

Environmental impact assessment report for new airport project construction essay...

[Environment](#), [Air](#)



This Airport link project between The Government of Perak and the Sungai Siput City council is identified as one of the number of strategic major transport elements of the motorway-standard road network of Sungai Siput and is part of the strategy to improve the efficiency of Sungai Siput road network. The purpose of this Environmental Impact Assessment (EIA) Report is to investigate, assess the principal environmental concern associated, and for conducting the work of the environmental impact assessment for the proposed Cucumber Island International Airport. This report will identifies the major environmental issues which are considered in relationship to the significant effects of the development during construction and operations work. The scope of the Environmental Impact Assessment (EIA) study covers both of the construction phase and the operational stage of the Cucumber Island international Airport, investigating and analyzing

The effect because of aircraft noise to the near institution and residential areas.

Increase traffic congestion in the airport approaches.

Increase risk from aircraft accidents in populated areas along the flight path

Ambient air and water quality

Hydrogeology

Impact on flora and fauna

Social perception and

Emergency preparedness

The Project Sponsor commissioned A. Pascual environmental Services and Consultant Perak, Inc to prepare the Environmental Impact Assessment (EIS) Report after considered all properly made and other submission about the EIS and supplementary Report and other advice from agencies, including the department of Department of Main Roads, Directorate General of Air Communication, Department of Health, The environmental Protection Agency and Sungai Siput City Transport.

Description of the Project

The Project consists of the design, financing, operation and construction of a new international airport passenger terminal official called Cucumber Island International Airport. Located in the middle of Perak and between the Kuala Kangsar and Ipoh. So it was the very suitable place to build the new airport. The proposed new terminal will replace the existing Ipoh International Airport. The problem with the Ipoh International airport is it only can maximum capacity of 5, 000, 000 passengers per year had already been exceed by 1990. The Perak Government has decided that Cucumber Island International Airport will be located on approximately 70 hectare (ha) within Taiping Airbase, which is under the territorial jurisdiction of Sungai Siput. The Cucumber Island International Airport will replace the Ipoh International Airport, which will be closed upon commercial of Cucumber International Airport and it will designed to handle a maximum of 10, 000, 000 passengers of Sungai Siput.

The proposed schedule for implementation of Cucumber Island International Airport is as follow:

Activity Time table

Start of Construction January 2011

Completion of Construction December 2013

Start of testing and Commissioning January 2014

Completion of Testing and Commissioning March 2014

Start of Commercial Operation May 2014

Description of the Environment

Physical Resources

Sungai Siput City is situated on coastal plain with only a slight of up to 2 percent. It is generally affected by tectonic earthquakes generated by the Casiguran Fault East Luzon Trench. These tremors are normally felt with an intensity ranging from 4 to 7 on the Rossi-Forrel scale, with most being 4.

The noise during the day time in the vicinity of the site presently average approximately 64 decibels (dB[A]), and the nighttime average level is 53 dB(A). The Perak standard of noise level in residential areas are 55 dB(A) for daytime, and 43 dB(A) for nighttime. Because of this place is near with many mountains around 10 Km so the temperature ranges around 25°C in January and February to around 35°C in April and May. In the vicinity, the groundwater table ranges from 1.0 to 7.5 meters from the ground surface.

The main river is Perak river. Sampling conducted in September 2010 revealed that the surface water quality is below Malaysia standard.

Ecological Resources

There are no fishpond, nor is there active fishing in the vicinity of the project site. The near fishing came around 25km which so far from the airport. The only conspicuous form of wildlife are birds (mostly sparrow) but there are no forest near the project site so there are no endangered species flora and fauna. In 2000, the place be the recreation because they have the very large lake with the crystal clear water as 15km from the airport area. So the airport will be the one of the treasure thing and can interact other people to go there.

3) Human and Economics development

In the 2007, the total of population, 300000 were males and 129850 were females, but the population of Sungai Siput City Perak was registered at 458850 of whom 29000 were relocated from squatter area, so resulting in a net population of 429850. The average population density was more than 22000 persons per square kilometer. There were only 50000 household, with an average of five persons each, smaller than the regional average of ten. As 2007 only 85 percent was employed, with the fairly high population enrolment at an average of 87 percent. The dominant economics activity in Sungai Siput City mostly involved in services activity.

