VII. LAND USE PLAN

7.1 Principles for Land Use Planning

The characteristics of transport and the natural and built environment in and around the Diyagama site were considered for land use planning.

Development principles based on the topographical condition

The topography of the Diyagama site is slightly undulating. Utilizing the undulated topographic characteristics of the site, the plots for IT-related enterprises could be developed with varied and attractive scenery for IT-related professionals and workers. The center area of the site, where the provincial road is running, presents rather gentle slopes and is suitable for development of the IT-related enterprise plots. The perimeter of the site has rather steeper slopes and will be left undeveloped. Existing vegetation around the perimeter could be reserved so as to provide the Technopark with a greenish environment.

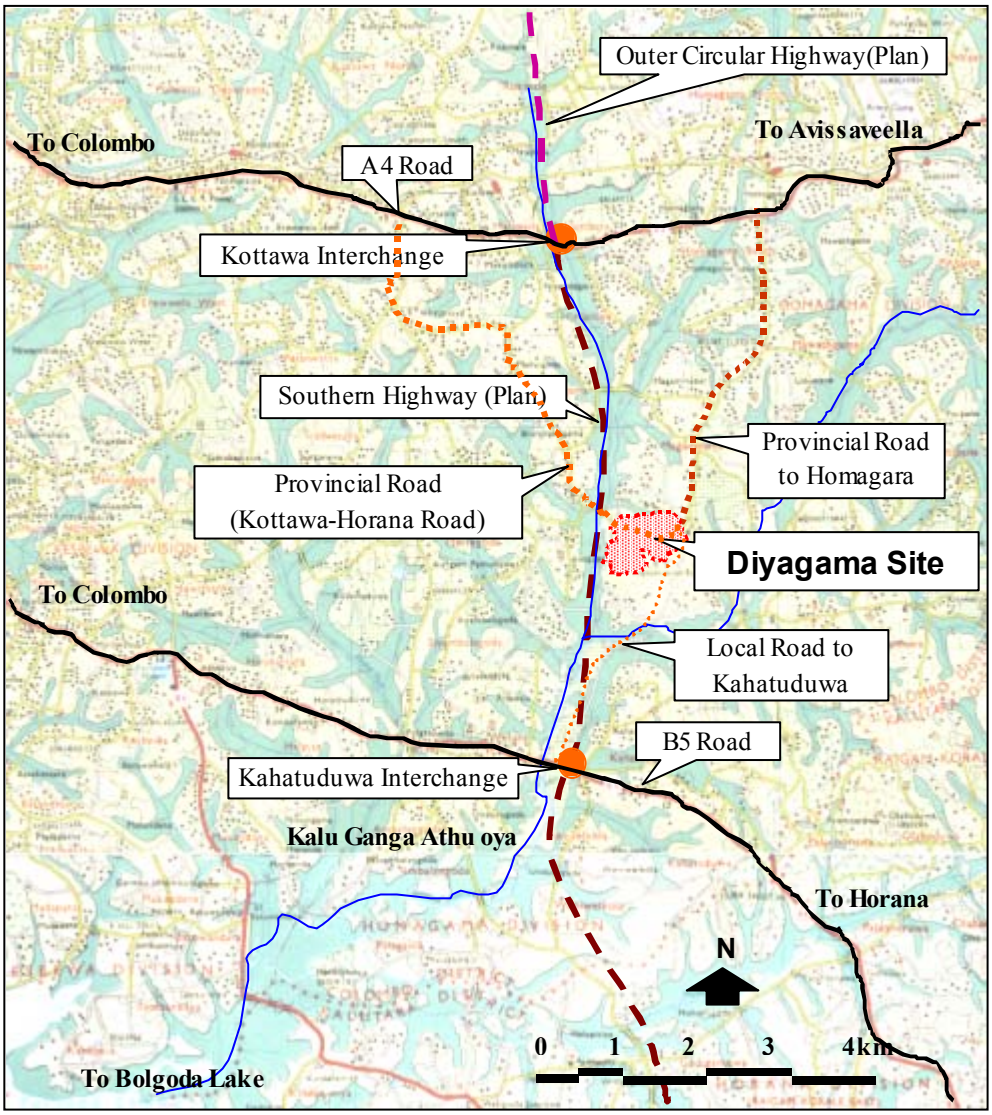
Two shallow valleys are observed in the center and the western edges of the Diyagama site. Both are upper streams of the Maha Oya, which flows into Bolgoda Lake. Taking the scattered farm houses and farm-land into account, both valleys should be left undeveloped except to be utilized as retention ponds in the case of floods. Topographically, the central valley separates the site and phased development can be planned in view of such topography.

