

Task Force on Kai Tak Harbourfront Development

For discussion
on 3 Aug 2011

TFKT/17/2011

Proposed Water Sports Centres at Kai Tak

PURPOSE

This Paper is to present Members with the Conceptual Background for the development of Kai Tak as a Water Sports Centre and to request endorsement of taking the concept further in determining the development content of the Kai Tak Waterfront.

INTRODUCTION

2. The future planning and use of Kai Tak was presented to the public in 2004 as a potential sports hub for Hong Kong. While focus has been on the provision of the Stadium and associated land based sports facilities, little attention has been given to the enormous potential Kai Tak has to become the major focal point for water sport in Hong Kong, and to provide sports facilities not possible elsewhere. It has the potential to become an International Standard water sports centre in the middle of the City, and will require the water quality to be addressed. This would not only become an important water sports event centre but would for the first time provide a convenient water sports training and competition venue close to the main population centre of the City.

3. For the last year or so the three main National Sports Associations (NSA's) responsible for water sports – The Hong Kong China Rowing Association, the Hong Kong Canoe Union and the Hong Kong Dragon Boat Association – having been meeting with the Home Affairs Bureau and the Kai Tak Office (KTO) of CEDD to discuss the opportunities that exist. Other water-based NSA's have indicated a strong interest in being involved. An umbrella "Water Sports Council of Hong Kong" (WSC) is in advanced stage of being established, as it is realised that all of the sports have common concerns over venues and space for their sports. The WSC could also grow to be able to manage water sports venues. This submission is made by the three NSA's mentioned above, in advance of the WSC being formally established.

4. This paper has therefore been prepared and submitted on by the three NSA's. The paper is by its nature, an introductory paper and brings to the attention of the Task Force some of the issues which have been identified during discussions with the KTO. One of the main

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

concerns at this stage is that engineering design decisions be made carefully so as to not remove opportunities that exist.

5. The site has been visited by the technical experts from the International Rowing Federation (FIRA) and International Dragon Boat Federation. The FIRA expert has prepared a report and has confirmed that Kai Tak has the capability to become an international venue for rowing competitions. This would also apply to canoeing, dragon boating and other sports. A copy of the report is included at **Annex A**.

COMMON ASSUMPTIONS

6. During the discussions that have taken place over the last year a number of areas of common understanding have been identified.

Water Quality

7. It is assumed that water quality will continue to improve in the eastern harbour and in the Kai Tak Approach Channel and while this may take time, it will be achieved. Water sports that do not require emersion in the water can take place on relatively polluted water, and this has happened in Sha Tin for many years. By considering the waters around Kai Tak suitable for water sports it may also help clarify the water quality objectives to be set for this portion of the harbour. The manner in which the water quality objectives are achieved has an impact on the use of the water for water sports. To cut a 600m gap through the former runway would not be conducive to water sports and it is pleasing to see that the KTO is looking at alternatives.

Multi-functional and Multi-use

8. There is a large body of water on both sides to the former Kai Tak runway and various parts of it have potential for a variety of uses. All of these areas can be used for different purposes at different times, and it is established practice that water sports venues can be multipurpose facilities. This means that they can be used for different sports at different times and for non-sports purposes at other times. An example of this is that the potential water sports venues at To Kwa Wan and Kwun Tong Typhoon Shelters would still be available for use as typhoon shelters as the water sports would not use the water during storms. This will be subject to further consultation and discussion with the relevant stakeholders.

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

Water sports at Kai Tak are feasible

9. The initial site visits and investigations have confirmed that the Kai Tak Approach Channel is suitable for water sports such as rowing, canoeing and dragon boating. It could be used for these purposes immediately if there was suitable access between the land and the water, and suitable facilities for boat storage. Some of the engineering decisions already made, such as the need to re-build the runway bridge and to provide footpaths along the sides of the water will only facilitate the use of the water. However, the actual design of these new facilities needs to be designed with care for water sports requirements so that they do not remove the opportunity that exists. One important issue for example is the clear height available under the new bridge to allow sports boats to go underneath.

Low Marginal Cost to provide Facilities

10. It is evident that the related engineering works for structures over the water ways, the treatment of the edges of the water way and the provision of land facilities, such as the open space areas around the water ways, are all going to incur government expenditure. With some relatively simple design considerations, these could all be made suitable for water sports use, and could possibly result in savings in construction costs in some cases. For relatively little additional expenditure Hong Kong could have international water sports venues available in a relatively short time. In this sense Kai Tak is an opportunity which should not be missed.

NSA's Input Required at an Early Stage

11. It is clear that the input from the NSA's at an early stage in the design process can facilitate the provision of suitable design of facilities. The input from the International Sports Federations also provides international examples and experiences that the design of Kai Tak can benefit from.

