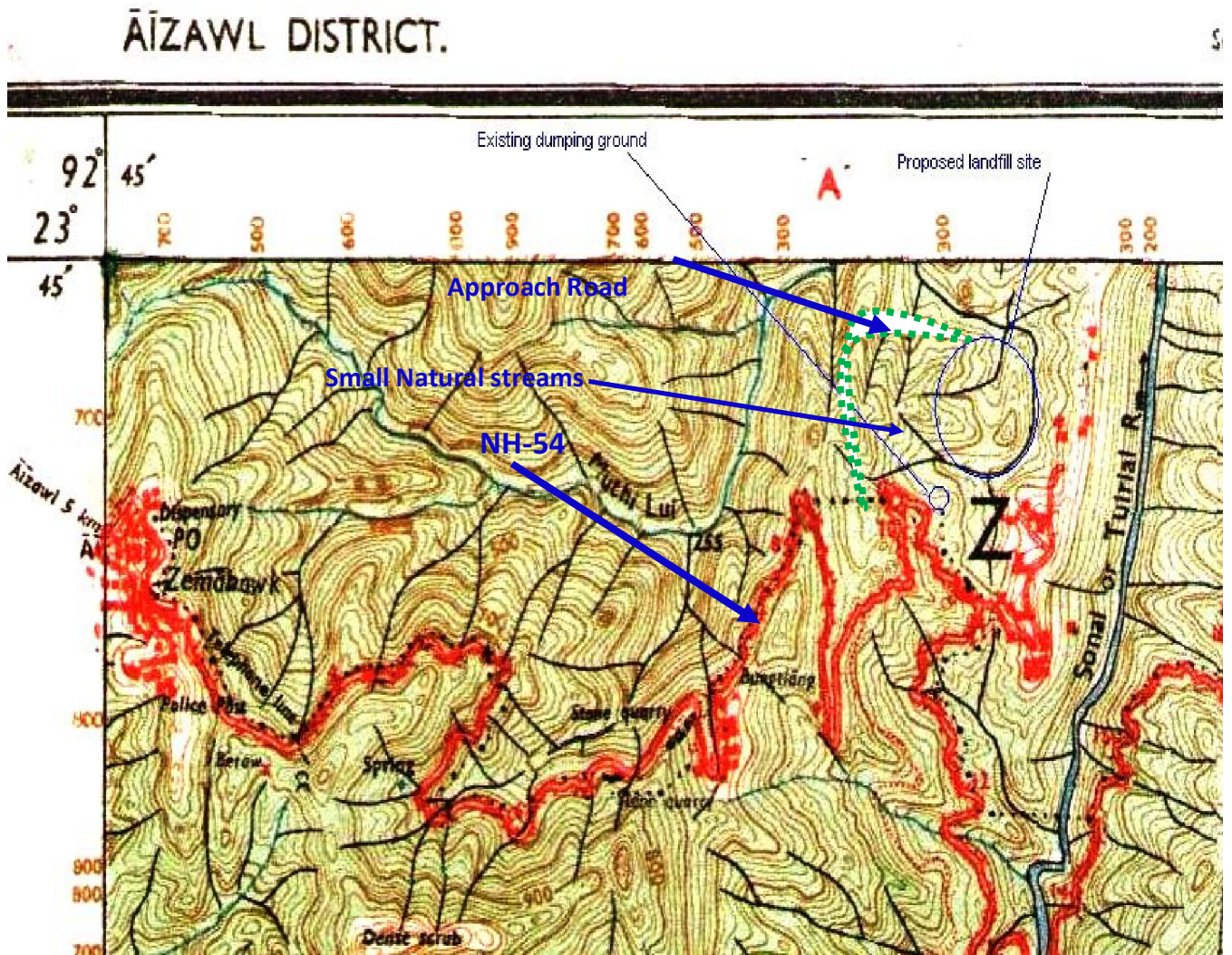


Annexure -1

Toposheet Showing features -Landfill



Sl. No	Feature (in 10 Km)	Status
1	National highway	NH-54
2	State highway	No State highway
3	District road/approach road	Shown in green color

