1st draft report prepared by Wilbur Smith Associates Pvt. Ltd., Bangalore with specific reference to the environmental improvement projects.

2) Prioritization of key environmental project for immediate implementation

3) Discussions on short listed projects identified by WSAPL, Bangalore for immediate and long term implementation;

4) Experience at other religious places and the project implementation and monitoring arrangements made for eco-city and similar projects by Govt. of India;

5) Any other matter of interest pertaining to the project;

The meeting was presided by Dr. Vishwanath Karad, Executive President, Shri Kshetra Alandi Dehu Parisar Vikas Samitee Alandi, Pune. Among the other members, Dr. S. B. Katoley, Technical Advisor, MPCB, Mumbai, Dr. A. R. Supate, Project Leader, Zoning Atlas Division, MPCB, Mumbai, Shri V. N. Mundhe, Regional Officer, Dr. Sarang Joshi, Chief Trustee, Alandi Devsthan, Alandi, Shri Babannrao Kurhade, Nagaradkyashya, Alandi were present. Other dignitaries included, representatives of Alandi Devasthan, officials of M/s Wilbur Smith Associates Pvt. Ltd., (WSAPL), Shri P. P. Dhayagude, Sub Regional Officer, Pune-II & other MPCB officers. The list of participants in the meeting is separately annexed.

Dr. Supate, Project Leader Zoning Atlas Division, MPCB, Mumbai welcomed all the participants and informed the issues resolved during the first meeting held on 19th January, 2005 at Alandi. He informed that this meeting is called to discuss the issues of Prioritization of key environmental project for immediate implementation.

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Dr. Karad, Executive President, Shri Kshetra Alandi Dehu Parisar Vikas Samitee welcomed all and assured to share the all technical and other information available with the Shri Kshetra Alandi Dehu Parisar Vikas Samitee for this project with MPCB & the Boards consultant M/s. WSAPL, Bangalore. He showed the photo exhibition of the work undertaken by the Shri Kshetra Alandi Dehu Parisar Vikas Samitee and their current status to steering committee members.

Mr. Harinath, WSAPL, welcomed all and presented details of various projects short listed for undertaking the Pre Feasibility Report within the Core and Buffer Zones in various sectors such as Land use Planning, Sewerage and Sanitation, Waste Management, Traffic and Transport and so also for Pilgrim Infrastructure Development

Dr. Karad asked the concept of **"eco-city."** Dr. Supate informed the "eco-city" is concept motivated by Germans considering the sustainable development of a certain city/area with safe guarding the heritage, culture and other related social issues.

Dr. Karad pointed out that, India has ancient evidences having implemented the "eco-city" concept even before the foreigners' imagination. He gave the version of Shri Sant Dnyaneshwar regarding how the cities should be planned and developed.

Steering committee discussed the present situation & problems and considered following projects for immediate considerations:

1. **Updating / Revision of Existing Development Plan of Alandi Nagar Parishad :**

   It is proposed to consider **updating/revision of existing Development Plan** of Alandi Nagar Parishad incorporating the eco-city concept and Disaster Management issues for total area of Alandi i.e. considering the Core Zone and Buffer Zone areas. Dr. Karad & Nagaradhyaksha, Alandi categorically stressed the need to have such plan which can be submitted for consideration and approval of Competent Authority. Unless, this plan is prepared approved it shall be difficult to stop the unplanned development being place now in Alandi.

2. **Solid Waste Management (SWM) :**

   SWM in temple premises & along the ghat area of the river is another priority project, which will include, providing places for collection of *nirmalya* in core zone, transportation to treatment site & treatment of the same using vermicomposting technique. Trust showed its willingness to provide & operate such facility. It is also suggested by the steering committee that the land fill site should be developed as per recent directives considering development for next 30 years'.

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3. **Preparation of Traffic Management Plan:**

Priority considerations are required for decongestion of core temple area, providing appropriate access to devotees during festivals, ensuring emergency access to ambulance & fire engine in case of emergencies, good road conditions in the core area & preparation of traffic management plan for ordinary days & festive days.

4. River Front Development for Flood Protection & Bathing Ghats :

There is an urgent need to develop the river front of Indrayani in Alandi to ensure the river bank protection from flood & also, develop the bathing ghats as at Nashik, provision of public toilets, bathrooms/changing rooms on the bank, recycle/reuse of purified/treated water in bathing pools should also be given considerations to ensure health & hygiene of the pilgrims. **Safety** of devotees during the bathing should also be considered while planning ghat development. Concept, Work & plan of Shri Kshetra Alandi Dehu Parisar Vikas Samitee may be considered as guideline while preparation of PFR & DPR. Dr. Karad assured that Samitee will provide all the information & is willing to consider the changes in the plan, if any.

A suggestion was also made to explore the possibility of re-circulating & reuse of water in bathing pools at downstream for washing, gardening/irrigations etc. using appropriate technology.