INITIAL CONCEPT

12. There are effectively four activity zones within the Kai Tak area where water sports could take place and they are related to the land uses along side. These are:-

- (a) To Kwa Wan Typhoon Shelter – this area provides sheltered water which leads directly to the eastern portion of the

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

Harbour. This would provide an ideal location for the establishment of a sailing centre with land facilities located within the open space zone;

- (b) Kai Tak Approach Channel – this is ideal for an international standard rowing, canoeing and dragon boating training and competition course. It is wide enough and has sufficient length for a full 2,000m competition course which would be used as a training course when not in competition use. All of the boat houses, event management and spectator facilities would be located in this area;
- (c) Runway Park - The water immediately off the runway park, both inside and outside the typhoon shelter could be used for water based events and would be suitable for public viewing of a wide range of sports such as jet-ski races and other events.
- (d) Kwun Tong Promenade – The promenade would be a suitable venue for viewing and organising shorter events such as canoe and dragon boat races. It would also be a suitable area for considering a cable water-skiing location and an illustrative proposal is at **Annex B**.

Illustrative Plan

13. Based on the input from the various NSA's, the International Sports Federations and the KTO, an illustrative plan has been prepared and is attached as **Figure 1**. This is based on the requirements for an International Rowing and Canoeing competition course and is 2,000m long. Within these requirements the needs of other sports and non-international events can be met. It would include facilities for about 20 local water sports clubs.

Usage

14. It is anticipated that the venue would be used for high-level international events about 6-8 times a year. For the remainder of the time, it is anticipated that local competitions would take place every second weekend. The main usage would be from local athletes in training. The water sports are demanding terms of athletes time and it would be usual for them to train at least 5 times per week. At any normal week day it would be likely that several hundred athletes would use the venue, many of these from the surrounding areas of To Kwa

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

Wan, Kowloon City and Kwun Tong. One of the big advantages of Kai Tak is that the water could be floodlit and used at night extending the amount of time that it could be used.

ISSUES

15. A number of issues have arisen and these are briefly discussed below.

Acceptance of Water Sports as a Priority

16. For the development of Kai Tak to successfully accommodate water sports, it is necessary for the KTO to be directed to consider it as a priority. Unless this is done as a matter of policy, then the many opportunities for providing water sports at Kai Tak will be lost or inadequately catered for. For example, the design of the open space areas around the Kai Tak waterfront should take as a priority the provision of sufficient facilities of appropriate design and size to facilitate water sports activities.

Design Direction

Water Quality Solutions

17. It is hoped that a long term water quality improvement strategy which is compatible with the needs of water sports could be developed. In this respect it is suggested that the improvement in water quality could be given a specific purpose – to enable water sports to take place around the shores of Kai Tak – rather than just improvement of water quality per se.

Control of Water Movement

18. For the Kai Tak Water Sports Centre to meet international standards it would be necessary to provide fair water to all competitors across the course, so that each racing boat would have an equal chance. To achieve this it is necessary for the water to be still and with no current. In this respect the following would be necessary:-

- (a) Control of the water from the Kai Tak Nullah and other stormwater inlets so that they have minimal water flow during the period of competition, while accommodating essential drainage discharge; and
- (b) Control of the water height within the whole Kai Tak Basin

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

through the introduction of barrier gates at the existing Kai Tak Typhoon Shelter entrance. These would be closed on a high tide and would retain the water within the basin for perhaps two days to enable the event to take place and then would be opened. For the majority of the time these gates would be open and water flows continue as usual. As this does not impair but enhance the use of part of the Harbour for boating it is considered that a case could be made for these barrier structures to be accepted within the requirements of the Protection of the Harbour Ordinance.

Design of Waterfront Areas

19. The design of the land along the waterfront is very important in terms of making the water usable. Access to the water from the land is important for the transfer of boats and people, usually by using floating pontoons. The shape and form of the seawalls at different parts of Kai Tak may need different design requirements to meet sports needs. For instance, there is a need to have wave absorptive sea walls to reduce wash from boats. There is also a need for areas to accommodate spectator facilities such as toilets and spectator stands and spectator banks. There are also needs for food and beverage facilities, car parking areas, boat sheds and multipurpose space to accommodate temporary activities and functions and this can be seen in **Figure 2**. **Annex C** contains some photos of the Olympic rowing course in Toda, Tokyo Japan, which illustrate the type of approach that could be taken to the design of the waters edge and location of facilities. The Toda course is not subject to tidal movement.

20. Detailed schedules of accommodation of facilities desirable have been provided to KTO along with outline plans of how these can be provided. FIRA will also provide drawings and information on a desirable layout.

21. The activities on the water provide focal points which should be integrated with the design of the waterfront. The various starting points for races could also be good locations for cafes and gathering points. Waterside cycle paths and footpaths could also be used by people following the races and activities on the water.

Design of Open Spaces

22. The open space zones have been suggested as the most appropriate places for the land based facilities for the water sports to be located. There is therefore a need to ensure that the design of these

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

open spaces includes suitable facilities and that water sports become part of the theme for the design of these spaces.

23. For example, the Canoe Slalom Course is an important part of international canoeing competition. Hong Kong does not have one at present and has no training or competition facility. In other places such as the Sydney Olympic facility at Penrith, the canoe slalom course is also used by the general public and is a revenue generating facility. It could become a major feature of the open space where it is located at. Information on the Penrith White Water Centre is included in **Annex D**.

