Sinopower Consultants Limited

Temporary Karting Track at Tuen Mun Environmental Impact Assessment Study

Project Profile for the

Application for Permission to Apply Directly for Environmental Permit (21564-PP1 Rev B)

APRIL 2002

Westwood Hong & Associates Ltd.

A. BASIC INFORMATION

1. <u>Project Title</u>

Temporary Karting Track at Tuen Mun

2. <u>Purpose and Nature of Project</u>

The objective of this project is to provide a temporary recreational karting track at Tuen Mun (Project). The Project is located at the area of the former Airport Authority Lok On Pai Transshipment Centre (Figure 1). The Project will have an outdoor motor training track with petrol karts. The karting information is given in Appendix 1.

In view of the planned occupation of the Nan Fung Siu Lam Project (NF1) at TMTL 419 in November 2002 (Figure 1 & Appendix 2), the application for Environmental Permit is to cover the period from April till October 2002.

The proposed karting track is well designed and installed with the necessary safety features. The proposed karting track will provide a track length of 500m. The temporary karting track will operate from Monday to Sunday with opening hours from 9 am to 11 pm. The proposed track will have an estimated maximum population of 20 trained instructors and 200 visitors. Maximum 10 karts are allowed to be operated within the track as per Electrical & Mechanical Services Department's requirement.

Table 1 illustrates the provision of facilities inside the karting track. Layout plan of the proposed track is given in Appendix 3.

Facilities
Training track
Store room
Repair kart centre
First aid centre
Toilet
Exhibition area
Staff changing room
Office
Drink bar

 Table 1
 Facility Provisions of the proposed karting track

Apart from the above facilities, the project also provides the following measures for mitigating the environmental impacts:-

- The installation of minimum 2.2m high profiled steel walls as noise barriers along the site boundaries (Appendix 3)
- The provision of portable toilet/sink facilities and waste collection services by licensed disposal agent (Appendix 4)
- Collection of chemical waste including used oil by licensed disposal agent (Appendix 4)

3. <u>Name of Project Proponent</u>

Sinopower Consultants Limited

4. Location and Scale of the Project

Location:	The proposed site is located at Zone 3, Tsing Fat Street, Lok On Pai, Area 59, Tuen Mun, New Territories (Figure 1).
Site Area:	4,600 m ² (Approximately)
Total GFA:	$4,600 \text{ m}^2$ (Approximately)

5. <u>History of Site</u>

The site was part of the former Airport Authority Lok On Pai Transshipment Centre. As advised by Sinopower Consultants Ltd., the lease does not contain any specific requirements on decommissioning and the restoration condition (Appendix 6).

6. Number and Types of Designated Projects

The karting track constitutes a Designated Project under Schedule 2, Part 1, O.4 of the Environmental Impact Assessment Ordinance.

7. <u>Name and Telephone Number of Contact Person</u>

The contact persons are shown in Table 2.

Table 2Names and Telephone Number of Contact Person

Project Team	Company	Contact Person	Telephone Number	Fax Number
Project Proponent	Sinopower Consultants Ltd			
Environmental Consultant	Westwood Hong & Associates Ltd			

8. <u>Licenses obtained from other Government Departments</u>

The design aspects and operation method of the Project have been approved with licenses issued by Electrical & Mechanical Services Department, Food and Environmental Hygiene Department and Fire Services Department (Appendix 5).

B. OUTLINE OF PLANNING AND IMPLEMENTATION PROGRAMME

The proposed project is planned and designed by the Project Proponent. Westwood Hong & Associates Ltd has been appointed as the Environmental Consultant of the Project.

The construction period of the Project will take approximate 9 days (Appendix 7).

The decommission period of the Project will take approximate 7 days.

C. POSSIBLE IMPACTS ON THE ENVIRONMENT

The possible environmental impacts that may arise from construction and operational phases of the Project are given below.

Construction Phase

1. <u>Construction Noise Impact</u>

Construction activities anticipated include the erection of outlying fence, cleaning of waste on site, allocation of tyres within course, paving of 500m long tracks and erecting a small pedestrian bridge (Appendix 7). The Powered Mechanical Equipment (PME) involved only a 5.5 ton truck and compactor. The construction activities are to be carried out during daytime period from 0700 to 1900 hours.