Development principles based on the access condition

It is proposed that the provincial road running from east to west through the northern part of the site be kept at the present location in view of its convenience for the current traffic and local residents. This implies that the site may be separated by the provincial road in addition to the central valley.

Homagama-Kahathuduwa provincial road, approaching the site from Homagama at the east entrance of the site, is currently the main access to the site as shown in Figure 7.1. After completion of the Southern Highway and the Outer Circular Highway, these highways will serve as the main access to the site from the west. The eastern access will be the main entrance

through Homagama-Kahathuduwa provincial road at the beginning, and the western access from the highways will substitute at a latter stage.



(Source) JICA Study Team

Figure 7.1 Access Roads to Diyagama Technopark

Development principles based on the environmental condition

Since a variety of fauna and flora, such as birds and flowering trees are observed on the site, the utmost care for preservation of the natural environment should be planned in development of the Diyagama site. Therefore, the earthwork should be kept to a minimum during development of the Technopark.

Due attention should also be paid to the social environment. In order to minimize any adverse impacts on the surrounding communities, waste water treatment and garbage disposal should be undertaken within the Technopark. Flood control should also be achieved by construction of a retention pond within the Diyagama site.

7.2 Demand for Land Use

Pursuant to the discussion in Chapter 2.4, the land use plan will be prepared to accommodate the following facilities in the Diyagama Technopark:

(i) SMART Center
   a) Project Management Unit
   b) Network Operation Unit and Data Center
   c) Virtual University
   d) Training and Retraining Unit
   e) Research and Development Unit
   f) Incubation Unit
   g) Rental Laboratory and Office Space

(ii) Software Industry Plot

(iii) Hardware Industry Plot

(iv) Residential Plot

(v) Electric Technology Center or Academic Institute. (possible future use)

The required area for the SMART Center is assumed to be 2.5 - 5 acres (1 - 2 ha). The same area is provisionally allocated for both the software industry and hardware industry plots. Consequently, the number of plots for the software industry will be approximately double that of the hardware industry due to the smaller plot-size requirement of the software enterprises. The Center area in the second phase development can be converted to electric technology center or academic institute as an alternative.

7.3 Land Use Plan

A land use plan of the Diyagama Technopark is proposed on the basis of the following scenario:

(i) The existing provincial road running through the north of the Diyagama site will be retained, and the Technopark site will be separated into two parts; northern part and southern part.

(ii) The northern tract will be allocated to the residential area, while the southern tract will be developed as an industrial area for the software and hardware industries.

(iii) The southern tract is divided into the eastern area and western area by a shallow valley. This natural division facilitates phased development of the Technopark.

(iv) The eastern area of the southern tract will be the first phase development area in view of the convenient road access from Homagama and Colombo. The residential area in the northern part is also planned for the first phase of development.

(v) Various size of industrial plots is assumed at the moment. Smaller plots of 0.75 - 1.25 acres (3,000 m^2 - 5,000 m^2) will be allocated to the software industry. Plots of more than 2.5 acres (1 ha) will be planned for the hardware industry.

(vi) More than 5 acres (2 ha) will be allocated to the SMART Center as described above. An additional 5 acre plot is planned for the expansion or new alignment of the Center facility.

The number and average plot size of the software industry, hardware industry and residential area are assumed as summarize

Table 7.1 Number of Plots at Diyagama Technopark

Item	Number of Plots			Average Plot Size			
	Phase			m^2		(acres)	
	Phase 1	Phase 2	Total	Phase 1	Phase 2	Phase 1	Phase 2
1 Software Industry	10	8	18	3,600	5,400	0.89	1.33
2 Hardware Industry	7	4	11	6,100	18,100	1.51	4.47
Total	17	12	29	-	-	-	-

(Source) JICA Study Team

Land use of the Diyagama Technopark is planned as summarized in Table 7.2 and Figure 7.2. The first phase development of the eastern part of the site has an area of approximately 34ha (83 acres) .

Table 7.2 Land Use Plan of Diyagama Technopark

Land Use Item		Land Area (ha)			Land Area (acres)			(%)
		Phase 1	Phase 2	Total	Phase 1	Phase 2	Total	Total
1	Center Area	2.60	2.60	5.20	6.4	6.4	12.8	8.1
2	Software Industry Area	3.63	4.29	7.92	9.0	10.6	19.6	12.3
3	Hardware Industry Area	4.24	7.25	11.49	10.5	17.9	28.4	17.9
4	Residential Area	7.42	1.60	9.02	18.3	4.0	22.3	14.1
5	Infrastructure & Facility	5.77	3.73	9.50	14.2	9.2	23.5	14.8
6	Reserved Green	10.00	11.05	21.05	24.7	27.3	52.0	32.8
7	Total	33.66	30.52	64.18	83.1	75.3	158.4	100.0