5. Providing Public Utilities at Public Places & Dharmashalas:

It was also strongly recommended that, to ensure the hygienic conditions in town especially along the river front, every Dharmashala should build bathrooms and toilets with drainage facility and drinking water facility. If the dharmashala are unable to build the sanitation facilities, the same should be built in the common programme as may be initiated by local body. If dharmashala does not follow the guidelines, the local body should revoke their license. In future it should be mandatory to build toilet blocks bathroom & drinking water facility by dharmashalas.

6. Upgradation of Sewerage System & STP :

The domestic effluent should not enter into the river as the people consider the river water as holy water i.e. Tirtha. Hence the sewerage system & sewage treatment plant of local body should be upgraded to tackle the situation. **The committee requested Regional Officer, Pune and Sub Regional Officer, Pune-II to follow-up the matter of installing STP with Alandi Municipal Council on top priority.**

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7. Drinking Water Supply in the Core & Buffer Zones:

Dr. Karad desired that, Alandi should be brought on World Map and people of World should see the village as World Peace Center. Hence, he stressed the need to have sufficient and clean drinking water supply to the town & ensure the demand of town for water supply during the peak seasons for drinking water, bathing etc. of the local & floating population of the town.

8. Providing Crematorium on the River Bank:

Dr. Sarang Joshi, Trustee, Shri Kshetra Alandi Devasthan opined that the issue of building modern crematorium should also be included in this programme. Setting up of a electric crematorium may be considered as it will save the wood. Dr. Katoley informed that in *Varanasi* the people have opposed to use electric crematorium due to blind faith and hence, the people need to be educated about the use of such crematoria. Dr. Supate and Shri Mundhe, opined that people should be made aware of the benefits and that it does not affect their religious faiths.

Dr. Sarang Joshi informed that the Alandi normally in eight days, there are 2-3 unknown dead bodies which have to be cremated. Hence electric crematorium will be beneficial. So also people will be educated for use of the electric crematorium and not using the ghats for last rites.

The meeting ended with vote of thanks to the Chair. It is proposed that the next meeting will be taken at Alandi to review the progress of the work.

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"Environmental Improvement Programme for Religious Places in Maharashtra: Alandi"

Minutes of Meeting dtd. 5/05/05 at MIT, Pune

List of Participants

Sr. No.	Name	Organization/ Department
1	Dr. Vishwanath Karad	Executive President, Shri Kshetra Alandi Dehu Parisar Vikas Samitee, Alandi, Pune
2	Dr. S.B. Katoley	Technical Advisor, MPC Board, Mumbai
3	Dr. A.R. Supate	Project Leader, Zoning Atlas Division, MPCB, Mumbai
4	Mr. V.N. Munde	Regional Officer, MPC Board, Pune
5	Dr. Sarang Joshi	Chief Trustee, Shri Alandi Devasthan Trust, Alandi
6	Mr. A.S. Harinath	Vice President, WSAPL, Banglore
7	Dr. B.A. Giridhar	Practice Area Leader, WSAPL, Banglore.
8	Mr. Jitendra Lonkar	Consultant, WSAPL, Banglore
9	Mr. P.P. Dhayagude	SRO, Maharashtra Pollution Control Board, Pune
10	Mr. P.D. Barbole	SRO, Maharashtra Pollution Control Board, Pune
11	Mr. Baban Kurhade	President, Alandi Nagar Parishad, Alandi
12	Mr. Vilas Kurhade	Vice-President, Alandi Nagar Parishad, Alandi
13	Mr. S.N. Kurhade	Councilor, Alandi Nagar Parishad, Alandi
14	Mr. A.B. Kendre	Coordinator, Shri Kshetra Alandi Dehu Parisar Vikas Samitee, Alandi
15	Mr. S.S. Nimbalkar	Project Scientist, Zoning Atlas Division, MPCB, Mumbai
16	Ms. Sindhu Kapre	Field Officer, Maharashtra Pollution Control Board, Pune
17	Mr. M.P. Jadhav	Sr. Clerk, Alandi Municipal Council
18	Dr. D.M. Kondap	MIT, Pune
19	Mr. V.R. Phadke	MIT, Pune
20	Mr. S.R. Deshpande	MIT, Pune
21	Mr. Sandeep Joshi	Shrishti Eco-Research Institute, Pune
22	Dr. Vishwambhar Choudhari	Deccan Ecological Research Foundation, Pune
23	Mr. B. Tawade	Alandi, Pune
24	Dr. B.M. Dama	Alandi, Pune

