Designing Victoria Harbour: Integrating, Improving, and Facilitating Marine Activities

By:
Brian Berard, Jarrad Fallon, Santiago Lora, Alexander Muir,
Eric Rosendahl, Lucas Scotta, Alexander Wong, Becky Yang

DesigningHongKong 創建香港 .com

WPI

Harbour Business Forum
海港商界論壇

CXP-1006

Designing Victoria Harbour: Integrating, Improving, and Facilitating Marine Activities

An Interactive Qualifying Project Report
Submitted to the Faculty of
WORCESTER POLYTECHNIC INSTITUTE
in partial fulfilment of the requirements for the
Degree of Bachelor of Science
In cooperation with
Designing Hong Kong, Ltd., Hong Kong
Submitted on March 5, 2010

Sponsoring Agencies: Designing Hong Kong, Ltd.
Harbour Business Forum

On-Site Liaison: Paul Zimmerman, Convener of Designing Hong Kong Harbour District

Submitted by:

Brian Berard
Jarrad Fallon
Santiago Lora
Alexander Muir
Eric Rosendahl
Lucas Scotta
Alexander Wong
Becky Yang

Submitted to:

Project Advisor: Creighton Peet, WPI Professor
Project Co-advisor: Andrew Klein, WPI Assistant Professor
Project Co-advisor: Kent Rissmiller, WPI Professor

Abstract

Victoria Harbour is one of Hong Kong's greatest assets; however, the balance between recreational and commercial uses of the harbour favours commercial uses. Our report, prepared for Designing Hong Kong Ltd., examines this imbalance from the marine perspective. We audited the 50km of waterfront twice and conducted interviews with major stakeholders to assess necessary improvements to land/water interfaces and to provide recommendations on improvements to the land/water interfaces with the goal of making Victoria Harbour a truly "living" harbour.

Acknowledgements

Our team would like to thank the many people that helped us over the course of this project.

First, we would like to thank our sponsor, Paul Zimmerman, for his help and dedication throughout our project and for providing all of the resources and contacts that we required.

We would also like to thank Terry Ma for her time and effort spent organizing meetings and collecting information.

We would like to thank the Harbour Business Forum, Marine Department, and Development Bureau for their support, insight, and assistance with the project.

We wish to thank all of the stakeholders that contributed to this project. Without their dedication to Victoria Harbour, we would not have been able to complete this project. Their names are listed below:

Michael Agopsowicz	*Waterfront Air Ltd.*
Arthur Bowring	*HK Shipowners' Association*
Ian Brownlee	*Masterplan Ltd.*
Tony Chan	*HK Development Bureau*
Kim Lui Choi	*HKMSOA*
Warwick Downes	*Royal Hong Kong Yacht Club*
Roger Eastham	*Royal Hong Kong Yacht Club*
Brenda Fung	*Harbour Business Forum*
Chris Fung	*HK Development Bureau*
Laurent Genna	*Spysea Ltd.*
Peter de Kantzow	*Waterfront Air Ltd.*
Chi Wan Kwok	*HKMTBA*
Mabel Lam	*Wheelock Properties*
Patrick Lau	*HKSAR Eastern District Council*
Thomson Lee	*HKMTBA*
Yuet Lee	*Lee Yuet & Associates (Ret.)*
Horace Leung	*HK Tourism Board*
Bonnie Nickerson	*City of Providence*
Charles Norris	*Norris & Norris Associates*
Ray Parry	*Royal Hong Kong Yacht Club*
Emmanuel Poon	*HK Tourism Board*
Priscilla Poon	*HK Tourism Board*
Mike Simpson	*Simpson Marine*
Garry Smith	*Saffron Cruises Ltd.*
Peter Cookson Smith	*Urbis Ltd.*
Moody Tang	*HK Maritime Museum*
Roger Tupper	*Marine Department*
Robert Wilson	*Rowing Association*
Bonnie Wong	*Hoi Kong Container Services*
Miu-Sang Wong	*HKMSOA*
Frankie Yick	*Wharf Holdings Ltd.*
Ping Zou	*Marine Department*

Finally, we would like to thank our Worcester Polytechnic Institute advisors, Professors Andrew Klein, Creighton Peet, and Kent Rissmiller for their generous advice and continuous support throughout this project.

Table of Authorship

All members of this project contributed equally to the editing and revision of each section of the report. Each section was proof-read by every member of the team. In addition, certain members contributed to the project in ways not reflected in the table of authorship.

Brian Berard acted as the primary note-taker and task organizer. He provided many of the section outlines prior to their authorship and was responsible for formatting the final paper.

Jarrad Fallon was responsible for much of the data analysis. He also assisted with many of the tasks of the other members, working diligently in many different areas.

Santiago Lora collected most of the data regarding tour boats. He was also responsible for a significant portion of the team's public relations work.

Alexander Muir acted as the team leader, coordinating the project and providing guidance for all tasks undertaken.

Eric Rosendahl created, structured, designed, and scripted all of the team's PowerPoints for use in the presentations.

Lucas Scotta was the primary creator of the Google Earth database and also compiled the audit data into the Google Docs spreadsheet.

Alex Wong set up the first round of interviews and was responsible for keeping in contact with the seventy stakeholders on the contact list.

Becky Yang created the page that was placed on the Harbour Business Forum's website to host the Google Earth database.

Table of Contents

Table of Figures

Table of Tables

Executive Summary

Large bodies of water, such as rivers, bays, and harbours, serve as the defining element of many communities around the world. Many large port cities owe their existence to their harbours - without which, their trade and commercial industries would not have been able to flourish. Over time, waterfront uses change due to the evolution of industry, commerce, and technology. Marine uses require land/water interfaces: land- and water-based facilities that enable the transition between land and water. Piers, landing steps, ticketing kiosks, marine clubs, water kiosks, fuel stations, and marinas are all examples of land/water interfaces on which marine users rely. Marine-related land uses must compete with other uses such as residential developments, roads, promenades, and parks for scarce land available along the waterfront. The idea of a "living" harbour stems from the need for balance amongst these many waterfront uses. Proper waterfront management results in a harbour actively used for a diversity of land- and water-related activities. A true "living" harbour stimulates jobs in marine-related industries and attracts people to the waterfront.

Background

Victoria Harbour, one of the world's most beautiful natural harbours, was instrumental in Hong Kong's growth from a small fishing village to an international trading centre. As a central point of maritime trading activities in Southeast Asia, Hong Kong's container ports serve vessels from all parts of the world. With its mountainous landscape, this region has little developable land in its core urban areas. For 150 years, Hong Kong's primary method of expansion was the reclamation of land, reducing Victoria Harbour to less than half of its original width. In 1997, the government approved the Protection of the Harbour Ordinance to prevent future reclamation barring a "public overriding need without a reasonable alternative." As a result, the current water-edge of Victoria Harbour will be kept unmoved for 999 years.

The Protection of the Harbour Ordinance further increases the value of existing waterfront land, and there is a long list of competing needs for the last remaining plots around the harbour. In the past, redevelopment projects along Victoria Harbour's waterfront have focused primarily on the more economically valuable uses: commercial, corporate, or residential developments. Due to their lower economic value, marine users have often been forgotten or neglected during project planning. Residential developments, roads, parks, and promenades have been built along the waterfront, making it more beautiful and publicly accessible, but few improvements have been made to marine-supporting land/water interfaces. Land/water interfaces often requires piling and support grounded on the seabed (e.g. for piers). New marine infrastructure that requires reclamation must demonstrate a public overriding need to pass the strict tests set out under the Protection of the Harbour Ordinance.

Methodology

The goal of this project was to provide Designing Hong Kong, Ltd. with a set of recommendations to make Victoria Harbour into a "living" harbour – one that is actively used for a diversity of land- and water-related activities. To achieve this goal, our study was divided into two phases. In the first phase, we created a database with the locations and descriptions of the existing marine infrastructure in Victoria Harbour. In the second phase, we created a forecast of the changes in marine activities and infrastructure requirements over the next 15 years and a set of recommendations to improve the marine infrastructure in the harbour. The harbourfront was divided into twenty-three action areas as adopted by the Harbourfront Enhancement Committee to categorize the data collected. This study was sponsored by Designing Hong Kong Ltd. and supported by the Harbour Business Forum and the Development Bureau.

To obtain the information needed to create a database, we walked along Victoria Harbour's 50km of waterfront twice on foot and also toured the harbour by boat, identifying

each land/water interface. Using a standardized Waterfront Evaluation Form and photographic evidence, we recorded the marine users and the supporting facilities observed at each action area. All of this information was compiled into a single database using Google Earth. This database includes over 200 land/water interfaces with a reference code, description, GPS location, maintainer, and photograph for each. In addition, future development plans for the waterfront were also overlaid. This complete Google Earth database was a powerful tool for our analysis. As the only such database in existence, it will be a valuable tool for future studies and marine users of Victoria Harbour.

To accomplish the second phase, the forecast, we conducted a stakeholders' conference and interviews. The 25 stakeholders that attended the conference were from various marine-related industries, government departments, and planning organisations in Hong Kong. They commented on four different topics: predictions for future marine users, future marine facility requirements, obstacles faced by marine-focused waterfront redevelopment, and potential solutions for the problems in Victoria Harbour. This information was supplemented by interviewing key professionals and organisations that hold interests in the harbour. Through content analysis of the interviews and stakeholders' conference data, we formed a preliminary list of recommendations based on the opinions of the stakeholders. Using these preliminary recommendations as a basis, we conducted desk research to assess the feasibility and evaluate the relevance of each recommendation, eliminate unrealistic recommendations, and strengthen the final set of recommendations. We also researched past trends and future development plans for the waterfront in order to envision the harbour's future users and infrastructure.

Results and Analysis

Over the course of the study, clear trends appeared in the data, demonstrating similarities in the needs of multiple types of marine users. The major areas of focus identified for further analysis were sheltered water, piers/landing steps, marine-related

recreational areas, and PCWAs. These results emphasize seven major issues regarding the state of Victoria Harbour, present and future:

1. Sheltered water is an extremely vital asset in Victoria Harbour and is not currently recognized as such.
2. The quality and accessibility of existing land/water interfaces are inadequate.
3. Future plans do not give sufficient consideration to the potential for developing areas to become areas of leisure and recreation for both marine users and visitors to the waterfront.
4. The movement of public cargo working areas out of the Eastern and Central Harbour threatens to destroy the cargo industry currently using these facilities.
5. Little balance exists amongst the various classes of marine users in Victoria Harbour.
6. There is no overall plan for future developments in Victoria Harbour. All projects are undertaken on a case-by-case basis.
7. The large number of organisations with a controlling stake along the waterfront hinders the development of Victoria Harbour.

The usage trends in the harbour create three major divisions of marine users: industrial activity takes place in the Western Harbour, ferry services dominate the Central Harbour, and recreational uses are primarily located in the East. This division provided a guiding concept of the harbour and how future developments should proceed. While this conclusion appeared to be widely recognized, it was difficult to find any guiding plan to facilitate this view of the harbour. In fact, recent waterfront development has often neglected the marine users entirely, especially in the most valuable areas of water: sheltered water.

Conclusions and Recommendations

In order to address the problems identified by our study, we drafted a set of recommendations. These recommendations vary in scope, but many of them focus on

resolving the issue of insufficient sheltered water in Victoria Harbour. The most important recommendations are summarized here:

- Increase the amount of sheltered water available in Victoria Harbour to meet the increasing demand for shelter during typhoons and year-round mooring space.
- Give marine users strong consideration in the development of land surrounding sheltered water.
- Landing steps should be improved in the following categories: land access, signage, lighting, shelter, and safety.
- Add more public piers to the plans for developing areas in order to aid the growth of the harbour tour industry. In addition, public piers should be improved to provide additional facilities for their users.
- Recognize the industrial marine uses in the Western Harbour and provide adequate land, access, and modern permanent facilities.
- Establish a single organisation for the control of the waterfront – one to plan and implement future development projects and manage existing facilities.

Overall, our findings show that marine users – a major stakeholder in Victoria Harbour – are neglected in the planning and use of the waterfront. With the changing nature of land uses and associated marine uses, there is a need to carefully consider new and alternative marine supporting infrastructure along Victoria Harbour's waterfront. New marine-supporting infrastructure may require some reclamation, but it is vital in order to ensure a vibrant, "living" harbour.

1 Introduction

Waterfronts have often played an important role in the economic development of countries by providing an accessible venue for trade and travel. Due to the many uses of a waterfront and the finite amount of space available, the optimization of space for maximum efficiency is especially important. As available land in the city dwindles, local governments occasionally attempt to extend their waterfronts - a process known as "reclamation". As new land is created by reclamation, industries may attempt to expand along the growing waterfront. This practice results in the loss of waterfront accessibility for the city's inhabitants. With such valuable land along the waterfront, conflicts of interest between various user groups occur, and some users are often overlooked.

The delicate nature of waterfront development in Victoria Harbour requires that careful consideration be given to urban planning. There are many factors to consider, including the desire of multiple users to use the same land for different purposes, priority given to specific users, and the amount of resources that are accessible to each user. Unfortunately, not all harbour users are satisfied with the current uses of the harbourfront. Since the Hong Kong government has implemented a program to put a stop to additional land reclamation (Protection of the Harbour Ordinance, 1997), the uses of the harbourfront are now more important than ever before. The existing waterfront will become the permanent shoreline for the next 999 years. Any redevelopment of Hong Kong's harbourfront is made more difficult by the difference in perspective amongst users. Those using the harbourfront from the water side, such as recreational boaters, ferries, floating restaurants, and cargo shipping companies, would view the shoreline as the end of the water and beginning of the land, while land users, such as most businesses and the government, would have the opposite view, seeing it as the edge of the land and the beginning of the harbour. This is an important distinction because, given the power to do so, each stakeholder would develop the harbourfront differently to benefit themselves.

Tourism and income associated with land leases are two of the largest sources of revenue for the Hong Kong government. Tourism accounted for 3.4% of income in 2007 (Census and Statistics Department, 2009a, The Four Key Industries in the Hong Kong Economy). This pales in comparison to the revenue generated by land leases, which accounts for more than 35% (Hong Kong Democratic Foundation, 1996, 'Land Tax' and High Land Prices in Hong Kong). Due to the Protection of the Harbour Ordinance, the government must determine new ways to generate additional income. Thus, they have less of a financial interest in accommodating the needs of boaters and other water-based harbourfront users. This has led to a significant lack of amenities for harbour users along the waterfront, which could negatively impact the tourism industry. In 2003, the Hong Kong government sponsored research that looked into the need for water-based amenities (Hong Kong Tourism Board, 2003, Planning Study on the Harbour and its Waterfront Areas), but there are no current plans to implement the report's recommendations. Moreover, since the research was sponsored by the government, a party of interest, there is no guarantee that the research conducted was done in an impartial manner. Similar situations of necessary waterfront redevelopment have occurred around the globe, in cities such as Baltimore, Cape Town, and San Francisco. Each city had to optimize its waterfront in order to adapt to the city's changing economy and new uses of its harbour.

There has been research previously conducted about the Victoria Harbour waterfront (Jannetti et al., 2009; Hyde et al., 2008; Radio Television Hong Kong, 2006; Wan, 2005; Harbourfront Enhancement Committee, 2010a), but it seems none has investigated it purely from the perspective of water users. It is important to understand what boating amenities are needed and where they are needed. If the harbourfront is improved in the wrong way or in the wrong areas, the work will not benefit water-based users. Due to the Protection of the Harbour Ordinance, signed in 1997, the harbourfront that is built will remain for 999 years, making it important to devise a long-term sustainable solution that fully uses the harbourfront. Designing Hong Kong, Ltd. has a goal of developing Victoria Harbour from both land- and water-based perspectives to create a "living" harbour.

The goal of this project was to provide Designing Hong Kong, Ltd. with a set of recommendations to make Victoria Harbour into a "living" harbour – one that is actively used for a diversity of land- and water-related activities. In order to complete this task, our objectives included: locating and describing the existing marine infrastructure present in and alongside the harbour; identifying the current marine users of the harbour, what infrastructure they need, and what improvements that infrastructure needs; and forecasting how marine users and their infrastructure requirements will change over the next 5, 10, and 15 years. To conduct this research, we collected the opinions of actual water-based harbour users, who would be the ones most impacted by any government policy changes, as well as city planners responsible for the development of current and future waterfronts. Additionally, by visiting sites along Victoria Harbour, we determined what amenities and services are needed, first-hand. This study was required because the current harbourfront has become Victoria Harbour's permanent waterfront, and it is important to use it to its fullest potential. We also considered the feasibility of these solutions, because an impractical or unrealistic solution would never be implemented. Based on our findings, we developed a set of recommendations for Designing Hong Kong, Ltd. on how to ensure Victoria Harbour's future success.

2 Background

Hong Kong's Victoria Harbour is a unique entity on the world stage, and it possesses many traits not found in any other harbour of the world. From its numerous typhoon shelters for the protection of ships to its dazzling panoramic skyline, Victoria Harbour never ceases to impress. The vibrant atmosphere boasts a constant inflow of visitors from all parts of the globe. Past increases in demand for more land along the harbourfront have resulted in multiple harbour reclamation and redevelopment projects. While these efforts have been beneficial for many land-based users, however, there has been little consideration for the harbour's water-based users. One of the ways to address this ongoing predicament is to view the current situation of the waterfront from the perspective of multiple users. The investigation of harbour planning and redevelopment principles, concerns, and concepts includes research on the evolution of similar port-cities around the world to explore the inherent issues that affect waterfront development. This chapter discusses these topics in order to present a comprehensive explanation of the context in which this study takes place.

2.1 Value of Waterfronts

A multitude of the world's large cities, as well as countless other smaller cities and towns, were established near bodies of water, proving beneficial to their development. "For communities and areas fortunate enough to be near a body of water, the waterfront is often the unifying element that defines them and serves as the source of their beginnings, their heritage, and the reason for their existence" (The Waterfront Centre, 2007, Home Page). Not only do waterfronts provide unique economic opportunities for their surrounding communities, they serve as attractive destinations for leisure activities and recreational uses. Many facets of Victoria Harbour, such as trade ports, fishing fleets, beaches, piers, and promenades help define their surrounding waterfront areas. Many large port cities owe their existence to their waterfronts, without which, their trade and commercial industries would not have been able to flourish.

2.1.1 Historical Uses of Waterfronts

Waterfronts are a linkage medium, permitting access from the land to the water and vice versa. The cities and communities situated on vital waterfronts have historically used them for both peaceful operations and national defence purposes - namely fishing, trading, transportation, and military applications. Control of a harbour or a stretch of coastline confers influence over the traffic in the surrounding area, in particular trade and transport vessels, fishing boats, and naval warships.

Trade remains a vital component in the current economy; global trade continues to be on the rise despite the global economic recession. From 2000 to 2008, world merchandise exports grew 5% (World Trade Organisation, 2009b, Table I.2). Although some trade takes place over land via trains and trucks, the vast majority of goods are transported and pass through port cities by container ships. Container ships are by far the most cost-efficient method of transporting large quantities of goods. As a result, harbours will continue to be a valuable trade resource in the years to come.

2.1.2 Changing Waterfront Uses

As the economy of a waterfront community changes, its waterfront must also adapt to accommodate new uses so as to maintain its value as an asset to society. “Like the cities they help define, urban waterfronts are dynamic places, undergoing profound change” (The Waterfront Centre, 2007, Home Page). The growth of the non-commercial leisure boating industry has added many new uses to urban waterfronts and harbours, necessitating a fresh look at how these waterfronts are developed. Large container ships need drastically different facilities and services than smaller recreational boats or even large cruise ships.

Waterfronts are a finite resource, and competing harbour uses must be considered in any waterfront redevelopment project. Conflicting harbour uses can lead to many difficult decisions when determining an ideal development plan. If the different interests of the changing marine user demographic are not carefully considered, the infrastructure of the harbour will not be appropriately modernized to accommodate the new waterfront users – eventually causing the value of the harbourfront to decline. In many cases, economic changes

in harbourfront communities cause the shipping industry to suffer or move out of the harbour altogether, making way for new public harbour uses and tourism activities (Harms, 2008, p. 10).

2.2 Waterfront Redevelopment Projects Worldwide

During the last century, many port cities noticed that their waterfronts had become underused, misused, or unbalanced. Upon realizing this issue in the 1950s, the city of Baltimore, Maryland, became one of the first major port cities to undergo waterfront redevelopment in the United States. During the course of the waterfront's revival, the economic focus of the waterfront area shifted towards a more balanced distribution of uses. Similarly, Cape Town, South Africa was a city that noticed the changing trends in tourism and global shipping, respectively, and quickly made the appropriate adaptations. On the other hand, San Francisco, California is an example of delayed waterfront redevelopment, which resulted in San Francisco's loss of its shipping industry (Harms, 2008, p. 10).

2.2.1 Baltimore

Located at the head of Chesapeake Bay, Baltimore is a major shipping port. Baltimore's economy developed around shipping and industry and struggled to adapt to changing economic conditions during the 1950s. Most of the manufacturing jobs had left the city, along with a good portion of the population, which had moved to the suburbs. The shipping industry had all but abandoned the Inner Harbour, leaving large areas of the waterfront unused (Millspaugh, 2003, p. 2). Baltimore needed to do something quickly in order to improve its fortunes, and it turned to waterfront redevelopment as the most realistic, effective solution to revitalize the unused areas of the harbour

An organisation was formed by private interests in Baltimore to begin the process of redevelopment (Millspaugh, 2003, p. 2). This organisation was called the Committee for Downtown (CD) and was formed in 1954. The CD guided Baltimore through the first phase of the redevelopment, which ended with the completion of the Charles Center. As public and private support grew for the redevelopment, a private corporation was chartered (though it

was controlled via contract by the municipality) to take over the responsibilities of urban planning, called the Charles Center-Inner Harbor Management, Inc (CC-IH).

Figure 2.1: Baltimore Inner Harbour
(Raoul Pop, 2009)

When Baltimore decided to renovate the Inner Harbour, the waterfront was littered with old industrial buildings - too many to renovate all at once (Millspaugh, 2003, pg. 3). The CD realised that a series of small victories would be just as important to the public as the end result, so they placed their focus on making a first impression, and the Charles Center (CC) was born. The CC was designed to be a large development consisting of many buildings and plazas, the first of which, 1 Charles Center, is a 27-storey office building (Emporis, 2009, One Charles Center). As intended, the glass and aluminium building served as a focal point for the city's waterfront.

After the CC was completed, the redevelopment process started to gain momentum. More and more projects were started and completed, including the Maryland Science Center and several privately funded buildings intended to be corporate headquarters. Yet, development always focused on improving the waterfront, not just on building new office buildings (Millspaugh, 2003, pg. 5). A festival market and a 2,000-seat auditorium were

both built on old shipping piers. Then, in 1976, the Tall Ships, an international fleet of 18th and 19th century sailing vessels, came to Baltimore. This was a pivotal moment, as beforehand the waterfront redevelopment had been focused on making the Inner Harbour better for the residents of Baltimore. However, the Tall Ships visit turned the Inner Harbour into a tourist destination.

By the mid-80s, it became apparent that a balance needed to be struck between the new and different competing uses for the Inner Harbour. Therefore, in 1985, the City of Baltimore created the Marina Master Plan, with the goal: "to allow access to the water by recreational boaters while protecting and allowing for growth of the commercial shipping industry in Baltimore's Harbour" (City of Baltimore, 2003, p. iv). With this plan, Baltimore was able to balance its growing tourism and recreational boat traffic with the needs of its shipping industry in the rest of the harbour. This balance included the preservation of the shipping lanes to Baltimore's 16 public and private ports in addition to the creation of "boatels" – waterside hotels with dock space for those who travel by boat, and space for canoes and kayaks. The plan has been updated several times over the years as the situation has changed, but the balance has been maintained.

Once the flow of tourists started and a balance with industry had been achieved, the momentum of the redevelopment movement persisted. The Inner Harbour continued to develop through the 80s and 90s, and today, Baltimore is regarded as having one of the best waterfronts in North America (Millspaugh, 2003, pg. 1). It is estimated that 6.5 million people visit the Inner Harbour each year, bringing money into the city and fuelling the growth of the tourism sector. Yet, Baltimore got more out of this than just tourists; the people of Baltimore now take pride in their city. Dozens of abandoned buildings were levelled or renovated in order to build new office buildings, providing jobs for the people and property taxes for the city; the semi-dilapidated harbour was rebuilt into a vibrant area usable by both commercial and recreational vessels.

2.2.2 Cape Town, South Africa

The waterfront redevelopment project in Cape Town, South Africa is another excellent example of well-executed, intelligent planning that can provide valuable insight to cities in the process of redevelopment. A large portion of Cape Town's waterfront was converted from an underutilized plot of land to one of the most successful, attractive harbourfronts in the world. The once neglected shorelines of Victoria and Alfred Basins - after years of development - now serve as a multi-use area with a focus on retail, tourism, and residential development while maintaining the continued operation of a working harbour (V&A Waterfront Company, 2009, V&A Waterfront). The focal point of the V&A waterfront redevelopment project was the restoration of physical links between Cape Town and its waterfront. The project sought to create a quality environment, a desirable place to work, live, and play, and a preferred location to trade and invest for Capetonians and visitors (van Zyl, 2005, p. 1). This world-class seascape provides a true waterfront experience for both locals and visitors alike.

The project on the waterfronts of Victoria and Alfred Basins started in 1988 with the establishment of the V&AW committee (van Zyl, 2005, p.4). Once an industrial harbour, the V&A areas of Cape Town had become an under-utilized, poorly developed piece of land due to harbour expansions in other locations within the city. A very large redevelopment project was required in order to create a valuable land asset. The development project received no government funding, however, obtaining the necessary capital entirely from commercial organisations.

The V&AW committee immediately set to work forming a cost-effective development plan that would address their three major goals: to create public spaces, to develop the waterfront in a way that best accounts for its unique features, and to achieve maximum financial value through proper development (van Zyl, 2005, p. 10). The committee then established its objectives to further guide its planning. The committee's objectives were to create a rich and diverse environment, promote tourism and recreation, improve public access to the waterside, and create a viable business foundation.

Figure 2.2: Cape Town Pierhead, South Africa
(Mervyn Hector, 2008)

One of the most prominent areas of the V&A waterfront is the Pierhead (van Zyl, 2005, p.6). Development of the Pierhead added a number of new marine facilities to the harbourfront, including moorings, water access points, and docks. In order to create a more balanced recreational atmosphere, restaurants, shops, and arts centres joined the waterfront area. These multi-disciplinary developments in the Pierhead reflect the true success of the V&A waterfront: an area that promotes synergy between recreation and functionality in the harbour.

Cape Town's waterfront boasts a wide variety of marine-related activities for the enjoyment of visitors and residents alike, including boating, scuba diving, and fishing. Visitors can enjoy the harbour through various boat tours and ferry services located at the V&A waterfront. One of the most popular attractions is historic Robben Island. Daily ferries depart from the Robben Island Embarkation Building, located on one of the more popular jetties. The V&A waterfront redevelopment project strove to preserve as many of the city's historic waterfront activities as possible, while also providing modern facilities for the enjoyment of both residents and tourists.

Proof of the success achieved by the numerous developments on Cape Town's waterfront lies in the city's growing attraction of visitors. According to Ferreira (2007), the number of guests to the V&A waterfront has increased every year since the start of the development project and continues to grow. Over twenty-one million visitors comprising of locals, domestic travellers, and foreigners enjoyed the beautiful, functional harbour in 2004. Of these, 55% were local Capetonians, 24% domestic tourists, and 21% international tourists (p. 236). The V&A Waterfront redevelopment project seeks to integrate the uses of foreign tourists with those of the locals by making the waterfront enjoyable for everyone.

More visitors to Cape Town translate into an increase in revenue for the local economy. Restaurants, shops, vendors, and all forms of recreational services experience a higher volume of sales and business from tourists. The growth in sales volume helps to promote the city's local assets such as wine, flowers, and fruits (van Zyl, 2005, p. 12).

Capetonians further experience the benefits of the waterfront development through jobs created within the city. As local businesses grow to meet the demands created by increased tourism, employment directly related to the V&A Waterfront continues to rise. The number of permanent jobs created by the development has risen from 6,200 in 1992 to 15,610 in 2004 (Ferreira, 2007, p.237). This number does not include the thousands of temporary construction jobs created throughout the project. These numbers are indicative of how the V&A Waterfront project has created real regional economic growth for the city of Cape Town.

Cape Town's impressive success with the V&A Waterfront demonstrates the value of a "living" harbour – a place for residents and visitors to experience the waterfront for a variety of marine-related activities such as boating, sight-seeing, and fishing, as well as with various other arts, culture, and dining-related activities. The city's experiences offer an excellent benchmark for international waterfront development projects; Cape Town teaches the world many valuable lessons. The V&AW's development demonstrates many important aspects of waterfront development, including the need to maximize the views of the waterfront, provide public waterfront access with promenades and open spaces, attract all types of visitors, and

encourage a diverse set of marine uses. The V&AW's development's successes can teach waterfront developers many of the lessons that can lead to the success of future projects.

2.2.3 San Francisco, California

San Francisco, on the other hand, is an example of less than ideal waterfront redevelopment. San Francisco was caught unprepared for the change in shipping methods, and as a result, the shipping industry moved across the bay to Oakland. Having lost a major resource, San Francisco was left with kilometres of coastline with no set purpose. Many different development plans were proposed, including "[building] the unpopular Embarcadero Freeway over the old Embarcadero access road to the piers, blocking the city from the bay," and "[building] a 550 feet (sic) tower near the Ferry Building into the bay" (Harms, 2008, p. 13). In 1971, six years after Oakland overtook San Francisco in shipping volume, the San Francisco City Planning Department presented the *Comprehensive Urban Design Plan*. This was not actually a set plan on how to develop the waterfront, but rather "an elaborate series of zoning regulations and design guidelines" (p. 13). No significant steps were taken for another nineteen years, until after the earthquake of 1989. "Under public pressure from citizen groups and through a successful referendum proposition put on the voting ballot in San Francisco, the Port Authority was required to develop a comprehensive waterfront land use plan for port properties with maximum feasible public input" (p. 14). The result was *The Port of San Francisco Waterfront Land Use Plan*, published in 1994 – twenty-nine years after Oakland overtook San Francisco as a shipping centre. It would be another three years before the Port Commission would adopt the plan. The plan was guided by numerous goals including "reuniting the city with the waterfront and revitalizing the waterfront to create jobs, revenues, public amenities and benefits to port, city and state; also to provide parks, plazas, walkways and public open space at the water's edge; and to respect the historic character of the waterfront" (p. 14). Today, much of the waterfront in San Francisco is very attractive and well-developed, but there are still many piers that appear to be underutilized or empty. Even getting to this point has taken well over thirty years since Oakland surpassed San Francisco. San Francisco demonstrates that it is imperative for

waterfront development to stay on the cutting edge of world trends, or else it could take decades to create a new and more relevant waterfront.