The water supply of Sungai Siput City come from the Lembaga Air Berhad. So, around 90 percent population have water supply. Electric power is supplied by the Tenaga National Berhad.

In terms of land use, the Cucumber Island International Airport will be located at the largest area in Sungai Siput City. The detail of temporary arrangements will become the responsibility of the contractor during the construction planning, so other plan will create to avoid the spoil in transport, noise, dust, and traffic problem.

Quality of Life

a) Housing

Perak Government will need to build 20000 housing units. In addition to 7000 double-up families that need separate need housing so they need dwelling. In addition, there are some 29000 families indentified who need relocation or whose present dwelling units are dire need to upgrading.

b) Education

In Sungai Siput area, has 15 public elementary school, plus 22 private school 5 public secondary school. There also have one Matriculation College, two private college and one public university. There are also four private vocational school. So for the future, after this project are build, there is no problem and no worries for the new families who want to live around the Airport because this plan have a very quality of education.

c) Skill and Per Capita Income

Most of the resident in Sungai Siput City and the village near the city were employed in the Government (45), 20 percent being self employed, 12 percent in the private business sector and 22 housekeeping, and the rest is un employment. The income ranging for the household from RM2000 to RM4000 and only 5 percent had an average monthly income of less than RM500.

d) Public Health

Sungai Siput City has 5 hospital including 2 government hospital, Sungai Siput General Hospital, and the Lintang General Hospital. Because of the Cucumber Island International Airport allocated in the middle of Ipoh City and Kuala Kangsar City, so they have a lot hospital added from both city. With 8 government health centered staffed by 10 physicians, 50 nurse, 20 dentist, and 30 midwives. The five leading causes of morbidity in Sungai Siput City are diseases of the heart, traumatic injuries, tuberculosis, neoplasm, and senility. The birth rate in Sungai Siput City is recorded at 3. 5 per 10000 population, while the death rate is 5. 1 per 1000 population.

f) Archeological or history Treasures

There are no known archeological or history treasure within the project site.

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Anticipated Environment Impact and Mitigation Measures

This proposed project will include such as foundation treatment, roads and facilities building, container yard, as well as lighting, facilities for water supply and other as a major construction element. Some negative externalities for example pollution also have been created during the construction period such as engineering waste water, dust, mechanical noise, and construction waste. Other Environmental impacts are anticipated during both the construction stage and the operational stage for this new airport and some of the pollution prevention and other requirements that can increase this negative externalities by the both of stage to a minimum.

a) Construction Stage

Perak river are not expected to adversely affect during the construction work such as soil excavation, building construction, and ground preparation. The project's estimated the water requirement of 1000 cubic meters (m³) but it will nor affect the supply water to the resident of Sungai Siput City and the near City. Two new pumping will be operating and it will adding 1500 million liters per day of water supply.

The air quality within the vicinity is already above the Malaysia standard. Although the soil excavation, ground preparation, and concreting activities will increase the air quality level but a comprehensive system of to be used and it will mitigate the impact.

According to this project, construction activity will generate the employment opportunities and other sources of income for the resident of Sungai Siput City will be generated. Since no combustible material will be used, and no fires will be ignited so it will hardly be any fire hazard. Solid waste from the construction and generated by some 700 workers will be disposed of daily by Sungai Siput City garbage trucks.

Monitoring during construction stage will be responsibility of Directorate General of Air Communication. (DGAC) on site. The project administration assisted by the supervisory and inspection force of the consultant for supervision. The result of the environmental monitoring process will be prepared by the supervision consultant to ensure the construction contractor carries out the necessary control and mitigation and will be contained in monthly and it will be sent to DGAC central office in Kuala Lumpur and to the central Bank for review.

b) Operational Stage

The increase in air quality standard within the vicinity will be generated during the operation. The terminal building will be fully air-condition and filtration system will be regularly checked and cleaned the dust. According to monitoring data concerning water quality at locations site both off and on around the airport will be obtained also a monthly, the DGAC also will carry out the environmental monitoring work during the operational phase of the project.