(Source) JICA Study Team

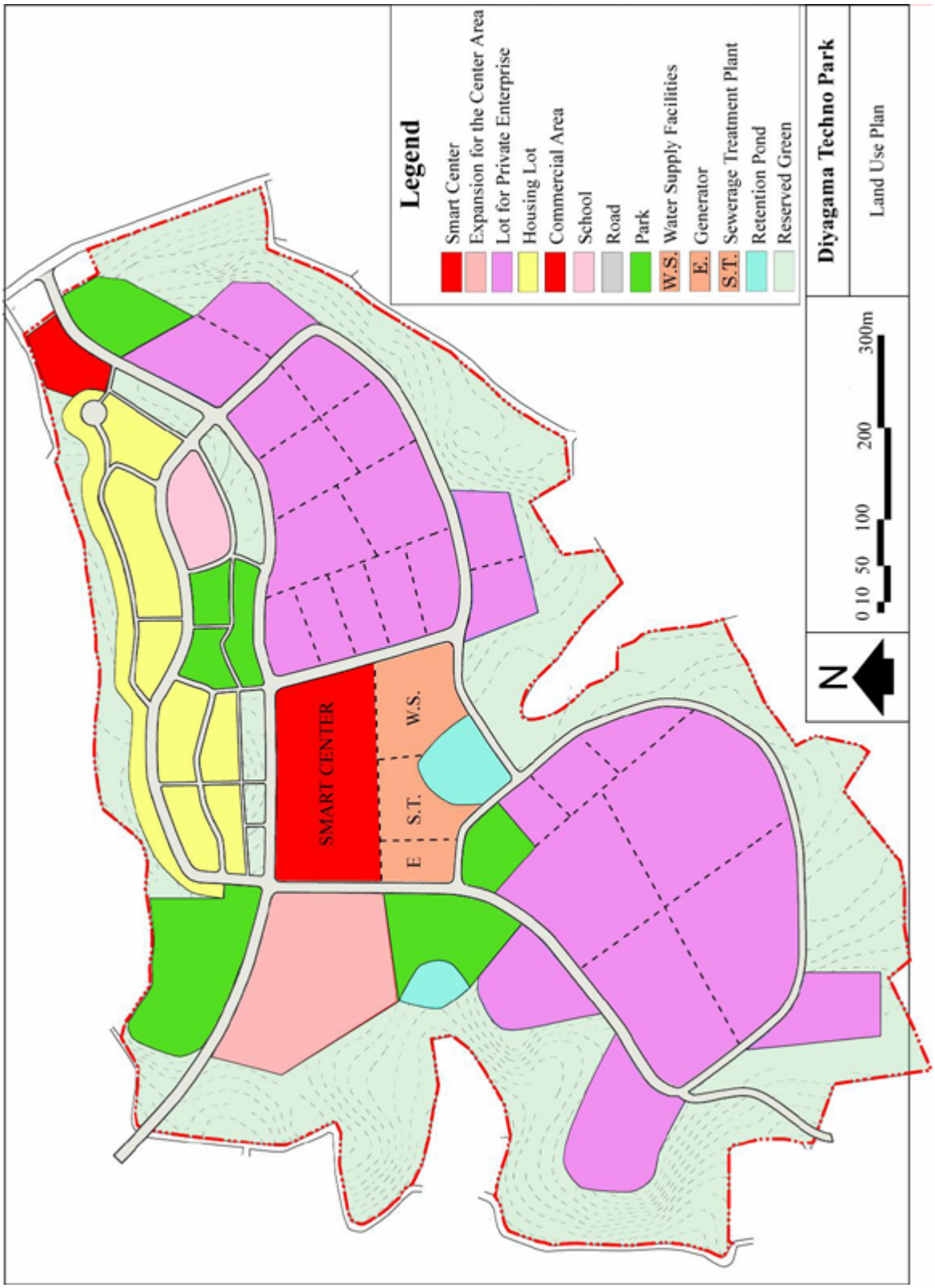
As phased development is proposed at the Diyagama Technopark, it is planned that the land use will be planned as shown in Figure 7.3.

For the residential area, housing plots, a commercial area, a school, parks, and a road network are planned to provide a well-serviced living environment for workers in the Technopark as shown in Table 7.3.