After San Francisco lost its shipping industry, large areas of its waterfront were unused. Today, the waterfront has been mostly developed with tourism in mind. “The ferry building has been well restored with shops and restaurants on the ground floor, offices above and at street level, and a market on the weekends. Public access to the water has improved and more tourist ferries are operating” (Harms, 2008, p. 14). There are a variety of tourist ferries, including one that goes to the popular tourist destination of Alcatraz. In addition, there are often large cruise ships docked on the piers unloading tourists, and a handful of high-priced boat slips can be found along the waterfront between the Bay Bridge and the Golden Gate Bridge. Tourism in San Francisco has grown dramatically over the years, now the city’s “no. 1 industry, employing 72,360 people who make a combined annual salary of USD$1.95 billion” (Smith, 2008, Tourism Strong Despite Flagging Economy). In 2007, tourists spent $8 billion in San Francisco, an all-time high up to that point. Many of these positive trends are due to the renovations that have been taking place along San Francisco’s waterfront.

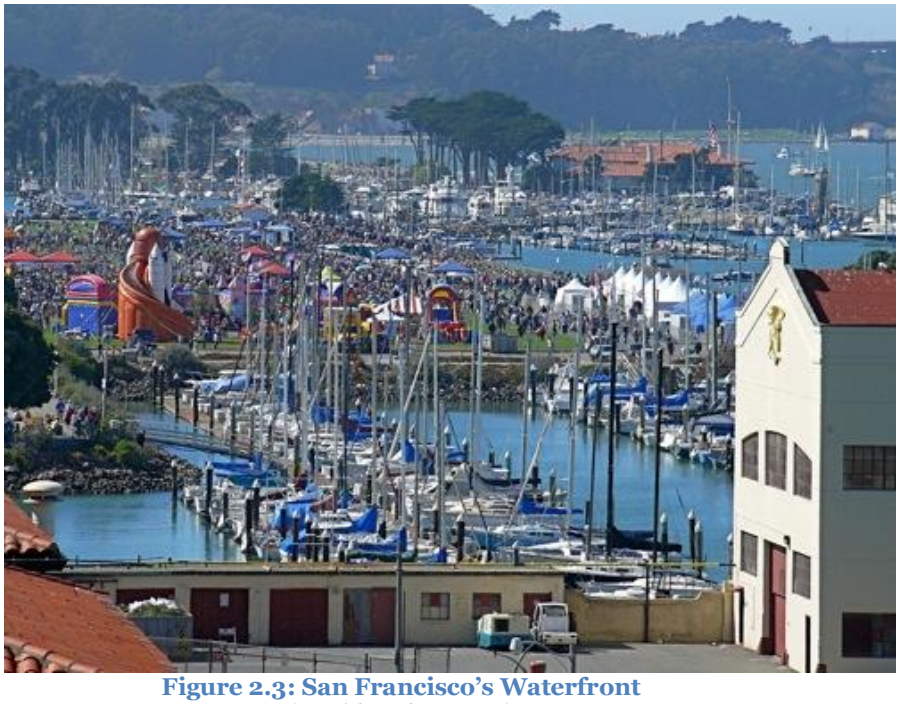


Figure 2.3: San Francisco’s Waterfront
(Ingrid Taylar, 2009)

To govern all facets of San Francisco's waterfront, the town implemented a single organisation called the San Francisco Port Authority. The Port Authority's board of commissioners is composed of five members, each appointed by the mayor for a four year term. The goal of this organisation is to aid in "promoting a balance of maritime, recreational, industrial, transportation, public access and commercial activities on a self-supporting basis through appropriate management and development of the waterfront for the benefit of the public" (Port of San Francisco, 2009). It accomplishes this goal by monitoring the needs of all the parties involved and providing fair and viable solutions based on those needs.

Economic shifts and changing waterfront uses provide excellent opportunities for waterfront redevelopment projects in port cities like Baltimore and San Francisco. Many harbours around the world have experienced a shift away from heavy industrial uses, opening up space along their waterfronts for public access and recreational uses, including: Bellingham, Washington (Port of Bellingham, 2009, The Waterfront District); San Francisco, California (Harms, 2008, p. 8); Hamburg, Germany (Harms, 2008, p. 12); London, England; Halifax, Nova Scotia; Jinji Lake, Suzhou, China; Richmond, Virginia; Sydney, Australia; and Boston, Massachusetts (The Waterfront Center, 2007, Community Consulting Services). This trend is occurring around the world, and waterfront redevelopment projects have proven to be an effective way to revitalize underused waterfronts and to benefit waterfront communities.

2.3 Victoria Harbour

Victoria Harbour is one of Hong Kong's greatest assets. Located between Hong Kong Island and the Kowloon peninsula, Victoria Harbour provides deep waters and natural shelter, which are ideal for port activities – allowing it to become one of the busiest in the world. The astonishing natural beauty and night-time skyline of the harbour draw millions of tourists to Hong Kong yearly.

Figure 2.4: Hong Kong Island Waterfront
(Pauliyas, 2006)

2.3.1 Hong Kong's Harbour History

For 155 years, Hong Kong developed under British rule from a small fishing village to a vital link for trade in Asia. Upon the addition of the New Territories to the domain of Hong Kong in 1898, Hong Kong experienced substantial growth in the manufacturing sector (Carroll, 2007, p. 89). The stability of Hong Kong in relation to the tumultuous political scene in China attracted waves of immigrants to the British colony, supplying a steady stream of labour. The period following World War I witnessed vigorous industrialization in Hong Kong. Due to its location and manufacturing capabilities, Hong Kong developed into one of the most important ports in Asia. After manufacturing declined in the second half of the 20th century, Hong Kong became a centre for financial, commercial, service, and tourism industries. Given this new situation, port-specific land requirements in Victoria Harbour have experienced a steady decline, thus paving the way for a steady transition from industrial uses to commercial and recreational uses in the harbour.

2.3.2 Hong Kong as a Harbour

As one of the most important deepwater seaports in Southeast Asia, Victoria Harbour has allowed large shipping vessels to easily navigate its waters to load and unload cargo in Hong Kong. As a commercial and industrial centre of the Eastern Hemisphere, Hong Kong relies on the harbour for its livelihood. Many of the economic activities that support these communities depend on the waterfront, making the waterfront an invaluable resource (Carroll, 2007, p. 159). Now that the importance of shipping in Hong Kong has begun to decline, the density of crowded container ships along the shores of Victoria Harbour has

lessened. The commercial activities take place primarily in the Western Harbour, while the Eastern Harbour is used mainly for recreation.

Various organisations within the city are currently working to make leisure, tourism, and recreation the foci of Victoria Harbour. This section provides an explanation of the situation in Victoria Harbour in order to fully appreciate the current dynamics on the harbour's waterfront - the events, players, and motivations that had or have a role in Victoria Harbour's development.

2.3.3 Land Reclamation in Victoria Harbour

The growth of service industries and an increasing population in Hong Kong have created a demand for land along Victoria Harbour's waterfront. To facilitate this growth, land along the harbour has been reclaimed since the British colonized the island in January 1841. This reclamation consists of creating new land at waterfronts or riversides by deploying concrete and other hard materials on water space. Hong Kong is the fourth most densely populated area on Earth, with a population of over seven million and a total land area of just over 1,100 sq. km (Hong Kong Yearbook Fact Sheet, 2008, p. 1), at least half of which is occupied by the steep granite hills that provide shelter for Victoria Harbour. Land is a premium resource in Hong Kong, and since 1887, 68.17 sq. km of land has been reclaimed, including much of Victoria Harbour's original 7,000 hectares of water. Land reclamation has reduced the width of the channel between Hong Kong Island and Kowloon to half of its original width, to just 900 metres.

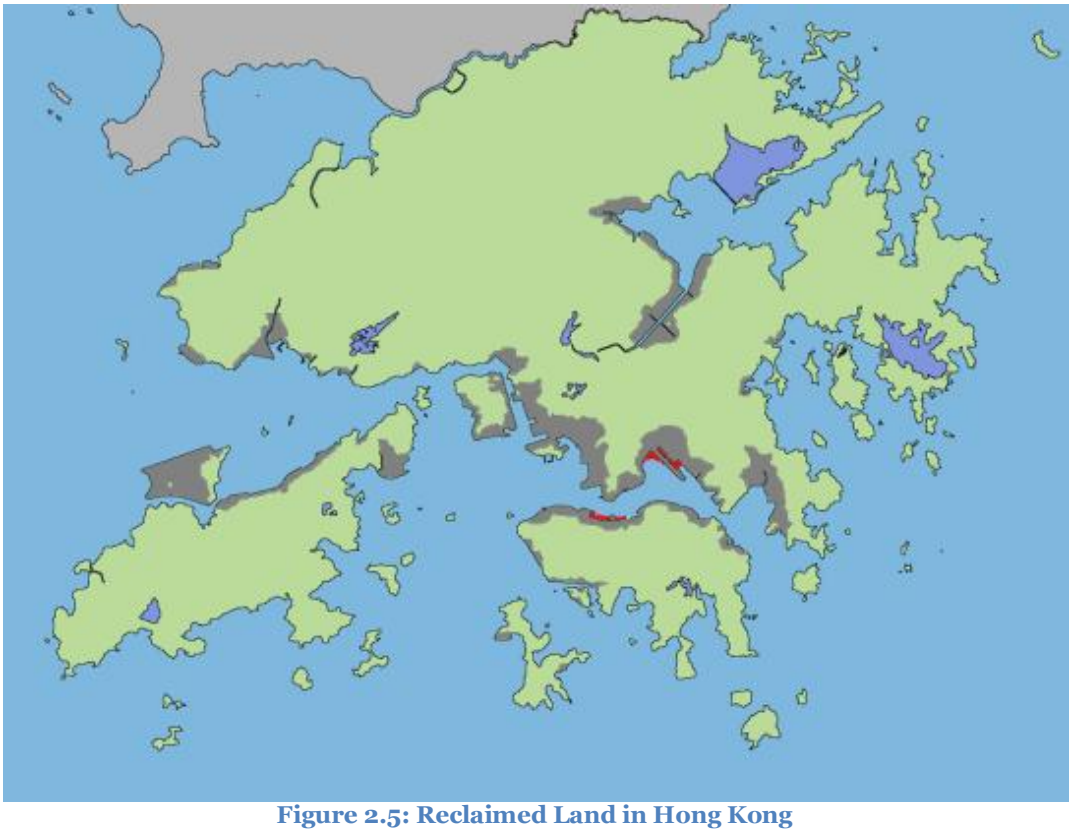


Figure 2.5: Reclaimed Land in Hong Kong
(Shizhao, 2006)

One of the first planned land reclamation projects in Hong Kong was the Praya Reclamation Scheme, carried out from 1868 to 1873 by the Hong Kong Land Company in colonial Hong Kong (Wordie, 2002, p. 64). Many merchants with private piers on the waterfront objected to the scheme. Additional land was reclaimed by the Tai-pan of The Hong Kong and Kowloon Wharf and Godown Company from 1889 to 1903. The scheme added between 59 and 65 acres of land to Hong Kong's Central waterfront using a total weight of 3.5 million tons of material (p. 65).

The Kowloon harbourfront, in particular, has experienced considerable land reclamation. Kai Tak Airport's modern runway was built in 1957 with a length of 2,194 metres. Built over reclaimed land on the Kowloon Bay, it was expanded to a length of 3,390 metres in 1975. All operations of this airport ceased and were transferred over to the new Chek Lap Kok airport in July of 1998.

Another large part of Kowloon's reclaimed land lies in the West Kowloon area. Reclaimed land in this area was intended for residential development and transportation

infrastructure. This land is part of the Airport Core Programme, a programme that used the space to build transportation terminals connecting Kowloon to the new airport at Chek Lap Kok. The southern peninsula of West Kowloon has not yet been developed and various projects have been proposed for the area, including the West Kowloon Cultural District (Hong Kong Yearbook, 2007b, Recreation, Sports, and the Arts). This project proposes the construction of cultural facilities for the public like theatres, concert halls and an art museum. South Kowloon, at Hung Hom, experienced large harbour reclamation between the Tsim Sha Tsui and Hung Hom MTR stations. The face of Hung Hom Bay has changed dramatically, nearly disappearing altogether.

In 1989, Hong Kong's Land Development Policy Committee conducted the Wan Chai Reclamation Feasibility Study, which proposed a five-phase land reclamation project in Victoria Harbour. Three of the five phases of the Central and Wan Chai Reclamation project have been completed, and the remaining two are currently in progress (Civil Engineering and Development Department, 2009a, Central and Wan Chai Reclamation).

Central Reclamation Phase I, completed in 1998, reclaimed 20 hectares of land and redeveloped an additional 6 hectares of land. This extended the coastline of Central up to 350 metres beyond the original coastline for the construction of Hong Kong Station and a new tunnel for Hong Kong's Mass Transit Railway (MTR) system (Civil Engineering and Development Department, 2009a, Central and Wan Chai Reclamation). Phase I also provided land to build new piers and to replace other facilities affected by previous reclamation projects.

The Central Reclamation Phase II was completed in 1997 and formed 5.3 hectares of new land, mainly by the reclamation of the Tamar Basin along Hong Kong Island (Civil Engineering and Development Department, 2009a, Central and Wan Chai Reclamation). Wan Chai Reclamation Phase I, also completed in 1997, resulted in 7.0 hectares of land for the extension of the Hong Kong Convention and Exhibition Centre on the Hong Kong Island side of Victoria Harbour.

Central Reclamation Phase III is scheduled to be completed in 2017 (Civil Engineering and Development Department, 2009a, Central and Wan Chai Reclamation) and will provide land for the Central-Wan Chai Bypass, new Star Ferry piers, new roads, and other facilities. Wan Chai Phase II is currently being reviewed and will extend along the water's edge from the Central Reclamation Phase III to Causeway Bay, providing land for the construction of the Central-Wan Chai Bypass (Central and Wan Chai Reclamation).

2.3.4 Protection of the Harbour Ordinance

In 1997, the Legislative Council of Hong Kong passed the Protection of the Harbour Ordinance, effectively setting a government-backed mandate against unnecessary land reclamation in Victoria Harbour. The bill maintained that "the harbour is to be protected and preserved as a special public asset and a natural heritage of the Hong Kong people, and for that purpose there shall be a presumption against reclamation in the harbour" (Protection of the Harbour Ordinance, 1997, 531). While the bill did not prevent projects that had already commenced, no additional land will be reclaimed in the harbour for 999 years. Land reclamation projects have continuously redefined the waterfront of Victoria Harbour and provided land for Hong Kong's economic development since the 1800s. Hong Kong's current waterfront is now an increasingly important resource. Victoria Harbour can provide many economic benefits to Hong Kong through tourism and recreational uses, and it is pertinent for any waterfront redevelopment projects to promote these valuable uses of the harbour.

2.3.5 Current Resources Available in the Harbour

Through the Harbourfront Enhancement Committee (HEC), the Marine Department establishes some degree of regulation over certain types of land/water interfaces within Victoria Harbour, including but not limited to: typhoon shelters, designated sea areas, Public Cargo Working Areas (PCWAs), landing steps, and piers. The regulations that the HEC makes are primarily concerned with the use of the sea area, with regards to certain specific nearby waterfront land/water interfaces (Harbourfront Enhancement Committee, 2009a, Welcome Message).

2.3.5.1 Typhoons and Typhoon Shelters

One unique aspect associated with Victoria Harbour is the regular occurrence of typhoons. Each year, during the months from May to November, Hong Kong experiences an average of ten typhoons. Typhoons could easily damage or destroy many of the ships and marine user facilities of Victoria Harbour if not for the 13 typhoon shelters located within the territory (Marine Department, 2009e, *Assessment of Typhoon Shelter Space Requirements 2005-2009)*. As the name implies, typhoon shelters are sea areas that are partly enclosed by breakwaters to protect ships of small to medium size from strong gusts of wind and rough seas during a typhoon.

2.3.5.2 Sea Areas and Designated Areas

The Marine Department designates certain parts of the harbour for certain uses, including vessel bunkering, private moorings, marine works, and entry restricted areas (Marine Department, 2009f, Existing Marine Uses and Activities). Vessel bunkering areas are places where mostly local vessels can refuel from anchored oil barges. These areas are primarily around the areas of Lei Yue Mun, Tai Kok Tsui, and Sham Shui Po. Moorings can be leased from the Marine Department by private boat owners. These can be found in Yau Ma Tei, Tsuen Wan, and Tin Kau. Marine works areas are areas in which there is water-based construction occurring. These can include servicing of underwater cables, dredging, or borehole drilling, and are usually temporary. Entry restricted areas prohibit vessels from entering a certain area, including most notably the naval base at Ngong Shuen Chau on Stonecutter's Island. The Hong Kong-Macau ferry terminal is another example, forbidding the entrance of any vessel aside from the ferries without permission of the Marine Department.

2.3.5.3 Public Cargo Working Areas

Victoria Harbour is a working harbour with many commercial industries that utilize the waterfront for inter-harbour business, especially for the movement of cargo containers (Marine Department, 2009f, Existing Marine Users and Activities). The twenty-foot

equivalent unit (TEUs) is the standard for containers around the world, with a length of 20 feet (6.1 metres), a width of 8 feet (2.4 metres), and a height of 8.5 feet (2.6 metres). A PCWA is paved with concrete and asphalt up to the seawall, with warehouses and space on the quay for the storage and holding of container units or any other type of cargo to be transported. Some PCWAs also have freight-handling capabilities such as cranes and facilities to load the cargo onto the adjacent ships.

2.3.5.4 Marina

Where a PCWA is designed for commercial marine users, a marina caters to recreational boaters. The facilities in a standard marina include an access road to the site, parking for vehicles, a clubhouse for members, a slipway to roll boats into the water, moorings to tie up boats, a hoist to lift/lower boats into/out of the water, and boatyard for storing or repairing boats (Marine Department, 2009f, Existing Marine Users and Activities). The mooring system in a marina usually consists of floating pontoons so that each leisure craft is easily accessible from the shore. Unfortunately, there are no public marinas in Victoria Harbour, which leaves marine users dependent on sampans to bring them to their boats.

2.3.5.5 Landing Step

A landing step is a simple land/water interface that bridges the gap between the two mediums; they facilitate access from the land to the water and vice versa. The public landing steps in Victoria Harbour are built into either a wharf or a pier extending into the water and have rubberized surfaces facing the waterside to avoid damaging boats that dock next to them (Marine Department, 2009f, Existing Marine Users and Activities). The sea area near the landings is to remain free of obstruction in order to permit marine access to the sites.

2.3.5.6 Ferry Piers, Public Piers, and Other Piers

Piers are man-made constructions that extend into the water to lengthen the available waterfront and/or facilitate easier access to vessels requiring deeper berths. There are various types of piers in the harbour: ferry piers which are for use by ferry services; public

piers that often have integrated public landing steps for anyone from tourism boats to local fishermen; and other piers that are privately owned and managed (Marine Department, 2009f, Existing Marine Users and Activities). Building new piers in Victoria Harbour is classified as a form of land reclamation because the pier would occupy space "in" the water. With the Protection of the Harbour Ordinance in place, proposals for new piers to be built face a rigorous process to justify their construction. The existing piers in the harbour are subsequently valuable land/water interfaces.

2.4 Stakeholders of Victoria Harbour

The Protection of the Harbour Ordinance affects many stakeholders along Victoria Harbour's waterfront, including but not limited to: the Hong Kong government, non-governmental organisations, residents, tourists, commercial users, leisure craft users, and real estate developers. Many of these stakeholders have diverse thoughts of how the waterfront should be utilized, and in recent years, Hong Kong has struggled to find a balance amongst these competing interests. While many studies have been performed by government agencies as well as non-governmental organisations, they lack a consensus regarding a proper course of action for the redevelopment of Victoria Harbour.

2.4.1 Hong Kong Government

One of the largest stakeholders in the development of Victoria Harbour is the Hong Kong government. In the past, Hong Kong's government has relied heavily on land reclamation projects to create new space for one of its major revenue sources: property. As a result, preservation of the waterfront has not been the government's highest priority. However, there are two organisations that work closely with the government to make decisions regarding the waterfront. These organisations are the Town Planning Board (TPB) (Town Planning Board, 2008, About Us) and the Harbourfront Enhancement Committee (HEC) (Harbourfront Enhancement Committee, 2010b, Success Through Consensus Building). The HEC, however, works as an advisory, non-government organization to provide guidance to policy decisions.

The Town Planning Board works to promote "the health, safety, convenience, and general welfare of the community through the systematic preparation of plans for the layout of such areas of Hong Kong as the Chief Executive may direct, as well as the types of buildings suitable for erection therein" (Town Planning Board, 2008, About Us). All plans for the development of Victoria Harbour are studied and critiqued by this Committee.

2.4.2 Non-Governmental Organisations

Designing Hong Kong, Ltd., the Harbour Business Forum and the Harbourfront Enhancement Committee are examples of non-government organisations that disagree with the views and policies of the Hong Kong government. Their mission is to see Hong Kong's harbourfront become "a genuinely vibrant, accessible, and sustainable world-class asset for Hong Kong's best long-term economic, social, and environmental interests" (Harbour Business Forum, 2009, About Us). These organisations believe that the harbourfront should be utilized by more than just the government and businesses. They believe the residents of Hong Kong should have a say in the redevelopment of the harbourfront. The people of Hong Kong hope that the waterfront will become less focused on development and more people-oriented in the future (Jannetti et al., 2009, p. 35).

2.4.3 Hong Kong Residents

Residents of Hong Kong identify with and feel closely related to Victoria Harbour, but extensive land reclamation and drastic transformations have deteriorated this feeling of belonging. According to the *South China Morning Post* (2006, July 3), the political and economic forces that drive the machinery of urban redevelopment are often opposed by Hong Kong citizens who cherish the historical, cultural, and sentimental value of heritage sites such as Queen's Pier. For sites such as Queen's Pier, the fight for preservation from concrete and steel under planned reclamation has been lost. According to the article *Focus Fight on Heritage Sites That Can Be Saved* (Chan, 2006, July 3), while the community of Hong Kong was able to have the Queen's Pier classified as a site of historic value, they were

regrettably unable to prevent the pier from being demolished. This clearly illustrates how some stakeholders' needs take priority over others if an overriding need is established.

2.4.4 Royal Hong Kong Yacht Club and Other Leisure Users

The Royal Hong Kong Yacht Club (RHKYC) location in Causeway Bay is one of the more prominent recreational user groups in Victoria Harbour. Though they have clubhouses in Middle Island and Shelter Cove as well, the only site within Victoria Harbour is in Wan Chai East on the former Kellett Island (Royal Hong Kong Yacht Club, 2005, History). Founded in 1890 under the name, "Hong Kong Corinthian Sailing Club" at North Point on Hong Kong Island, the RHKYC obtained its current name in 1894. The RHKYC moved to Kellett Island in 1938 and is now located on the only original, non-reclaimed piece of shoreline in Victoria Harbour.

The RHKYC is one of the largest yacht clubs in the world, with 12,000 members. The Yacht Club has a total of 391 moorings in 5 mooring areas, the largest grouping of which (152) is in the Causeway Bay typhoon shelter (Roger Eastham, Personal communication, 21 January, 2010). The Causeway Bay location is also the club's only mooring area within the harbour, with the maximum permissible length overall (LOA) of 30 metres and maximum draft of 3.5 metres. The RHKYC also has a boatyard on Kellett Island that has enough hard-standing space to store 93 keelboats and 80 sailboats.

Figure 2.6: Around the Island Race in Hong Kong
(SailKarma, 2009)

Figure 2.7: Extreme 40 Catamaran Race in Hong Kong
(Guy Nowell, 2009)

In terms of recreational events, the Yacht Club holds sailboat races almost every weekend and sponsors major events such as the Around the Island Race (Figure 2.6), the Extreme 40 Catamaran Race (Figure 2.7), the Louis Vuitton Trophy, and the dragonboat races (Figure 2.8). They were also responsible for helping organize Hong Kong Harbour Day in 2007. The RHKYC is instrumental in organizing and promoting recreational boating events in the Eastern Harbour.

Figure 2.8: Dragonboat Racing in Hong Kong
(Vincent Yu, 2009)

There are many different types of stakeholders with interests in Victoria Harbour, all of which have distinctly different needs. The wide array of ideas and opinions causes difficulty in determining the most important needs for the stakeholders. Our first step towards a solution was to determine the specific requirements to be given priority. The proper solution would allow stakeholders to share the available resources in Victoria

Harbour and enable them to use the harbour to its fullest potential. Current redevelopment plans exists with the goal of addressing these concerns.

2.5 Redevelopment Efforts

There have been numerous studies on how the Hong Kong waterfront can be developed or revitalized. Some of these studies have developed into concrete plans and have been completed. Others, however, remain in the planning stage while some proposals have been outright denied. Their foci have ranged from tourism to container ships.

The Hong Kong government has undertaken several recent redevelopment efforts in Victoria Harbour. In 2003, the Hong Kong Planning Department conducted a *Planning Study on the Harbour and its Waterfront Areas*. The vision statement of this study was "to make Victoria Harbour attractive, vibrant, accessible, and symbolic of Hong Kong – a harbour for the people and a harbour of life" (Hong Kong Tourism Board, 2003, 1.1.1). The study identified many constraints in Victoria Harbour's waterfront redevelopment, including incompatible and competing waterfront uses, poor and discontinuous accessibility to waterfront, lack of high quality open space, and poor water quality (Hong Kong Tourism Board, 2003, 4.1.1).

This study resulted in a few major findings. The committee made recommendations to improve the waterfront and developed concepts for the redevelopment of each area of the harbour (Hong Kong Tourism Board, 2003, 5.3). Figure 2.9 shows the committee's concept for the Causeway Bay waterfront:

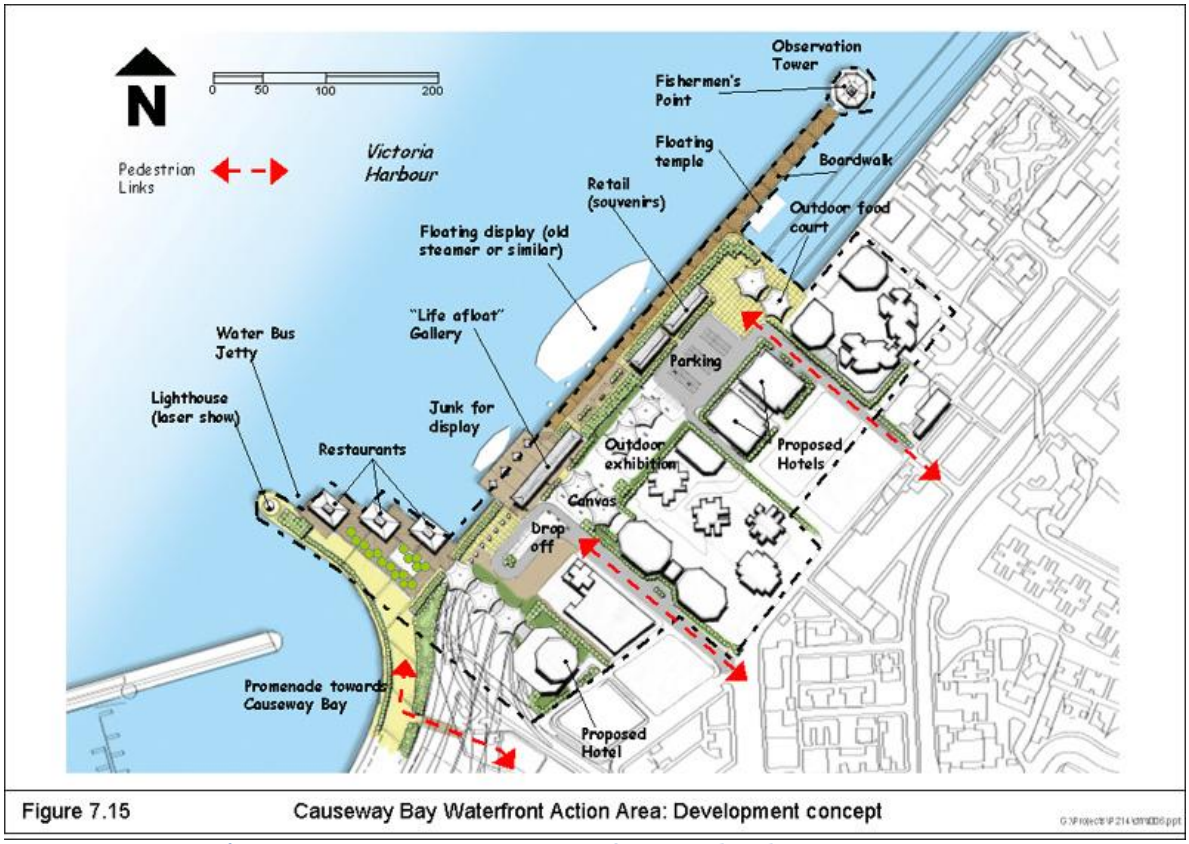


Figure 2.9: Causeway Bay Waterfront Redevelopment Concept
(Tourism Board, 2009)

The redevelopment plans suggested by the study focus heavily on tourism and land-based uses of the waterfront. The Harbourfront Enhancement Committee was also created as a result. The committee developed a set of harbour planning principles as "a set of guidelines for all individuals and organisations to facilitate the sustainable planning, preservation, development and management of Victoria Harbour and the harbourfront areas" (Harbourfront Enhancement Committee, 2009a, Our Harbourfront).

WPI students, with the help of organisations such as Designing Hong Kong Ltd., have also taken it upon themselves to analyse the waterfront. In the project titled "Four Tourists and Hong Kong's Harbourfront," a group of four students assessed the existing infrastructure of the Victoria Harbour in Hong Kong from the perspective of tourists with no prior knowledge of the layout of the waterfront (Hyde et al., 2008). They focused on pedestrian accessibility, availability of venues and facilities, and lighting and sidewalk aesthetics. The geographic scope of the study encompassed both the Kowloon and Hong Kong Island sides of Victoria Harbour; on the Kowloon side, the project group travelled the

waterfront stretching from the West Harbour District all the way to the Kai Tak airport. Across the harbour, the group walked from the western side to the eastern side of Hong Kong Island. According to their specified rubrics, the four students concluded that "most sections of the waterfront are very hard to find, unless [one] was a native. [They] often got lost as [they] tried to find [their] way through shopping malls, dead-end sidewalks, and confusing tunnels and foot bridges. With only a few exceptions, [they] found nothing to eat or drink on the waterfront and no public toilets. This made [visiting the waterfront] uncomfortable… [and difficult to] enjoy the spectacular views of the skyline and marine traffic" (p.182). In the following year, a different group of students analysed 48 sites listed by the Leisure and Cultural Service Department of Hong Kong and published the "Evaluation of 48 Leisure and Cultural Sites Along Victoria Harbour: Suggestions for a Vibrant Hong Kong Harbourfront" (Jannetti et al., 2009). The sites were evaluated on four main qualities, which were accessibility, connectivity, design, and maintenance. Different surveying and observation techniques were used to gather the necessary information for the authors of the project to be able to provide recommendations.

