

3. Candidate Sites

(1) Site A: Northern Part of Access Road of the New Mekong International Bridge

The site is located to the north of Khantabouly city and at the northern part of border facilities of the New Mekong International Bridge. Khantabouly district has 97,328 population and it is the largest district in Savannakhet province. Factories are located along Route 9.

Considering the cost of the expropriation, the lands for housing area are not suitable for the candidate sites. The existing lands for rice fields and forests are mainly selected as the candidate sites (Figure A.3.12).

In the city planning, the site is currently regulated to industrial area and agricultural area. Before development of SEZ, the land use is necessary to modify as suitable for SEZ development.

The site is a hilly area with a gentle slope of 7%, and is surrounded by the valleys. A river runs through from the east to the west of candidate sites, and it flows into the Mekong river. The river is unstable against weather, because it dries up in the dry season and inundates rice fields in lowland in the rainy season. Regulation pond is necessary for development. According to the detailed design for the 2nd Mekong bridge, the flood water level of the Mekong river is 138.5m for 25-year return period and 139.6m for 100-year return period. Therefore, it is advisable that the development area should be in an area with altitude is more than 140m.

The ground is solid with N standard value of 10 to 30 (or 23 on an average), according to the geological survey of the 2nd Mekong International Bridge. Sandstone and mudstone are basic geological formations. The surface ground is classified as stiff to hard clay, with its depth ranging from 6 to 10 m. Under the clay layer, sandstone and mudstone are laid and covered with decomposed rock.

For water supply, the northern part of Route 9 is out of the Khanthabouly water supply system (15,000 m³/day). The basic design is being conducted for the rehabilitation and extension of the treatment plant. The project targets on the year of 2004, and is expected to supply water for Phase I of SEZ.

The groundwater could be obtained in the volume, as the groundwater was encountered at 3 to 5 m below the ground level, in the geological survey, and the aquifer of the Mekong river would have large amount of ground water. However, the data of groundwater does not exist, and the groundwater

volume should be confirmed in advance of the development.

Additionally, in Natuey village along Route 9, the groundwater contains salt. The village produces and sells salt. Salt is also contained in the groundwater at more than 50 m depth wells in Xeno. However, salt is not contained at the wells ranging from 11m depth to 20m depth in Khantabouly. When the groundwater is taken in for raw water, the water quality test must be conducted sensitively.

Telecommunications is installed at few places in Khantabouly. The capacity of switching stations for in and out of the Khantabouly area is 3,368 lines. Additional 1,024 lines will be installed in December 2000. However, the demand of lines is still bigger than the supply of lines. Furthermore, the capacity of the backbone route (Microwave 34 Mbps) running in south-north direction in Lao PDR is already full and the capacity of the only gateway will be full in the future.

As such, south-north route with optical fibers should be constructed as shown in the concept of GMS optical fiber network. Expansion of gateway is also necessary.

For the electricity, 22kV power line runs along Route 9 from Pakbo substation. Until 2005 the power peak demand is over the capacity of the substation, according to EdL. In 2006 a new hydroelectric dam is expected to begin operation, so the power supply is shifted to the domestic supply. Consequently, a new substation is necessary to meet the peak demand before operation of the dam.

When the industry is established in Site A, some environmental protection is necessary to prevent housing area around Site A from noise, odor, and vibration. It is also required to control water quality of wasted water from SEZ, as an intake of Khantabouly water treatment plant is located downstream from Site A.

Figure A.3.12 shows the existing condition of Site A.

(2) Site B: Warehouse near Xeno

The site is located about 1 km to the west of the junction of Routes 9 and 13, or 25 km to the east of Savannakhet city. The Commercial Department of the provincial government owns this site of 6 ha. (Figure A.3.13) The government of Lao PDR proposes that the above site and its hinterland with 180ha are available for the candidate site. There are two warehouse, rice-mill, and stockyards, offices, accommodations for Chinese construction company

at the site. The construction company will rent the site until 2002.

Though ponds and forest are lying at a part of the site, the site is fairly flat. The topographic feature of the hinterland is classified to be a gentle sloped area from south to north. The slope is generally 2 to 5%. However, 1.2 km to the north of Route 9, the Hintat river and its tributaries flow from east to west, so the available area for large flat land will be limited to the south of the river.

No geological data for the site has been obtained, the soil foundation at the site is supposed to be mudstone similar to the soil at the Site A.