Table 7.3 Land Use Plan of Residential Area

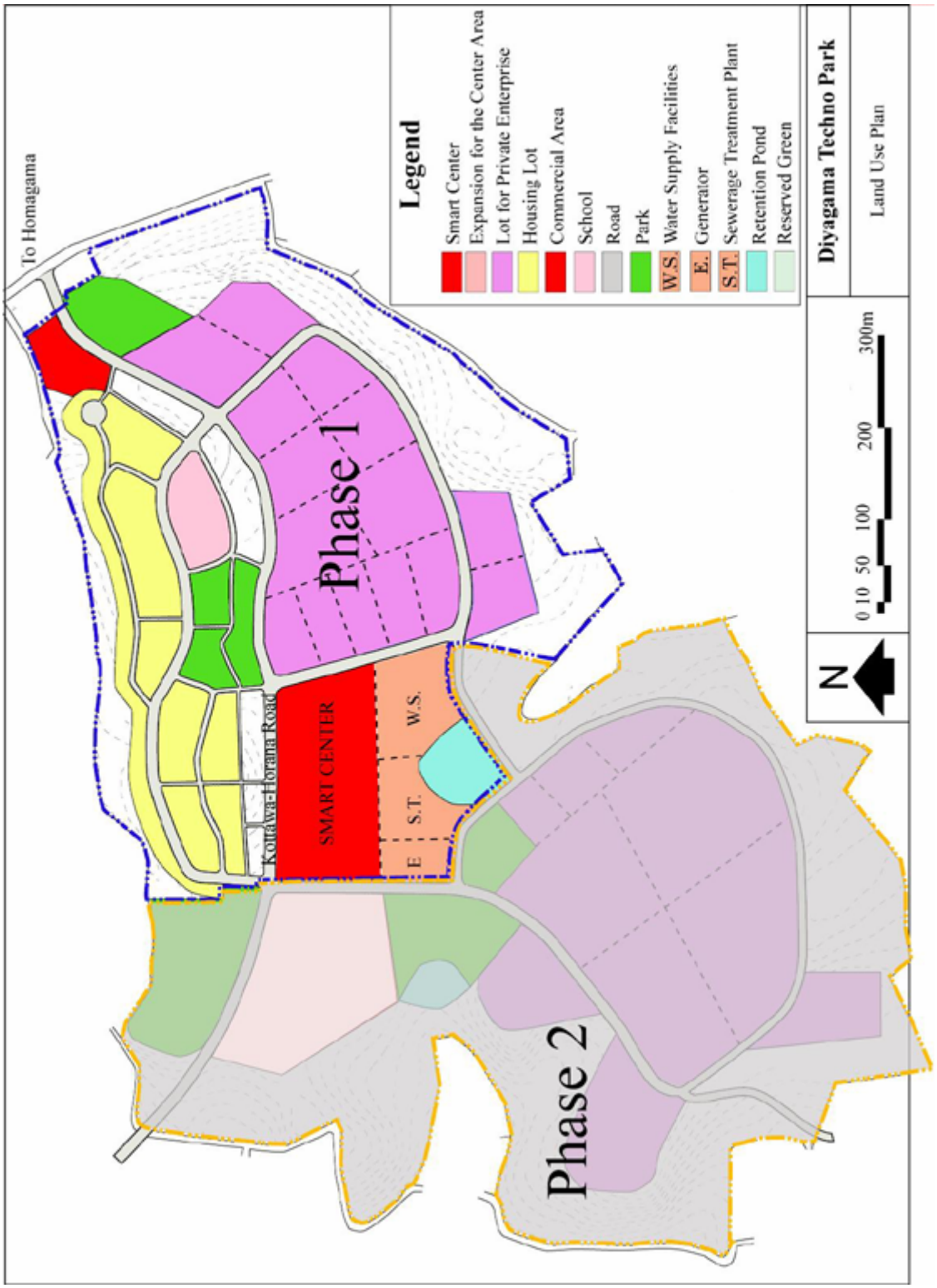
Land Use Item	Land Area (ha)			Land Area (Acres)			Remarks
	Phase 1	Phase 2	Total	Phase 1	Phase 2	Total	
(1) Housing Lot	3.69	0.00	3.69	9.1	0.0	9.1	250 plots with 6 perch (150m2) /plot in average
(2) Commercial Area	0.37	0.00	0.37	0.9	0.0	0.9	
(3) School	0.60	0.00	0.60	1.5	0.0	1.5	
(4) Park	0.67	1.60	2.27	1.7	4.0	5.6	
(5) Road	2.09	0.00	2.09	5.2	0.0	5.2	
Total	7.42	1.60	9.02	18.3	4.0	22.3	

(Source) JICA Study Team



(Source) JICA Study Team

Figure 7.2 Land Use Plan of Diyagama Technopark



(Source) JICA Study Team

Figure 7.3 Phased Development Plan of Diyagama Technopark