Port Development Strategy Reviews (PDSRs) are conducted by the Planning Department (PlanD) to review the state of Victoria Harbour's shipping industry. The last review was conducted in 2001 (Hong Kong Planning Development, 2001) and focused on bringing the shipping industry into harmony with the Government's desire to boost tourism, open space, and land-based infrastructure. In relation to the development of the Kowloon waterfront, the report estimated that the next typhoon shelter would not need to be built until after 2015.

The Tsim Sha Tsui Promenade Beautification Project was started in 2004 and is now nearing completion (Hong Kong Tourism Commission, 2004). Its focus was to revamp the narrow strip of waterfront to the east of the Ocean Terminal pier to make it more open and a better tourist attraction. The area already included the Hong Kong Cultural Centre, the Space Museum, and the Hong Kong Museum of Art, but lacked an open and walk-able venue.

Figure 2.10: Tsim Sha Tsui Promenade
(Hong Kong Tourism Commission, 2004)

The waterfront redevelopment efforts in Victoria Harbour are similar to the projects that have taken place in Cape Town, South Africa (van Zyl, 2005, p. 1) and San Francisco, California (Harms, 2008, p. 8). These projects sought to address changing harbour uses and make their respective waterfronts more attractive places. Though PlanD's study investigated tourism and recreational uses of the harbour, it focused primarily on reformations catering to land-based uses of the waterfront. Our study focuses specifically on recreational and leisure uses of the harbour itself. These activities help Victoria Harbour contribute more to Hong Kong's tourism industry and provide many benefits for Hong Kong.

Redeveloping Hong Kong Island's waterfront with the focus of being more boater-friendly would put more focus on Victoria Harbour as a tourist destination. This would help Hong Kong to continue its tourism industry's upward trend by improving one of its most popular tourist destinations. However, this would require a detailed look at what would be needed along the harbourfront to cater to the needs of boaters, whether they are large tourist ships or small recreational vessels. Improving the resources available to recreational users of the harbour would help Victoria Harbour reach its fullest potential, as other cities have done through waterfront redevelopment projects.

2.6 Current Redevelopment Plans

There are currently five redevelopment plans that are being implemented in Hong Kong, each of which will impact the waterfront, whether it is directly, such as redeveloping the waterfront itself, or indirectly, which includes increased barging traffic within the harbour.

2.6.1 Kai Tak Development Plan

The Preliminary Outline Development Plan proposes to create a new "urban node" at Kai Tak. This development spans over 320 hectares, covering the former Kai Tak Airport site and its nearby areas (Hong Kong Planning Department, 2007, Executive Summary). Public participation is an important aspect in this study; "'planning with the community' has been adopted as the objective in undertaking the public participation programme" (Hong Kong Planning Department, 2007, Executive Summary). The purpose of the Kai Tak plan is to strengthen tourism development at Kai Tak. Major features of this plan include a multi-purpose stadium complex fronting Victoria Harbour, a cruise terminal cum tourism node at the end of the former runway, a Metro Park at the Kowloon Bay waterfront, and more. The first of the cruise terminal berths is expected to open in the second quarter of 2013 (Civil Engineering and Development Department, 2009c).

2.6.2 Central Wan Chai Bypass

The Central and Wan Chai Reclamation plan was created by the Civil Engineering and Development Department. This plan will “accommodate strategic road and rail links along the north shore of Hong Kong Island between Central and Eastern Districts” (Civil Engineering and Development Department, 2009e). It will also accommodate the Hong Kong Station of the Airport Railway and the Hong Kong Convention and Exhibition Centre Extension along with road and rail links. The review for this plan has already been completed. The scheduled completion date of the construction is mid-2011.

2.6.3 The Truck Road Plan

The Truck Road (T2) plan is a part of the Route 6 proposal, which also consists of the Central Kowloon Route (CKR) and Tseung Kwan O – Lam Tin Tunnel (TKO-LTT). The overall proposal aims to relieve traffic congestion in central and eastern Kowloon, as well as at Tseung Kwan O. The purpose of the T2 plan is to link the CKR and TKO-LTT with a 3.6 km dual 2-lane truck road with 2.6 kilometres of tunnel. The road will start at Kowloon City, run parallel to the coast through the North Apron of the old Kai Tak Airport and the sheltered water off the coast of Kwun Tong, and end at Cha Kwo Ling (Civil Engineering and Development Department, 2009d). The planning study found that temporary reclamation would be necessary during construction.

2.6.4 The Central Kowloon Route

The Central Kowloon Route (CKR) is a part of the Route 6 proposal to relieve traffic congestion from eastern to central Kowloon through the construction of an underground tunnel starting at Western Kowloon and ending at Kowloon Bay (Highways Department Hong Kong, 2009, Central Kowloon Route – General Layout Plan). The dual 3-lane CKR will be 4.7 km long with 3.9 kilometres of tunnel and will link up with the Truck Road (T2) tunnel in the Kowloon Bay-Kowloon City area. One of the motives behind the CKR is to minimize impact on existing buildings.

2.6.5 West Kowloon Cultural District

The redevelopment plan for the West Kowloon Cultural District (WKCD) focuses on creating an "integrated arts and cultural district providing quality culture, entertainment and tourism programmes" (Home Affairs Bureau, 2008, p. 8). The plan is to renovate this district to contain 15 performing arts facilities with the hope that it will transform the WKCD into a centralized tourist hub. Because of its strategic placement, these redevelopments are seen as a cultural gateway to the Pearl River Delta. One of the main visions of this particular redevelopment project is to "improve quality of life through the provision of an accessible, open, spacious and vibrant harbourfront" (p. 8).

2.7 Summary

Hong Kong's attempts at waterfront redevelopment seek to restore Victoria Harbour to its former state as an instrument in the region's development into the international trading centre it is today. With the harbour serving a multitude of users, there is high demand for its limited waterfront space. Though there have been many land reclamation and redevelopment projects in the past, many have not been beneficial for the harbour's water-based users. Through studying worldwide water redevelopment projects and future redevelopment plans for Victoria Harbour, it is evident that the water-based users have not been taken into consideration as much as they should. With the marine users being a vital part of Hong Kong, it is essential not to overlook them in plans for the waterfront. There needs to be careful thought for the marine users amongst different users, in order for a preservation of balance to exist. The existence of this balance will result in Victoria Harbour's evolution into the vibrant harbour the people desire.

3 Methodology

The goal of this project was to provide Designing Hong Kong, Ltd. with a set of recommendations to make Victoria Harbour into a "living" harbour – one that is actively used for a diversity of land- and water- related activities. The objectives we used to accomplish this goal were:

- Locate and describe the existing marine infrastructure present in the harbour.
- Identify the current marine users of the harbour, what infrastructure they need, and what improvements that infrastructure needs.
- Forecast how marine users and their infrastructure requirements will change over the next 5, 10, and 15 years.

We compared the existing infrastructure with the future needs of the harbour in order to identify the gaps between them; our recommendations suggest ways of filling the gaps.

3.1 Locate and Describe the Existing Marine Infrastructure

Our first objective was to identify the current marine resources in Victoria Harbour. We used two methods to accomplish this objective: a direct survey of the existing marine infrastructure in the harbour and archival research. The collected data were compiled into a Google Earth database.

3.1.1 Archival Research of Existing Infrastructure

Before our team could begin surveying the waterfront in Hong Kong, we researched the types of infrastructure typically found along any waterfront. This information was gathered prior to our arrival in Hong Kong. The relevant terms were determined through personal experiences, background research on other cities' waterfronts, and with the help of Designing Hong Kong, Ltd. We used this list as the basis for the Waterfront Evaluation Form, which is discussed below in section 3.1.2.

3.1.2 Waterfront Audit

In order to specifically identify the existing land/water interfaces and marine resources in the harbour, the project team audited each site along the harbourfront. This was accomplished by walking along approximately 50 km of waterfront in pairs. One team member photographed each land/water interface while the other took notes on the Waterfront Evaluation Form (found in Appendix B), enabling us to have a visual and written record of all the marine activities and facilities at each action area. As mentioned above, the form design was based off of the data gathered during the research phase of the project. The form is broken down into two major sections: marine activities and marine facilities. In the activities section, we recorded existing activities such as commercial shipping, fishing, sailing, etc. In the facilities section, we recorded the existence of facilities such as landing steps, piers, typhoon shelters, etc. The photographs taken serve as evidence of current accessibility, usage, and aesthetics of the site. Data (including indices of the photographs) were recorded in a Google Earth database discussed in section 3.1.3. In order to maximize inter-observer reliability, teams of two observers independently audited each action area. Each action area was visited twice by two different pairs at different times.

3.1.2.1 Division of Action Areas

In order to keep the results of this study comparable to planning done by the government, our team segmented Victoria Harbour into 23 distinct action areas spanning the entire waterfront. The demarcation of these areas is shown below in Figure 3.1, as defined by the Marine Department. For a more detailed map depicting the action areas, refer to Appendix I. This map enabled us to not only generate general, non-specific improvements to the harbourfront but provide specific recommendations for specific areas.

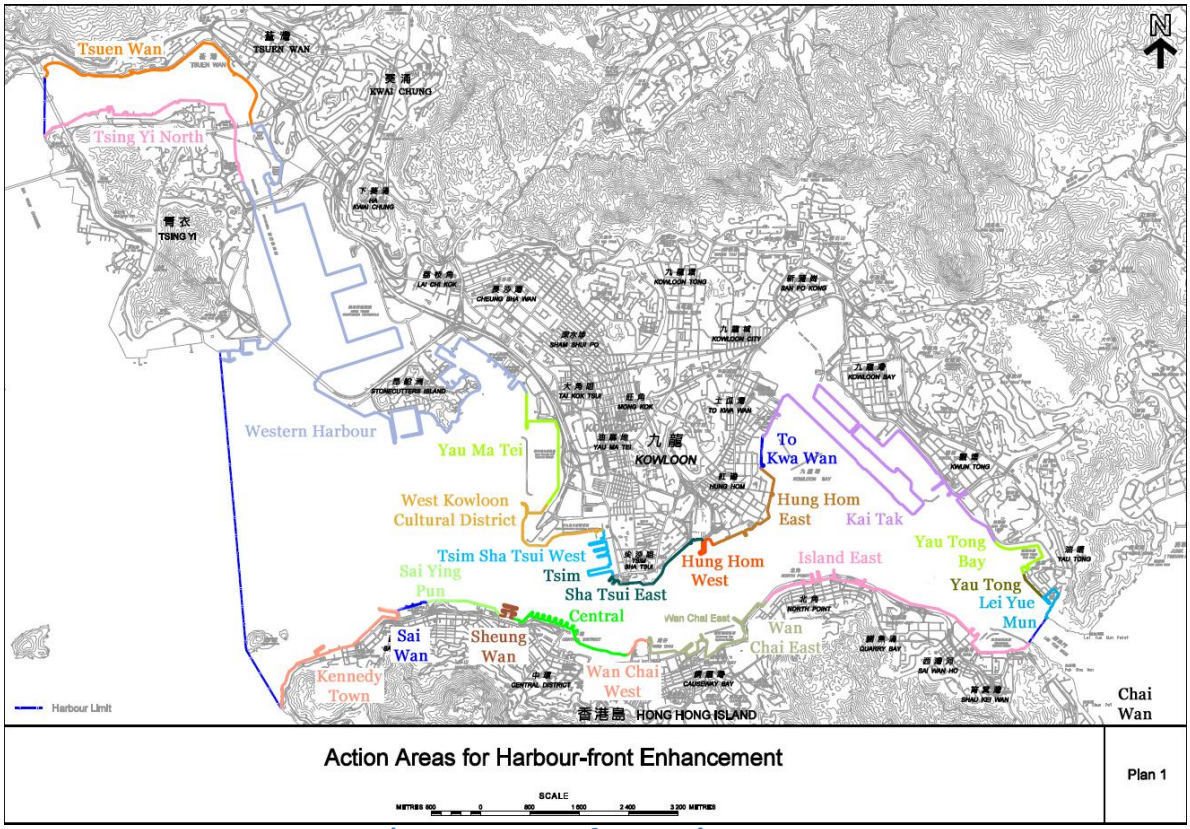


Figure 3.1: Waterfront Action Areas
(Marine Department, 2009)

Below is a table of the areas, broken down into two sections: Kowloon (including Tsing Yi Island) and Hong Kong Island.

Table 3.1: Waterfront Action Areas
(Marine Department, 2009)

Hong Kong Island	Kowloon
Kennedy Town	Tsuen Wan
Sai Wan	Tsing Yi
Sai Ying Pun	Western Harbour
Sheung Wan	Yau Ma Tei
Central	Western Kowloon Cultural District
Wan Chai West	Tsim Sha Tsui West
Wan Chai East	Tsim Sha Tsui East
Island East	Hung Hom West
Chai Wan	Hung Hom East
	To Kwa Wan
	Kai Tak
	Yau Tong Bay
	Yau Tong
	Lei Yue Mun

3.1.2.2 Waterfront Tour

As the first step towards understanding the waterfront, our team took a tour of the harbour on a chartered boat with the Marine Department and our sponsor, Paul Zimmerman, on 18 January 2010. The tour covered almost every district of the harbour (Kennedy Town, Sai Wan, Sai Ying Pun, and Sheung Wan were skipped due to time constraints) from the perspective of a marine user. This was a great opportunity to take many photographs of the coastline from the water. Mr. Zimmerman also introduced us to specific problem areas and other areas to which we would need to pay special attention.

3.1.3 Victoria Harbour Database

Data collected through the waterfront survey was presented in a Google Earth database. The purpose of this database was to provide people from all over Hong Kong with an easy-to-use reference of the facilities located in the harbour. The Harbour Business Forum announced their support of the database and their intention to host it on their website. Thus, we were able to create a database that would be accessible by the general public of Hong Kong. Before the construction of the database, we established a list of requirements that would help us choose the most appropriate style to meet those specifications.

1. **The database must be user-friendly and intuitive.**

   The target users of this database are those unfamiliar with the harbour itself. As determined at the beginning of our study, many marine users, waterfront planners, and government officials lacked a comprehensive knowledge of all of Victoria Harbour's many land/water interfaces and marine facilities. This database is meant to serve as a simple reference for any potential user to gain an introductory sense of the infrastructure available for marine use.

   As such, the database must be easy to use. It should be structured such that any user, regardless of technical knowledge and experience, could navigate to the website and use the system. The general user will not desire to read instructions nor

should they be required to spend a significant amount of time experimenting with the system just to figure out how it works.

2. **The information provided should be simple.**

The level of technical knowledge of this database needs to fit the intended users. We determined that we would provide an introductory level of information but also provide knowledgeable users with access to new information. Some more advanced material could also exist in the database, but this material would not be the focus of the final product. The intention was to have an easy-to-read database that requires no pre-existing knowledge of the waterfront to understand. The level of detail that the database has to provide will not be sufficient on which to base any waterfront plans, policy decisions, or any other serious decision regarding the harbour.

3. **The database must be functional.**

The database has to provide users with an idea of the land/water interfaces around the harbour. In order to address this requirement, we determined that the database will be organized in categories by the type of facilities. This will allow users to locate any of the services that they desire. Users should be able to easily sort the data in the order of their choosing.

For example, if a user wishes to determine the location of a landing step in their area in order to hire a sampan, he/she could sort the database by "landing steps" and quickly determine the nearest step.

4. **The database must be easy to update and maintain.**

Since the data will be passed into the hands of our sponsoring organisations, we must provide a means for the data to be updated easily. Our sponsor does not have the technical knowledge to update a complicated database, so one that is simple to modify would be ideal for the future.

5. **This data should be free and easily accessible.**

   Users should not have to download any proprietary software for the operation of this database nor should they have to download complicated software of any kind. Users should be able to log onto the web and find our data at their convenience.

   The level of interest in the waterfront in Hong Kong will guarantee that these data will actually be used, and we wish to allow people to access it as easily as possible. We want to educate those who are unfamiliar with Victoria Harbour and make people more aware of the current issues.

Based upon these five major requirements, we decided to use a program called Google Earth. Google Earth is a geographic information system (GIS) that was created by Keyhole, Inc. in 2004 and is now developed by Google. This program maps the Earth using satellite imagery and aerial photographs and provides the images in its database for free to all users. In order to operate this program, a user must simply download Google Earth and install it on their computer system. The Harbour Business Forum is hosting a link to download the database on their website. They will also host an embedded version of the database, which allows users to access a basic version of the program without the need to install the program.

3.2 Identify Current Marine Activities and Supporting Infrastructure

The second objective of our project was to identify the current water-based users of Victoria Harbour and the facilities that they use. Victoria Harbour supports a diverse set of marine activities, each of which has a minimum set of required supporting facilities and infrastructure. For example, yachting requires a marina, parking, water supply, fuel provision, and waste collection, whereas a ferry needs a schedule information display, ticket kiosks, a landing for passengers to embark and disembark, and facilities to stock food and

beverages. Our primary method of identifying the current marine activities and supporting infrastructure was by conducting interviews with the different stakeholders.

3.2.1 Marine User Interviews

We conducted interviews with commercial and recreational users of the harbour, as well as government and planning officials, to gain an understanding of the different kinds of activities that take place in the harbour, new activities that are gaining popularity, potential new uses of the harbour, and the resources that all of these activities require. The general interview protocol we followed is available in Appendix D. It must be noted, however, that this protocol was altered based on the specific user interviewed.

We identified interview candidates with the help of Designing Hong Kong, Ltd., personal affiliations, snowball sampling of interviewees, and through Internet searches. The interviewees, their organisations, and their industries are listed in Table 3.2 below:

Table 3.2: Marine Users Interviewed

Name	Organisation	Industry
Michael Agopsowicz	Waterfront Air	Transportation
Arthur Bowring	HK Shipowners Association	Shipping
Tony Chan	Development Bureau	Government
Warwick Downes	RHKYC	Recreation
Roger Eastham	RHKYC	Recreation
Brenda Fung	Harbour Business Forum	NGO
Chris Fung	Development Bureau	Government
Laurent Genna	Spysea Ltd.	Tourism
Peter de Kantzow	Waterfront Air Ltd.	Transportation
Mabel Lam	Wheelock Properties	Property Development
Sujata Govada	Urban Design Ltd.	Urban Planning
Yuet Lee	Lee Yuet & Associates (Ret.)	Architect
Emmanuel Poon	HK Tourism Board	Government/Tourism
Priscilla Poon	HK Tourism Board	Government/Tourism
Mike Simpson	Simpson Marine	Recreation
Garry Smith	Saffron Cruises Ltd.	Tourism/Recreation
Peter Cookson Smith	Urbis Ltd.	Urban Planning
Moody Tang	HK Maritime Museum	History
Roger Tupper	Marine Department	Government
Robert Wilson	HK-China Rowing Association	Recreation
Miu-Sang Wong	HK Mid-Stream Ops Assn.	Shipping
Frankie Yick	Wharf Holdings	Shipping/Transportation
Paul Zimmerman	Designing Hong Kong Ltd.	NGO

We asked interviewees what activities they participate in and what specific marine resources and land/water interfaces they currently use for those activities. Interviewees were

also asked to suggest improvements to the resources that they regularly use in the harbour. These interviews helped us collect information about seasonal marine activities and special events that take place in the harbour, such as holiday celebrations or annual competitions that we could not observe during our eight-week study period.

3.3 Forecast of Future Harbour Activities and Supporting Facilities

Our final objective was to forecast future uses of the harbour and to outline how the need for supporting marine resources will change over the next 5, 10, and 15 years. We organized a stakeholders' conference and conducted archival research in order to accomplish this objective. Additionally, we used information obtained in the interviews described in 3.2.1.

3.3.1 Stakeholders' Conference

The Harbour Business Forum (HBF) organized a stakeholder conference for January 27, 2010, which was hosted by the RHKYC. The purpose of this conference was to get first-hand opinions regarding the future of waterfront development in Hong Kong. We chose to conduct a conference because we could gather the opinions of different marine users and gain multiple perspectives simultaneously. These data formed the foundation for our predictions of the future uses of Victoria Harbour. It was attended by 19 participants representing the following organisations:

- Designing Hong Kong Ltd.
- Lee Yuet and Associates
- Harbour Business Forum
- Hoi Kong Containers Services Co. Ltd.
- Hong Kong Development Bureau
- Hong Kong & Kowloon Motor Boats & Tug Boats Association
- Hong Kong Marine Department

- Hong Kong Midstream Operators Association
- Hong Kong Planning Department
- Hong Kong Rowing Association
- Masterplan (Planning and Development Consultancy)
- Royal Hong Kong Yacht Club
- Urban Design & Planning Consultants Ltd.
- Urbis Ltd. (Planning, Urban Design, Landscape, Golf & Environmental Consultants)

The structure of the conference had three main sections. The first was an introductory presentation of our project, the second was a breakout group discussion at four separate tables, and the third was a group discussion with all participants. While we ran the event, the HBF organized and sponsored it because its reputation in the marine industry helped to attract more stakeholders to the conference. During this conference our questions focused on four main categories: current and future uses of the harbour; current and future infrastructure in the harbour, what uses/infrastructure should be added and where to add them; and laws and regulations affecting waterfront planning and development. This conference enabled us to identify both conflicting and common desires and needs amongst stakeholders. Efforts were made to include representatives from different industries and organisations at each table, though for reasons of the language barrier, one table was set aside for participants who were more comfortable speaking in Cantonese. Two members of the project team were assigned to each table, one to lead the discussion and the other to take notes.

In these four groups, participants were each given a survey packet to complete, as well as a map of the harbour for easy reference. The packet contained separate sheets of questions divided according to our four main topics and can be found in Appendix E. On the first sheet, participants were given a list of marine activities and asked to record their predictions for each activity - would the demand or participation for each activity increase, decrease, or stay the same over the next 5, 10, and 15 years? On the second page of the

packet, the stakeholders were given a list of land/water interfaces and were asked to predict whether or not there was enough of each type of interface. On the third page, stakeholders were given a list of land/water interfaces and were asked to comment on the state of each type of interface and whether they thought it could be improved in general construction or design. On the fourth page, participants were asked to discuss any obstacles they faced when trying to use or improve the waterfront. On the map, they were asked by our team to write down comments and ideas.

At the conclusion of these breakout sessions we quickly summarized each table's main points and presented each table's key ideas to the rest of the participants. The conference then opened up for discussion and debate, moderated and recorded by our team, in an effort to determine a solution that was best for everyone and to identify the main conflicting opinions. A detailed outline of the conference, as well as copies of the notes, can be found in Appendix E.

3.3.2 Archival Research for the Forecast

After the action area audits, we used archival research to discover important statistical data regarding the waterfront use and procedural data for obtaining waterfront services. Statistical data research focused on topics like sheltered water and mooring space for different users, number of tourists visiting Hong Kong SAR, and number and type of vessels licensed with the Marine Department. Procedural data research focused on topics like location of fuel stations and fresh water kiosks, tourism boats pick up/drop-off and mooring locations, and boatyard locations. In addition, we had researched specific plans and proposals for development along the waterfront, as found in Chapter 2. Such plans include the Central Wan Chai Bypass, Kai Tak Cruise Terminal, and West Kowloon Cultural District, amongst others. By conducting this research, we identified the different types of resources available and their respective locations. In addition, we identified the organisations responsible for maintaining the different facilities.

3.4 Summary

This chapter outlined the methods we used in order to collect the data needed to achieve our objectives. These methods allowed us to collect information with respect to the location of exiting marine infrastructure, the current activities and users of the harbour, and the forecast of marine users and their facilities. The results found using each of these methods and the analysis of these results can be found in Chapter 4.

4 Results and Analysis

In the first part of this chapter, we present the data collected during the audit of Hong Kong's waterfront, as well as through archival research as they apply to the current facilities and users in the harbour. This data provides a detailed understanding of the current infrastructure around Victoria Harbour – the number, location, and administrator for each land/water interface. Additionally, we discuss the existing users of the harbour: where they operate, the numbers for each type of user, and the facilities that each group requires.

In the second part of this chapter, we discuss the results of the third project objective. This section presents the forecast data regarding the change in Victoria Harbour's marine infrastructure over the next 5, 10, and 15 years. It also discusses the current issues in Victoria Harbour and analyses how this data affects its future.

4.1 Current Land/Water Interfaces

During the first phase of this study, we observed the existing land/water interfaces in each of the 23 action areas along all of Victoria Harbour. This section presents all relevant data collected at each site, providing a summary of the major observations. Each of the land/water interfaces identified was given a code based on the name of the action area and a number (i.e. TW1 for the first land/water interface in Tsuen Wan). The tables located in Appendix C present the results in much greater detail.

Tsuen Wan (TW)

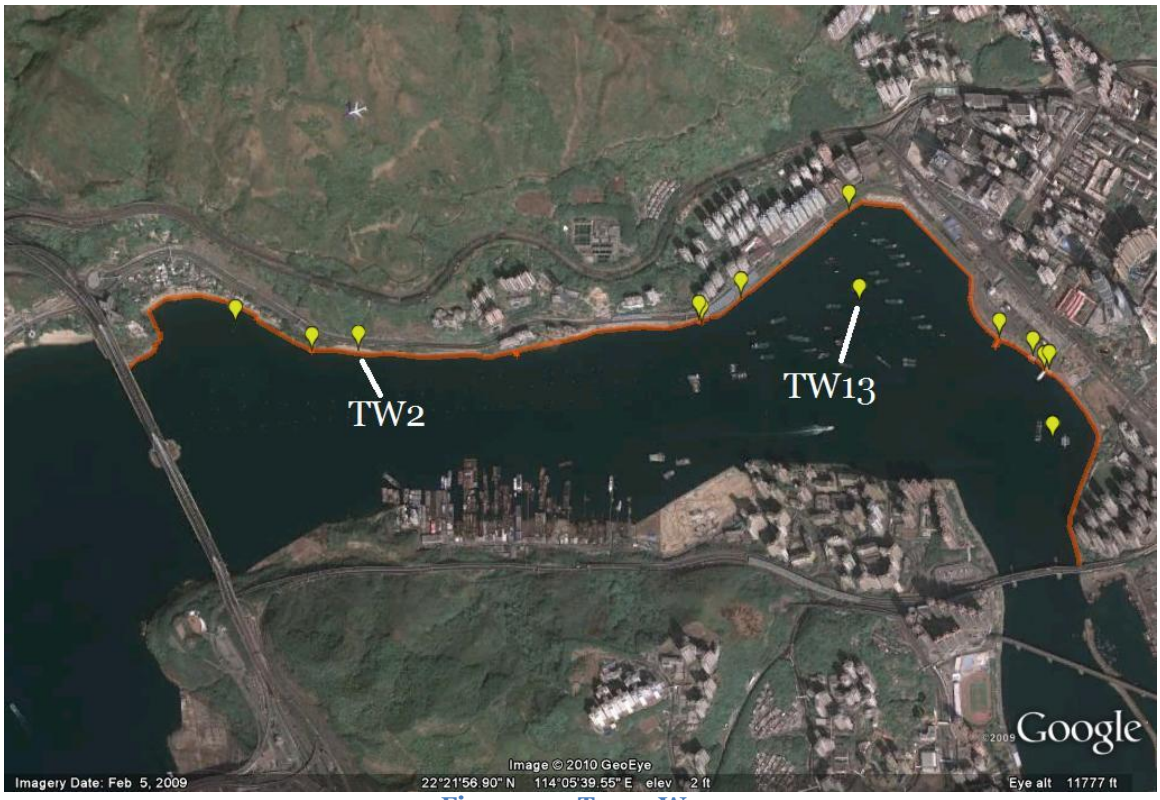


Figure 4.1: Tsuen Wan

The Tsuen Wan waterfront is the westernmost action area within the boundaries of the Inner Harbour on the Kowloon side. The channel between Tsing Yi Island and Kowloon is primarily used by commercial vessels bound for the Kwai Chung container terminals and is relatively devoid of recreational users. As a result, there are numerous mooring buoys (TW13) off the shore of Tsuen Wan with various commercial vessels tied to them (Figure 4.2), as well as several steel structures anchored in the middle of the channel to which smaller ships may dock.

Figure 4.2: Moorings in Tsuen Wan

The channel between Tsing Yi and Tsuen Wan would not likely be safe for leisure crafts with the number of larger commercial vessels plying those waters. However, just east of the Ting Kau Bridge, there is a stretch of beach (TW2) that permits easy approach to the shore for the public and storage of both canoes and water sports equipment. The beach represents the only significant site of recreational activity other than the occasional local fisherman on the promenade. In addition, there are two public piers and one ferry terminal in Tsuen Wan. The Park Island Ferry Terminal sits on a floating dock attached to a pier (Figure 4.3), while the adjacent public pier sports 4 sets of landing steps.

Figure 4.3: Park Island Ferry Terminal

While Tsuen Wan has some land/water interfaces suitable for marine users – some landing steps and piers and a sandy beach (Figure 4.4), there is little else there on the waterfront by way of activities, especially for recreational purposes. The western half of the long promenade that runs along almost the entirety of Tsuen Wan's waterfront is significantly elevated above sea level without any way of going down to the beach or the waterfront, while the eastern half is more or less sterile; no activities available with the exception of the ferry terminal.

