CHAPTER 10

STUDY FINDINGS

10.1 INTRODUCTION

The EIA study has attempted to analyze and identified the potential environmental impacts associated with the implementation of the project as proposed 400 hectares (988.42 acres) of forest plantation in Bukit Slim Forest Reserve, Mukim Slim, District of Muallim, Perak Darul Ridzuan. The findings carried out in respect to major concern of physical, ecological and socioeconomic aspects in each phase of the project implementation. The findings of the assessments are summarized in the consequent paragraph.

10.2 PRINCIPAL FINDINGS

The principal findings of the study are as follows:

a) This project is not a deforestation project. Deforestation can be defined as removal of forest with no intention of developing a future stand of trees. On the other hand, this project is the development of forest plantation which absolutely did not change the land use.

b) There will not be any acquisition of private or public property for the project development since the area is within a forest reserve.

c) Development activities i.e. road construction, drainage and planting rows will bring hydrological changes as a result of changes in the characteristics of the sub-soil, changes in water networks and artificial flow control systems. However it can be mitigated if all recommended mitigation measures are implemented systematically and actively maintained.

d) Major air pollutants during land preparation and the stages of planting would be fugitive dusts. Once the plantation is developed, an air pollution emission is minimal since only a few vehicles will travel in and out of the plantation area.

e) Noise pollution is expected to be less significant during the operations phase compared to the land preparation and development phase. Although the land development activities will increase the levels of noise in the area, the impacts are transient and short term in nature. Potential impacts of noise to the human population will be significant because the nearest local settlements area (Kampung Orang Asli Sg Gesau and Kampung Orang Asli Pos Bersih) is located approximately 3 km away from the project site.

f) The existing flora and fauna would be affected by the project development and operation. Since all vegetative cover will be cleared, the fauna will move to the adjacent forests.

g) During the land preparation, planting and operations phase, human-wildlife conflict situations may arise as animals such as wild boars and monkeys will encroach into the plantation area searching for food.

h) Biomass and other solid wastes will be generated during the land preparation operations. Burning is strictly prohibited at the project site. Solid waste can be managed following the proposed mitigation measures.

i) Used oil and grease and other agrochemicals can create water pollution if not stored and managed properly. However, water pollution issues can be minimized if there is a good management been practiced.

10.3 PRINCIPAL RECOMMENDATIONS

Several measures are recommended to be implemented throughout the site preparation and operational phase of the project development. They are as follows:

a) The drainage system including LD-P2M2 components are recommended to be constructed at critical sections in the project site in addition to the existing earth drains to cater for surface runoff. An adequate permanent drainage system should be constructed, maintained and de-silted regularly. The LD-P2M2 control measures must be properly installed, maintained and monitored.

b) Land preparation and drainage construction should be avoided during the monsoon season to minimize soil erosion problems.

c) The access roads shall be maintained regularly especially during the dry periods and it should be sprayed when necessary to control dust. Turfing or planting the cover crops should be carried out for any bare land.

d) Biomass and solid wastes generated from the land preparation activities and operations shall be managed by using zero open burning techniques. Solid wastes and other construction wastes should be appropriately disposed at an approved dumpsite.

e) The land preparation activities need to be programmed and implemented in phase by phase. This approach is good in avoiding any bare area to be happened on site. Besides that, it is also as a good recommendation in controlling the air pollution. Staging development is highly recommended in order to preserve the existing vegetation of areas which are not immediately affected by the land development. This will reduce the time and size of the area exposed to the weathering elements of soil erosion. Furthermore, the project proponent needs to ensure that all these activities will be carried out in an environmentally safe manner.

f) All the temporary drainage, erosion and sediment control measures i.e. silt traps, check dam etc. must be constructed before the commencement of land preparation activities. These control measures shall be maintained throughout the project development period to ensure their effectiveness.

g) Implementation of buffer zone of natural vegetation shall be maintained as much as possible to act as natural mitigating measures that disperse and absorbs the noise generated from logging and operation phase. In addition, this natural buffer zone will act as filter and slow down the movement of soil particles carried by surface run-off before it directly enter the watercourses.

h) Noise control measures should be implemented at source and in the transmission path. This can be achieved by careful maintenance of construction equipment, limiting construction activities within permitted times, enclosing the area of construction, and feasible and controlling access to the work areas. Noise pollution is expected to be less significant during the operation phase compared to land preparation and development activities.

i) During land preparation, there is a major air pollutant that would be occurred. Once the plantation is developed, air pollution emission is minimized as such very few vehicles travelling in the plantation area. For dust control, the contractor/project proponent shall provide suitable spraying equipment for regular spraying of water over the existing roads, tracks and access roads to minimize the dust dispersion. All the Lorries, tractors and other heavy machineries shall be cleaned before leaving the project site and entering the access road as well. Tyre washing facility is highly recommended to be provided to remove the excessive sediment from bound vehicles at specific site egress point in the project site.

j) Adequate provisions should be made for the storage and disposal of oil and grease and other agrochemical wastes to prevent contaminated runoff from entering

nearby water bodies and seep into the groundwater. It will also reduce the risk fire of hazards.

k) The project proponent and project developer must engage in dialogues with officers from the DOE and the Department of Wildlife and National Parks in the planning stage of the project development to formulate a management plan and strategies for handling human-wildlife conflict incidents.

l) The Project Proponent must prepare an Environmental Management Plan (EMP) and introduce an Environmental Monitoring and Auditing Program. Even after appropriate mitigation and abatement measures has been implemented, environmental monitoring is essential to evaluate the residual impacts and compliance with environmental regulations.

m) Many other mitigation measures and recommendations have been incorporated in this EIA report. They are more clearly spelled out in the various sections of the report dealing with hydrology, erosion control, water quality, solid wastes, air quality, noise, water supply and socio-economics.

10.4 CONCLUSION

Throughout this EIA study report, there are many mitigation measures incorporated according to the analyzed potential impacts in each phase of development. There are more explainable and specific to every issue discussed.

It is concluded that the potential environmental impacts that would be created by the various project activities during land preparation, development, planting and plantation maintenance stages which will be mostly manageable. Some of the most significant issues can be mitigated to acceptable levels if all control measures being implemented systematically and pro-actively to preserve the existing environmental quality. The project's potential beneficial impacts far outweigh the residual impacts.

Therefore, the success of the development in integrating with the surrounding areas will contribute towards the social acceptability of the project. Through strict commitment and supervision on-site, it is anticipated that the development can carry on with the context of a sustainable development.