24. All of the open spaces should be designed to facilitate interaction between activities on the water and activities on the land. This design intent needs not limit the use of the land but should enable better use and theming of the space.

FUTURE MANAGEMENT BY THE WATER SPORTS COUNCIL

25. One of the issues raised in relation to the harbour is the identification of suitable NGOs to take over the management of various parts of the waterfront. The WSC will be constituted so as to enable it to take on a management role of facilities, either directly or through its constituent NSA members. However, the basis for doing this would need to be further developed, particularly in relation to funding arrangements. It is possible that some of the facilities at Kai Tak would also be operated as revenue generating facilities. The WSC will be a not for profit organisation.

26. Should the Harbourfront Commission and the Government consider that the WSC is a suitable body for the management of relevant parts of the Kai Tak waterfront, then it would wish to have an integral part in the design process for those areas which would be directly related to the management function. Even if the WSC is not to become the future manager of part of the Kai Tak waterfront, the WSC and the NSA's would request that it be recognised as a body with a need for a direct input into the design and development of the Kai Tak waterfront.

CONSULTATION WITH OTHER BODIES

27. The NSA realises that there are competing uses for the Kai Tak site, and should the concept for water sports be accepted in principle, then it would be necessary to commence a process of public

Task Force on Kai Tak Harbourfront Development

TFKT/17/2011

engagement with relevant sports bodies, government departments and the District Councils most directly affected. It would also involve the International Sports Federations in providing technical expertise into the design of facilities at Kai Tak. Consultation would also continue with the KTO which has been of great help in taking the project forward.

ADVICE SOUGHT

28. The Task Force is invited to :-

- (a) recognise that water sports should be included as an integral part of the development of Kai Tak;
- (b) recognise that the design and development of the waterfront at Kai Tak should facilitate the use of the water for sports and other water based activities;
- (c) recognise that the design requirements for water sports should be incorporated into open space design at Kai Tak; and
- (d) consider the WSC as a possible management agency for part of the Kai Tak waterfront and water areas, and to include it in consultation for the Kai Tak development on a regular basis.