Extent and boundaries of electoral wards

Ward No.	Name of the ward		Extent and Boundaries
1	Fruitwala Dharmashala	Location	Tanaji Nagar, Kelgaon Road, Chakan Road Bridge, S. No. 126, Ghundre Ali, Ghaswala Dharmashala, Padmavati Road, Padmavati Odha, Vadgaon Road, Bhosale House, S. Nos. 43, 46, Dyanandarshan Dharmashala
		North	Padmavati Odha, Sr. No. 127, North to South S.N. 105, Municipal boundaries East S. Nos. 45, 46's Municipal boundaries.
		East	S.No. 46 Municipal boundaries to Sr. No. 43 near Sanjay Cinema Hall to South Dyanandarshan Dharmashala
		South	Varhadkar Dharmashala, Kelgaon Road to Ghundre Ali Road to Ghundre chowk from Ghundre chowk east Pradakshina Road to Shree Bhairavnath Chowk.
		West	S. No. 224, 223, 229, 126 near Municipal Boundary
2	Primary School No.4	Location	Ghere House, Rhidas Dharmashala, Narke house, Pachunde Niwas, Vilas Kurhade Building, Jalram Mandir, Ramesh Ghundare Niwas, Nakoda Mandir, Aru Niwas, Suresh Thirve, House, Nahirat Chawl, Datta Mandir, Charholi Road, Mama sahib Mohol Dharmashala, Ganesh Nath Maharaj Math, Primary School No.4, Proposed Ring Road.
		North	Sr. No. 43, 44 Municipal Boundaries
		East	Municipal Boundaries proposed Ring Road
		South	S. No. 7, 8, 9 'S Municipal Boundaries
		West	Pradakshina Road 30 feet road, Datta Mandir Road, S.NO. 15 upto DMandir Boundary
3	Shree Gajana Maharaj Sansthan	Location	Yogiraj Hotel, Ghedse service station, Dhabale House, Shree Dyaneshwar Maharaj Dhaktay Paduka, Lemraj Jadhav House, Geeta Pathhala, Lunawat Bungalow, Mandale Shopping Centre, Gajanan Maharaj Sansthan, Sadhka Ashram, Chaitnya Ashram, MIT College, New ST. Stand, Shree Vaitageshwar Mandir, Bhageshwar Dharmashala
		North	Sadhak Ashram to Indrayani River boundary, Chitanya Ashram, Vaitageshwar Mandir
		East	Matang Samj Dharmashala, Dabhade House, S.No. 927, 929 to 932, 935's Boundary (Indrayani river boundaries S. No. 943, 944, 945' s Boundaries)
		South	S.NO. 916, 917, 945, 946 near South MunicipalBoundaries
		West	Dehu Road, to Hill from Dehu Road to Sadhak Ashram Municipal Boundaries
4	Narshima Swami Maharaj Math and Dyaneshwar Maharaj Bhint	Location	Siddh beth Alandi Water Supply Centre, Dyaneshwar Maharaj Garden, Gopal Krishna Mandir, Vaish Samaj Dharmashala, Primaery School No.1, Shree Dyaneshwar High School, Bhagwat Dahram Pracharak Shala Narshima Swami Maharaj Math, Sarad Dharmashala, Phulwale Dharmashala, Sadanad Maharaj House, Lonari Dharmashala, Mandiawale Dharmashala, Dynaeshwar Bhint, Ghadge Maharaj, Dharmashala Centre, Chawdi Chowk, PDCC Bank, Jagtap Huse, Parvatrao Kurhade

Ward No.	Name of the ward		Extent and Boundaries
			House, Waghmare House, Ramesh Tea house, Warkari Shikshan Sanstha, Prasade wada, Harale Vaishnav Dharmashala.
		North	S.No. 122, 225 to north municipal boundaries Kelgaon Road to Lala Tapkir House to east Chakan Road, Octroi Post to Ghundare Chowk, to Dyaneshwar Maharaj Bhint
		East	Dyaneshwar Maharaj Bhint, Padmashali Dharmashala, Kanifnath Dharmashala, Sarkari Chawdi.
		South	S. No. 122's South Boundary too Indrayani River Boundary to east of Malappa Mandir, Sadanand Maharaj House to Ganesh Darwaja and Parwatrao Kurhade House from Mouje House Road
		West	Kelgaon Road to Kendre Maharaj Road, S. No. 122's Municipal Boundaries Ghundare Chowk to Bharav Chowk to Mhadwar Chowk to Gore Sadan
5	Shree Dyaneshwar Maharaj Mandir and Hajeri Maruti Mandir	Location	Dyaneshwar Vidyapeeth, Shree Dyaneshwar Maharaj Mandir, Ajol Ghat, Nagarpalika Office, Shree Khandoba Mandir, Dr. Yadav Dispensary, Cosmos Bank, Seema Provision Store , Pachunde house, Bunkateswami Math, Shree Laxmi Mata Mandir, water tanks, dhor Samaj Dharmashala, shree Hajeri Maruti Mandir. Pimpalwandikar Dharmashala, ghundre Talim, Ranaawade Sadan, Kanif Nath Dharmashala, Baudh Samaj Mandir, Wadar Samaj Charmasala Buyeulla Dharmasahala, Old S.T Stand, Wadgaonkar Math, shree Ram Mandir, old police chowki , Pundlik mndir, shree Shani Maharaj Mandir.
		North	Dhyaneshwar vidhyapeeth, parvatrao Kurhade House Road, From Ganesh Darwaja, Hajeri maruti Mandir to East Gadge maharaj Hall by bhagirithi Nala
		East	Bankat Swami Math from Hajiri maruti to Laxmi Mata Mandir, Bankat swami Math to Charholi Raod by 30 road vithal Rukmani chowk to south Municipal boundries and Indrani river.
		South	Indryani rivershree Khandoba Mandir Pradakshina road30 Road Pachude niwas.
		West	Indrayani "Teer Gadge Maharaj Hall to Madhala Hall raod.