Figure 4.4: Tsuen Wan Approach Beach

Tsing Yi North (TYN)

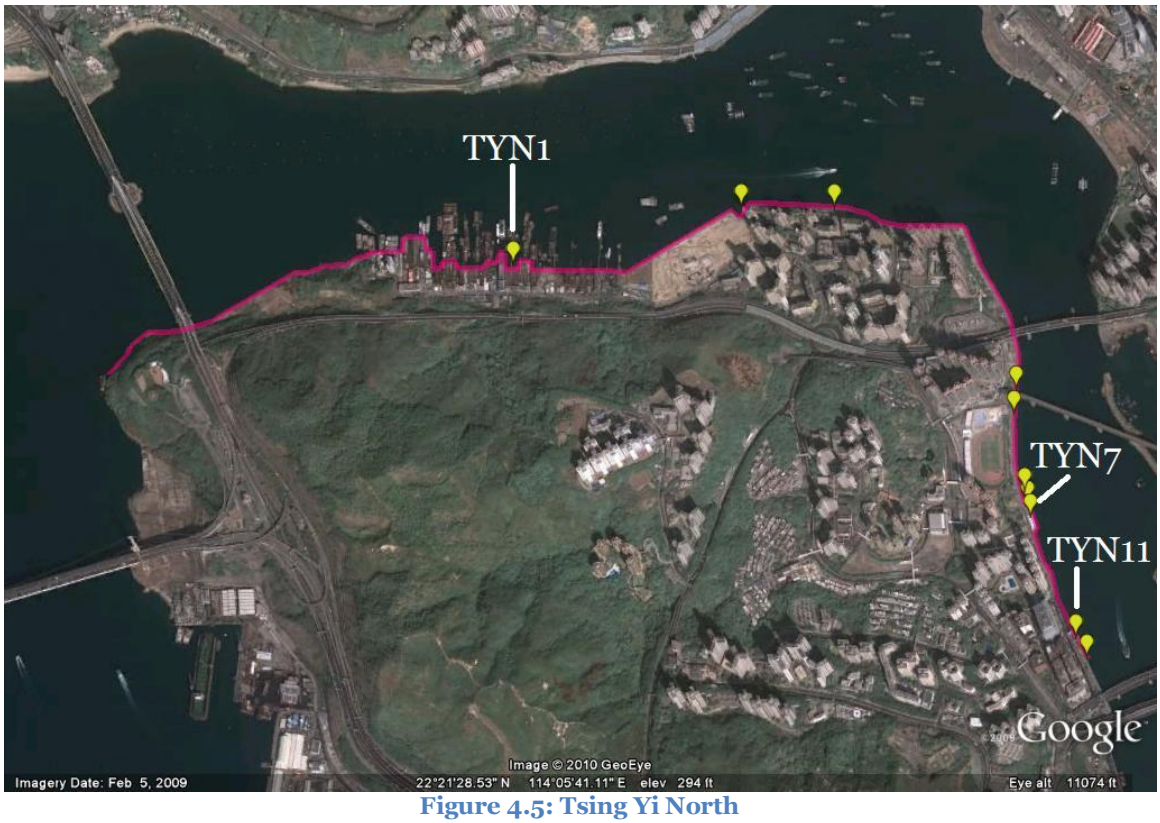


Figure 4.5: Tsing Yi North

The northern coast of Tsing Yi Island is the waterfront facing Tsuen Wan. There is little by way of publicly-accessible land/water interfaces on the waterfront beyond the fireboat station (TYN11) (Figure 4.6) located north of the Cheung Tsing Bridge and the public pier (TYN7) off the promenade. Directly in the centre of the northern face of the island is a boat yard (TYN1) that is not accessible by the public.

Figure 4.6: Tsing Yi Fireboat Fire Station

A continuous promenade runs through much of the northern and eastern coasts of Tsing Yi Island. Unfortunately, there is little to do along the promenade; the walkway separating a number of residential complexes from the water has a high railing that is only interrupted by the occasional landing step. The container terminals on Tsing Yi begin once the promenade ends. Because the Tsing Yi waterfront is bounded by a boat yard in the north and container terminals in the southeast of the island, and numerous commercial vessels make use of the channel between Tsing Yi and Tsuen Wan to reach the commercial facilities along the sides of the Rambler Channel, the likelihood of finding any leisure craft in the area is low. The lack of facilities oriented towards recreational users and elevated level of commercial vessel traffic in the aforementioned areas do not encourage recreational activity.

Western Harbour (WH)

The Western Harbour was not audited on foot because none of it was accessible to the public, though we did visit the action area by boat. The waterfront is the longest out of any action area in the Inner Harbour, and it is almost exclusively used by ocean-going cargo vessels – the only exception is the military naval base located on the southern coast of what was once Stonecutters Island. The naval base at Stonecutters Island has a sheltered basin which is off-limits to non-military vessels. The container terminals is composed of container freight-stations, container yards, shipyards, dry-docks, and shipping berths for the massive container ships.

This particular area is ideal for ocean-going cargo industries because it is located further away from the inner harbour so there is a lower volume of smaller vessel traffic and

the large container ships can more easily reach the open water. The harbourfront east of the naval base and all the way till the end of the Western Harbour action area is home to large dry-docks and shipyards that service smaller scale commercial ships as well as the ocean going vessels.

Yau Ma Tei (YMT)

Figure 4.7: Yau Ma Tei

Yau Ma Tei is predominately used by smaller scale commercial ships. Yau Ma Tei is home to Victoria Harbour's largest typhoon shelter, on the shores of which can be found a large public cargo working area (YMT13), a water-selling kiosk, a Harbour Patrol station, and various mooring areas. The volume of commercial boat traffic is very high because the Yau Ma Tei Typhoon Shelter is one of the primary typhoon shelters for industrial users of the harbour in addition to having permanent moorings for cargo barges, container ships, and tugboats.

The northern stretch of this action area contains a length of waterfront promenade that is currently under construction. This promenade follows the waterfront behind nearby

residential complexes, continuing into the typhoon shelter area. Along this promenade are some mounts for boarding planks (Figure 4.8) and a landing step.

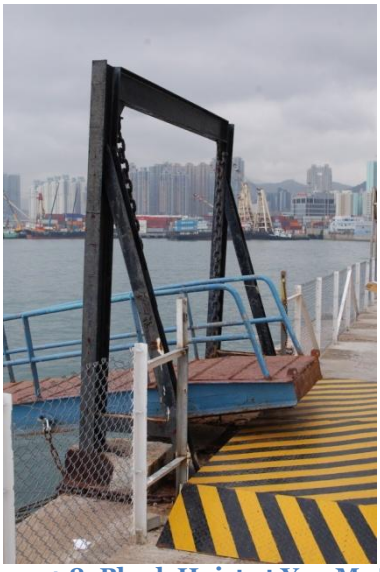


Figure 4.8: Plank Hoist at Yau Ma Tei

The northern area of the typhoon shelter is comprised of a vertical stone wall along the promenade. This section, however, lies nearby to a road. Fishermen, merchants, and other small cargo handlers use this area to load and unload their boats and trucks, despite the fact that there is nowhere to actually tie up their boats or to park their trucks. As a result, they are forced to bring their boats up to the wall and stop the trucks by the side of the road. This is shown in Figure 4.9.

Figure 4.9: Improvised Cargo-handling Area in Yau Ma Tei

The typhoon shelter hosts a number of different mooring areas for vessels of various types. Marine service vessels, barges, work boats, ferries, and launches utilize this area for permanent mooring. A number of mooring buoys remain unused outside of the typhoon season.

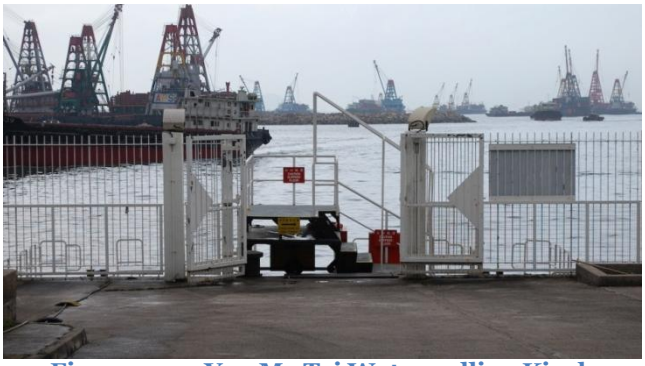


Figure 4.10: Yau Ma Tei Water-selling Kiosk

This shelter is also home to one of Victoria Harbour's public cargo working areas (Figure 4.11). It provides docking areas for cargo vessels, as well as a water-selling kiosk (Figure 4.10) for all forms of vessels, public or private. Nearby to the kiosk is a sewage-pumping area to service ships. The proximity of industrial facilities, abundance of moorings for commercial ships, and PCWA lining the typhoon shelter waterfront are several reasons why commercial shipping is concentrated in Yau Ma Tei. The anchorage offshore to the west provides a significant amount of the area's cargo handling. With the scheduled closure of other public cargo working areas in the eastern harbour, to be discussed later, business operators in Hong Kong are quickly finding themselves without an inexpensive alternative for cargo operations. The PCWA in Yau Ma Tei should remain as a functional facility for use by commercial shipping.

Figure 4.11: Yau Ma Tei Public Cargo Working Area

West Kowloon Cultural District (WKCD)

Figure 4.12: West Kowloon Cultural District

The waterfront of the West Kowloon Cultural District (shown in Figure 4.12) does not provide marine users of Victoria Harbour with any form of land/water interface. The entire reclamation area consists of a flat area devoid of much foliage, and a newly-constructed promenade. Access to the water is strictly denied by the fence (Figure 4.13) that stretches along the entire length of the coastline.

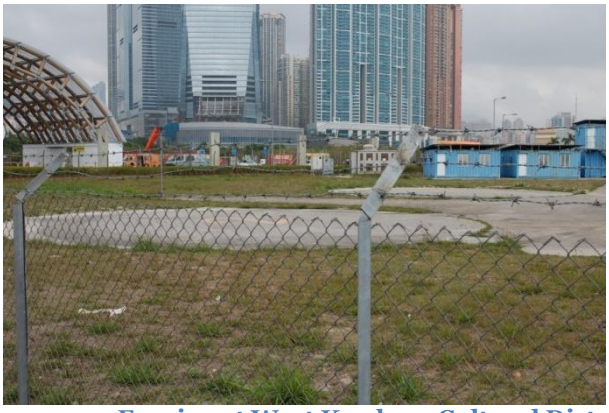


Figure 4.13: Fencing at West Kowloon Cultural District

While the plan for this area is still under development, it is quite apparent that this area was not meant to enable marine use in its current state. Slanted rock faces encompass the entire shoreline of the area. The area contains no landing steps, piers, or accessible waterfront of any kind. Given that the waters around the West Kowloon Cultural District

experience a lot of vessel traffic and that the Yau Ma Tei waterfront near the northern side of the peninsula is a hub of commercial activity, any development to facilitate marine uses is not advised in the short term. Once the construction projects on the peninsula finish, however, there could be land/water interfaces, such as a ferry or public pier, to enable marine user access to the Cultural District.

Tsim Sha Tsui West (TSTW)

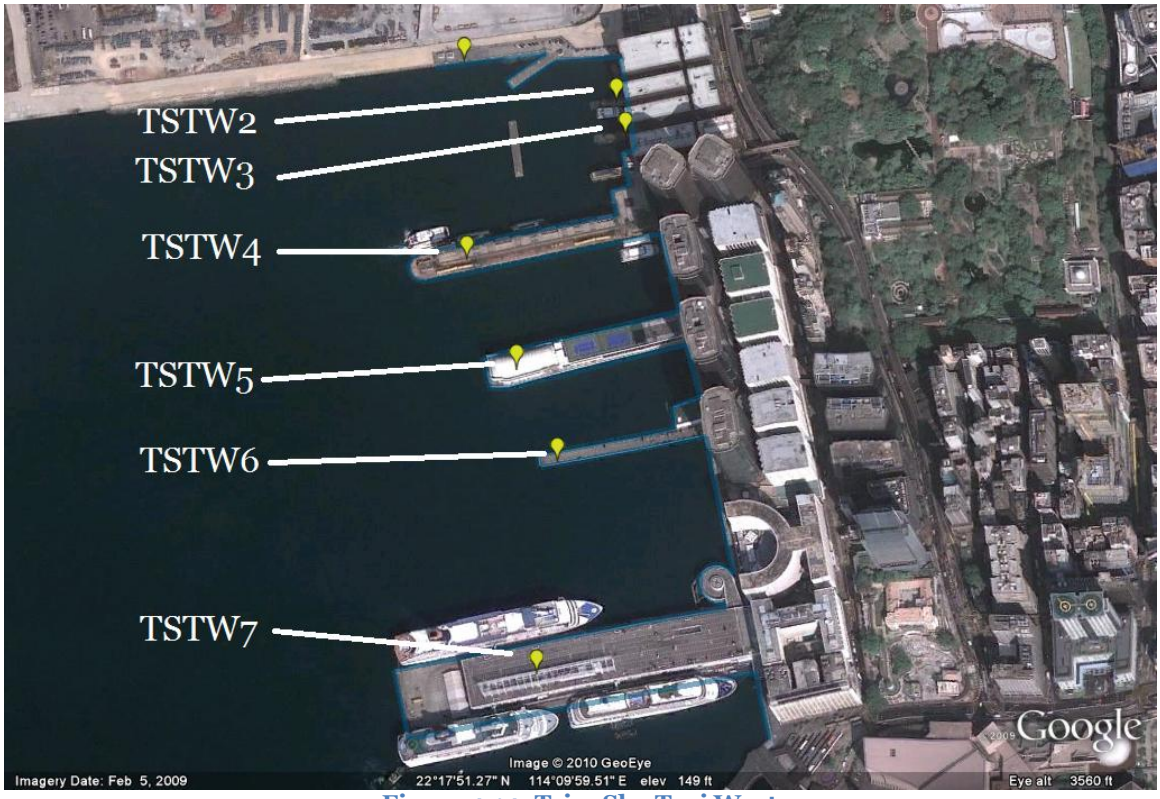


Figure 4.14: Tsim Sha Tsui West

The Tsim Sha Tsui West waterfront is characterized by its many piers; it is home to one of Hong Kong's cross-boundary ferry terminals, various utility piers, and the Ocean Terminal – the only cruise terminal currently available in Victoria Harbour. Additionally, Harbour City Mall takes up the rest of the waterfront behind the piers, which means visitors need to go through the mall to get to the piers. While the ferry terminals and the Ocean Terminal experience heavy traffic, the other piers in this area do not serve marine users.

Figure 4.15: Tsim Sha Tsui West Main Cross-boundary Ferry Pier

The HK-China Ferry Terminal (TSTW4) provides service for various ferries to Macau and areas of China such as Shenzhen and Guangzhou. Apart from the primary service pier with gangways, boat ties, and luggage management services, the ferries utilize three pontoon platforms (Figure 4.16). These pontoons (TSTW2 & TSTW3) serve as temporary access to the boats that are not docked at the primary service pier (Figure 4.15).

Figure 4.16: Tsim Sha Tsui West Ferry Floating Pontoon Dock

The Pacific Club pier (TSTW5) is located to the south of the HK-China Ferry Terminal. This private club provides sports facilities, recreation areas, and dining to its members. The club, however, provides no marine-related activities. The pier has no landing steps, boat ties, docking areas, or water access of any kind. Directly south of the Pacific Club is another private pier. This pier (TSTW6), however, serves simply as car parking. There are no land/water interfaces along the entirety of the pier.

Figure 4.17: Tsim Sha Tsui Ocean Terminal

Tsim Sha Tsui West contains Hong Kong's only operational cruise terminal (Figure 4.17). The Ocean Terminal (TSTW7) is a five-story pier solely for the purpose of servicing large pleasure cruise lines such as Queen Elizabeth 2, Norway, and the Star Princess. The lower three floors feature shops and restaurants for passengers. The top two floors serve as parking garages. A single store structure extends further down to the road, providing direct access to the pier at ground level. The terminal contains two berths for ocean liners.

The harbourfront along Tsim Sha Tsui West is a major access hub; cruise passengers and visitors ferried in from Macau or China enter Hong Kong through the Ocean Terminal and ferry terminals. As a result, the majority of the vessel traffic in the central part of the harbour consists of the various types of ferries. While those facilities bring tourists to the waterfront, there is a relative lack of available land/water interfaces for everyone else to use. For example, the Pacific Club pier could be improved by changing the infrastructure to permit access to the water. The car park is an utter waste of a medium-sized pier; it can be put to far better use than putting stationary vehicles on a potentially useful land/water interface. On the other hand, there are reasons for the limited land/water interfaces in Tsim Sha Tsui West; the number of ferry routes in the area translates to choppy waters that are unfavourable for small ships. The physical length of the action area waterfront is small and the existing marine users already have occupied most of the available space.

Tsim Sha Tsui East (TSTE)

Figure 4.18: Tsim Sha Tsui East

Tsim Sha Tsui East is home to several piers serving as transportation access points; it contains the Star Ferry terminal consisting of two piers (TSTE1 & TSTE2) and a large public pier that is used by various passenger and tourist boats for the loading and unloading of passengers.

Figure 4.19: Tsim Sha Tsui East Star Ferry Terminal

The Star Ferry piers (Figure 4.19) in Tsim Sha Tsui East provide transportation services to Central and Wan Chai. The Star Ferry Harbour Tour also operates out of this terminal. The terminal offers seating and shelter for waiting passengers as well as hosting several stores and food kiosks. Currently, the buildings on the piers are undergoing renovation. Many tourist boat services advertise their respective services at impromptu

stations in front of the entrance to the piers (Figure 4.20) to take advantage of the high pedestrian traffic.

Figure 4.20: Ticketing Kiosk on Tsim Sha Tsui East Pier

The Tsim Sha Tsui public pier is a two-story structure with benches and an expansive vista on the upper level. The lower level offers a similar view, but also hosts six public landing steps (TSTE3) that are used by tour boats and launch services to load and unload passengers (Figure 4.21). Between the hours of 17:00 and 20:00, this area is particularly busy as overnight casino cruise shuttles pick up passengers to transport them to the cruise ships anchored in the middle of the harbour.

Figure 4.21: Water Taxi at Landing Step in Tsim Sha Tsui East

The remainder of this action area is composed of the Avenue of Stars in front of the New World Centre, and the Tsim Sha Tsui promenade (Figure 4.22) that stretches from where Chatham Road intersects Salisbury Road all the way to the Cross Harbour Tunnel entrance. Only two landing steps exist along this entire stretch of waterfront. After the promenade ends, the rest of the waterfront is fenced off.

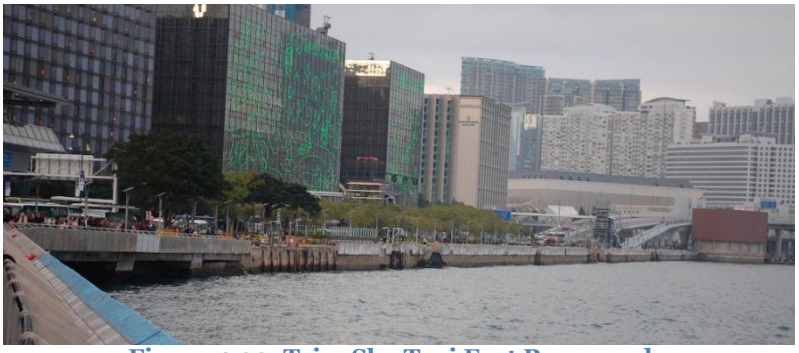


Figure 4.22: Tsim Sha Tsui East Promenade

Although the western end of Tsim Sha Tsui East is primarily used by transportation businesses such as ferries and launches, the rest of the waterfront is less busy and can be redeveloped to support recreational users. The seawall along Tsim Sha Tsui East is empty with the exception of only two landing steps, which also lack amenities such as sheltered waiting areas and adequate signage.

Hung Hom West (HHW)

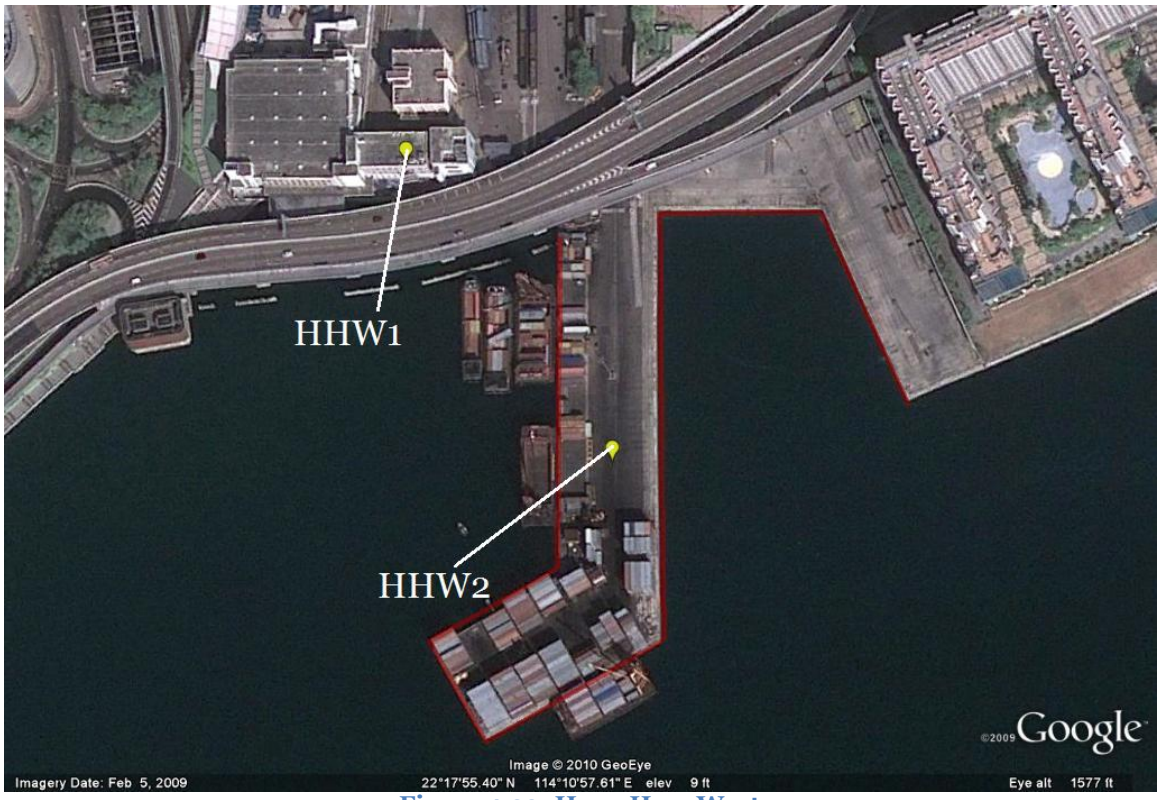


Figure 4.23: Hung Hom West

Hung Hom West is one of the smallest action areas on the Kowloon side. It is home to a Hong Kong mailing centre (HHW1) that dealt with both local and international shipping and a PCWA (HHW2) that is managed by the Marine Department. The privately-owned mail

centre appears to be under-utilized, even though it has boat tie-ups and landing steps. On the other hand, the PCWA (Figure 4.24) showed signs of commercial activity, with container ships and barges tied up at the pier. Unfortunately, neither the mail centre nor the PCWA was accessible by the public, and the only marine users were commercial.

Figure 4.24: Hung Hom West Public Cargo Working Area

The public cargo working area on the Hung Hom pier is somewhat underutilized, based on the limited visible commercial activity; and it will soon disappear as the area has been rezoned for other purposes. Possible future applications of the pier might be to modify it for ferries and public use. There is also space in the water sufficiently far away from the commercial fairway to permit a small number of moorings along the waterfront, particularly the small area east of the pier that could be converted sheltered water.

Hung Hom East (HHE)

Figure 4.25: Hung Hom East

There are three piers in Hung Hom East, two of which are ferry terminals and the other owned by the marine police. The two ferry companies that own and use these piers are Star Ferry (HHE1) (Figure 4.26) and First Ferry (HHE2) (Figure 4.27), and they travel to Wan Chai and North Point, respectively. Both of the ferry piers are sheltered and the First Ferry pier even has a restaurant on the ground level.

Figure 4.26: Hung Hom East Star Ferry Terminal

Figure 4.27: Hung Hom East First Ferry Terminal

The marine police pier (HHE8) (Figure 4.28) is used primarily as a boat storage facility. The rest of the Hung Hom East harbourfront is a long promenade that contains

three public landing steps that are primarily used by launch operators (Figure 4.29) to taxi passengers around the harbour.

Figure 4.28: Hung Hom East Marine Police Pier

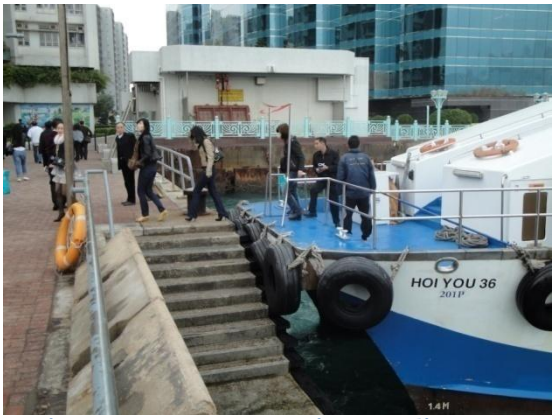


Figure 4.29: Water Taxi at Landing Step

The hinterlands behind the eastern half of the Hung Hom East waterfront are predominately occupied by high-rise residential tower blocks almost right up to the water's edge, but the land behind the Star Ferry pier to Wan Chai is unused and may possibly be redeveloped with a focus on marine users. Although, the presence of the same ferry pier may be a deterring factor to introducing more vessel activity to an area frequented by ferries.

To Kwa Wan (TKW)

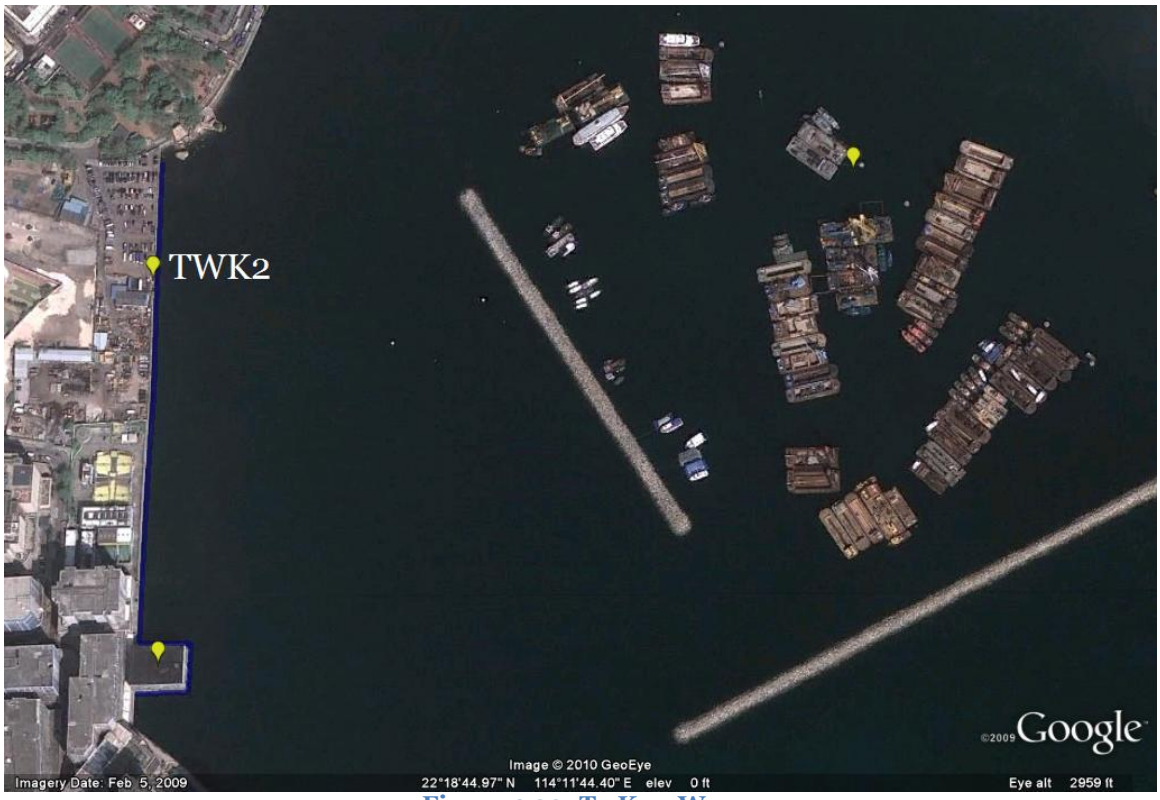


Figure 4.30: To Kwa Wan

Another small action area on the Kowloon waterfront, To Kwa Wan contains a large typhoon shelter (Figure 4.31) that is typically used for container ships, barges, and other commercial vessels. This area has no facilities for serving the cargo ships, nor does it offer much access to the waterfront beyond a solitary landing step (TWK2).

Figure 4.31: To Kwa Wan Typhoon Shelter

The one landing step in this area is located in a decrepit parking lot, surrounded by broken fences and rusty pipes. It is primarily used by launch services to pick up cargo workers to transport them to their ships (Figure 4.32). The To Kwa Wan harbourfront is

severely underutilized; there are no marine users other than the small number of barges and lighters–large, flat-bottomed barges for loading/unloading ships, temporarily moored in the typhoon shelter and to be re-serviced for reuse in the Hong Kong Island redevelopment projects. There are almost no land/water interfaces along the promenade to facilitate access to the water, effectively rendering the waterfront sterile.

Figure 4.32: To Kwa Wan Landing Step

The typhoon shelter in To Kwa Wan is currently occupied by mainly commercial vessels but those boats are not involved in any commercial activity on any nearby harbourfront. Those vessels are merely moored in the shelter, which can certainly house other types of ships – such as tourism boats and leisure craft. The waters in the Kowloon Bay are relatively calmer than the western and central harbour areas, and the typhoon shelter can be expanded to vastly increase the amount of sheltered water that anyone may use.

Kai Tak (KAIT)

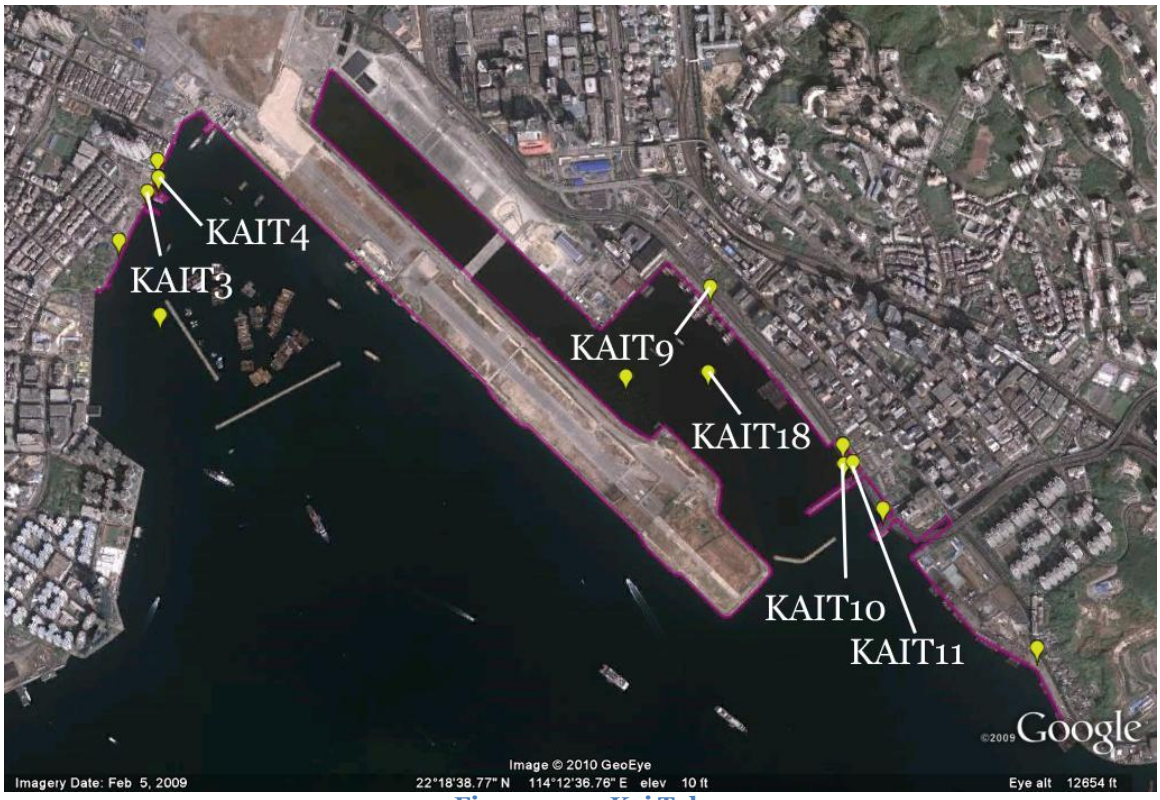


Figure 4.33: Kai Tak

Formerly the home of the only airport in Hong Kong, Kai Tak is now undergoing extensive redevelopment – especially with respect to its waterfront. Currently, there are several piers with different applications: three are west of the former airport runway where one is closed to the public (KAIT3) (Figure 4.34), one is a ferry terminal (KAIT4) to North Point on Hong Kong Island, and the other the Ma Tau Kok public pier (Figure 4.35). The public pier sports three public landing steps for access to the water.