**Prepared by
Masterplan Limited**

**on behalf of
Hong Kong China Rowing Association
Hong Kong Canoe Union
Hong Kong Dragon Boat Association**

July 2011

FIGURE 1

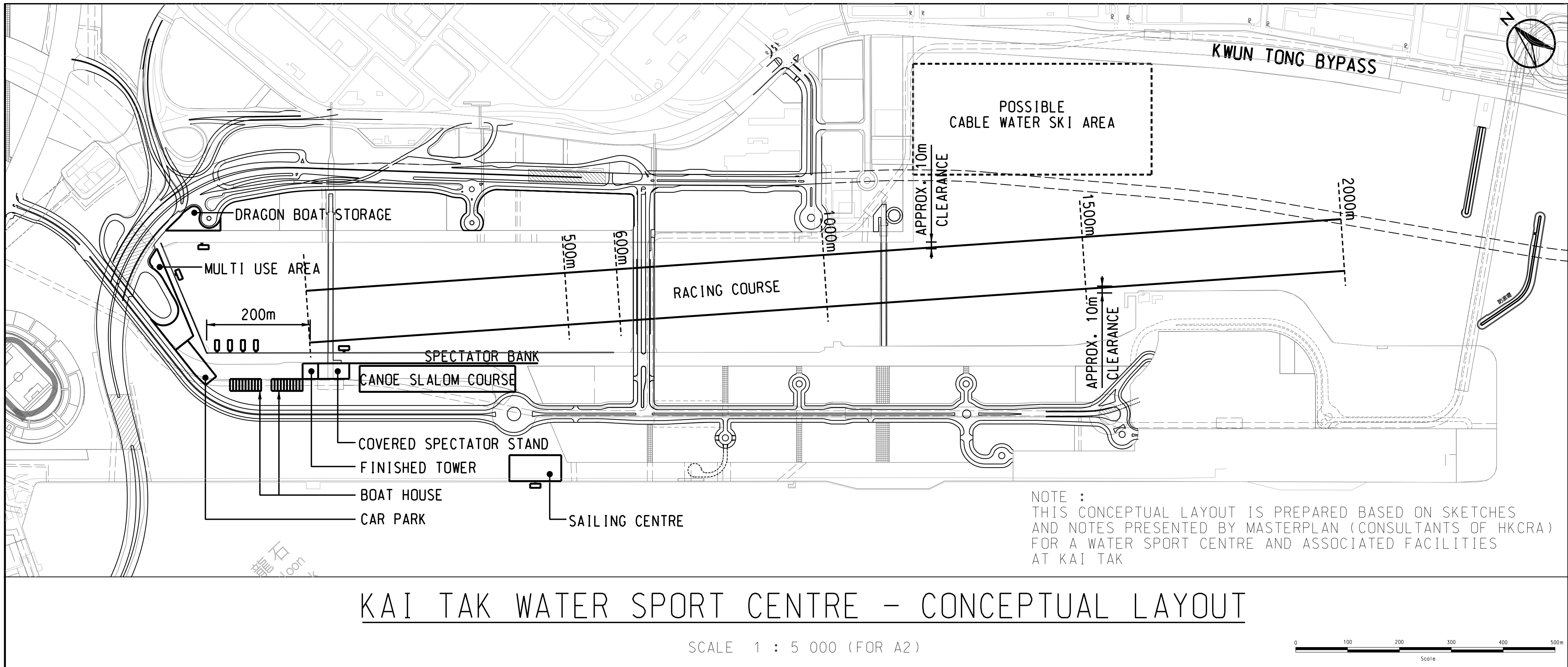
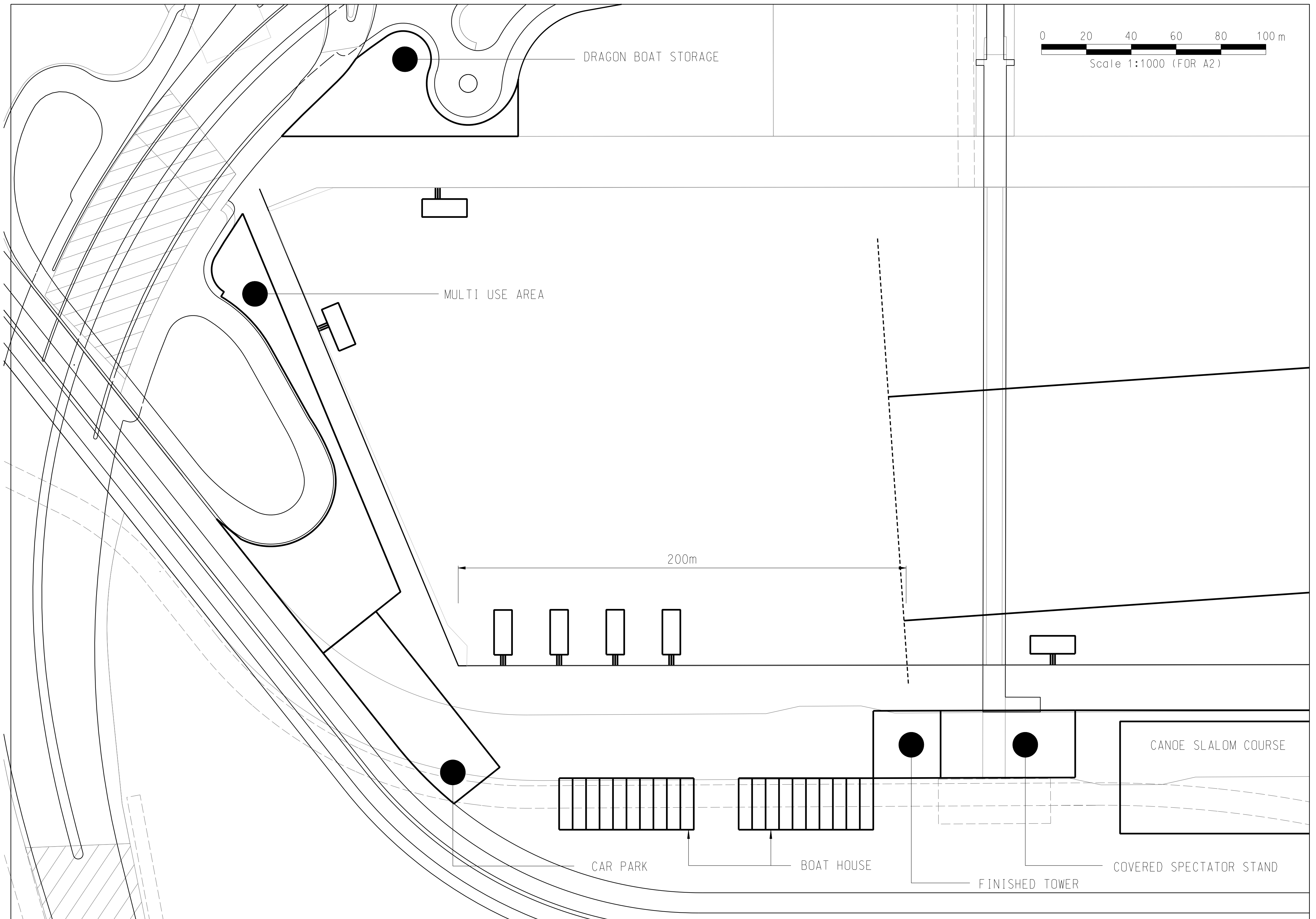


FIGURE 2



REPORT ON THE FISA VISIT TO THE PROPOSED KAI TAK INTERNATIONAL REGATTA COURSE

General Summary of Venue Background

The venue is part of the old Hong Kong Kai Tak airport, decommissioned since 1998. The area will be redeveloped into a cruise terminal, commercial, private and public residential, government & community use, recreational, and a sports hub featuring a major stadium and associated supporting sports facilities.