According to the F/S report of ADB, there are no substantial rivers within a reasonable distance of Xeno that maintain significant flows in the dry season. Water is currently supplied through pumping up from the well at the site to elevated tank. The provincial government says the groundwater level is 10m depth and the discharge is enough to supply.

The F/S also conducted water quality test, which resulted the quality is moderately hard, chlorides are within WHO drinking water limits. Only disinfection and chlorination units can be installed at the wells. However, saline was found at the well with more than 50m depth in Xeno. To supply suitable water without salt, the quality of ground water should be analyzed.

A telecommunications line accesses to a switching station with a capacity of 512 lines in Xeno. It is primary for meeting the SEZ development to strengthen south-north route with optical fibers and gateway to international telecommunication.

A transmission line of 22 kV is connected to the site. Site. As mentioned in the previous section, the new substation receiving electricity from Thailand is necessary, before the new hydroelectric power supply is operated in 2006.

Figure A.3.13 shows the existing condition of the Site B and related facilities.

(3) Site C: Xaybouly Industrial Estate

The Ministry of Industry and Handicrafts (MOIH) has identified this land. Though it is located within a range of 30 km from Savannakhet city, the actual driving distance is 45 km from the city along the existing road.

The population in Xaybouly district is 47,012. The surrounding area of the site is sparsely populated. At 4 km to the west of the site, there is the Kengabao river port which is not currently operated. Some villages are

existing along a provincial road to the port. There is no factory along the provincial road and the paddy fields are spreading.

MOIH prepared a development plan including an industrial zone and a residential zone. The whole development area is 1,300 ha (Figure A.3.14). MOIH expropriated 800 ha of land for industrial use consisted of agro-industry, chemical industry, light and heavy industry. Currently it is mostly covered by dry forest (765 ha), and partly by paddy fields (35 ha) cultivated by 2 villages.

The soil consists of sand, laterite, clay, and mudstone, according to the soil survey conducted by MOIH. The surface ground is sand and laterite of 3 m in depth. Clay and clay sand layer of 2 m in average lie under the surface layer. Mudstone also lies at more than 10 m below the ground level. The survey reported the soil is not appropriate for agriculture.

Topographically, five valleys intricately run in the site. It is undulated and is also a diverging point of the rainfall catchment areas to the Mekong river and Xiangxao river flowing into the Xe Bangfai river to the north. The elevation varies from 150 m to 180 m, with a slope of about 7 %.

For the water supply, the survey reported that the groundwater level is 9 to 13 m below the ground level. It also recommended that the groundwater is used for domestic water in the villages. MOIH has planned to develop a water supply system. Raw water will be taken from the Mekong river and transmitted to an elevated tank in the site through the purification process. The length of transmission will be more than 4 km.

For telecommunications, there is no line. One relay station for mobile phones is located near the port. The switching station will be required for SEZ. A 22 kV transmission line reaches the western end of the site.

Figure A.3.15 shows location of the Site C, and existing infrastructures.

(4) Site D: Deansavanh Free Trade Zone Site

The Ministry of Commerce and Tourism (MOCT) planned a FTZ near the border with Vietnam at Deansavahn in Xepon district. The plan contemplates a total area of 400 ha along Route 9 and its location will be selected from Deansavahn to Ban Dong village (20 km west from Deansavahn).

The population of Xepon district is 38,246 and the cultivated area is scattered along Route 9. The villages are only Xepon and a border area.

Existing facilities at the border are immigration office and guesthouse for

officials. MOCT recently constructed 2 duty free shops on both sides of Route 9. The shop to the north part of Route 9 is opened, while the other to the south is used for stocking. Both shops have a floor area of approximately 900 m².

Topographically, the site is in a hilly area with a steep slope of more than 20%. The Xepon river flows from west to east in the southern part of Route 9. The slope around the river is generally gentle or 5 % in maximum. The site for SEZ will be selected at the area along the river.

A substation beside the immigration office in Deansavahn receives electricity from Vietnam, and steps down from 35 kV to 22 kV (5 MVA). A transmission line of 97 km is laid along Route 9 up to B. Na village through Ban Dong. The line also joints at Bang Dong with a 22 kV line from a small hydroelectric powerhouse (80 kW).

There is no tapped water. Domestic water in villages is supplied from small dams and deep wells. The water supply for FTZ will take raw water from the Xepon river.

Telecommunications system is not established. In Xepon a high frequency radio station is located 50 km from the border. The switching station will be required for FTZ.

Figure A.3.16 shows the existing condition at the Site D.