Figure 4.34: Closed-off Pier in Kai Tak

Figure 4.35: Ma Tau Kok Public Pier

Of the two piers on the other side of the runway, one is the Kwun Tong Ferry Terminal (KAIT10) and the other a car ferry terminal (KAIT11) (Figure 4.36), but both ferry services are bound for North Point as well.

Figure 4.36: Kwun Tong Car Ferry Terminal

The ferry terminal (Figure 4.37) west of the runway is owned and operated by First Ferry while the Kwun Tong Pier (Figure 4.38) is used by Fortune Ferry Company Ltd. All of the ferry terminals have multi-story buildings on the piers to handle the passengers and vehicles; and all but the Kwun Tong Ferry Terminal are situated behind breakwaters.

There are many ferry piers providing access to both sides of the Kai Tak runway, but there is no transportation access along the 3.4 kilometre runway itself. Once the redevelopment in Kai Tak concludes, there should be easily accessible transportation to bring people to and from the area. Especially when the new cruise terminal scheduled to be built at the tip of the runway is in service, there will be no way to get tourists across the harbour to Hong Kong Island or to other destinations on the Kowloon waterfront by boat.

Figure 4.37: Kai Tak First Ferry Terminal

Figure 4.38: Kwun Tong Ferry Terminal at Kai Tak

There is also significant commercial activity on the Kai Tak waterfront, a PCWA lies on the outer section of the North Apron (KAIT9) (Figure 4.39) while a larger one occupies much of the Cha Kwo Ling waterfront (KAIT 18). The PCWAs and the inland redevelopment are off-limits to the public. There are also a number of mooring buoys in the sheltered waters between the runway and the shore, as well as next to the To Kwa Wan typhoon shelter that is west of the runway.

Figure 4.39: Kai Tak Public Cargo Working Area

The Kai Tak harbourfront has little by way of land/water interfaces oriented towards marine users beyond the commercial vessels in the PCWAs because Kai Tak was once an airport and did not take into account recreational boating or water sports. For example, the new Kwun Tong promenade was constructed along the shore of the Kai Tak approach channel to add a beautiful new leisure area. The issue, however, occurs because these projects don't address the needs of the harbour as a whole. Using the same example in Kwun Tong, the glass wall along the waterfront of the promenade denies access to the water and provides no useful land/water interfaces along the coast of some very valuable sheltered water. There is a lot of potential for the extensive waterfront in Kai Tak now that the airport is gone, but the water quality in the sheltered waters is very poor because of the sewage runoff from pipes depositing untreated waste into the water. Any development involving activities in the water will need to vastly improve the cleanliness of the waters.

The long waterfront of Kai Tak is a valuable resource and the current redevelopment of the area is a major opportunity for including facilities oriented towards recreational

marine users; in fact, the PCWAs in Kwun Tong and Cha Kwo Ling have been rezoned and will eventually disappear, removing a major type of marine user from that area. Once the water in the Kai Tak nullah has been cleaned up, there is a substantial amount of sheltered water between the runway and the North Apron; that water should not be bordered by glass walls prohibiting of access between the land and water. The nullah and approach channel can support rowing activities and small leisure craft sailing, while the appropriate facilities such as a rowing centre and a small marina can be built on the North Apron and the runway. These facilities and the sheltered water can be for public use and will add to the available recreational activities within the harbour.

Yau Tong Bay (YTB)

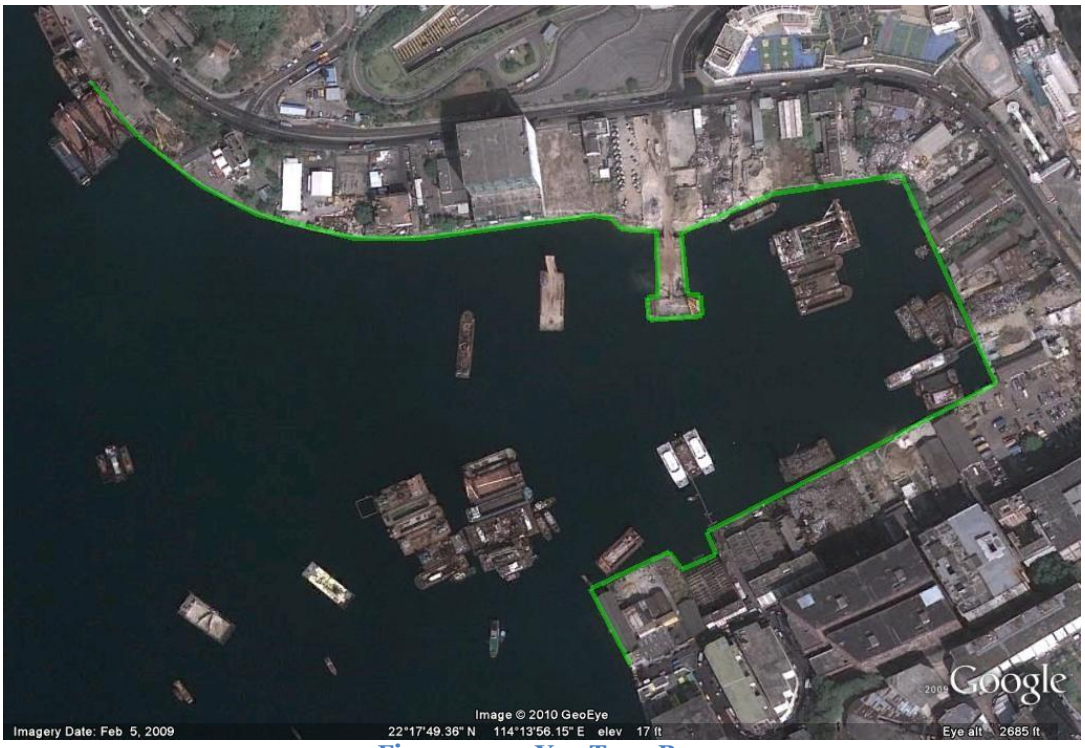


Figure 4.40: Yau Tong Bay

Virtually all of Yau Tong Bay is a commercial shipping development (Figure 4.41) along the waterfront of the bay and consequently is closed off to the public. There are moorings, warehouses, and piers within the bay for the commercial vessels docked in Yau Tong Bay but no land/water interfaces for leisure crafts.

Figure 4.41: Yau Tong Bay Public Cargo Working Area

Yau Tong (YT)

Figure 4.42: Yau Tong

Similar to Yau Tong Bay, the Yau Tong harbourfront action area is by and large devoid of recreational activity as a large number of privately owned businesses, consisting mainly of scrap metal recycling and concrete production, use the waterfront for commercial purposes. There are, however, a couple of landing steps (YT1 & YT2) that can be found on the waterfront. They are occasionally used as access points by fishermen to offload seafood (Figure 4.43).

Figure 4.43: Yau Tong Landing Step with Fishing Boat

Lei Yue Mun (LYM)

Figure 4.44: Lei Yue Mun

Lei Yue Mun is the easternmost action area on the Kowloon side. It is a fishing village with dozens of seafood markets and restaurants, a typhoon shelter, and home of the Sam Ka Tsuen Ferry pier (LYM2) with service to Sai Wan Ho (Figure 4.45).

Figure 4.45: Sam Ka Tsuen Ferry to Sai Wan Ho at Lei Yue Mun

The typhoon shelter (Figure 4.46) is rather small and only has moorings (LYM3) for fishing boats, houseboats, and several small yachts. A number of temporary, improvised wooden pontoons extend into the water from the shore where a total of 5 concrete staircases (Figure 4.47) lead to the street level (LYM4 through LYM8). There is also a landing step used by the fishing boats to offload their catch to the trucks parked nearby.

Figure 4.46: Lei Yue Mun Typhoon Shelter

The water quality in Lei Yue Mun is extremely poor; due to the distinctive U-shape of the typhoon shelter, refuse from all over Victoria Harbour collects in the bay with the currents and tidal movement so that the seabed is heavily littered with garbage. The untreated sewage that is permitted to enter the typhoon shelter from the surrounding fishing settlement – and possibly the nearby developed buildings as well, adds to the pollution in the water.

Figure 4.47: Stairwell to Polluted Water in Lei Yue Mun Typhoon Shelter

The waterfront at Lei Yue Mun is primarily used by the local citizens, particularly the fishermen who live along the eastern shore. Lei Yue Mun serves as a major access point for the fresh fish entering Victoria Harbour as well as a place to moor the smaller fishing vessels. But on the other hand, the waters are far too contaminated for other marine activities to take place. The result is a lack of any land/water interfaces oriented towards recreational users.

Kennedy Town (KENT)

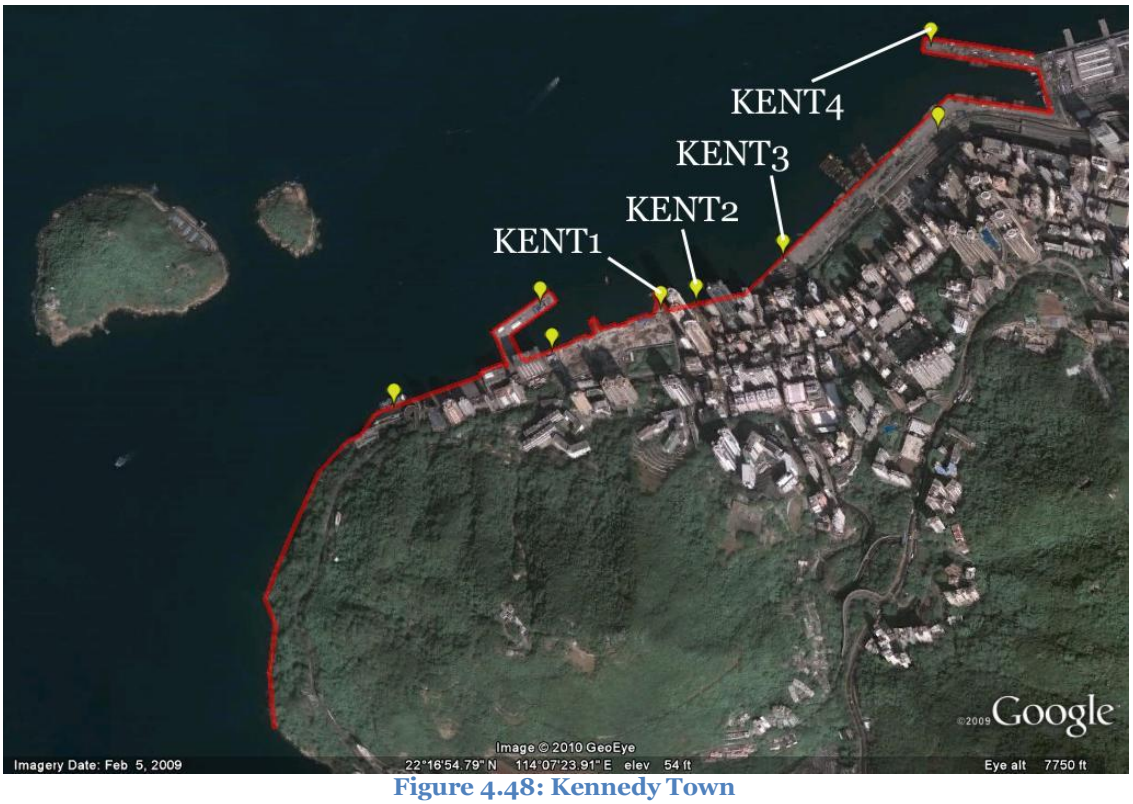


Figure 4.48: Kennedy Town

Kennedy Town is the westernmost action area of Hong Kong Island. The Western District PCWA occupies the majority of the waterfront in Kennedy Town. The PCWA extends from the northernmost pier (KENT4) to the landing step (KENT3) and includes an area of

semi-sheltered water. Many cargo vessels are moored against the seawall of the cargo working area in order to unload cargo as well as take on fuel and water.

Figure 4.49: Western Public Cargo Working Area in Kennedy Town

The northern pier (KENT4) of the western PCWA is not fully utilized by cargo vessels. Most of the vessels were docked along the seawall (Figure 4.49) while the pier was used mainly as a place to store cargo. Although the pier was part of a PCWA, many visitors and fishermen are able to enjoy the excellent view of the harbour and passing vessels (Figure 4.50 and Figure 4.51).

Figure 4.50: Northern Pier in Kennedy Town

Figure 4.51: Fishing on Northern Pier

With plans of extending the MTR Island Line to reach Kennedy Town, there is currently a lot of ongoing construction; one of the piers (KENT1) is currently blocked off for that reason. Another pier (KENT2) is owned by the Government Property Agency but it was locked and fenced off with barbed wire. Kennedy Town's westernmost pier is the China Merchants Wharf. It is primarily used for private cargo handling operations by the China Merchants International Holdings Co., Ltd.

Figure 4.52: China Merchants Wharf in Kennedy Town

The China Merchant's Wharf (Figure 4.52) serves as an alternate berthing location for cruise vessels that cannot dock at the Ocean Terminal in Kowloon due to size or schedule conflicts. As a cargo terminal, the Merchant's Wharf is a poor place for cruise ship passengers to arrive in Hong Kong because Kennedy town is largely an industrial area and the pier is very far away from Hong Kong's major tourist attractions. Tourists arriving in Kennedy Town have no easy way to get to the nearest MTR station in Sheung Wan, located over two kilometres to the east, making Kennedy Town a far from the ideal location to welcome tourists to Hong Kong. Due to the high traffic of commercial and ferry vessels in the western harbour, Kennedy Town's location coupled with the PCWA and available sheltered water makes it ideal for commercial use rather than recreational uses.

Sai Wan (SAIW)

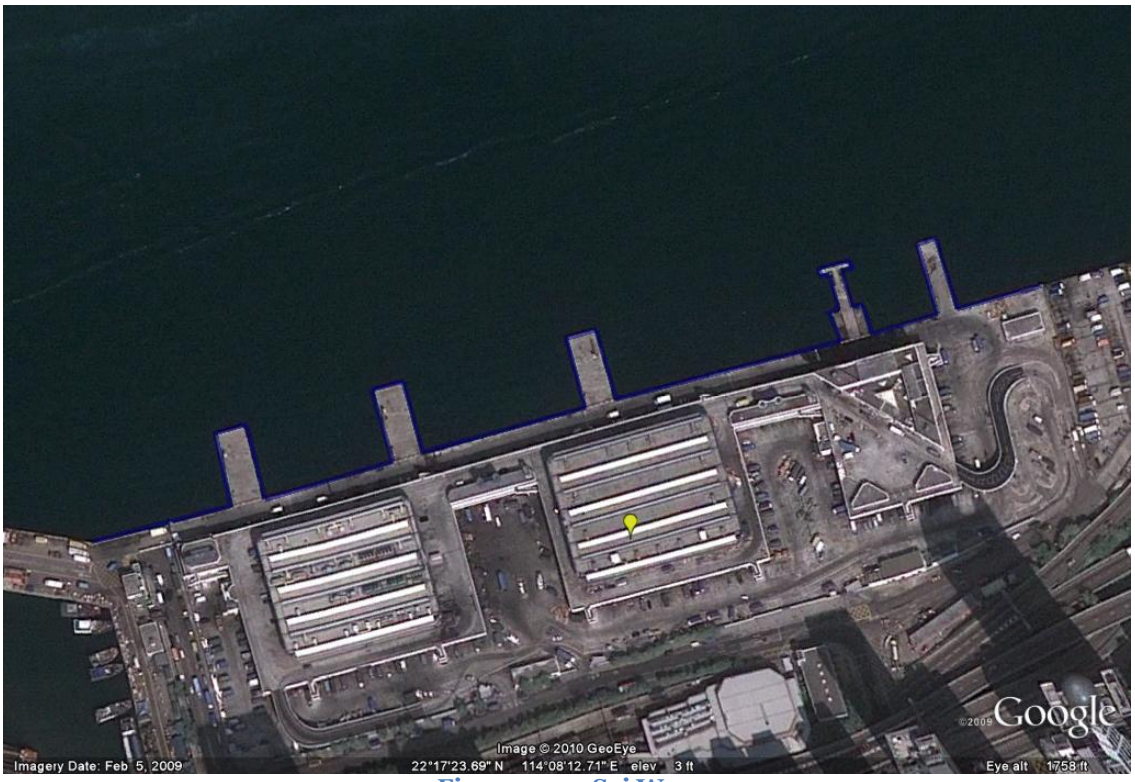


Figure 4.53: Sai Wan

Just east of Kennedy Town is Sai Wan, an action area with five piers, all of which belong to the Western Wholesale Food Market and none of which are used (Figure 4.54).

Figure 4.54: Western Wholesale Food Market in Sai Wan

The Western Wholesale Food Market is one of two wholesale markets operated by the Hong Kong Government and accommodates markets for freshwater fish, vegetables, fruit, poultry, and eggs. The market occupies Sai Wan's entire waterfront, and there are no other public land/water interfaces for marine users in the action area.

Sai Ying Pun (SYP)

Figure 4.55: Sai Ying Pun

Sai Ying Pun is located between Sai Wan and Sheung Wan on Hong Kong Island. The area under construction along the waterfront, when completed in early 2011, will contain the Sun Yat Sen Memorial Park and Swimming Pool Complex. The construction plans do not include any plans for new land/water interfaces along the waterfront, and the construction is currently blocking access to landing step SYP1. The promenade along Sai Ying Pun's eastern waterfront contains a water-selling kiosk (SYP2) (Figure 4.56) and a landing step (SYP1).

Figure 4.56: Water-selling Kiosk in Sai Ying Pun

Cross-boundary ferries frequently pass through the Southern Fairway to the north of Sai Ying Pun's waterfront on their way to Macao and mainland China, creating large waves along much of Sai Ying Pun's waterfront.

Sheung Wan (SHEW)

Figure 4.57: Sheung Wan

Sheung Wan is a small action area between Sai Ying Pun and Central on Hong Kong Island. The HK-Macau Ferry Terminal (SHEW1) in Sheung Wan provides high-speed ferry services to Macao and southern China. The HK-Macau Ferry Terminal is one of the busiest in the world, with over 100 departures and just as many arrivals per day. Approximately 16.5 million passengers passed through the Macau Ferry Terminal in 2008-2009, representing an 11.5 percent increase over the previous year's traffic. The ferry terminal has customs and immigration facilities.

The Ferry Terminal is a part of the Shun Tak Centre, a commercial and transport complex, and is connected to the MTR. Helicopter transportation services between Hong Kong and Macau use the helicopter pads on top of the ferry terminal piers. The terminal complex also contains the Vessel Traffic Centre, a branch of the Marine Department

responsible for maintaining surveillance over Hong Kong's navigable waters to monitor and regulate vessel movements. This action area's location and existence of ferry terminals in the central harbour make it an ideal candidate for easy ferry transportation.

Central (C)

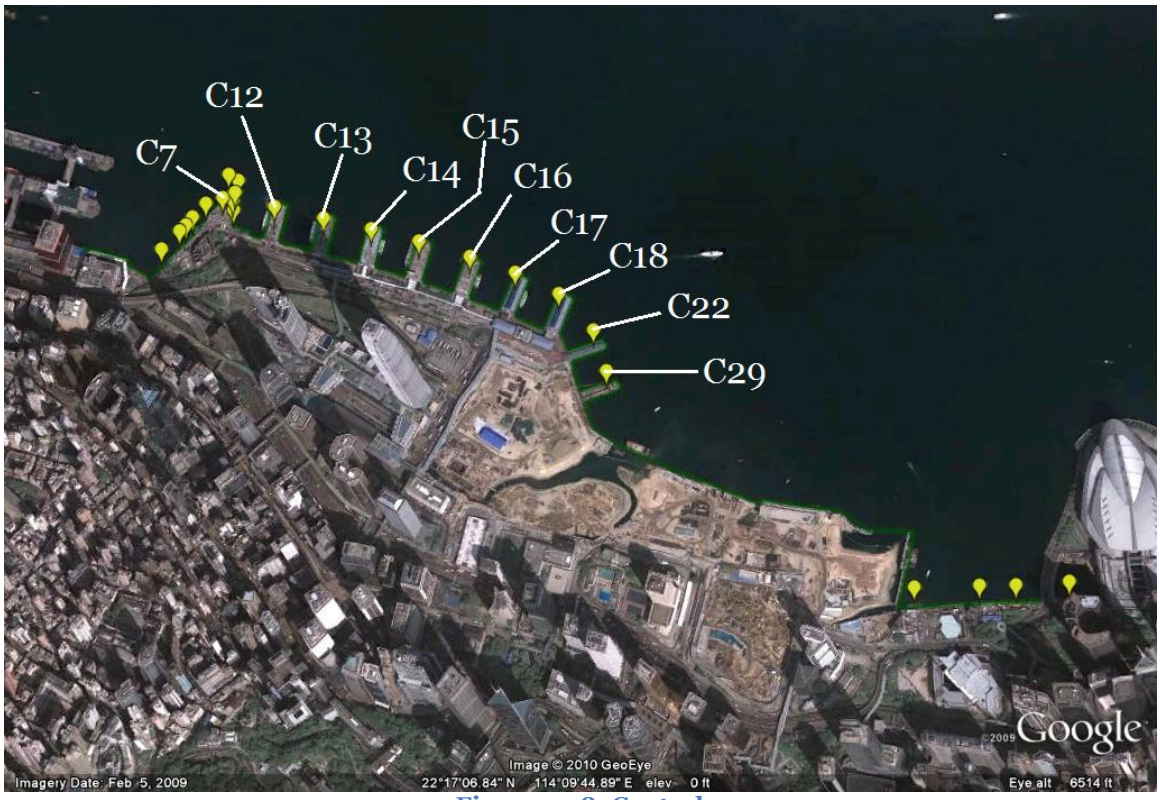


Figure 4.58: Central

A major stretch of the Hong Kong Island waterfront, Central is located in the middle part of the harbour directly across from the WKCD. Central contains 10 piers, known as Central Pier No. 1 through 10, of which No. 2 through 8 are ferry piers. Most of the harbour's local ferry traffic is located in the area between Central and the Tsim Sha Tsui peninsula, just 900 m across the harbour. Ferries at Pier 2 (C12) depart to Park Island, those at Pier 3 (C13) depart to Discovery Bay on Lantau Island, and the ones at Pier 4 (C14) depart to Lamma Island.

Central's westernmost pier is the Central Government Pier (C7). There are several actively used government landing steps on the Central Government Pier and on the western edge of Central's waterfront, shown in Figure 4.59. These landing steps, although not open to the public, are some of the best landing steps in the harbour.

Figure 4.59: Covered Government Landing Steps in Central

The government landing steps are easily accessible by car with areas for parking nearby, a covered waiting area between the parking spaces and the landing steps, and overhead cover from the rain at the landing steps. The landing steps also have lighting, railings, and excellent rubber fenders to protect the vessels moored alongside them.

Some ferry services travel to the outlying islands in the New Territories such as the New World First Ferry to Cheung Chau at Pier 5 (C15), and the Hong Kong & Kowloon Ferry Holdings, Ltd. ferry to Peng Chau and Mui Wo at Pier 6 (C16). Piers 7 (C17) and 8 (C18) are used by the Star Ferry with services to Tsim Sha Tsui and Hung Hom, respectively. All of those piers are 2 or 3 stories tall to permit passengers boarding from multiple levels. The third story of Central Pier No. 8 is the future location of the Hong Kong Maritime Museum, which is relocating from southern Hong Kong Island to the Star Ferry pier in a mutually beneficial plan to attract more tourists to both the museum and the Star Ferry. The Central action area is located in the heart of Victoria Harbour, and therefore is easily accessible to tourists and ferries alike. The abundance of piers and accessibility allow Central to function in a manner conducive to ferry traffic and tourist related uses.

The two remaining piers, Pier 9 (C22) and 10 (C29) are both public, single-story piers. Pier 9 contains 6 public landing steps for passenger pick-up and drop-off. The public piers (Figure 4.60) are covered and well-equipped with seating, lighting, trash cans, railings, and a lighted beacon. Pier 10, part of Central Reclamation Phase III, is still under construction and is not yet publically accessible, but when finished it will be identical to Pier 9.

Figure 4.60: Central Piers No. 9 and 10

Central Reclamation Phase III (Figure 4.62), scheduled for completion in 2013, will add another 18 hectares of land to Central and extend its waterfront approximately 200 metres further into the harbour.

Figure 4.61: Central's Waterfront Before Central Reclamation Phase III

The Queen's pier, visible in Figure 4.61, was demolished in 1998 despite controversy and protests from Hong Kong's citizens. It was disassembled and will be reassembled on the new waterfront when Central Reclamation Phase III is complete.

Figure 4.62: Central Reclamation Phase III

In addition to Central Pier No. 10 and the reassembled Queen's pier, the Planning Department's Master Layout Plan for the New Central Harbourfront includes two new public landing steps, a People's Liberation Army berth, a "marine place" and a "harbour place" for waterfront-related commercial and leisure uses.

Wan Chai West (WCW)

Figure 4.63: Wan Chai West

The Wan Chai West action area consists of the waterfront on the western side of the Hong Kong Convention and Exhibition Centre. The waterfront promenade surrounding the convention centre contains one landing step (WCW3). There are several ladders, cargo hoists, and moorings (Figure 4.64) between the two access roads to the convention centre.

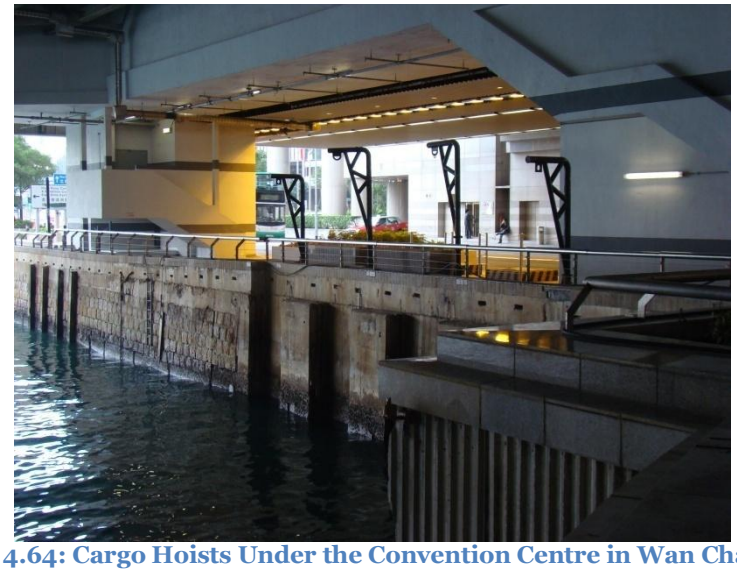


Figure 4.64: Cargo Hoists Under the Convention Centre in Wan Chai West

There is a small waterway between the convention centre and the rest of Hong Kong Island, but it is inaccessible to all but the smallest vessels that can fit under the bridges and between the bridge support structures. There are unused structures along the banks left over from the old waterfront before the construction of the convention centre.

Wan Chai East (WCE)

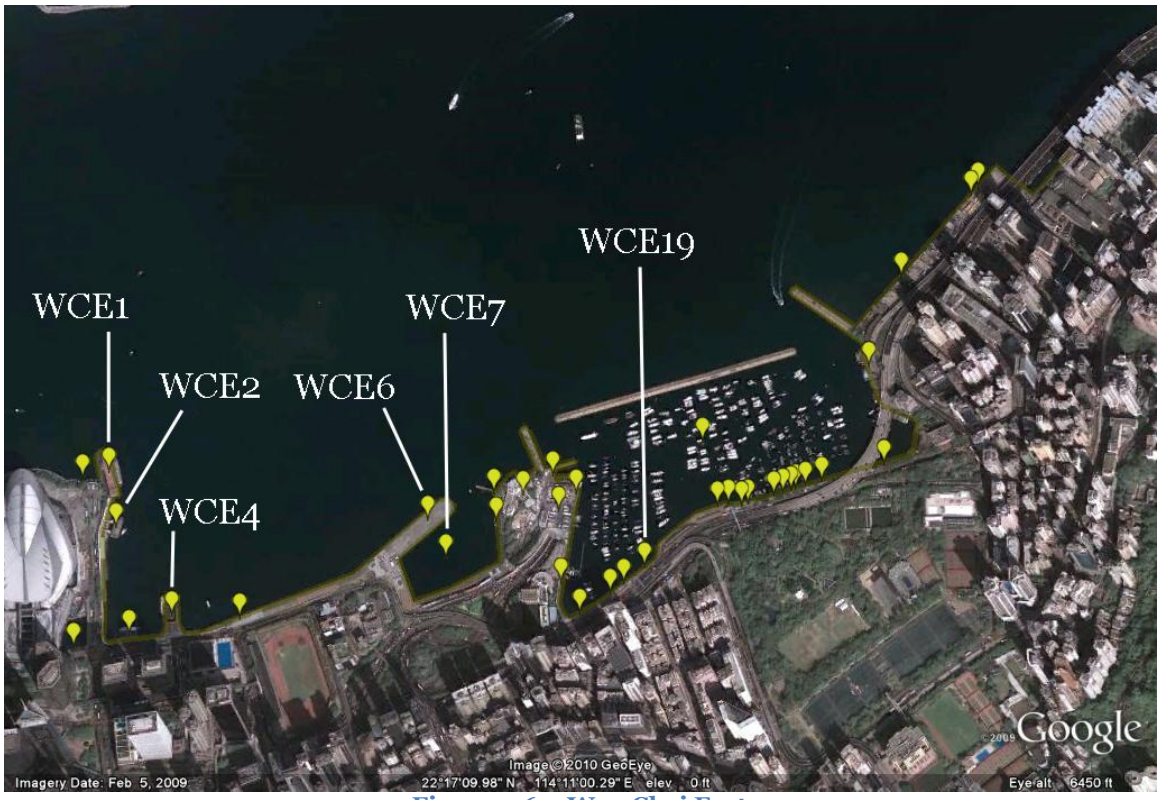


Figure 4.65: Wan Chai East

Wan Chai East is located in the Eastern Harbour, where most of the harbour's recreational activities take place. The Causeway Bay typhoon shelter in Wan Chai East is the main mooring area for the Royal Hong Kong Yacht Club. Wan Chai East also contains the Star Ferry pier (WCE4) to Tsim Sha Tsui, government helipads (WCE6), a large, unused ex-PCWA (WCE7), and two ferry piers (WCE1, WCE2) east of the Hong Kong Convention and Exhibition Centre.