The opportunity to create an international regatta course arises from the channel which runs down the side of the original airport runway. The channel is around 200m wide and can provide about 2,400m length.

The water is highly polluted but will be cleaned up to provide a good environment for the future community living, working and taking recreation in the area.

The channel is currently open to the main harbour, so is salt water and tidal. There are two breakwaters across the mouth of the water area, and part of the proposal is that a dam or gate be placed across the mouth to allow the regatta course to be closed off during major events. The gate can be open at all other times to allow normal tidal movement to clean the water.

The standard of regatta course desired is one which would allow the hosting of the Asian Games and other International regatta events in future. Hong Kong currently has no rowing/canoeing course of a standard suitable for staging the Asian Games. Because all Olympic sports will be mandatory for Asian Games from 2019, it is essential that such a venue be available if Hong Kong is to bid again to host these Games in future.

The initiative for the new regatta course is a joint one between the Hong Kong, China Rowing Association, the Hong Kong Dragon Boat Association and the Hong Kong Canoe Union.

The Government department responsible for the Kai Tak development project is Civil Engineering and Development Department (CEDD).

Points for Consideration

1. We should focus on the use as multi-function sport and public areas.
2. Minimise the impact of the road down the middle of the runway, so that it retains the environment of one venue.
3. Create a BIG GREEN PARK.
4. Suggest suitable activities which facility can be used for.
5. Alignment of course – because of the “hump” near the start, it is not possible at present to have a straight course parallel to the bank. The current proposal is a course of 8 lanes each 12.5m wide. If the “hump” can be removed it would allow a straight course with 13.5m lanes.

6. The body of water is currently open to the harbour and for a major event such as Asian Games or World Junior Championships, etc., the tidal movement would have to be managed. This would require a method of controlling the tidal flow.
 7. The area towards the start of the proposed course also includes a wide body of water near the Kwun Tong waterfront, where a boardwalk area has been created. Additional water activities can be staged here, including sprint regattas (rowing/canoeing/dragon boating, canoe polo, etc), or there is also an opportunity to install a cable water-ski facility for public use.
 8. There are several bridges proposed along the length of the regatta course. CEDD has asked:
 - a. What is the minimum span between pylons which would be possible for the international regatta course?;
 - b. What is the minimum height clearance at high tide for the bridge to allow water sports activities beneath it?
 9. There are vertical walls down one side of the course and a sloping concrete wall down the other. CEDD stated that these walls would remain as they are. They will require some wave dampening solution (check if Bled might be a good example).
 10. There are two major storm water outlets into the course area. One is at the top end (i.e. past the finish line) and the other is at the 1500m point. The outfall from these will be significant in heavy rain. Possibility to purify the incoming water (e.g. Beijing?)
 11. There should a cycle path and footpath around the course, with dual use for coaches cycling and TV road during major events.
 12. Installations –
 - a. Start Tower (floating and part of the start bridge (as with Singapore) or permanent structure?
 - b. Timing Huts – 500 m, 1000 m, and 1500 m.
 - c. Canoe Start Huts – 1,000 m, 500 m, 200 m
 - d. Finish Tower
 - e. Permanent Grandstand – plus restaurant?? Best use, office, etc and public use during other times.
 - f. Boathouses – proposed 20 boathouse units – we should consider if this is enough particularly sharing with canoe, rowing and special needs of Dragon boats storage.
 - g. Office space, victory ceremony preparation, administration, and other areas.
- To be considered:
- the possibility the Finish Tower and the Grandstand to be at the opposite side?
 - if temporary grandstand seating should be on opposite side but main grandstand be on “runway” side to allow “arena effect”.
 - If the “hump” cannot be removed to allow the course to be straightened, we could propose to CUT off the corner on the opposite side at the 1000m mark to allow a wider gap for crews going to the start.
13. The pedestrian bridge proposed to cross the course near the finish line means that the actual Finish Line should be moved a further 50m back to ensure it is on the Start side of the bridge.

14. There is a possibility that CEDD intends to raise the side walls to a height of 5m above water level from the current height of between 3 and 4m (current height not checked). If yes, the height of the Finish Tower might only need 2/S. A solution is needed to minimise the height by using sloping areas towards the water – boathouse etc at height level, then a lower area in front leading down to the water.
15. CEDD will provide some hard copies of plans to be used for further development of the project.
16. HK Dragon Boat Association will provide a list of their requirements to be incorporated.
17. HK Canoe Union would also like to include a white water canoeing facility. They will provide details. Mike Tanner will follow up with HKCU to get their input, including information on commercial returns on these facilities around the world.
18. Mike Tanner will check with Sydney Olympic course to see if there is information on utilisation of the venue over a one year period to justify public use aspects.

Svetla Otzetova
FISA Events Director

Hong Kong Water Ski Association

香港滑水總會

Kai Tak Aquatic Stadium & Park

A Waterski & Wakeboard Cableway Proposal

An opportunity to rejuvenate the old Kai Tak Nullah restore the “Fragrant Harbour” and revolutionise the sport of water skiing / wake boarding and increase its popularity from an exclusive sport to a sport for everyone!