The aircraft movements will be increased the noise level. Surface construction work also may generate excessive levels of noise, vibration, or dust would be restricted to the hours of the 7: 00 am to 7: 00 pm Monday to Saturday, with no work on Sundays or Public Holidays. Special circumstances where above ground surface works may be conducted outside these hours might include works on

arterial roads, works in rail corridors, and works involving large prefabricated components. However, flights are normally schedule during day time. So to minimize noise description to settlement relatively dear to Cucumber Island International Airport, not more than two flights will move and must be before 10 pm. Thus, no breach of acceptable airport noise standard will take place. Further, the flight path of aircraft will not be over population areas. Although when a road-header is used, vibration, noise, and dust level are likely to be low and imperceptible in building above the tunnel but this will only occur during the day and be for short period. The noise also will be report monthly. This some example are to be taken to reduce the impact of this project, they use the advanced equipment and technologies of low noise which is can reduce the noise, the percussion piling machine be prohibited and the working time schedule also will be arranged rationally.

Cucumber Island International Airport will have its own sewerage treatment plant, which before discharging them into the Perak River, they will properly treat effluents first in accordance with Malaysia standard. An agreement will be develop by DGAC by which any changes in land use in the restricted zones of the land use plan adopted to control the area around this new

airport must be submitted to airport operator for review and concurrence to prior approval.

This new airport project will create 100,000 jobs, so the commercial operation may cause a mild migration of potential job seekers to Sungai Siput City.

This project also can be a substantial additional revenue to both the local government of Sungai Siput City and national government. Over a 15 period, it is estimated that the project will add some RM 25 million to the tax collection of Sungai Siput City and RM 300 million to the national government.

The risk of aircraft accidents will be minimized through continuing improvements in surveillance facilities and employment of highly trained personnel and it can be reduced if one considers that aircraft flight patterns are largely over low density settlements.

E. Alternatives

On physical environment site, there is no effect either positive or negative if the Cucumber Island International Airport. But it also will have no adverse impact would be suffered by the adjoining city institution. However, this would result in congestion of passenger and eventual loss of revenues to the National and local government. The Sungai Siput City and the national government will lose as RM 325 million of revenues from tax in 15 years if the new airport was built. This City also will lose the good way to create a new job and at the same time can reduce unemployment at that area.

If Cucumber Island International Airport were not to be set up at the proposed site, the permanent structures such as the elementary school, the community center, the church, at their present site, but the school communities (relevant Parents and Citizens Association, student, parent and Education Sungai Siput) have identified a number of physical improvements to the existing school to mitigate perceived impacts especially at the Kuala Kangsar State High School, Malay College Kuala Kangsar, Angel Maria Convent in Sungai Siput. Suggested measures proposed by submitters include air conditioning, improved sport facilities and set down areas and other facilities.

The Bases Conversion Development Authority (BCDA) which owns the site proposed project, definitely plan want to develop the area into a commercial center. Hence, the problem such as air pollution and noise levels, will increase due to vehicular emissions, increase in domestic air flights and heavy traffic flow even without the this International Airport project.

F. Cost Benefit Analysis

In conducting the cost-benefit analysis of the proposed Cucumber Island International Airport, the Financial prepared by NSR Financial Consultant was used.

For the cost item, the estimated total project cost of RM500 millions was used. The total project cost includes the total cost of facilities, the mosque, and community center, estimated as RM6 million, cost of provision of a car park building RM20 million, road access improvement, and other cost such

as cost of the Fire Prevention Plan, sewerage and drainage system, estimate at RM2 million. In terms of the benefit, the internal rate return and the net present value are calculated as 25 percent and RM505. 5 million, respectively.

The direct negative sociological impacts of Cucumber Island International Airport will relate primarily to Temin's Village. There will be a significant displacement of or change in neighborhood composition Third street, Trosor street and cool water avenue. The residents will also facilities such as:

Sungai Siput City South High School

Cucumber Elementary School

Community College of Sungai Siput

Village Health Center and the gymnasium

At-Taawuniah mosque

There will be some direct costs related to the relocation of effected residences and facilities. This facilities will also be temporarily subjected to nuisances associated with major construction, including dust, traffic problem, increase in noise level and other similar effects. On the permanent basis site, the noise and traffic from terminal activities will cause some disturbances, However, the project will result in several beneficial impacts on both a temporary and a permanent basis.

Construction will require approximately 700 laborers of varying trade and skill levels. The foreign exchange reserves of the country will be improved because of the foreign exchange inflow of RM300 million. There will also have some positive impact on welfare and unemployment. About 65 percent of the labor would require no specific skills or training.