The Causeway Bay typhoon shelter was Hong Kong's first typhoon shelter, originally constructed in 1883. In 1908, it was deepened and expanded to 30 hectares. It was moved further into the harbour to its present location in 1953, and the old typhoon shelter was reclaimed to provide land for Victoria Park. Reclamation for the Cross Harbour Tunnel has further decreased the size of the shelter to its current total area at 26 hectares.

Figure 4.66: Royal Hong Kong Yacht Club

The typhoon shelter has a number of public moorings, many of which are used by the RHKYC (Figure 4.66) while some others are in use by other pleasure vessel owners. The eastern part of the shelter is occupied by a 'floating village' where people live in their boats on the water and rarely leave the typhoon shelter. The mooring system in the shelter is a fore/aft system with no docks to access the boats, but demand for moorings in the Causeway Bay typhoon shelter remains high because of the easy accessibility to the Inner Harbour. There is a similar demand for recreational events in the harbour, but insufficient facilities at the Causeway Bay typhoon shelter inhibits the RHKYC from hosting those activities.

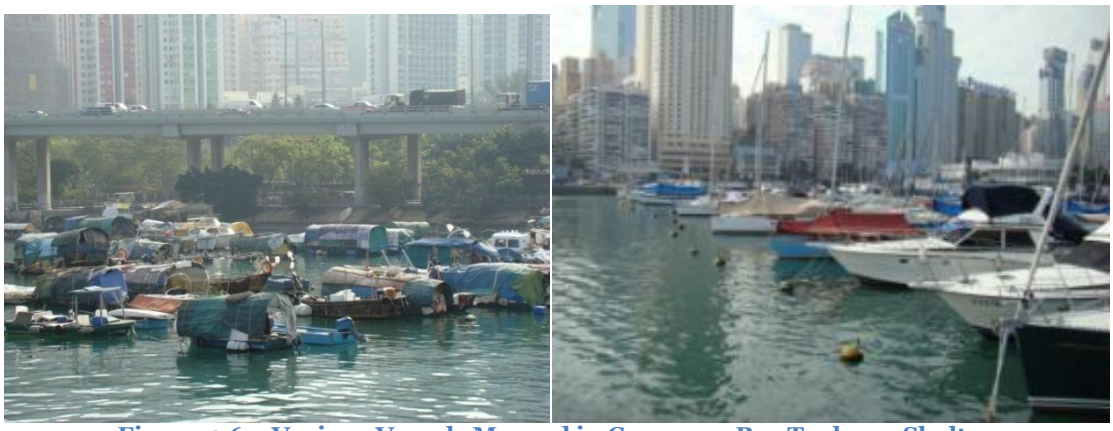


Figure 4.67: Various Vessels Moored in Causeway Bay Typhoon Shelter

There are many landing steps along the inside of the typhoon shelter, frequented by boat owners travelling to and from their ships moored in the water. Almost all of the landing steps are maintained by the CEDD. The example below (Figure 4.68-WCE19) is a makeshift rain shelter that has been constructed from a tarp and some bamboo; most landing steps in the harbour lack nearby covered waiting areas.

Figure 4.68: Makeshift Covered Waiting Area Next to Landing Step in Wan Chai East

The water quality in the typhoon shelter is much worse than in the harbour because the water does not flush out of the sheltered area as easily as the rest of the harbour. A combination of sewers and storm drains from the surrounding area emptying into the typhoon shelter, coupled with waste and raw sewage dumped into the shelter by illegal sewer connections from surrounding buildings, adds to the water quality problems in the typhoon shelter. The floating village also contributes to the pollution in the water by putting waste directly into the typhoon shelter because there are no sewage-pumping facilities for the boats in the shelter. The water quality is so bad that it can eat through the fibreglass boat hulls if they do not have a special protective coating. Waste from the grease traps of surrounding restaurants also ends up in the typhoon shelter water. The problem with water quality could be fixed by changing the storm drains to empty into the harbour or connecting them to existing sewage systems. The typhoon shelter is also getting shallower and shallower due to the accumulation of solid sewage on the seabed, it needs to be dredged to deepen it and remove the polluted layer of sediment that has formed in it.

Island East (IE)

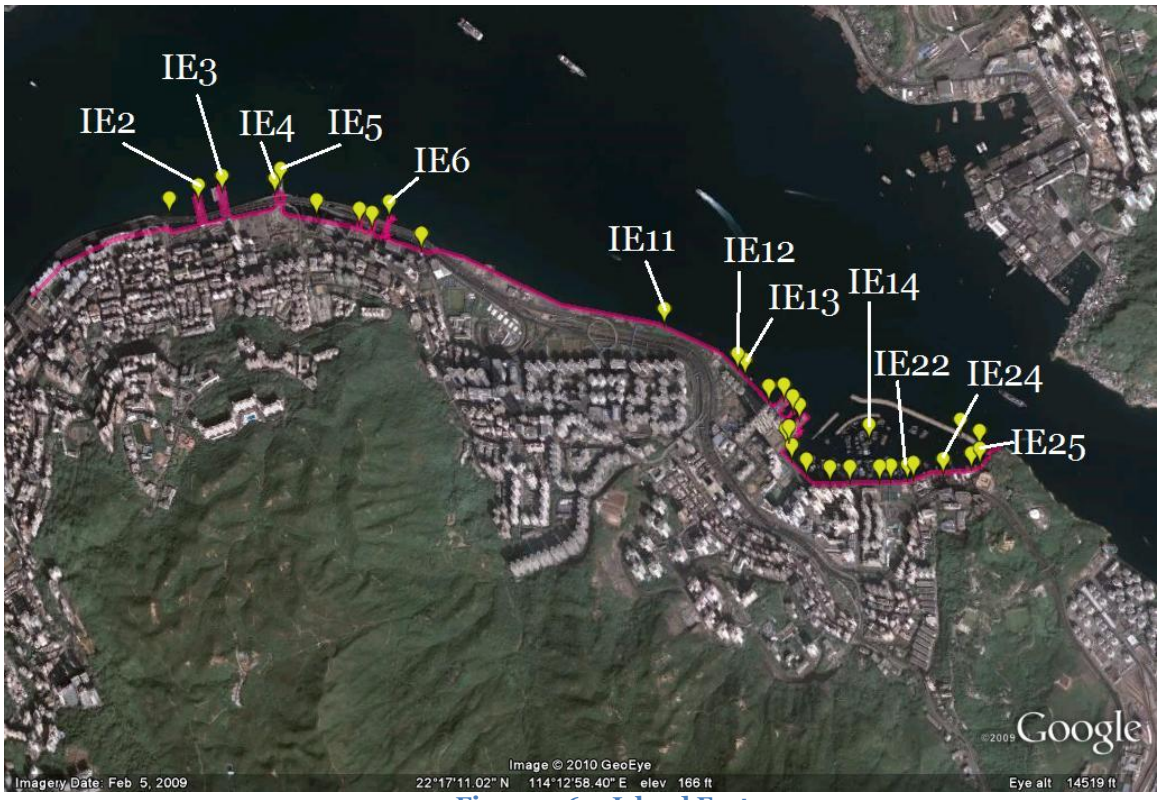


Figure 4.69: Island East

Island East is the largest action area on Hong Kong Island, stretching from Oil Street in the west all the way to the eastern end of the Shau Kei Wan typhoon shelter. There are a variety of marine facilities along the waterfront, including multi-purpose piers, fish markets, and boatyards. There are a total of three ferry terminals in Island East; one services the Fortune Ferry line (IE3) travelling between North Point and Kwun Tong, another is for the Bauhinia Ferry (IE2) providing tours of the Inner Harbour, and the last one is used by the Kwun Tong-Sam Ka Tsuen Ferry line (IE13) travelling between Kwun Tong and Sam Ka Tsuen. With two ferry lines transporting people to Island East and a pier dedicated to a tourism boat service, harbour cruises (Figure 4.70) are one of the most popular recreational activities in this action area. The abundance of sheltered water and minimal commercial traffic make Island East a prime location for recreational uses within the harbour.

Figure 4.70: Harbour Tour Boat in Island East

The Island East waterfront is also home to a marine police pier (IE12) with the capacity to moor five or more standard marine police vessels simultaneously (Figure 4.71) and two private docks (IE5, IE6), both of which are located in a restricted area on the waterfront. There are two freshwater kiosks (Figure 4.72), both of which are restricted for marine use only – one (IE11) is about 340 metres west of the marine police pier and the other (IE22) within the Shau Kei Wan typhoon shelter.

Figure 4.71: Island East Marine Police Pier

Figure 4.72: Water-selling Kiosk in Island East

The Shau Kei Wan typhoon shelter (IE14) is located at the eastern end of the action area and contains a combination of small commercial ships, service vessels, leisure craft, and fishing boats. Along the typhoon shelter waterfront are five boat yards (IE24) (Figure 4.73) that service many of the privately owned watercraft and the Shau Kei Wan Wholesale Fish Market where the fishing boats unload their catch to be sold.

Figure 4.73: Shipyards in Island East

There are twelve public landing steps scattered along the waterfront, but the majority of them are found within the Shau Kei Wan typhoon shelter. We also found two landing steps that are privately owned and maintained (IE25), one of which is located directly behind the Shau Kei Wan Wholesale Fish Market (Figure 4.74).

Figure 4.74: Shau Kei Wan Wholesale Fish Market in Island East

Chai Wan (CW)

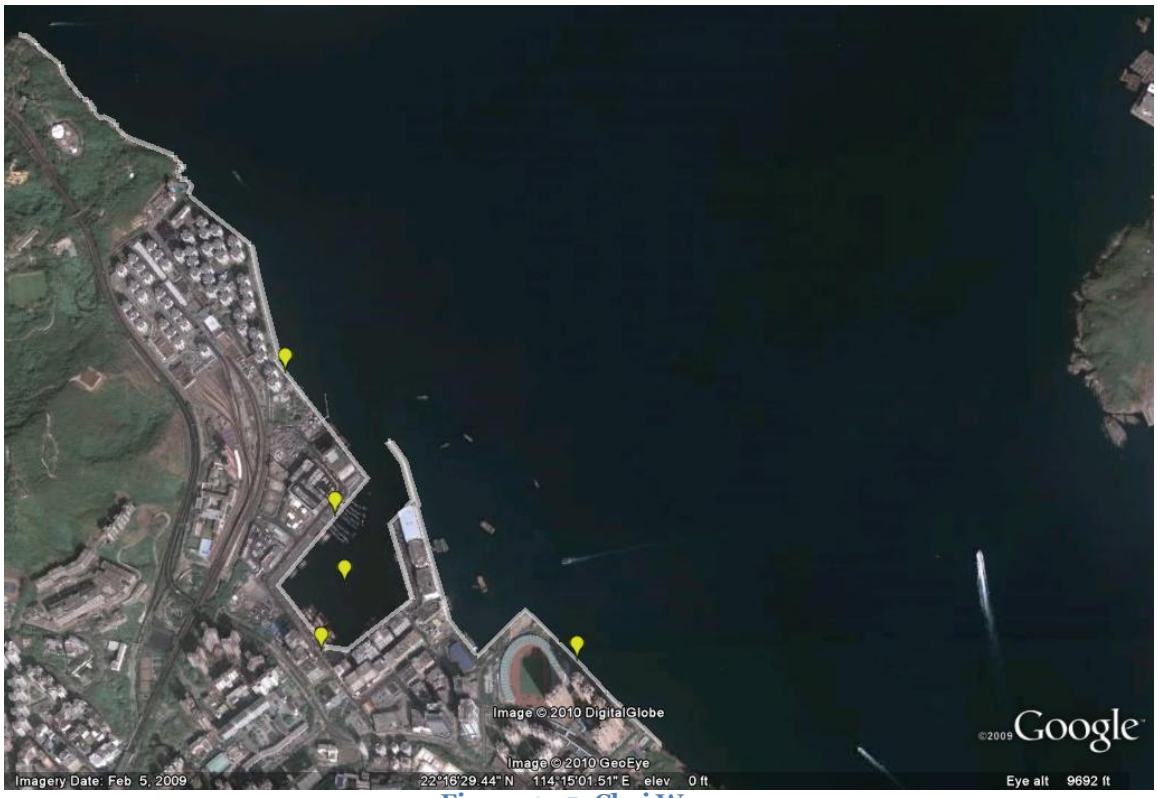


Figure 4.75: Chai Wan

Chai Wan is the easternmost action area of Hong Kong Island. The harbourfront in Chai Wan consists primarily of parks and promenades with concrete walls bordering the edge of the waterfront. There is a small bay in Chai Wan that was once designated as a typhoon shelter, but it is now the home of several barges at the back and a floating community near the entrance (Figure 4.77). Besides the three landing steps noted, of which one is completely fenced off (Figure 4.76) and another with barriers inhibiting its access, the waterfront is inaccessible.

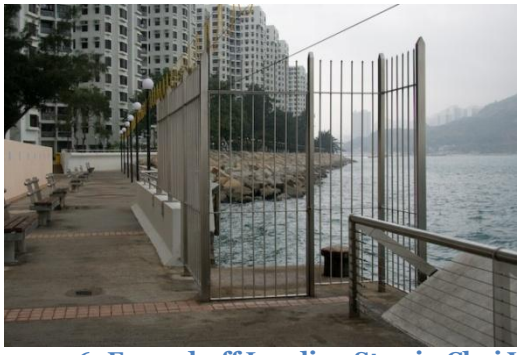


Figure 4.76: Fenced-off Landing Step in Chai Wan

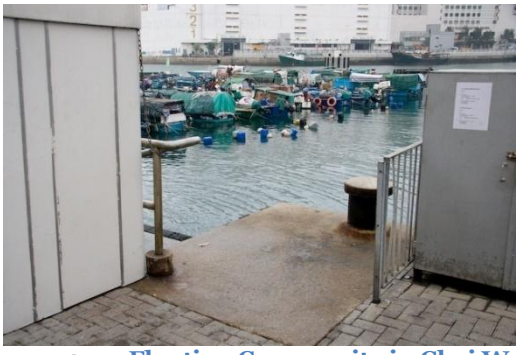


Figure 4.77: Floating Community in Chai Wan

4.2 Forecast

After collecting all of the audit data from each of the 23 sites, we compared this data to the information we collected during the stakeholders' conference, interviews, and archival research. In general, we conducted content analysis on our data in order to determine which data are reliable and relevant, as well as to determine any trends amongst the data. The five major topic areas outlined in this section are: sheltered water, improvement of existing facilities, new types of facilities, the balance of users in the harbour, and the governing structure of the harbour.

4.2.1 Sheltered Water

There is an important distinction between sheltered water and typhoon shelters: sheltered water is a body of water that has reduced wave action as compared to the rest of the harbour[1], whereas a typhoon shelter is a type of sheltered water that is safe during a typhoon and denoted as such by the Marine Department[2]. It became apparent during interviews that this distinction was not always clear. In general, the above mentioned definitions are the ones that we have used in analysing our data.

[1] This is different from the Marine Department's definition of sheltered water, which is defined simply as the total area of Victoria Harbour

[2] It is possible for "sheltered water" to be safe during a typhoon, and such areas while not technically typhoon sheltered, are treated as such by both this study and the Marine Department

Importance of Sheltered Water

Sheltered water provides a safe environment for getting on and off of boats, loading and unloading cargo, and for water-based recreation. These are activities, apart from larger vessels for which wave action is less of an issue, which can only take place in sheltered water. However, as waterfront property is also valuable to real estate developers, conflicts arise over the use of sheltered water.

Yau Tong Bay is a good example of an area in conflict. Currently, the Bay hosts a number of commercial docks. The owners of those docks have formed a consortium in order to remove those commercial facilities and put in residential buildings (Kowloon District Planning Office, 2010). The plan they presented to the HEC includes a waterfront promenade but no marine uses for this important bit of sheltered water. As this bay is one of the few areas of naturally sheltered water in Hong Kong, marine users would desperately like to make use of it (Appendix D, Robert Wilson). They suggest that a small marina could be included in the plans for a promenade so that this opportunity, to them, is not wasted.

Another example is in Sai Ying Pun, where there are several landing steps that are rendered less useful because of their placement. Due to the Macau Ferry Terminal directly to the East, the water at these steps can be very rough. This makes it dangerous to get on and off any vessel. Additionally, there is a water-selling kiosk there that is also dangerous to use because of the passing ferries. These landing steps in Sai Ying Pun is just one example of facilities that either need sheltered water or need to be moved to sheltered water.

The Supply of Sheltered Water

Typhoon shelter space is always at a premium. The Marine Department Typhoon Shelter Space Requirements report from 2009 estimates that over the next 15 years, no additional space will be required.

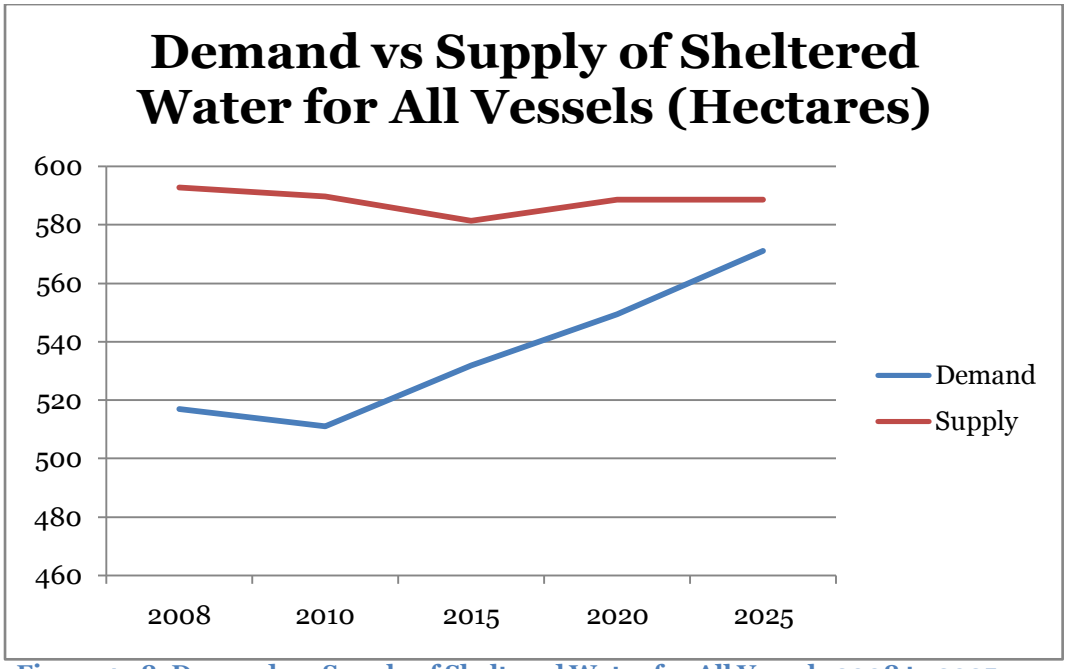


Figure 4.78: Demand vs. Supply of Sheltered Water for All Vessels 2008 to 2025
(Marine Department, 2009)

The issue is that this graph includes all vessels and all sheltered water- which is not the way sheltered water usage is distributed to users in practice. In fact, the Marine Department reserves specific areas of sheltered water for pleasure craft, and other areas for all other classes of vessels. Thus, the actual supply and demand graphs, broken down by pleasure craft and non-pleasure craft, look like the following:

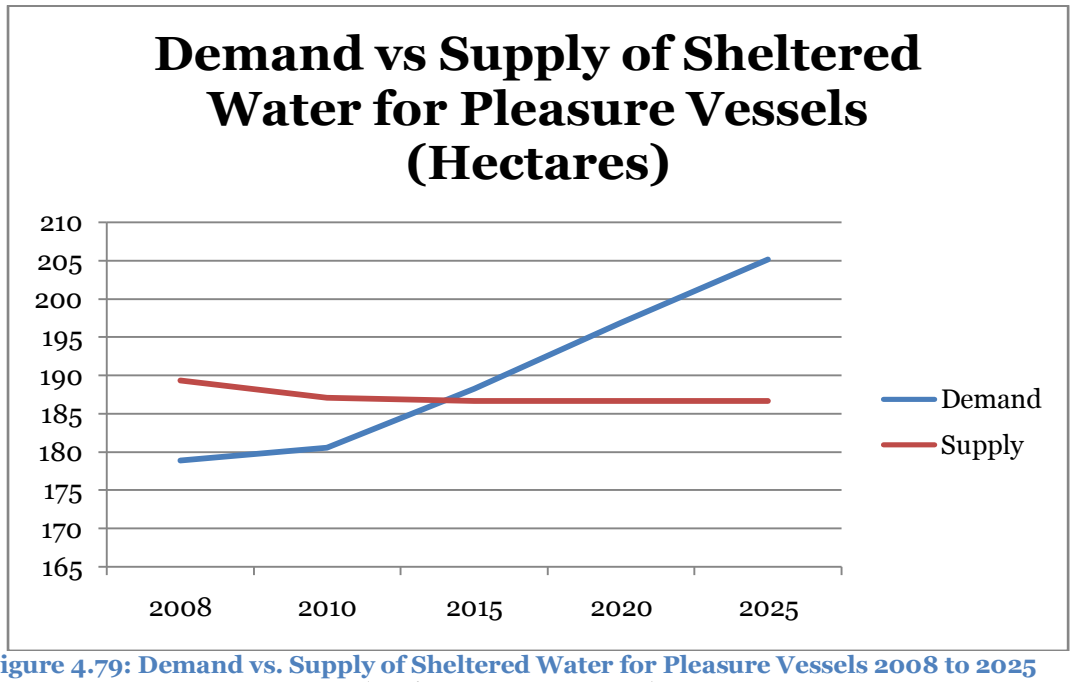


Figure 4.79: Demand vs. Supply of Sheltered Water for Pleasure Vessels 2008 to 2025
(Marine Department, 2009)

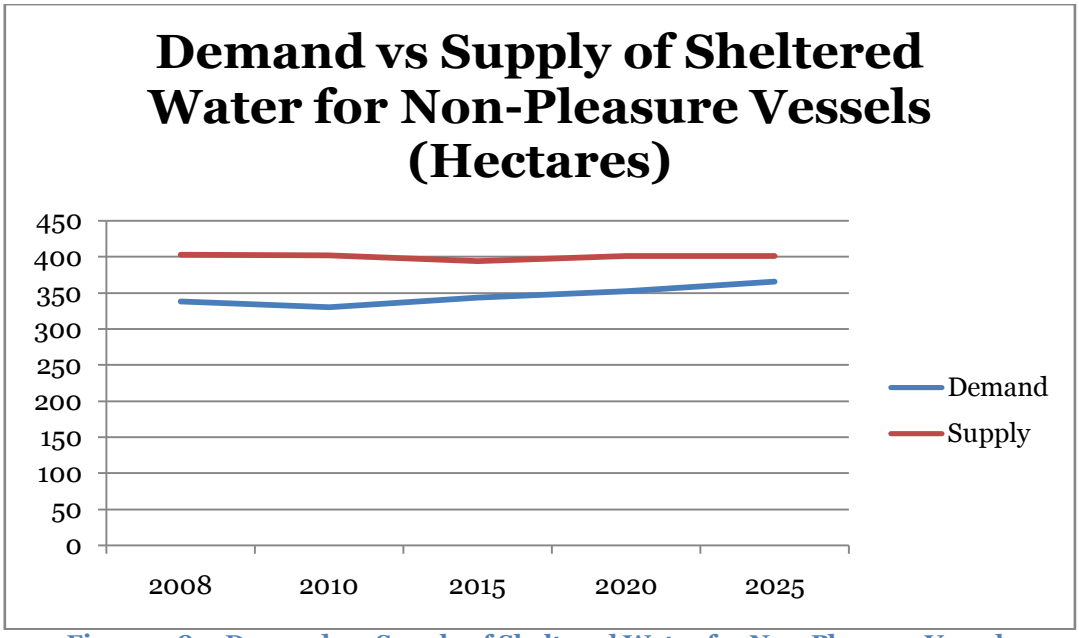


Figure 4.80: Demand vs. Supply of Sheltered Water for Non-Pleasure Vessels
(Marine Department, 2009)

While sheltered water reserved for non-pleasure craft certainly will not need to be increased before 2025, one can see from Figure 4.79 that the amount of available space for leisure craft will run out before the year 2015.

Inside the Harbour, the situation is worse. Only 29% of the total sheltered water area in Hong Kong is within Victoria Harbour, as seen in Figure 4.81.

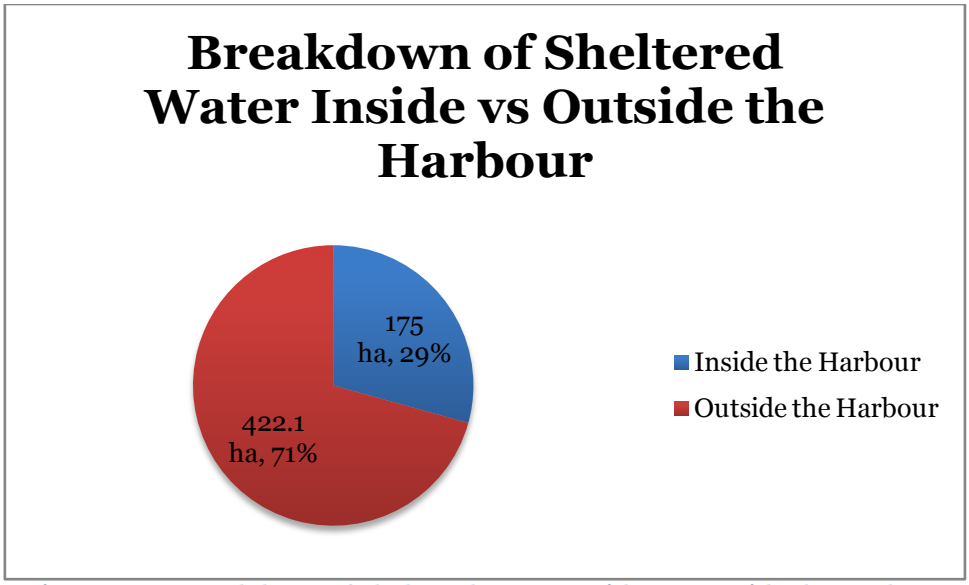


Figure 4.81: Breakdown of Sheltered Water Inside vs. Outside the Harbour
(Marine Department, 2009)

Of that sheltered water in Victoria Harbour, only 6% is available for use by pleasure vessels, as seen in Figure 4.82.

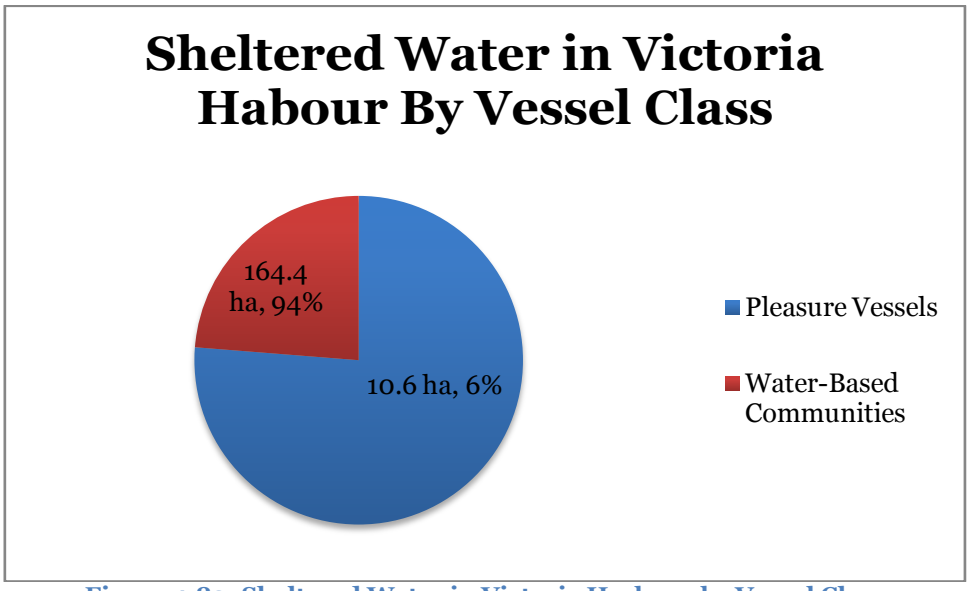


Figure 4.82: Sheltered Water in Victoria Harbour by Vessel Class
(Marine Department, 2009)

The Need for Additional Sheltered Water

Stakeholders consistently told us that they need additional sheltered water inside of the harbour. They gave many reasons, including travel time, fuel costs, and safety. Travel time is an issue because vessels are often stored outside the harbour when the actual usage of the vessel takes place in the harbour. Additionally, during a typhoon, commercial vessels which operate in the harbour but do not have shelter there need to leave several hours before the typhoon arrives in order to get to the shelter in time, which translates into lost work hours. Table 4.1 approximates the distances from the Central Piers to all sheltered water in the territory. This table was created by measuring the distances on a map.

Table 4.1 Sheltered Water in Hong Kong S.A.R. by Approximate Distance from Victoria Harbour (all numbers rounded to the nearest nautical mile or minute)

Name of Sheltered Water (P) = Pleasure Vessel (C) = Commercial Vessel	Distance from Victoria Harbour (Nautical Miles)	Travel Time at 8 knots (Minutes)
Aberdeen West (C)	6	45
Clearwater Bay (P)	6	49
Discovery Bay (P)	8	61
Aberdeen South (P)	8	61
Hei Ling Chau (C)	8	61
Middle Island (P)	9	69
Cheung Chau (C)	10	77
St. Stephen's Bay (P)	11	81
Gold Coast (P)	14	101
Tuen Mun (C)	14	101
Tai Tam Tuk (P)	15	113
Yim Tin Tsai (C)	17	126
Marina Cove (P)	18	134
Pak Sha Wan (Hebe Haven) (P)	18	134
Sai Kung (P)	18	134
Tsam Chuk Wan (P)	20	150
Tai O (C)	24	178
Kat O (C)	33	251
Tai Mei Tuk (P)	36	267
Shuen Wan (C)	38	284
Sha Tau Kok (C)	38	284

Eight knots is the approximate cruising speed of the Star Ferry (Frankie Yick, Personal Communication, 23 February 2010) and is an appropriate speed for calculating travel times for larger vessels. As one can see, the closest commercial sheltered water area is 45 minutes away, in Aberdeen West.