4	River,	Shown in sky blue (Tuirial River)
5	Canal	No canal
6	Natural drain	As area is hilly many natural/seasonal drain exist , shown in black colour
7	Protected areas, under wild life (protection) act, archaeological site, natural lake, flood area,	No Such area
8	Human settlements (with population),	Few settlement (outside the boundary of 4 km from proposed site) having population less than 2500.
9	Industries,	No industries
10	High tension electric line	---
11	Prominent wind direction (summer and winter),	Mentioned in chapter 5.0 Description of existing environmental condition heading 5.3 Wind Speeds and Directions
12	Effluent drain, if any and ponds	No

Annexure 2

1. Community Participation in Solid Waste Management & Segregation at Source

1.1 Introduction

Solid Waste Management (SWM) is one such activity, where public participation is key to success. The local body can never be successful in Solid Waste Management without active community participation, whatever may be the investments made from the municipal or Government funds. The local bodies are the institutions of grass root democracy having elected members representing a small group of electorate. It also has an outreach service at the ward level through which it can easily interact with the people on almost all-important issues. The local body should therefore, seriously consider involving community in all programs through a consultative process and variety of other communication approaches and adopt the strategy which has the acceptance of the community.

1.2 Strategy of Community Participation

The Aizawl Municipal Council (AMC) may adopt the following strategy.

1.2.1 Identification of Groups of People to be addressed

- **Residential Areas**

1.2.2 Community will be classified into three categories

1. High Income Group – the affording
2. Middle Income Group – educated, sensitive, less affording
3. Low Income Group – Un-affording

None of the above categories of people is an exception in apathy towards SWM but the level of awareness and sensitivity of each group is different and needs to be tackled differently.

- **Markets/Commercial Areas/Offices/Banks etc.**

These places may be classified into three board categories:

1. Vegetable Markets
2. Shopping areas
3. Offices/Institutional areas
4. Slums
5. Hotels and Restaurants.

1.3 Identification of the Area in Solid Waste Management where Community Participation is essential.

Solid Waste Management involves several stages of activities where people's participation is critically required in some of them and local body has to do the rest of the work. In the City of Aizawl following areas has been identified where people's participation is essential.

- Generation of awareness with in the community.
- Reduce, Reuse & Recycling (R R R) of waste.
- Not to throw the waste/litter on the street, drains, open spaces, and hill.
- Segregation and Storage of organic / bio-degradable and recyclable waste separately at source.
- Primary collection of waste
- Community storage/collection of waste in flats, multi-stories buildings, societies, commercial complexes, etc.
- Waste disposal at a community level (optional)
- Pay adequately for the services provided.

1.3.1 Reach the Community

The essential steps in this direction is to select representative samples of the community and go through a consultative process to ascertain the perceptions of the people about the SWM services being given to them, their expectations and extent to which they are willing to support and participate in the process. Their choice of technological options available also needs to be ascertained.

1.3.2 Community consultation process.

The consultative process could be taken up as under:

- **Identification of Problems**

Identification of problems of waste management through site visits and consultation with local population at the time when the community is generally available for interaction.

They should try to find out the prevalent situation of waste management in the area under observation and ascertain the perceptions of the people about the services provided. In this exercise the local councilors, local leaders, NGOs, etc. may be invited to participate.

- **Finding out Optional Solutions**

Having identified the deficiencies in the system and known the public perceptions, the next essential step is to think of optional solutions to tackle the problems, workout the cost implications and level of public participation needed.

- **Consult Community on Options Available**

Having done this homework, there should be second round of consultative process where the options worked out may be discussed with the community along with cost implications and their support required. Their suggestions may thought on each solution proposed. The community may be encouraged to give their views freely.

They must, therefore, be first appraised of the options available and then asked to give their considered opinion on what will work in their area and how much they are willing to cooperate.

- **Workout the Strategy of Implementation**

After the consultative process, strategy for implementation of the system may be worked out and pilot projects may be taken up in the areas where better enthusiasm is noticed and demonstrate the successes to other areas and gradually implement in rest of the areas of the city/town. It is desirable to implement the new program in a few areas to begin with, monitor its success carefully and extend the program to other areas thereafter with suitable modifications wherever necessary.

1.4 System of waste management to be adopted

Having gone through the consultative process as indicated above, in a few selected areas and having taken up pilot projects, the Aizawl Municipal Council (AMC) should finally decide on the systems of waste management to be adopted in the city and take the following measures to ensure public participation.