Presented by : Hong Kong Waterski Association Ltd
Contact: Chris D. Howarth, Hon.Treasurer
Tel: 852 94526345
e-mail: chrishowarth@yahoo.com

&

Rixen Seilbahnen
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May 2011

**Water cableways
revolutionize the sport of water skiing / wake boarding and increase its
popularity from an exclusive sport to
a sport for everyone!**



1) Prologue

Being able to water ski / wake board has only been a dream for many so far, due to the prohibitive cost of owning and operating a power boat with a motor large enough to tow a skier and auxiliary equipment. However, there exists an alternative, now – a **water cableway**.

Its convenience and low cost does not only attract the conventional water skier / wake boarder but also thousands of people, who have never water skied / wake boarded before.

What is more, from a medical point of view, water-skiing / wake boarding is one of the healthiest sports of all. Not only does it help to train all the muscles groups, but it also strengthens the immune system. The accident rate is extremely low and people of all age groups can participate in it!

Waterskiing / wakeboarding behind a powerboat is expensive and not always an option. A water cableway offers a more practical and desirable alternative.

A key invention in terms of concept and technology enables water skiing / wake boarding using an overhead cable system, eliminating the need for powerboats and petrol.

For the first time, waterskiing / wakeboarding could become available to everyone in Hong Kong– affordable, safe, independent of others, close to home, energy saving and environmentally friendly!

Water cableways have been perfected mechanically, they are economically and environmentally sound.

There is a main continuous towing cable, which runs on horizontal guide pulleys connected to about 4 or 5 slim steel supports. The operation speed is easily and continuously regulated from the starting point. It is not necessary to slow down to enable water skiers / wake boarders to join or leave the course. The starting point is a ramp, and starts are completely smooth with optimal acceleration. According to their level of skills water skiers / wake boarders can try a slalom course, jump over ramps or just be towed in a straight line.

A water cableway also answers many environmental questions. It blends neatly into any outdoor setting and is barely visible from a distance. It is powered by an electric motor, ensuring that the air and water are kept clean. Water cableways contribute to a great extent to regenerate and maintain the biological balance in waters. Since they also do not spoil the landscape, do not cause any noise or pollution of the water by oil, these cableways have become very popular recreation grounds doing no harm to the environment.

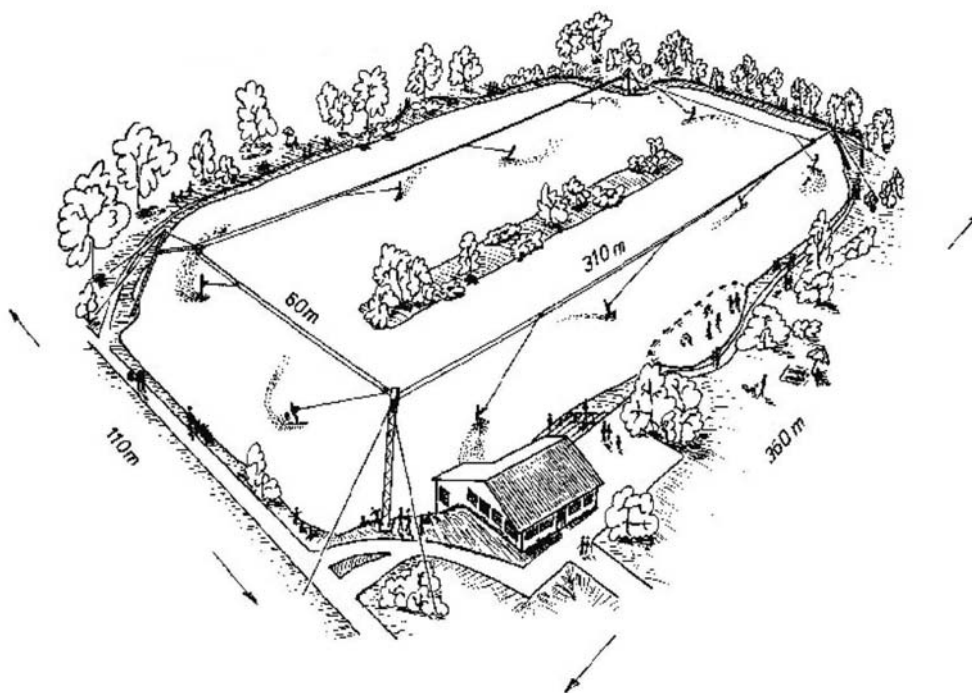
Furthermore, due to the continuous splashing of water, cable water skiing / wakeboarding also introduces about 200 kg of oxygen into the water on an average day, equals 73 tonnes of oxygen per annum (50 % capacity). This is a great asset for the health of our lakes. Official studies have been conducted, which support these facts.