An issue related to distance is the fuel cost. Table 4.2 was created from information gathered from different boat operators on their vessels' fuel efficiency, and the cost of diesel from Caltex Inc. on February 22, 2010 (HKD$11.74/litre). It lists the cost of one round trip from the Central Piers to these shelters. When used in conjunction with the distances from Table 4.2 above, one can see the fuel cost of storing a boat outside of the harbour.

Table 4.2 Cost of Moving Vessels from Selected Shelter Waters to Victoria Harbour, by kilometres per litre

		List of Shelters							
		Clearwater Bay	Marina Cove	Aberdeen West	Shuen Wan	Middle Island	Tai Mei Tuk	Tai O	Sha Tau Kok
Fuel Efficiency (km/L)	0.1	$2,817.60	$7,748.40	$2,582.80	$16,436.00	$3,991.60	$15,496.80	$10,331.20	$16,436.00
	0.2	$1,408.80	$3,874.20	$1,291.40	$8,218.00	$1,995.80	$7,748.40	$5,165.60	$8,218.00
	0.3	$939.20	$2,582.80	$860.93	$5,478.67	$1,330.53	$5,165.60	$3,443.73	$5,478.67
	0.4	$704.40	$1,937.10	$645.70	$4,109.00	$997.90	$3,874.20	$2,582.80	$4,109.00
	0.5	$563.52	$1,549.68	$516.56	$3,287.20	$798.32	$3,099.36	$2,066.24	$3,287.20
	1	$281.76	$774.84	$258.28	$1,643.60	$399.16	$1,549.68	$1,033.12	$1,643.60
	2	$140.88	$387.42	$129.14	$821.80	$199.58	$774.84	$516.56	$821.80
	3	$93.92	$258.28	$86.09	$547.87	$133.05	$516.56	$344.37	$547.87
	4	$70.44	$193.71	$64.57	$410.90	$99.79	$387.42	$258.28	$410.90
	5	$56.35	$154.97	$51.66	$328.72	$79.83	$309.94	$206.62	$328.72
	6	$46.96	$129.14	$43.05	$273.93	$66.53	$258.28	$172.19	$273.93
	7	$40.25	$110.69	$36.90	$234.80	$57.02	$221.38	$147.59	$234.80
	8	$35.22	$96.86	$32.29	$205.45	$49.90	$193.71	$129.14	$205.45
	9	$31.31	$86.09	$28.70	$182.62	$44.35	$172.19	$114.79	$182.62
	10	$28.18	$77.48	$25.83	$164.36	$39.92	$154.97	$103.31	$164.36

Smaller vessels fall somewhere in the 1-10 km/L range, while large vessels, such as the Star Ferry and some tug boats, fall in the 0.1-1 km/L range. One should note that these costs are for one trip *only*. A working vessel would be making this trip almost every day, and fuel costs would be correspondingly larger. One should also note that vessels buying diesel in bulk often receive discounts on the cost of the fuel. Nevertheless, Table 4.2 should give the reader a general sense as to the potential fuel costs, not to mention the additional wages for the crew as well as the additional maintenance required due to extra use associated with storing a vessel outside of the harbour when it operates inside of the harbour.

Safety of small vessels, typically pleasure vessels or small sampans, is an important consideration when discussing the need for sheltered water in Victoria Harbour. The Marine Department typically issues warnings to vessels under 5 metres in length to avoid the harbour when wave action is anticipated to be high, such as during the Chinese New Year's fireworks celebration. In practice, this advisory is always in effect for the Western Harbour due to the ferries passing through on a regular basis. A vessel under 5 metres in length would

not be able to safely pass through these waters and it would also run the risk of being hit by one of these ferries. Thus, vessels less than 5 metres in length are effectively prohibited from using the harbour if they are not already stored there.

Additionally, given that in 2006 the monthly median income in Hong Kong is only HKD$10,000 (Census and Statistics Department, 2006) - compared to about HKD$32,000 (Department of Commerce, 2008) in the United States in 2007, using HKD$7.65 per USD$1 as the exchange rate - the majority of the population in Hong Kong simply cannot afford a boat larger than a dinghy for fishing on the weekends, let alone one over 5 metres long. Due to the lack of sheltered water inside Victoria Harbour, the majority of the population of Hong Kong is barred from owning and operating their own boat in the Harbour.

One solution to this problem would be to provide boat rental facilities inside the harbour. This would ensure that people who want to use a boat but cannot afford the purchase price or the maintenance costs could still use the harbour for a small rental fee. Another solution would be to provide more sheltered water inside the harbour for those who could afford a small boat. Note that these solutions are not mutually exclusive and could complement each other.

Ways to Increase Sheltered Water in Victoria Harbour

There are two ways to expand the area of sheltered water available in the harbour. One idea is to move the breakwaters in Causeway Bay and To Kwa Wan to make the typhoon shelters larger. The Marine Department commented on the idea and said that both breakwaters could be moved without adversely affecting marine safety or the Hong Hom Fairway (Appendix D, Roger Tupper). Below are an artist's renditions of the two shelters with relocated breakwaters:

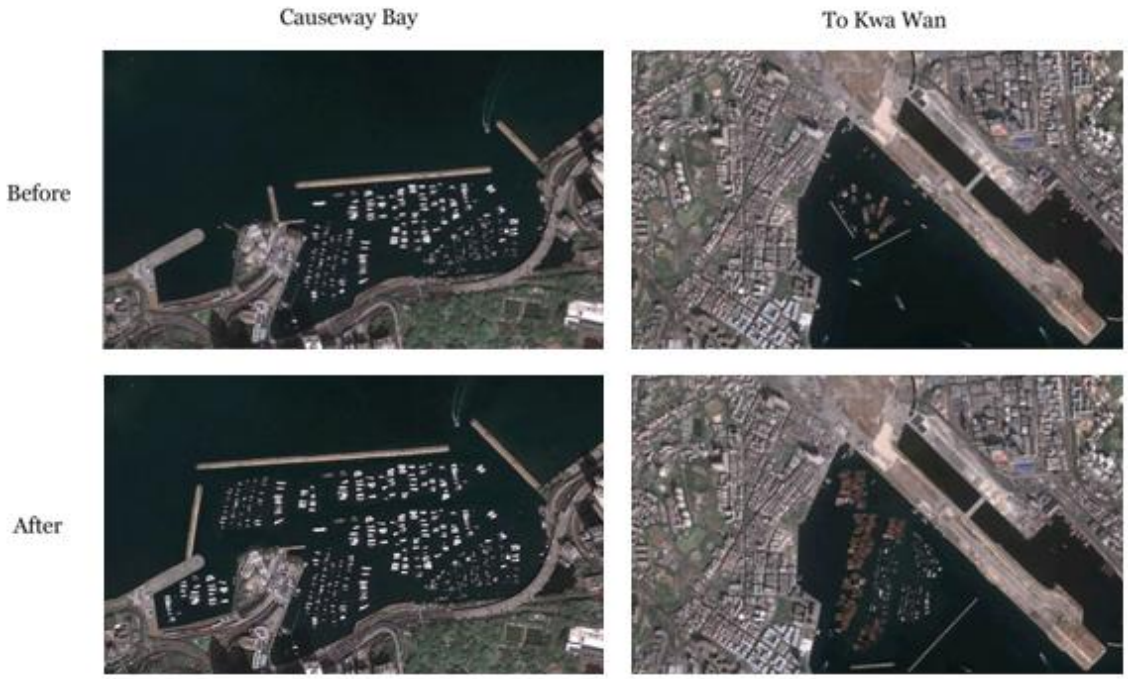


Figure 4.83: Expansions of the Causeway Bay and To Kwa Wan Typhoon Shelters

Another possible way to increase the space available in typhoon shelters is to reorganize them. The RHKYC has a proposal on how to re-organize the Causeway Bay typhoon shelter around a floating dock system instead of a mooring system. The Marine Department has said that they favour that type of arrangement over the mooring system because it keeps things more organized and helps get more boats into the same typhoon shelter. Timing, specifically for the Causeway Bay typhoon shelter, could correspond with the Central-Wanchai Bypass construction.

There are significant issues with both proposals – the biggest one being the Protection of the Harbour Ordinance. To move the breakwaters, as in the first proposal, would require land reclamation. In the RHKYC proposal, the dock system requires permanent fixtures on the seabed, which is technically land reclamation as well. In addition, the dock system would require a managing organisation. If that organisation were to make the docks private, the Marine Department would interpret that as a net loss of space in the typhoon shelter system and that organisation would then need to provide an equal amount of typhoon shelter space somewhere else in the territory. Otherwise, a current government department would need to take ownership of the docks.

Boat Accessibility in Sheltered Water

Under current conditions, many areas of sheltered water are used by people to store their boats near the harbour. This is a use for which many sheltered water facilities, including typhoon shelters, were not designed. This issue is felt most in sheltered water that hosts floating communities - where users often improvise methods for gaining access to their boats in order to avoid paying for a sampan – but this problem is relevant in any sheltered water area in which users store their boats permanently.

In the Lei Yue Mun typhoon shelter, we discovered several "staircases to nowhere," pictured below in Figure 4.84.

Figure 4.84: Staircase to Nowhere

The stairways appear to be intended for use in getting on and off of a boat, but as one can see from the photo, local boaters prefer to make their own docks rather than use the staircase. There is nowhere to tie up a boat next to the stairs or to get on or off a boat larger than a dinghy.

In Tsing Yi, local boaters have created their own mooring fields, land/water interfaces, and methods for reaching moored vessels, as one can see from the pictures below.

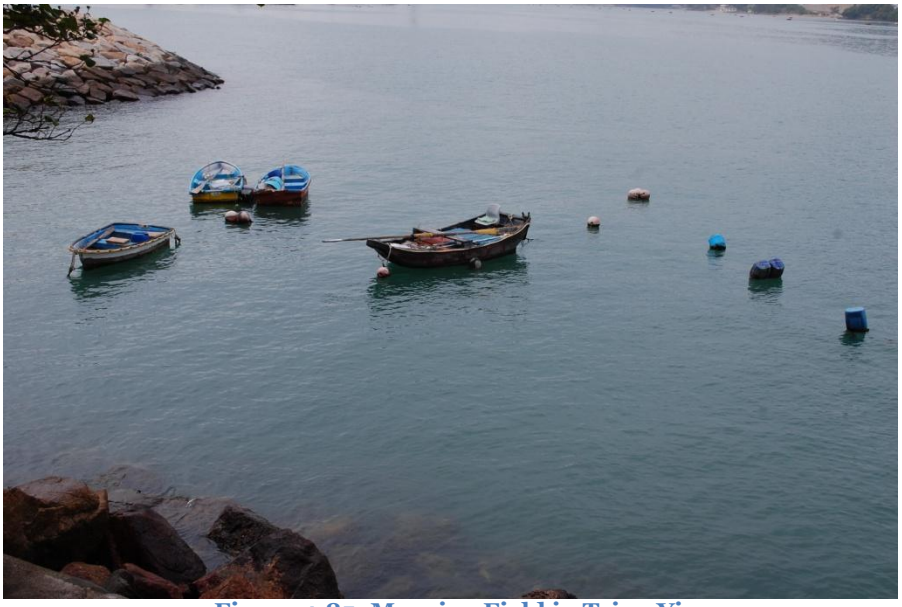


Figure 4.85: Mooring Field in Tsing Yi

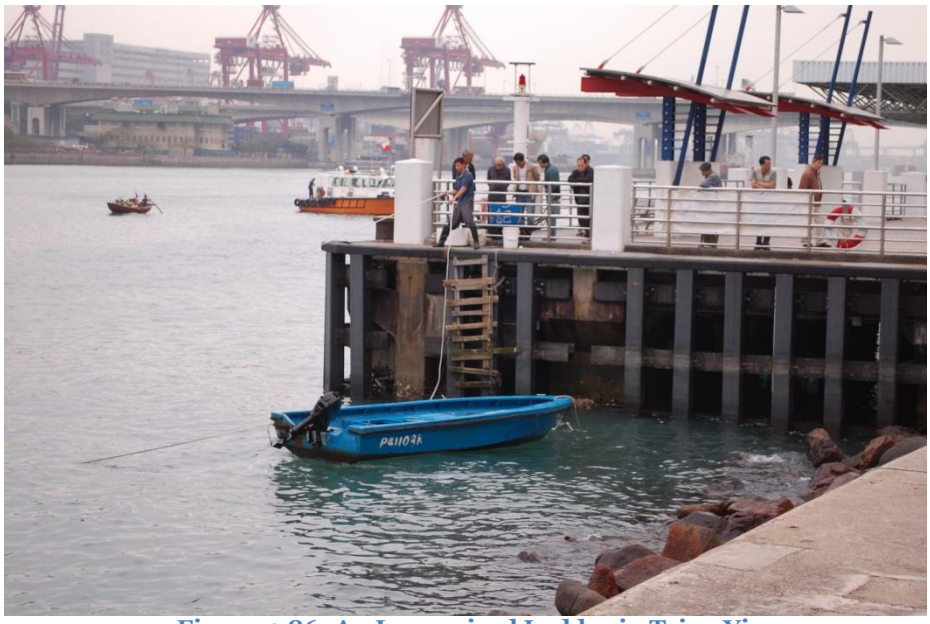


Figure 4.86: An Improvised Ladder in Tsing Yi

In Figure 4.85, the moorings are unlicensed and are evidence of the latent demand in the area for marine activities. In Figure 4.86, a man has just disembarked from his boat and is using a series of ropes to move the boat back to its mooring, safely away from the pier. There is also an improvised ladder made by residents in order to access their boats from the pier itself.

The first step towards solving this problem of accessibility is the recognition by the Marine Department that these users exist and need support. Though there could be many ways to support these users, the simplest method would be small floating-dock facilities in

areas of sheltered water where community users have created their own land/water interfaces. The docks could be attached directly to the shoreline in order to avoid reclamation issues and could be managed by the local district government.

4.2.2 Current Facilities – Upgrades and Additions

Further analysis of the waterfront facilities presented in section 4.1, in conjunction with data obtained during the forecast of future uses and users from the stakeholders' conference, presented in Appendix E, revealed the inadequacies inherent in marine infrastructure in Victoria Harbour. Data provided by our site visits has provided a general understanding of the facilities that exist along the harbour. Our direct observations identified preliminary areas of focus including, but not limited to: public and private piers, landing steps, vessel-supporting facilities, and tourist facilities. Further research into these areas of interest through the stakeholders' conference, desk research, and interviews with stakeholders provided additional detail to the problems identified by our observations.

Piers

One of the major issues identified by our team during the audit phase was the lack of access to piers for transportation across the harbour or for any other purpose. This issue was further expanded upon during the stakeholders' conference and interviews with the Tourism Board and Saffron Marina. These observations and interviews demonstrate that many of the underlying reasons that piers are perceived as inadequate are: their size, quantity, and accessibility.

Ferries transport passengers across the waters of Victoria Harbour on a regular basis. These passenger services provide transportation to many different areas of Victoria Harbour, as well as to areas throughout Hong Kong, but their routes are limited by the availability of piers. Ferry services such as the Star Ferry and First Ferry may only provide transportation to areas in which they possess a private pier. The Star Ferry has operations in Central, Tsim Sha Tsui, Wan Chai, and Hung Hom, and its service may only carry passengers to these locations. The First Ferry has locations in Hung Hom and Kowloon City that carry customers

to North Point. Additionally, First Ferry's location in Central carries passengers to areas outside of Victoria Harbour.

In addition to ferry services, residents may use launch services to get transported to various areas around the harbour. Passengers can phone one of these services to pick them up at a specified location – typically a landing step - and they are then transported to another pre-specified location. These transportation companies run no regular routes, and are based on a chartering system. Again, these services are limited by the available piers and landing steps (discussed below). This more complicated system of travel decreases the convenience of travelling by boat; people would rather use the MTR or other public transport that runs a regular service.

Currently, most piers are situated far from other forms of transportation. Harbour reclamation over the past few decades has pushed the waterfront farther and farther from land-based transportation. As a result, travellers must walk some distance from the MTR to the waterfront in order to pick up a ferry, cross the harbour, and then walk from the waterfront to their destination. As the number of popular destinations around Victoria Harbour increases, the importance of transportation to and from these waterfronts will also become more important. The lack of piers in areas with good land-based transportation, such as MTR stops, bus terminals, and parking areas, causes a problem for ferry services.

While it is important to include more public piers in waterfront areas, it is also important to ensure that piers adequately accommodate their users. Many large tour boats and ferries require multi-story piers for gangways, ticket sales, and other supporting facilities. Piers without areas for commercial ticket sales, shops, and restaurants hinder the growth of the harbour tour industry. Users want practical, attractive piers to further enhance the many tourism and transportation businesses in Victoria Harbour.

Landing Steps

Landing steps are the most plentiful type of land/water interface in Victoria Harbour. They provide access to the water in areas all around Hong Kong. Most are public and readily accessible by vessels of many sizes. These landing steps, however, are not sufficient for many uses and users because they lack the following characteristics: land access to roads and promenades; signage noting where steps are and how to get to them; lighting for illuminating the steps after dark or in the rain; shelter for users waiting for boats during inclement weather; and appropriate safety equipment, such as life buoys.

Land access is important because landing steps are *land/water interfaces*- not just water interfaces. If the step is meant to be used by pedestrians, there at least needs to be a way to walk to the step. In addition to that, if the step is meant for commercial users, there should be a way to drive a car or a truck to the step as well as park the vehicle for cargo transport. Pedestrians and commercial users can also benefit from illumination at the steps and sheltered waiting areas. Both amenities help during foul weather, and the illumination also ensures that the step can be used after dark (Figure 4.87).

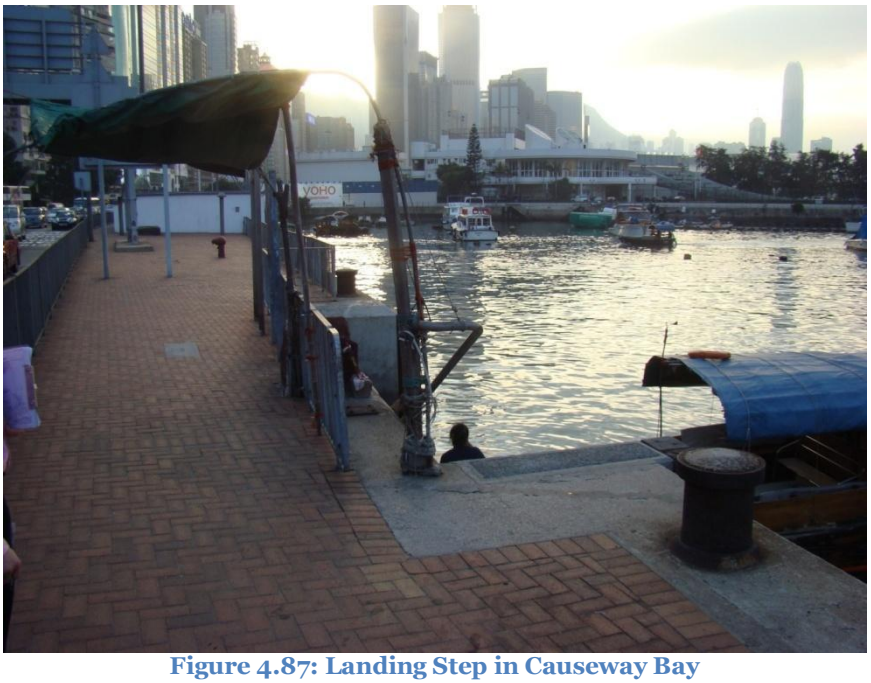


Figure 4.87: Landing Step in Causeway Bay

It is often difficult to locate a landing step without searching the waterfront, as seen in the *Four Tourists* study conducted in 2008. The only two locations where landing steps

have adequate signage are at Central Pier #9 and the Tsim Sha Tsui public pier beside the Star Ferry pier. Other steps are often difficult to spot as there is no visible difference in the sea wall and railing until a visitor is in close proximity to the step. Additionally, many landing steps are located in locations that offer no indication of purpose. For example, one landing step was discovered in the far corner of a makeshift dirt parking lot (Figure 4.88). This landing step served to help cargo workers take water taxis to their barges, but the step was surrounded by torn-down chain fences and garbage, so this purpose was not immediately obvious.

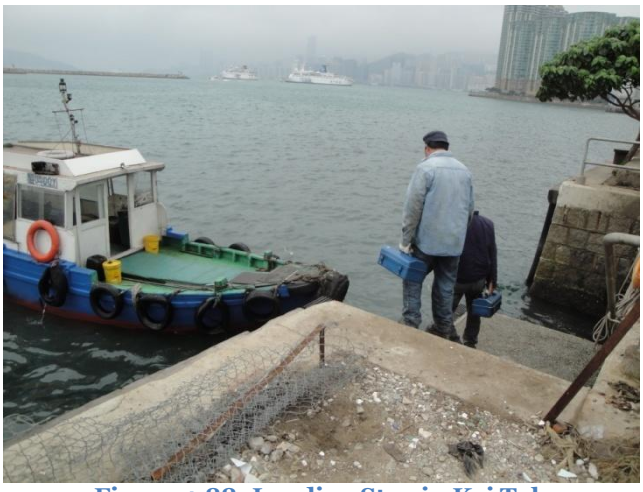


Figure 4.88: Landing Step in Kai Tak

Safety is also an important factor to consider when improving landing steps. Jumping into the boat is sometimes dangerous for boarding passengers, as the typical method for taking on passengers is for boats to bump their nose on the step and run the motor to push the boat against the step for the duration of the boarding procedure. This can be very dangerous as the boat's nose is typically narrow and railings are located on the opposite side of the step, as seen in Figure 4.87 and Figure 4.88.

Figure 4.89: Steel Ring in Lei Yue Mun

While most landing steps and typhoon shelters include real life buoys, not all of them do. Figure 4.89 shows a steel life buoy in Lei Yue Mun which is welded to the railing. There are many other such "steel rings" in the area, but no actual life buoys. In an emergency someone could waste valuable time running to one of these rings instead. A simple solution would just be to remove them all and make sure real buoys are available.

Services and Supplies

The two most important supplies for boats in Victoria Harbour are fuel and fresh water. Fuel can be obtained from fuelling barges at bunkering areas or from fuelling pumps at the waterfront. Fresh water can be obtained from water selling kiosks on shore or individual water distributers at typhoon shelters. The methods for obtaining these supplies are sometimes inconvenient or dangerous.

Diesel fuel can be obtained from fuelling barges at any of the three bunkering areas inside Victoria Harbour. One is located near the Lei Yue Mun channel and the other two are located in the area between Stonecutters Island and the Yau Ma Tei typhoon shelter. Although these areas offer fuelling services to any boat, it is difficult and sometimes dangerous to fuel boats in open water, especially for small boats or wooden junks. The only alternative is to berth at a land based diesel fuelling pump – the only one being in the Shau

Kei Wan typhoon shelter. Although this is much safer because it is inside sheltered water, it is not convenient for boats that function on the opposite side of the harbour.

Regular petrol cannot be obtained by the public anywhere within Victoria Harbour. The RHKYC has a licensed delivery service of petrol, but it is limited to use by members. This lack of petrol fuelling facilities forces users like tourism power boats to load extra tanks of fuel in their boats in order to have enough to come all the way from their mooring locations outside of Victoria Harbour to the piers at Central and Tsim Sha Tsui for picking up passengers. Kayak and Hike Ltd. recommended the construction of a petrol fuelling station in the eastern Victoria Harbour, possibly in Lei Yue Mun or at North Point. Most power boats that need petrol come in and out of the harbour on the eastern side, so Lei Yue Mun would be a convenient location for them, while North Point offers a safe space for a fuel station since it is located away from residential areas as well as from the heavy traffic of the Central waterfront. Adding a new petrol station in Lei Yue Mun channel not only solves the lack of petrol availability, but also reduces the risks of illegal petrol delivery within Victoria Harbour.

Fresh water can be obtained at one of the seven Water Supply Department (WSD) water-selling kiosks within Victoria Harbour. Water needs to be prepaid at the WSD (offices located in Mong Kok and Shau Kei Wan), which issues tickets that can be exchanged for water at the kiosk. The other alternative is to buy it directly from small water sampan distributors in typhoon shelters or sometimes obtaining it for free from fuelling barges at the bunkering areas. No additional need has been expressed by any of the interviewees or stakeholders with respect to modifying the current fresh water supply methods.

Tourist Facilities

Tourist attractions in general are highly concentrated in the areas of Central and Tsim Sha Tsui. The majority of harbour tours pick up and drop off passengers on the public piers at these two locations. Passengers board tour boats in abundance for a multitude of

tours, dining cruises, party trips, and casino cruises. These tours however, face several difficulties in their operations.

Tour boats are forced to use landing steps to which they cannot tie their boat in order to pick up passengers. Not only is this inconvenient for passengers, it is also difficult for the tourism companies. The lack of permanent facilities makes it more complicated for potential customers to locate the boats and board at the proper times.

Licensing restrictions prevent tour boats from selling tickets directly to passengers. Tourism boats need to be classified as Class IV pleasure vessels in order to include the types of amenities such as food and drink, which passengers on these boats expect. However, Class IV licensed vessels can only be chartered as a whole – they cannot sell tickets to individuals. This restriction is typically avoided by chartering boats to travel agencies who sell and distribute individual tickets. Makeshift advertising stations appear all over Victoria Harbour's most active waterfronts, but ticket purchases must take place off-location, sometimes quite far away. Permanent ticket counters require a dedicated commercial location.

It is the opinion of the tourism companies and the Tourism Board that current harbour tour activity is driven by concentrated hotel and tourist activity in the Central area and Tsim Sha Tsui. As new tourist destinations are developed in the West Kowloon Cultural District and Kai Tak, there will be an increase in the need for tour services in those areas. Currently, the plans for these areas only include public piers. While these piers may be sufficient for smaller size tour boats, they are inadequate for bigger boats from companies that plan on carrying more than a couple dozen passengers. Larger vessels, such as ferries, require at least two stories for a gangplank. The availability of these larger, specialized piers could also provide other services to visitors on the waterfront such as dining, shops, rest areas, bars, lounges, and other attractions (Appendix D, Horace Leung). Well-facilitated harbour tours that take off from prime tourist locations provide the greatest amount of services for visitors to Hong Kong.

In terms of storage facilities, the tourism companies that we talked to requested space for their vessels in the harbour, for reasons given in section 4.2.1. The expanded To Kwa Wan typhoon shelter would be an ideal location because of its proximity to Central and Tsim Sha Tsui.

4.2.3 New Uses of the Harbour

Compared to other harbours around the world, Victoria Harbour is devoid of water-based recreation. As the harbour was developed with commercial use in mind, it should be no surprise that there are no public facilities solely designated for that purpose. There are three main facets to this issue: the lack of public accessibility of the harbour, the lack of publically accessible land/water interfaces to which to tie a boat, and the lack of water sports facilities inside the harbour. Through interviews and research on other harbours, we learned of different ideas for facilities, such as boat rental, boat parking, and a water sports centre, all of which would work to remedy this situation.

One distinct issue concerns the public accessibility to the harbour. If someone would like to enjoy the harbour for a day but does not own a boat, he/she is limited to participating in a structured tour or chartering a boat. While this does satisfy the requirement of being on the harbour, it lacks the freedom of control. If boat rental facilities were available, this would enable virtually anyone to enjoy Victoria Harbour in a manner of their own choosing.

Another significant shortcoming within the harbour deals with the lack of interfaces that aid in the transition between water and land. Currently it is almost impossible for boat users to park along the waterfront, disembark and walk around. The only exceptions require membership at a private organisation in order to be allowed to perform those actions. Small marinas could be included in Yau Tong Bay or the Kwun Tong typhoon shelter (Appendix D, Robert Wilson). If marinas were created and made available to the public, this type of recreational activity would become possible.

Currently there are five water sports centres (managed by the LCSD) for use by Hong Kong residents. While these facilities are good, they are far from where most people live. One proposal designed to address this issue is the Kai Tak International Regatta Centre.

According to Robert Wilson, Chairman of the Hong Kong China Rowing Association, the water space between the typhoon shelter and the Kai Tak nullah is very valuable due to its potential to become a rowing course with international standards, as well as its convenient location close to Hong Kong residents. Part of this plan includes the addition of a sluice gate to help flush that area as well as To Kwa Wan of the dirty water there. Additionally, as mentioned above, a small marina and boat rental facility could be included in this development in order to make the harbour more accessible to the general public. Currently, there is a recycling facility located in Kai Tak; but that will be leaving the area within five years (Appendix D, Roger Tupper).

4.2.4 Preserving a Balance

We discovered through the stakeholders' conference discussions and follow up interviews that each stakeholder desired the appropriate facilities and features to satisfy his/her own needs. They all placed emphasis on the importance of satisfying all stakeholders' needs, as well, in order for a balance of their competing interests to be achieved. Tony Chan of the Development Bureau stated, "Not everyone agrees with how the harbourfront should be enhanced. When changing anything in Victoria Harbour, balance is a very key word." Currently recreational users are found primarily in the Eastern Harbour, transportation users are found primarily in the Central Harbour, and commercial users are found primarily in the Western Harbour.

At the stakeholders' conference, recreation and tourism uses of the harbour were identified as likely to increase in the coming years. Similarly, transportation was identified as having the potential to increase, depending on the land developments around the harbour. Commercial shipping was identified as neither increasing nor decreasing. The difficulty in balancing the harbour is in accommodating recreation, tourism, and transportation without destroying commercial shipping, which, as a major industry in Hong Kong, should be preserved.

The first thing to consider when balancing the harbour is what cannot move – in Victoria Harbour that would be commercial shipping. The ocean going vessels utilize the

Rambler Channel and the container ports there, while river-trade vessels and smaller commercial vessels use the facilities in Yau Ma Tei. The shore facilities and sea lanes required by these users are already in place in the western harbour, so it does not make sense to move them somewhere else. The commercial shipping area could also be strengthened, or at least preserved, by keeping residential zones at an appropriate distance. Commercial zones often have characteristics that residents find annoying, such as early-morning operating hours, foul smells, loud noises, and "ugly" industrial ships and equipment. Proper zoning would help reduce the pressure on these facilities to move.

Central contains seven ferry piers and is home to most of the marine-based transportation is found in Central. Intra-territory marine-based transportation facilities are currently located in areas where demand for water-based transportation exists, so moving them does not make sense either. In fact, even a small move away from land-based transportation hubs or destinations can cause significant harm to the intra-harbour ferries; for instance, the Star Ferry has lost 18% of its business on its Tsim Sha Tsui to Central route as a result of having to move 300 metres due to the Central/Wan Chai bypass project (Appendix D, Frankie Yick). Marine transportation can be strengthened by placing facilities near popular destinations. In the future, this could mean Kai Tak and the West Kowloon Cultural District.