It is estimated that the facility will spend about RM25 million per year on direct purchase. Based on this amount each year, the total direct and indirect contribution of the facility to the Malaysia economy will be about RM11 million per year, and that RM25 millions will help the production and sales many local industries. Due to this project at least RM 37million will be generated from tourism and all revenue will act as long-term source of revenue. Cucumber Island International Airport will accommodate an average of 7000 arriving and departing international passengers per day.

G. Institutional Requirements and Environmental Monitoring Program

During the whole Project Cycle, when construction stage and operational stage, regular monitoring will be undertaken to assess the effectiveness of the mitigating measures being implemented to minimize the adverse impact of the project activities. The parameters also will be undertaken regularly and continuously in order to monitor noise, air and water quality. This Cucumber Island International Airport will result in negative impact from construction activity over approximately four years. However, it is clear type, intensity and scale of the impacts are reasonably typical of inner city

construction sites, and are of a nature that the construction industry is adept at managing .

Monitoring will also cover i) Performance of the facility after construction, ii) verification of proper effluent at the facility iii) yearly physical testing of the project area iv) traffic management v) proper solid waste disposal.

H. Public Involvement

A social perception survey was conducted by a joint group of social scientist from the University Putra Malaysia and Malaysia Engineering college for this project. The survey was undertaken among the resident of the city and village around the proposed area.

Base on the interview with the Chairperson of BCDA on August 2010, the following information was confirmed:

To avoid exposure from the resident to any air transport-related accidents. It is necessary to relocate the school, mosque, and existing community center from their present site to an area farther away from the project. The PAF Command has agreed to relocation the some families presently occupying the apartment building. The new relocation will have high-rise condominiums that will be offered for sale at concessional rates.

The Department of Education, Culture and Sport (DECS) also agreed to the suggestion to transfer of the affected schools to the proposed relocation site. The representatives of the mosque also agreed to the transfer of the mosque to the proposed relocation site.

I. Conclusion and recommendation

As this Cucumber Island International Airport will be located within the Ipoh City and Kuala Kangsar the Royal city, so its project place is feasible. The option to control all the measures proposed and the pollution from this project are reliable and shown the contractor and the management team very responsibility for all the negative effect during the construction and operation stage. and Implementation of the Cucumber Island International Airport will provide the facility that could adequate accommodate 10, 000, 000 passengers annually for the country and is expected to increase the tourism potential of the country especially Perak is one of the good travel place in Malaysia. So this new Airport can make the tourist easier to come straight from their country. New job also will increase from the proposed Project estimate to be 1700 (direct labor 700, indirect labor 1000) and 11000 person during operation which is can decrease unemployment.

The Malaysia Government is guaranteed to earn a total of RM 15 million from the operation of the Cucumber Island International Airport Project. But the Project will pay back through the annual income tax of approximately RM 25 million, while income tax to be paid by roughly 18000 employment opportunities with the total around RM 12 million annually.

Initially, incremental foreign exchange is RM300 million loan. During commercial operation of this proposed project will added foreign exchange inflows will come from 7, 000, 000 arriving passengers, the estimate revenue is 700 million if the average expenditure is RM1000 per arriving passenger.

The proposed Cucumber Island International Airport will definitely be to public advantage. The major benefit will be socioeconomic and financial economic. Although, the primary long-range effects on the physical environment include the relocation of several houses on Third street, Trosor street and cool water avenue due to road widening, and several institutions such as Sungai Siput City South High School, Cucumber Elementary School, Community College of Sungai Siput, Village Center and Gymnasium, and At-Taawunniah mosque but all relocation are already discussed with the residents. Finally, the resident of Lintang's village where the ones that very near with the proposed Project will be subjected to permanent increase in noise level that generating from the container bridges and container bridges and trailers, forklift and etc. However, in terms of level time of occurrence, and distribution will not a cause a major impact and will disappear upon the project is complete but they will measure as a regular maintenance. The construction of the proposed Project will assure optimum use of a section of unused land owned by BCDA and the will result just in a few limited temporary environmental adverse effect.

The first three years of operation and to cover the construction phase, a simple monitoring program is needed. This will be prepared during the design phase of the project by the engineering and adopted by DGAC. It will then be implementing during project construction by the administration assisted by the engineering consultant and the staff operating the airport during airport operation. The monitoring program will be supervised by the Directorate of Engineering of DGAC.