1.4.1 Public Information, Education, Communication Program (IEC)

For the successful implementation of any program involving public at large in SWM system, it is essential to spell out clearly and make them known the manner in which local body proposes to tackle the problem of waste management and extent to which public participation in Solid Waste Management is expected to keep the city clean and improve the quality of life in the city.

Dayal Committee of Government of India (Report 1995) has advocated that IEC approach should

- a) Ensure that the people become aware of the problems of waste accumulation and the way it affects their lives directly.
- b) Ensure that the people generates less waste by cutting back on waste generating material and by following clear defined practices of waste management.
- c) Create public awareness against big waste generators and provide information to monitor the performance of these sources of waste.
- d) Inform the people about waste management program of the government and municipal bodies.
- e) Promote public participation in waste management efforts through private partnership where feasible.
- f) Propagate the message that the “Clean City Program” is both analytical and purposive and that solutions proposed are within the framework of government initiatives and legally appropriate.

Citizens co-operation is vital to reduce, reuse and recycling of waste and in keeping garbage off the streets, by keeping biodegradable “wet” kitchen and food waste unmixed and separate from recyclable “dry” wastes and other hazardous wastes. Their participation in primary collection of waste, using community bins for storage of waste generated in multistoried buildings, societies, commercial complexes and slums is also

essential. If the reasons for doing so are explained, public participation is bound to improve.

1.5 Measures to be taken to bring about a change in public behaviour

A series of measures can be taken to bring about a change in public behaviour through public awareness programs, which could be as under:

1.6 Promote “Reduce, Re-use and Re-cycle (R-R-R-) of Waste

- **Reduce**

Everyone is concerned with the growing problems of waste disposal in urban areas with the scarce availability of land for processing and disposal of waste and environmental remediation measures becoming ever more expensive. It is therefore necessary to not only think about effective ways and means to process and dispose of the waste that we generate each day, it is also essential to seriously consider how to avoid or reduce the generation of waste in the first place and to consider ways to re-use and recycle the waste, so that the least quantity of waste needs to be processed and disposed of.

- **Re-use**

One person’s waste can be useful material for others. Efforts should therefore be made to encourage collection of such re-usable material through waste collectors, waste producers, NGOs and private sector instead of allowing reusable waste to land up on the disposal sites. Bottles, cans, tins, drums and cartons can be reused.

- **Re-Cycling**

In the era of excessive packaging materials being used, a lot of recyclable waste material is generated. All out efforts are necessary to retrieve recyclable material from the households, shops and establishments and fed to the recycling industries through intermediaries such as waste purchasers, waste collector/NGOs, etc.

1.7 Promote Public Participation in SWM Systems Adopted

The first and foremost thing that the citizens need to be told and made to understand is that no waste shall be thrown on the streets, drains, hill, open space, etc. and that they should form habit of :

- Storage of wet food/bio-degradable waste and dry recyclable waste separately at source

- Participation in primary collection wastes
- Handing over of recyclable waste materials to rag pickers/waste collectors

1.8 Provide Information Hot-line

The key to success of any public-education, awareness and motivation program is to provide as many ways as possible for the public to interact, is promptly and conveniently as possible, with policy-makers, to seek clarification at doubts, share ideas or give suggestions which are constructively followed upon telephone hot line or Post Box number for written communications could be one of the ways to have inputs from members of the public. The phone must be attended during working hours by polite, responsive and dynamic persons who are well informed, interested in the subject and available at all stated times.

1.9 Public Education on Solid Waste Management.

The communication material developed should be utilised in public awareness programmes through variety of approaches as under.

1.9.1 Group Education

This may be done through:

- a. Group Meetings in the community
- b. Workshops
- c. Exhibitions
- d. Lecture series
- e. Panel Discussions, etc.

1.9.2 Mass Education

This is very essential to cover the entire population, as it is not possible to reach all the people through group education programs.

Mass Education programs can be planned using following methods of communication.

- **Use of Print Media :**

Advertisements may be given in a planned manner to educate the masses and local newspapers can also be requested to insert the given messages on SWM at regular

intervals. They should also be encouraged to start a regular Suggestion Box from where good ideas can be picked up by the local body.