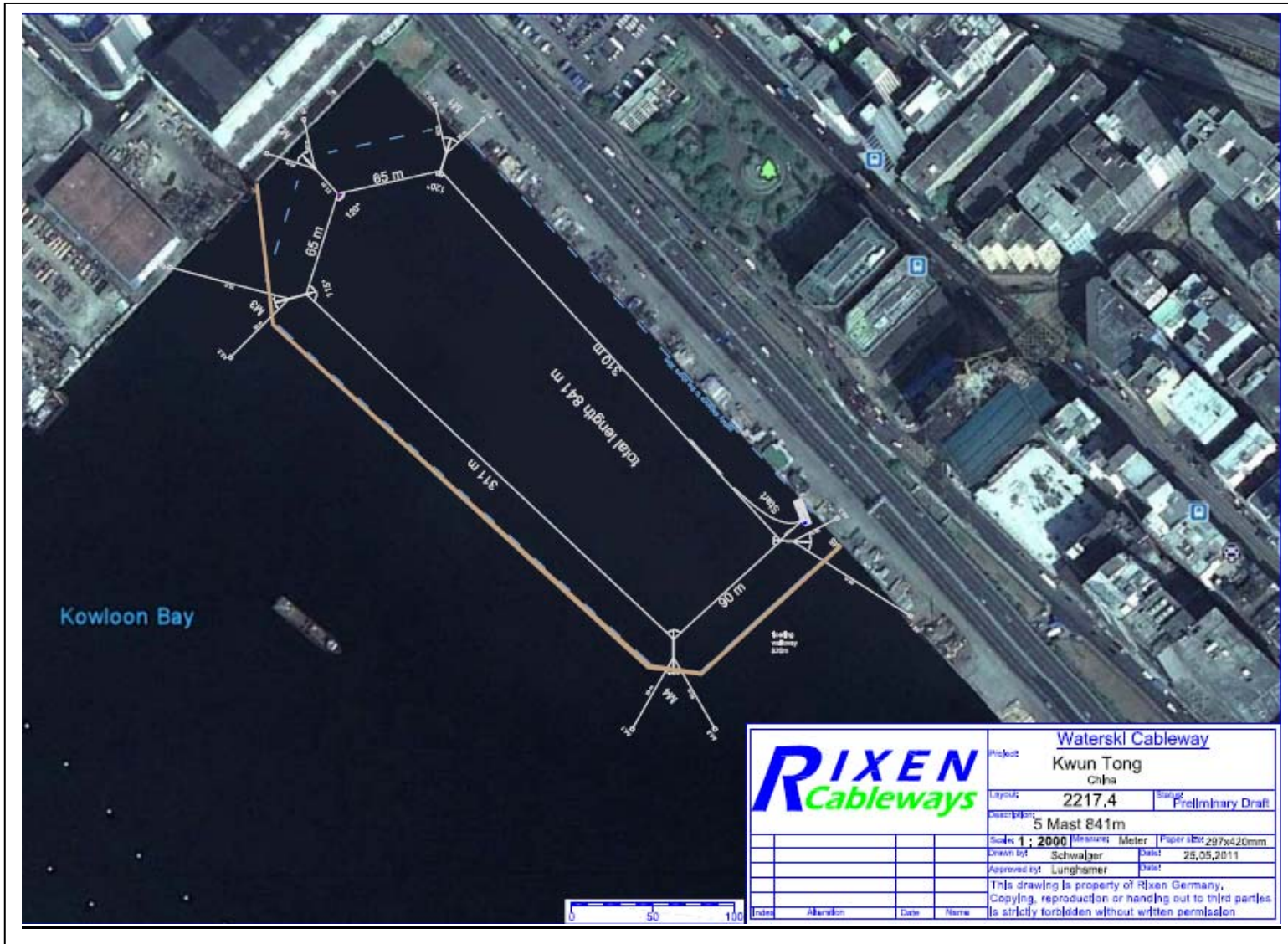


Advantages of water cableways

- enables many people to water ski / wakeboard
- is one of the healthiest sports around
- very low accident rate
- **affordable & safe fun**
- independent from others
- close to home activity
- **energy saving & clean**
- ideal for beginners & pros
- **does not make any noise**
- suitable for all age groups
- needs only a small area
- can be moved to other location
- blends into the environment
- **improves water quality by adding oxygen**
- attracts tourists & spectators
- is not dependent on the weather
- etc.