The nearest Sensitive Receivers (SRs) including Siu Lam Sun Tsuen are located at more than 200m from the subject site and hence, the SRs would not be affected by the construction works that would involved very few Powered Mechanical Equipments (PMEs) except for a 5.5 ton truck lorry with SWL of 112dB(A) and a compactor with SWL of 105dB(A), as governed by GW-TM. The construction noise levels at nearest SRs will be well within the stipulated day-time noise limit of 75dB(A) as stated in EIAO-TM.

The construction contractors are to be required to implement good site practices to control construction site noise in order to minimize any adverse impacts.

2. <u>Fugitive Dust Impact</u>

Fugitive dust will be strictly controlled on site. The decorative work is simple requiring no demolition of any building structure. The construction contractors will be required to implement good site practices to control fugitive dust, in order to minimize any adverse impacts.

3. <u>Water Quality Impact</u>

Little or no wastewater will be generated regarding to the construction activities. No water pollution from site will result.

4. <u>Waste Disposal</u>

The construction waste will be collected and disposed as per the requirements stated in the Waste Disposal Ordinance (WDO).

5. <u>Landscape and Visual Impact</u>

No landscape and visual impact is expected as the nearest residential buildings are located at more than 200m from the subject site.

Operational Phase

6. <u>Air Quality Impact</u>

The engine of a kart works with an efficient 4-stroke petrol cylinder having a max capacity of 60 c.c. only. This tiny engine is similar to that of a low-power motorcycle with minimal air emission.

A CALINE4 model has been set up for predicting the air pollutant concentration due to kart emissions. With an approximate 2-minute lap time and maximum allowable 10 karts on the track, the flow is estimated as 300 karts per hour on the track. This estimation can be considered as conservative as a non-stop karting operation is assumed for all the karts. Details of assessment are given in Appendix 8.

Prediction results indicate that the air pollutant concentrations caused by the karts are insignificant and well within the HKAQO limits for all the nearby air sensitive receivers. No adverse air impact is expected.

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Air Pollutant	Predicted Maximum Pollutant Concentrations, µg/m ³	HKAQO limit, µg/m ³
1-hr Nitrogen Dioxide	78*	300
24-hr Respirable Suspended Particulates	51**	180

Note:

* Predicted concentration including background concentration of 61µg/m³.

** Predicted concentration including background concentration of 50µg/m³.

Little or no painting will be required for the karts. There will also be no air polluting sources such as kitchens on site. No odour emission is expected from the kart operation and from the entire track site.

7. <u>Noise Impact</u>

The dominant noise source is identified as kart movements and PA system. The measured noise levels due to karts running on leveled course and the section with a gentle slope at the maximum allowable speed of 24kph are in the range of 77 - 82dB(A) at 3m from passing karts. These measured noise levels included braking noise, skidding noise and tyre noise. The noise levels of the PA system for making announcements and playing of background music are measured in the range of 75 - 80dB(A) at 3m from the speakers.

The nearby Noise Sensitive Receivers (NSRs) are identified as the residential houses in Siu Lam Sun Tsuen and Villa Sapphire located at approximately 200m and 300m from the site boundaries respectively (Figure 2). The residential development (Nam Fung Siu Lam Project (NF1)) located to the north of the site will be a potential NSR but as the occupation of the NF1 development will take place beyond the period of the EP, there is no need to be included in this noise assessment.

The predicted cumulative facade noise levels at the identified NSRs are in the range of 35 - 41dB(A) due to the karting activities and PA system. The NSRs will not be adversely affected by the operation of the proposed karting track. Details of noise survey and assessment are given in Appendices 9 - 10.

The adjoining flea market is located within an enclosed building such that the noise from the activities within flea market is insignificant. The cumulative noise impact arises from the activities taken in the proposed karting track and flea market will be within the stipulated noise criterion.

8. <u>Traffic Generation</u>

The scale and purpose of the Project is for use by a maximum allowable number of 200 visitors. The estimated traffic generation is approximately 10 car trips (Appendix 6). The number of visitors and their vehicles will be under control and management by Project Proponent, no excessive burden to the existing traffic flow due to visitors of the subject site is estimated.

9. <u>Night-time operations</u>

No night-time operation including maintenance works will be undertaken in the period from 2300 to 0900 hours.

10. <u>Water Quality & Waste Impact</u>

Portable toilet and hand-wash sink facilities will be provided. The amount of household waste generated is estimated to be approximate 5 kg per day (Appendix 6). All wastes generated from will be collected and disposed by a licensed disposal agent (Appendix 4). No adverse impact is identified.

