

Chapter 10

Sofulu Site Development

10 Sofulu Site Development

10.1 Selection of the Priority Projects

10.1.1 Selection of the Priority Projects

Following to the selection of the best scenario by Adana GM, the priority projects were decided and agreed upon by both the Turkish counterpart, and the team, as described below.

- Introduction of a separate collection system
- Construction of a sorting plant
- Construction of a compost plant
- Construction of Sofulu MSW disposal site
- Construction of Sofulu medical waste disposal site

10.1.2 Targets of the Priority Projects

The priority projects aim to conduct Phase 1 (2000 - 2005) improvement of the SWM M/P. The targets between 2000 and 2005 are summarised in the table below.

Table 10-1: The Targets of the Priority Projects for Adana GM

Components	Phase	1999	2002	2003	2004	2005
1. MSW Generation						
Population in Adana GM		1,196,620	1,335,987	1,383,347	1,431,174	1,479,477
Seyhan DM		859,170	977,882	1,018,080	1,058,602	1,099,454
Yuregir DM		337,450	358,105	365,267	372,572	380,023
MSW Amount (ton/year)						
Generation		304,410	366,460	388,725	412,450	438,000
Discharge		293,095	355,145	377,410	401,135	426,685
Collection		284,700	348,992	372,005	396,477	422,774
2. Separate Collection						
Separate collection rate to refuse collection (%)		0	30	30	30	30 %
Separately collected amount (ton/year)		0	104,697	111,602	118,943	126,832
3. Sorting plant						
Treated amount (ton/year)		0	39,785	44,641	48,766	54,538
Recovered amount (ton/year)		0	9,548	10,714	11,704	13,089
Residue amount (ton/year)		0	30,237	33,927	37,062	41,449
4. Compost plant						
Treated amount (ton/year)		0	64,912	66,961	70,176	72,294
Compost amount (ton/year)		0	11,684	12,053	12,632	13,013
Residue amount (ton/year)		0	2,597	2,678	2,806	2,892
5. MSW Final Disposal						
Disposal amount (ton/year)		290,540	286,984	307,593	328,717	352,693
Landfill volume (m ³ /year)		435,810	430,476	461,390	493,076	529,040
6. Medical Waste Final Disposal						
Disposal amount (ton/year)		1,606	1,898	2,008	2,117	2,263
Landfill volume (m ³ /year)		4,130	4,881	5,163	5,444	5,819

10.2 Preliminary Design of Sofulu Site Development

10.2.1 Overall Site Development

a. Fundamental Issues

The most important issue on the planning the site development is the fact that this site is still in use as a final disposal site. It is also necessary to consider the rehabilitation of the site used as an open dumpsite (partly conducted by the pilot project) . Although the Adana City Development Master Plan (City M/P) is being reviewed, the plan defined the site as a residential area. Further, the overall site development plan should fully consider the speed in which surrounding areas are becoming urbanised.

b. Overall Site Development Plan

An overall site development plan is presented in the figure below. The plan is summarised as follows:

- A 50m wide buffer zone (trees, plants) will be constructed along the ridge of the current disposal site catchment area to isolate the disposal site from the surrounding residents, and thereby ease resident opposition to the operation of the site.
- Landfill operations will be carried out at the catchment area (77 ha), i.e., inside the buffer zone. The compost and sorting plant will be also constructed inside the buffer zone.
- Because the target site slopes from north to south, the leachate treatment facility will be constructed at the southernmost end.
- The sorting and compost plant will be constructed on the highest section upstream where the land slopes gently, in consideration of the plant space required, and wastewater treatment system that will be introduced to the leachate drain.

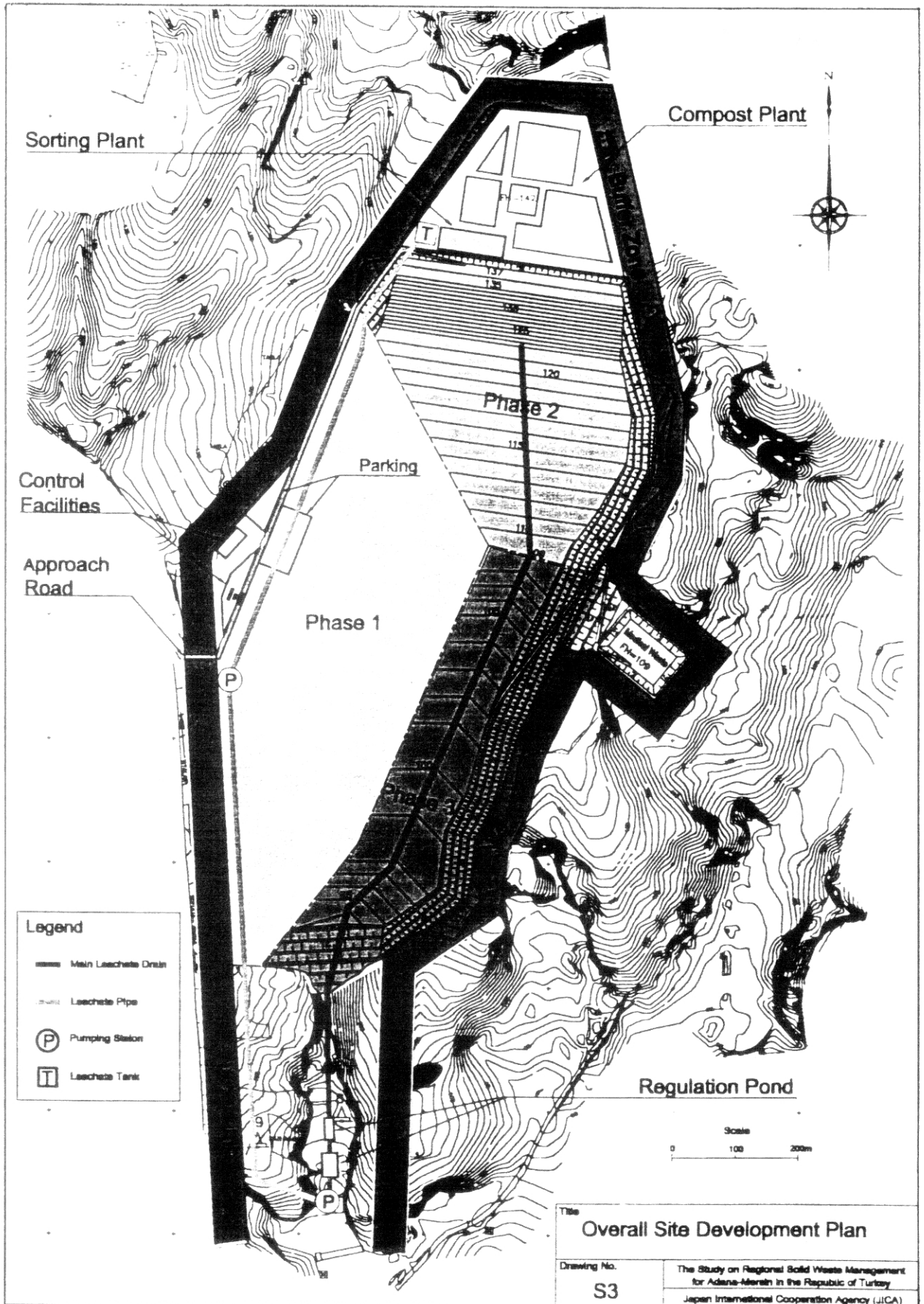


Figure 10-1: Overall Sofulu Site Development Plan