Basic Drawings & Maps of Water Cableways





Room 1025, Olympic House, 1 Stadium Path, So Kon Po, Causeway Bay, Hong Kong.
2504-8168 傳真: 3113-0613
Website : <http://www.waterski.org.hk> E-mail: hkwsa@hkolympic.org

Tel: 2504-8168 Fax: 3113-0613

**Possible Cable Water Ski Venue
near Kwun Tong Promenade**

Olympic Rowing Course, Toda, Tokyo, Japan



View of pontoons for accessing water with boats and boat houses on opposite bank



Spectator Bank at finish area



Starting area of Rowing Course

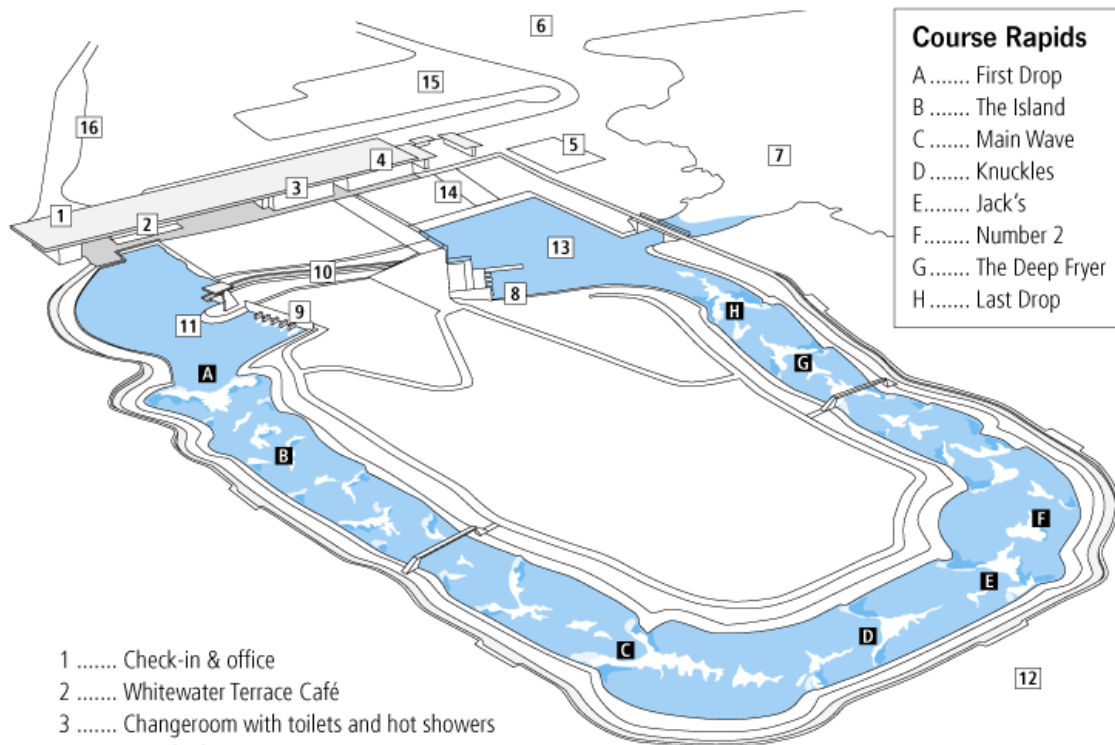
Penrith White Water Stadium, Sydney Australia

<http://www.penrithwhitewater.com>



Note : Shape and form of a slalom course can be changed to meet site requirements

The Course



Course Rapids

- A First Drop
- B The Island
- C Main Wave
- D Knuckles
- E Jack's
- F Number 2
- G The Deep Fryer
- H Last Drop

- 1 Check-in & office
- 2 Whitewater Terrace Café
- 3 Changeroom with toilets and hot showers
- 4 Boatshed
- 5 Beach volleyball court
- 6 Grassed picnic areas
- 7 Warm-up lake
- 8 Pump inlets
- 9 Pump outlets
- 10 Conveyor for rafts and kayaks
- 11 Start pool & tower
- 12 Grassed spectator areas with walking paths
- 13 Finish pool
- 14 Boat ramp and safety briefing area
- 15 Car park
- 16 Bus parking bay

Operating at normal capacity, enough water flows through the pumps to fill a 50 metre Olympic pool in **55.7 seconds!**

Penrith Whitewater is wheelchair accessible.

Specifications

The course has been constructed using a combination of both natural and man-made materials to recreate the characteristics of a natural whitewater river. Water is drawn from the nearby warm-up lake by six 300kw submersible pumps. Each pump delivers 2,800 litres (2.8 cubic metres) of water per second to the start pool at the top of the course, from where it flows down to the finish pool.

The river flows at 14 cubic metres of water per second or 5 pumps. The channel itself is concrete and varies in width from 8 metres to 14 metres. It is 320 metres long, drops 5.5 metres top to bottom and is constructed in a "U" shape. A moveable obstacle system makes it possible to change the whitewater.

A conveyor carries rafts, canoes and kayaks along with their occupants from the bottom of the course t



group courses – beginner

Half-day Sampler

Are you curious about kayaking and would like to give it a try?

The Half-Day Sampler has been designed to give you a small taste of kayaking and hopefully "wet" your appetite for a lot more!

You will be introduced to:

- Kayaking as a recreational activity
- Kayaking equipment
- Flatwater paddling
- Basic strokes
- Leaning
- Turning
- Basic self-rescue

Adventure Level: Low. We recommend that you be physically fit and be confident in the water.

Duration: 3 hours

Minimum age: 12 years

Experience: No experience necessary

Cost: \$77

Note : Through providing public access, special events and courses such as this, the facility could be self financing