11. <u>Generation of Chemical Waste</u>

The amount of chemical waste generated is estimated to be 20 litres per month (Appendix 6). The used engine lubrication oil and the effluent via the petrol-interceptor will be collected by a licensed disposal agent (Appendix 4). No adverse impact is identified.

12. Land Contamination

All used lubricant and effluent will be handled as per the stipulated guideline and collected by the licensed disposal agent. Daily inspection for karts will be carried out by a Registered Person to ensure that they are kept in good running conditions, and hence no leakage of lubricant and petrol from the karts to be occur. No land contamination is envisaged.

13. <u>Risk of accident</u>

The karting course is designed to meet the international standards of safety including the fitting along the karting course with rubber tyres, providing the necessary cushioning to prevent the kart from any significant damage. Only the participants and the trainers will be allowed on the karting course. The karts are fully equipped with the bumpers to minimize damage on impact with the rubber tyres.

Training courses will be given to the karting participants from experienced instructors. A maximum of 10 karts are allowed within the track as per the requirements of EMSD. Together with the safety helmets and protective gears, it is not anticipated that the proposed project will cause hazardous impact to human life.

14. <u>Hazard impact</u>

As per Fire Services Department's requirement, only a maximum of 20 litres of petrol will be stored within the site. A re-filling area is defined at repair kart centre where away from the main entrance and Hall. The proposed karting track will be adequately equipped with fire fighting devices as per the FSD requirements to ensure the safety of individuals against the potential fire hazards

15. Landscape and Visual impact

The proposed karting track comprises on-grade tracks, a small site office (container box) and a covered space for refreshment. Given the significant screening available from the 7-stroey high building, there is no direct line of sign from the nearest residential buildings at more than 200m away from subject site. No significant landscape and visual effects caused by the appearance of the karting track is expected.

16. <u>Ecological impact</u>

The subject site is considered as an ecologically unimportant area. The Project will not cause ecological impact.

D. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

The proposed karting track is quite isolated from the existing residential areas including Siu Lam San Tsuen and Villa Sapphire (Figure 2).

A residential development (Nan Fung Siu Lam Project) located to the north of the Project is being constructed (Figure 1) and will be occupied beyond the period of the EP.

The dominant noise sources in the residential areas are the traffic noise from Tsing Fat Street and Castle Peak Road. The karting track is screened from the sight of the identified sensitive receivers by the 7-storey high Lok On Pai Transshipment Centre, natural landscape and trees.

There are no ecology or heritage sensitive receivers in the vicinity.

With the provision of proposed mitigation measures, there will be no significant impacts on the surrounding environment.

E. ENVIRONMENTAL PROTECTION MEASURES

To mitigate any environmental impact that may arise from the construction and operation phases of the Project, mitigation measures to be carried out in different phases are given below.

Construction Phase

1. Protection measures

During the fitting-out period, all precautionary measures applicable to construction works such as dust suppression measures, noise control, drainage & waste management would be implemented. In particular the following control Ordinances and other relevant ProPECC Notes will be strictly followed to ensure compliance:

- Air Pollution Control (Construction Dust) Regulation
- Noise Control Ordinance
- Water Pollution Control Ordinance

2. <u>General Management</u>

As a general guidance, the emission of dust and noise should be controlled by providing a high standard of housekeeping. This can be done by adopting precautionary procedures to reduce the amount of dust and noise emission whilst carrying out loading, unloading, handling and storage of building materials and debris.

Operational Phase

3. <u>Air Quality</u>

The proposed karting track is located at an open area. Air prediction results indicate that the air sensitive receivers would not be affected by the karting activities. No additional air mitigation measures are required. Daily inspection and schedule check will be carried out to ensure the kart will be operating in good conditions.

4. <u>Noise Impact</u>

2.2m high profiled steel walls are erected along site boundaries for minimizing the noise impact from the karting activities.

5. <u>Water Quality</u>

Wastewater generated from all operational processes should be collected by the licensed disposal agents.

6. <u>Waste Management</u>

Adequate, environmentally acceptable waste handling, storage, collection, transfer, treatment and disposal facilities should be provided to deal with the waste arising from the operation of Project.

Chemical Wastes should be collected by licensed disposal agent.

7. <u>Hazard Impact</u>

The proposed karting track will be adequately equipped with fire fighting devices as per the FSD requirements to ensure the safety of individuals against the potential fire hazards.

F. USE OF PREVIOUSLY APPROVED EIA REPORTS

No previously approved EIA reports are found to be relevant to this proposed project.