Newspaper may be especially encouraged to give coverage to successful initiatives that have overcome SWM problems.

Aizawl Municipal Council (AMC) also use newspaper delivery services by inserting handbills for readers in a particular locality to announce the start of campaign from time to time and adhere to the systems introduced.

- **Use of TV / Cable TV / Radio / Web Site :**

This is the very powerful medium and can be used through local programs to inform the citizens of new waste collection arrangements made by the local body as and when they become operational and advise them to participate effectively in the prescribed manner. Contact number of the concerned officials for problem solving of reporting of SWM grievances may also be publicized. This media may be used to publicize successful efforts in some localities to motivate other citizens to perform likewise and get similar recognition of their effort.

- **Street Plays, Puppet Shows etc. :**

Street plays and puppet shows play a significant role in bringing awareness among the people. This method of communication will work well in low income population; more particularly in slums. Well designed street plays / puppet shows can convey the messages effectively as such programs are well attended in slums.

- **Posters :**

Attractive posters with good photographs and messages with a very few words, readable from a distance, should be prepared and displayed in various parts of the city where awareness campaign is being taken up.

- **Pamphlets :**

Pamphlets, hand bills can be printed giving instructions in very and understandable language showing photographs in action and circulated in the community requesting public participation.

- **Use of Hoarding :**

Special hoarding may be put at strategic locations in the city carrying messages seeking public participation. Alternatively, all Municipal-licensed hoarding should

have a space reserved at the bottom for civic messages. Such messages should be developed and painted by professional agencies. These hoarding should also carry the contact numbers etc.

- **Use of Public Transport System :**

Children are powerful communicators. Parents who do not listen to the advice of others often taken their children seriously. Children are idealistic and would like to change their world for better. The AMC should hold regular meetings with principals, teachers and students to explain the need for change and the usefulness to society of new ways to manage waste. The message can be reinforced by holdings essay, debate or drawing and painting competitions on the subject and publicizing the winning contestants. Social clubs can be encouraged to sponsor such events to keep the topic alive. The leading schools could be persuaded to work as a role model for other schools in taking up awareness campaigns in the city through their students, which should be higher publicized and other schools could be persuaded to follow suite.

- **Primary School Curriculum to cover the subject :**

It is an established fact that people form habit at a very young age and habits are hard to change. It is, therefore, necessary to educate young children when they are in primary school to form good habits for managing waste. School curriculum should cover this aspect in the subject of moral science or social studies. This will go long way in developing enlightened community and least efforts would be required to discipline the people in managing the waste.

- **Involvement of National Cadet Corps (NCC), National Social Service (NSS) and Scouts :**

In the schools and colleges the students are participating in NCC, NSS and Scout activities. These students could also be sensitized on the public participatory aspect in solid waste management and as part of their activities they can be involved in the awareness campaign to bring about a change in public behavior.

- **Involvement of Medical Practitioners :**

The citizens hold medical Practitioners in high esteem. A word from them to the patients or the community to practice appropriate systems of waste management at home, offices, shops and establishments would help substantially in bringing compliance of the directions of the urban local body to keep the city clean.

- **Involvement of Women Associations :**

Women are generally found more concerned in maintenance of health and hygiene and they are involved in domestic waste management on day to day basis. The awareness among the women could be raised through Women Associations who could be given talking points and necessary literatures in a very simple understandable language / graphics for creating awareness among women.

- **Resident Associations :**

Most citizens want a nearby facility to dispose of their waste but nobody wants a dustbin at their doorstep. Both needs can be met by the house-to-house collection system through auto carts. Neighborhoods can be rewarded for good response to doorstep collection of segregated waste. Groups that undertake to manage the cleaning of their own area can be rewarded by AMC through grants/subsidies.

- **Voluntary Organizations / NGO Involvement :**

Many NGOs are committed to improve SWM practices in urban areas to protect the environment and have been very active in this field. They have also developed good mass-communication skills and education programs for the public. Such NGOs may be persuaded to actively support the new strategies adopted by the local body and associate in public awareness campaigns. Those who wish to conduct programs for sections of the public on the new SWM strategies may be encouraged to do so and given necessary support.