The majority of pleasure boats are found in the eastern harbour because of the Causeway Bay typhoon shelter. Though there is public space in the typhoon shelter, the majority of it is occupied by the RHKYC – which is private. As discussed above in 4.2.1, it is very difficult for smaller pleasure vessels to get in to the harbour. With the majority of the commercial operations in the eastern harbour leaving within a few years, there is now an opportunity to increase public access via the eastern harbour, in places such as Kai Tak and Yau Tong Bay.

Tourism boats are technically a subset of pleasure boats under the Marine Department's vessel classification scheme, even though their operators have needs more similar to those of marine transportation. Due to their classification as pleasure vessels, their

needs often go unnoticed by the government. We have learned through interviews with organisations like the Hong Kong Tourism Board, Saffron Cruises, and Spysea that though they do not have an area of the harbour devoted specifically to their use, they would like to be included in the balancing of the harbour. Beyond the specific facilities discussed in 4.2.2, the To Kwa Wan typhoon shelter could be made to accommodate tourism vessels.

4.2.5 Governing Organisation

Every time we talked to a stakeholder, whether it was through an interview, at the stakeholder's conference, at a marine-related event, or through casual conversation, they all repeated the same line: the government impedes progress on the waterfront. Their specific complaints varied, and not all their comments were negative, but, overall, they listed the government as the biggest problem.

The first issue raised was that there are too many different government organisations involved in the waterfront. The Marine Department is responsible for safety. The Leisure and Cultural Service Department is responsible for managing the promenades and government-run maritime recreational facilities. The Lands Department owns all the land and the seabed. The Planning Bureau is responsible for tendering and making plans. The Civil Engineering and Development Department is responsible for the design and maintenance of land/water interfaces. The Environmental Protection Department is responsible for the water quality. The Highways Department is responsible for highway development along the waterfront. The individual Town Councils are responsible for implementing plans specifically in their own townships. The list goes on; the point is that there is a multitude of organisations responsible for different aspects of the waterfront, making communication between marine users and the government, and between government departments difficult at best.

The lack of a unified vision for the harbour's future was another issue raised by many stakeholders. This problem manifested itself in different ways; for instance, several urban designers commented that the Planning Department's plans were often excellent from the point of view of a marine user, but the plans were often ruined by other organisations with more influence. In addition, the District Councils often want changes to their district's

waterfronts, but, by definition, they do not have the entire waterfront in mind when they make decisions. Piecemeal planning and implementation, such as is the case in Hong Kong, only ensures piecemeal results.

Many other cities have solved this problem by adopting an over-arching government organisation responsible for the entire waterfront and harbour, as seen in Chapter 2. With some initial capital investment, such an organization could be self-funded if it collected fees from things such as vessel licences, moorings, and fines for safety and health violations. This would allow the harbour area to be developed by one organisation with the proper scope and perspective of all the issues and stakeholders and provide a much more consistent flow of policies, while, at the same time, helping to reduce government bureaucracy from taking over. The Harbour Business Forum published a document recently called the *Integrated Harbour Vision & Delivery Plan*, which discusses in-depth a possible structure of such an organisation, as well as a more in-depth analysis of its strengths, weaknesses, and implications.

5 Conclusions and Recommendations

As a result of the information collected and the trends identified over the course of our project, we determined a set of conclusions regarding the needs of Victoria Harbour. In order to address the issues noted in these conclusions, we provide recommendations for the future improvement of Victoria Harbour's waterfront. These recommendations are intended to provide guidelines for future planning of waterfront space to better facilitate an increase in marine activities and to preserve Victoria Harbour as a focal point of Hong Kong's identity.

1. Sheltered water is an extremely vital asset in Victoria Harbour and is not currently recognized as such.

Sheltered water has an incredible value to marine users of all kinds, from ocean-going cargo vessels to community boats, as described in 4.2.1.

- **We recommend an increase in the amount of sheltered water available in Victoria Harbour to meet the increasing demand for shelter during typhoon seasons and year-round mooring facilities.**

  The number of vessels in the harbour is growing, and, in order to allow the number of vessels in the harbour to continue to grow, more space must be provided for moorings. The issue, however, lies in the availability of space for shelter during typhoons. If year-round moorings are placed in typhoon shelters, they detract from the typhoon shelter space available in that area. It is for this reason that additional moorings cannot currently be added in typhoon shelters. Due to this lack of available space, governing bodies should consider an increase in the amount of sheltered water; more sheltered water would allow for increased mooring space for the growing number of small vessels while retaining typhoon shelter space for existing vessels.

- **In order to increase the amount of sheltered water for moorings as well as shelter during typhoons, we suggest moving the breakwaters in the Causeway Bay and To Kwa Wan typhoon shelters.**

  Currently, the Causeway Bay typhoon shelter is the primary location allocated by the Marine Department for the mooring of pleasure vessels. This shelter is already unable to accommodate additional pleasure vessels, preventing the growth of recreational boating.

  Expansion of the To Kwa Wan typhoon shelter would serve the community by providing additional space for boat storage during typhoons. This large shelter is currently used primarily for temporary shelter and could be expanded to further facilitate this function.

  - **We recommend that the To Kwa Wan typhoon shelter be used to provide moorings for the tourism-supporting vessels, including harbour tour boats and water taxis.**

    To Kwa Wan could provide a more convenient location for these vessels, which are currently forced to moor in the Aberdeen typhoon shelter, and facilitate the tourism industry growth. Allowing these vessels to moor within the harbour rather than an area located on the other side of Hong Kong Island would allow these companies to reduce their cost of operation, expand their business, make harbour tours more readily available and affordable.

- **Use the Central-Wanchai Bypass and Shatin-Central Link construction to improve the Causeway Bay typhoon shelter and adjacent ex-PCWA.**

The Central-Wanchai Bypass' temporary effect on the Causeway Bay typhoon shelter could easily become beneficial rather than detrimental. We recommend that

this potentially valuable opportunity not be wasted. While the construction is occurring in the area, other necessary projects could also be undertaken in order to improve the typhoon shelter.

- **The shelter should be enlarged to accommodate the increasing number of pleasure vessels and to facilitate the further growth of the recreational boating industry.**
- **The fore-aft mooring system should be replaced by a more efficient pontoon system that would allow boaters walking access to their vessels, as well as allow more ships to fit into the same amount of space.**
- **Access and amenities for community, leisure, and watersport uses should be provided. Namely, access to boating should be provided for the general public, including boat rentals, space for very small boats, and facilities for the floating communities located in the Causeway Bay shelter. Additionally, proper fuel, fresh water, garbage disposal, sewage removal, and maintenance services should be provided for use by the general public.**

- **We recommend that marine users be given higher consideration in the development of land surrounding sheltered water.**

Sheltered water is crucial for the safe mooring of smaller vessels. It also provides easy access to boating and other marine-related activities. As such, the water-edge around sheltered water should be designed to cater to and support marine users.

2. The quality and accessibility of existing land/water interfaces is inadequate.

The issues noted in section 4.2.2 prevent users from making proper use of public piers and landing steps. These interfaces are vital to many industries in Hong Kong and should receive much more attention than at present.

- **We recommend that landing steps be improved in the following categories:**
    - **Land access** – Roads, walkways, or other forms of land-based transportation allow water-based transportation to become a viable option for travellers. It is not only important to have land/water interfaces located nearby to proper land-based transportation but also to have land-based access for existing interfaces.
    - **Signage** – Landing steps that are used frequently for passenger transport, harbour tour pick-up, or other frequent services should be given signs to identify their location, as well as their intended purpose.
    - **Lighting** – Many of the landing steps in Victoria Harbour lack any kind of lighting, making it nearly impossible for transportation or commercial services to make use of these areas after dark.
    - **Shelter** – In inclement weather, many potential passengers for transport ships have nowhere to wait for their boat. Covered waiting areas would provide an area for passengers to wait, protected from the weather. These areas are significantly lacking in the harbour.
    - **Safety** – Most landing steps in Victoria Harbour lack railings. These areas can become quite dangerous as passengers are forced to step off rocking vessels, as there are currently no supports on these slippery steps. Additionally, we found that the situation in Lei Yue Mun is extremely dangerous. All of the life buoys surrounding the typhoon shelter are made of

metal and are welded to the railing. **We recommend that the lack of real life buoys in Lei Yue Mun be fixed <u>immediately</u>.**

- **We recommend that more public piers be added to the plans for Kai Tak, Yau Tong Bay, West Kowloon Cultural District, Kennedy Town, North Point, and future developing areas in order to facilitate transportation to these areas and aid the growth of the harbour tour industry. In addition, public piers should be improved to provide adequate facilities for all users.**

  These piers should be multi-purpose, offering ticketing facilities, shops, restaurants, bars, and other commercial and pleasure services for all to enjoy.

3. Future plans do not give sufficient consideration to the potential for developing areas to become areas of leisure and recreation for both marine users and visitors to the waterfront.

The development of the West Kowloon Cultural District, Kai Tak, and all other waterfronts will cause an increase in demand for harbour-based tourism, leisure activities, and water-based transport. At present, government plans for developing areas neglect marine users. In order to allow for maximum use of available space for marine-related activities, planners must keep in mind the needs of marine users.

- **We recommend additional piers and landing steps be included in the plans at the very minimum.**

  More specific recommendations for some of the major developing areas follow.

- **Central**

We recommend that additional facilities be added to the plan, including a pier addition to the PLA birth for increased access, a display ship, and docking along the waterfront nearby to the Convention Centre.

Figure 5.1: Current PLA Berth Plan

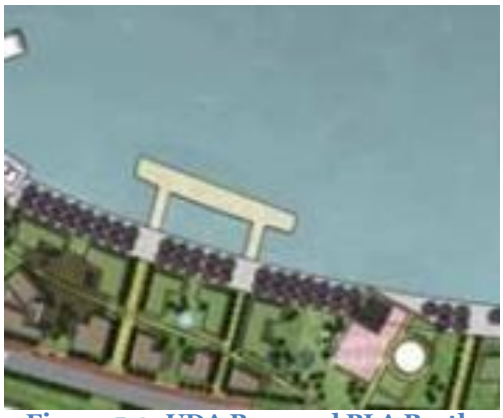


Figure 5.2: UDA Proposal PLA Berth

- **Wan Chai**

We recommend consideration of the highlighted themes in the Royal Hong Kong Yacht Club's 2005 proposal for this area, with the addition of an expanded typhoon shelter, repositioned breakwater in the ex-PCWA, facilities for public small-boat enjoyment – including boat rental facilities, fishing supplies rental, public moorings, public slipway, etc. – and an additional pontoon system for the community vessels located in the Causeway Bay typhoon shelter.

- **Kai Tak**

  We recommend that the current plan for Kai Tak area be expanded to transform the area into one of watersports activity for the general public. Specifically, the Hong Kong-China Rowing Association plan for an international rowing facility should be given serious consideration.

  Second, we recommend additional public piers and landing steps over the course of the runway to serve increased visitor traffic to the Kai Tak area and to accompany our previous recommendation of increased usage of the typhoon shelter space.

- **West Kowloon Cultural District**

  In this area, we recommend the consideration of marine users in future plans. Namely, public piers and landing steps for small transport vessels, as well as a pier for ferry services to this area.

- **Yau Tong Bay**

  With the re-zoning of this area, we recommend that future developments along this area not neglect marine users. The value of this area as sheltered water would make the bay an excellent location for a small marina to accompany any proposed waterfront promenade.

4. The movement of PCWAs out of the eastern and central harbour threatens to destroy the cargo industry currently utilizing these facilities.

- **We recommend the recognition of the industrial marine uses in Yau Ma Tei, Tai Kok Tsui, and Stonecutter's Island, and the provision of adequate land, access, and modern permanent facilities.**

The conglomeration of marine services, from cargo handling to repairs, - guarantees the industry can operate efficiently and cost-effectively. The consolidation of industrial marine services to this area should be further strengthened by a long-term lease to industrial services so that permanent, modernized facilities may be constructed. Not only would this increase the effectiveness of the industry in the area, but it would also increase the attractiveness of these facilities.

It must be noted that in order to continue proper operations, the hinterland in this area must also remain as a dedicated industrial area. The land surrounding industrial areas should not be re-zoned as residential because this creates conflicts contributing to the further decline of Hong Kong's historical industry.

5a. Little balance exists between the various classes of marine users in Victoria Harbour.

Over the course of this study, we determined a number of specific imbalances amongst the many users of the harbour that prevent Victoria Harbour from reaching its full potential. Common use divides the harbour into its three areas – industry, transportation, and recreation - but waterfront development projects fail to facilitate the users located in each area. Current development plans for the harbour do not consider the preservation of balance amongst marine users. Future plans should consider the harbour as a whole to make the best possible decisions for marine users of all kinds.

5b. There is no overall plan for future developments in Victoria Harbour. All projects are undertaken on a case-by-case basis.

Future developments should consider the harbour as a whole, protect and support the balance of marine users, and provide services, facilities, and attractions within the harbour. It is imperative that all waterfront areas of Victoria Harbour work together. An integrated network of facilities, waterfront areas, and users creates a vibrant waterfront and draws more visitors.

5c. The large number of organisations with a controlling stake along the waterfront hinders the development of Victoria Harbour.

In order to create the best possible harbour, the waterfront must be developed with a guiding plan that considers the balance of marine uses and users, but the current waterfront governance system prevents action. All of the organisations with a stake in Victoria Harbour's waterfront operate independently – each has an agenda and separate goals for development projects. Under these circumstances, it becomes nearly impossible to support an over-arching vision for Victoria Harbour.

Each controlling organisation has its own interests in the harbour, but none of those interests are *the harbour*. In order to ensure that the future of Victoria Harbour is one of vibrancy and balance, the organisational structure of the harbour's governance must be modified. Victoria Harbour needs an organisation with the sole interest in the harbour as a whole – one organisation that can determine an overall goal for the harbour, create a development plan to reach that goal, and execute the plan quickly, efficiently, and completely.

Our final recommendation addressing conclusions 5a, 5b, and 5c is to establish a single organisation for the control of the waterfront – one to plan and implement future development projects and manage existing facilities.

A single controlling entity will ensure that Victoria Harbour experiences balance amongst users. This organisation would develop the overall plan for the creation of a vibrant harbour and would be responsible for seeing it through. An organisation with full administrative powers will ensure that action is taken, necessary improvements are made, and that Victoria Harbour will become a truly magnificent harbour that sets Hong Kong apart from all other harbours the world over.

Reflections & Improvements

The implications of the recommendations made by our team are extensive, and further study into a number of these conclusions should be undertaken. Our recommendations require a large amount of effort, policy change, and cooperation, but they are based on facts collected over the course of this study that should be verified by additional research. In this section, we identify areas of interest for further study, as well as provide advice for these studies based on our experiences and observations.

Geographical Scope

Hong Kong is in the unique position of having both a small metropolitan core city and wider territory under its control. While the region encompasses many different islands, bays, and rivers, the city itself is centred around Victoria Harbour. The scope of this project addressed this urban core. We excluded the resources available to the government and to the other marine stakeholders in the rest of the Hong Kong territory. These resources are important to the goal of balancing marine activities and uses in the harbour, as space along the water is finite and it is impossible to fit everything there. Future studies should therefore cover the entire territory and not just the harbour.

Design of Future Studies

This study provides a solid basis of information upon which further research may build. This paper presents a significant introduction to the facilities, governance, services, and issues present throughout Victoria Harbour. Our Google Earth database exists solely to help others to understand these issues and concerns. Future studies should become acquainted with the harbour before designing the study. Our methods should be considered and analysed during the design process of any further studies.

Additionally, the many stakeholders along the waterfront should be considered in future studies, as they are often under-represented in policy decisions. The goal of bringing

people to the waterfront and the waterfront to the people should be recognized in any further study. Marine users must be given equal consideration to land users and the focus of research should reflect this consideration.

Forecast

One of the objectives of this project was to forecast how the uses of Victoria Harbour will change over the next 5, 10, and 15 years. We estimated the change in marine users to the best of our ability, using existing plans, past trends, and stakeholder predictions. We believe strongly that our forecast is as accurate as possible, but future research should delve further into the issues discussed in this study. Future studies should therefore include advanced economic and statistical analysis.

Given the wide-ranging implications of our findings on waterfront planning, reclamation, and the design and management of land/water interfaces, we urge all stakeholders to undertake further research on the value of Victoria Harbour as a marine resource and to develop and validate our findings.

Bibliography

Bernard, H. R. (2006). *Research Methods in Anthropology* (4th Ed.). Lanham: AltaMira Press.

Boston Redevelopment Authority. (1979). *Boston Harbor: Challenges and Opportunities for the 1980's*. Boston, Mass: Boston Redevelopment Authority.

Boston Redevelopment Authority. (2003). *South Boston Waterfront Public Realm Plan*. Retrieved on November 4, 2009, from http://www.bostonredevelopmentauthority.org/pdf/PlanningPublications/Seaport_Public_Realm_Plan.pdf

Carroll, J. (2007) *A Concise History of Hong Kong*. Lanham, MD: Rowman & Littlefield Publishers.

Census and Statistics Department. (2007a). *Hong Kong Population and Average Annual Growth Rate, 1996, 2001 and 2006*. Retrieved on November 14, 2009, from http://www.censtatd.gov.hk/hong_kong_statistics/statistical_tables/index.jsp?charsetID=1&subjectID=1&tableID=135

Census and Statistics Department. (2007b). *Census and Statistics Department Announces Results of Household Income Study*. Retrieved on February 23, 2010, from http://www.bycensus2006.gov.hk/en/press/070618/index.htm

Census and Statistics Department. (2009a). *The Four Key Industries in the Hong Kong Economy*. Retrieved on November 15, 2009, from http://www.censtatd.gov.hk/hong_kong_statistics/four_key_industries/index.jsp

Census and Statistics Department. (2009b). *The Four Key Industries in the Hong Kong Economy - Percentage Share to GDP at Current Factor Cost*. Retrieved on November 22, 2009, from http://sc.info.gov.hk/gb/www.censtatd.gov.hk/showtablecust.jsp?charsetID=1&subjectID=12&tableID=189

Census and Statistics Department. (2009c). *Key Economic and Social Indicators*. Retrieved on November 14, 2009, from http://www.censtatd.gov.hk/hong_kong_statistics/key_economic_and_social_indicators/index.jsp#pop

Cheung, C. (2009). *Safeguarding Our Heritage: A Clean Victoria Harbour*. Retrieved on November 8, 2009, from http://74.125.93.132/search?q=cache:Iucqfi9jE38J:www.epd.gov.hk/epd/english/news_events/events/files/clara_cheung.doc+victoria+harbour+development+hong+kong&cd=6&hl=en&ct=clnk&gl=us&client=firefox-a

Cheung, L., Kwan, P., Ching, F., et al (Directors). (2005). *Victoria Harbour*. [Video/DVD] Hong Kong: ATV.

China Daily. (2005, January 23). HK May Lose Container Port Crown. *China Daily*. Retrieved on November 12, 2009, from http://www.chinadaily.com.cn/english/doc/2005-01/23/content_411434.htm

CIA. (2009). *Hong Kong*. Retrieved on November 27, 2009, from https://www.cia.gov/library/publications/the-world-factbook/geos/hk.html

City of Baltimore. (2003). *Maritime Master Plan*. Retrieved on December 11, 2009, from www.baltimorecity.gov/government/planning/images/MaritimeFinal.pdf

Civil Aviation Department. (2005). *Kai Tak Airport 1925-1998*. Retrieved on December 10, 2009, from http://www.cad.gov.hk/english/kaitak.html

Civil Engineering and Development Department. (2004). *Overview of Enhancement Works at Government Piers and Landing Facilities*. Retrieved on December 3, 2009, from http://www.harbourfront.org.hk/eng/content_page/doc/subcom_2_agenda_3.pdf

Civil Engineering and Development Department. (2009a). *Central and Wan Chai Reclamation*. Retrieved on November 10, 2009 from http://www.cedd.gov.hk/eng/about/achievements/regional/regi_central.htm

Civil Engineering and Development Department. (2009b). *Wan Chai Development Phase II – Latest Development*. Retrieved on November 12, 2009, from http://www.cedd.gov.hk/eng/topics/wdii/index.htm

Civil Engineering and Development Department. (2009c). *Site Information for Kai Tak Cruise Terminal*. Retrieved on February 28, 2010, from http://www.cedd.gov.hk/eng/whats/ktct/doc/Panel%203-General%20Layout.pdf

Civil Engineering and Development Department. (2009d). *Truck Road T2*. Retrieved on February 28, 2010, from http://www.epd.gov.hk/eia/register/profile/latest/esb203/esb203.pdf

Civil Engineering and Development Department. (2009e). *Provision of Land and Infrastructure*. Retrieved on February 28, 2010, from http://www.cedd.gov.hk/eng/publications/fact_sheet/doc/Provision%20of%20Land%20and%20Infrastructure%20Jun%202009.pdf

Chan, Q. (2006, July 3). Community Deserves Chance to Save Heritage. *South China Morning Post,* pp. 14.

Chu, W. (2003). Victoria *Harbor: A Shrinking Asset*. Retrieved on November 4, 2009, from http://www.saveourshorelines.bizland.com/project04.html.

Conley, M. (2007, January 5). Hong *Kong's Real Estate is World's Peak*. Retrieved on November 12, 2009, from http://abcnews.go.com/Business/FunMoney/story?id=2773844&page=1&CMP=OTC-RSSFeeds0312

Connell, D., Wu, R., Richardson, B., Leung, K., Lam, P., & Connell, P. (1998). Fate and Risk Evaluation of Persistent Organic Contaminants and Related Compounds in Victoria Harbour, Hong Kong. *Chemosphere, 36*(9), 2019-2030.

Designing Hong Kong Harbour District. (2009). *Designing Hong Kong Harbour District*. Retrieved on November 9, 2009, from http://www.harbourdistrict.com.hk/

Designing Hong Kong. (2009). *About Us*. Retrieved on November 9, 2009, from http://www.designinghongkong.com/cms/index.php?option=com_content&task=view&id=2&Itemid=6

Designing Hong Kong Harbour District. (2004a). *Building Consensus on Sustainable Planning Principles for the Harbour District. Paper no. 2, Proceedings of 27 March Workshop*. Hong Kong: GML Consulting Ltd.

Designing Hong Kong Harbour District. (2004b). *Building Consensus on Sustainable Planning Principles for the Harbour District. Paper no. 3, Public Opinion Survey*. Hong Kong: GML Consulting Ltd.

Designing Hong Kong Harbour District. (2004c). *Building Consensus on Sustainable Planning Principles for the Harbour District. Paper no. 4, Key Issues Paper*. Hong Kong: GML Consulting Ltd.

Designing Hong Kong Harbour District. (2004d). *Building Consensus on Sustainable Planning Principles for the Harbour District. Paper no. 5, Research Papers*. Hong Kong: GML Consulting Ltd.

Designing Hong Kong Harbour District. (2004e). *Building Consensus on Sustainable Planning Principles for the Harbour District. Summary Report*. Hong Kong: GML Consulting Ltd. Retrieved on November 15, 2009, from http://www.harbourdistrict.com.hk/miniweb/chi/doc/Full%20Report%20(Eng%20&%20Chi).pdf

Designing Hong Kong. (2009). *Designing Hong Kong Newsletter*. Retrieved on November 9, 2009, from http://www.designinghongkong.com/cms/index.php?option=com_yanc&act=archive&cid=1&Itemid=8

Doody, C., Kim, D., Lee, A., & Sucre, A. (2006). *Harbor Reclamation: Central and Wan Chai Districts Unpublished IQP Report*. Worcester: Worcester Polytechnic Institute.

Dwyer, D. J. (1984). The Future of Hong Kong. *The Geographical Journal*, 1-10.

Emporis. (N.D.). *One Charles Center*. Retrieved on November 28, 2009, from http://www.emporis.com/application/?nav=building&lng=3&id=1charlescenter-baltimore-md-usa

Endacott, G.B. (1964). *A History of Hong Kong*. London: Oxford University Press.

EarthTimes. (2009, November 2). Hong Kong's Iconic Victoria Harbour Halved in Width by Developers. Retrieved on November 11, 2009, from http://www.earthtimes.org/articles/show/292784,hong-kongs-iconic-victoria-harbour-halved-in-width-by-developers.html

Focus Fight on Heritage Sites That Can Be Saved. (2007, May 10). *South China Morning Post,* pp. 14.

Fox, E. (1997). *Basic Sailing: Boat Types*. Retrieved on December 9, 2009, from Rutgers University Website: http://comminfo.rutgers.edu/~elfox/types.html

Geddes, P. (1968). *Cities in Evolution*. Great Britain: Howard Fertig, Inc.

Goodstadt, L. F. (2005). *Uneasy Partners: The Conflict Between Public Interest and Private Profit in Hong Kong*. Hong Kong: Hong Kong University Press.

Google Maps. (2009). *Hong Kong, SAR*. Retrieved on December 15, 2009, from www.maps.google.com

Graf, A., & Chua, B. H. (2009). *Port Cities in Asia and Europe*. London; New York: Routledge.

Harbour Business Forum. (2006). *Harbour Business Forum Releases Findings of Hong Kong's Most Comprehensive Survey of Public Opinion on Victoria Harbour*. Retrieved on November 12, 2009, from http://www.harbourbusinessforum.com/download/press_releases_060220_e.pdf

Harbour Business Forum. (2008). *Hong Kong Harbour*. Retrieved on November 20, 2009, from http://www.harbourbusinessforum.com/en-us/hkharbour

Harbour Business Forum. (2009a). *About Us*. Retrieved February 28, 2009, from http://www.harbourbusinessforum.com/en-us/page/show/about

Harbour Business Forum. (2009b). *Integrated Harbour Vision and Delivery Plan – The Business Case*. Hong Kong: Harbour Business Forum.

Harbourfront Enhancement Committee. (2009a). *Our Harbourfront*. Retrieved on November 22, 2009, from http://www.harbourfront.org.hk/eng/content_page/protection.html?s=2#1

Harbourfront Enhancement Committee. (2009b). *Harbourfront Enhancement Committee Membership*. Retrieved on November 14, 2009, from http://www.harbourfront.org.hk/hec/eng/membership/index.html?s=1

Harbourfront Enhancement Committee. (2010a). *Draft Planning Brief for Yau Tong Bay "Comprehensive Development Area" Zone on the Draft Cha Kwo Ling, Yau Tong, Lei Yue Mun*. Retrieved on February 23, 2010, from http://www.harbourfront.org.hk/hec/eng/subcom/doc/meeting31_paper2.pdf

Harbourfront Enhancement Committee. (2010b). *Success Through Consensus Building*. Retrieved on March 2, 2010, from http://www.harbourfront.org.hk/hec/eng/index.html?s=1

Harms, H., University of California, B., & Institute of Urban & Regional Development. (2007). *Changes on the Waterfront - Transforming Harbor Areas: Comparison and Evaluation of Waterfront Developments in Two Contexts: San Francisco Bay Area and Hamburg, Germany*. Berkeley, CA: University of California at Berkeley, Institute of Urban and Regional Development. Retrieved on November 12, 2009, from http://repositories.cdlib.org/iurd/wps/WP-2008-02/

Highways Department Hong Kong. (2009). *Central Kowloon Route – General Layout Plan*. Retrieved February 28, 2010, from http://www.hyd.gov.hk/eng/major/road/projects/6461th/HMW6461TH-SP0020.pdf

Home Affairs Bureau. (2008). *Executive Summary*. Retrieved February 28, 2010, from http://www.hab.gov.hk/wkcd/pe/eng/doc/CC_Report_eng/3_executivesummary.pdf

Hong Kong Democratic Foundation. (1996). *'Land Tax' and High Land Prices in Hong Kong*. Retrieved on November 15, 2009, from http://www.hkdf.org/pr.asp?func=show&pr=24

Hong Kong Planning Department. (2001). *Port Development Strategy Review 2001 Executive Summary*. Retrieved on November 14, 2009, from http://www.pland.gov.hk/pland_en/p_study/comp_s/port/pdsr_es01.pdf

Hong Kong Planning Department. (2007). *Kai Tak Planning Review: Executive Summary*. Retrieved on November 21, 2009, from http://www.pland.gov.hk/pland_en/p_study/prog_s/sek_09/website_chib5_eng/english/ES_Eng.pdf

Hong Kong Special Administrative Region Government. *Government Structure*. Retrieved on November 14, 2009, from http://www.gov.hk/en/about/govdirectory/govstructure.htm

Hong Kong Tourism Board. (2003). *Planning Study on the Harbour and its Waterfront Areas*. Retrieved on November 15, 2009, from http://www.pland.gov.hk/pland_en/p_study/comp_s/harbour/harbour_finalreport/contents.htm#maintext

Hong Kong Tourism Commission. (2004). *Tsim Sha Tsui Promenade Beautification Project*. Retrieved on November 21, 2009, from http://www.tourism.gov.hk/english/current/current_tst.html

Hong Kong Tourism Commission. (2009). *Tourism Performance: Key Achievements in 2008*. Retrieved on November 22, 2009, from http://www.tourism.gov.hk/english/statistics/statistics_perform.html

Hong Kong Yearbook. (1999). *Hong Kong Annual Report 1999*. Retrieved December 10, 2009, from http://www.yearbook.gov.hk/1999/eng/13/13_12.htm

Hong Kong Yearbook. (2007a). Transport. Retrieved on November 15, 2009, from http://www.yearbook.gov.hk/2007/en/pdf/E13.pdf

Hong Kong Yearbook. (2007b). Recreation, Sport, and the Arts. Retrieved on November 15, 2009, from http://www.yearbook.gov.hk/2007/en/pdf/E19.pdf

Hong Kong Yearbook. (2008). Hong Kong: The Facts. Retrieved on November 15, 2009, from: http://www.yearbook.gov.hk/2008/en/pdf/E-Facts.pdf

Hyde, M. C., Seymour, S. W., Tennant, D. W. & Truong, M. H. (2008). *Four Tourists and Hong Kong's Harbourfront: A Survey of the Waterfront of Victoria Harbour (E-project-022808-101640)*. Retrieved on November 8, 2009, from http://www.wpi.edu/Pubs/E-project/Available/E-project-022808-101640/

Infoplease. (2007). *World Port Ranking, 2005*. Retrieved on November 12, 2009, from http://www.infoplease.com/business/world-port-ranking-2005.html

Ingham, M. (2007) *Hong Kong: A Cultural History*. London: Oxford University Press.

Jannetti, N. A., Scarborough, A. M., Smith, P. L. & Tuite, E. M. (2009). *Evaluating Hong Kong's Waterfront (E-project-022709-044912)*. Retrieved on November 8, 2009, from http://www.wpi.edu/Pubs/E-project/Available/E-project-022709-044912/

Jenks, M., & Dempsey, N. (2005). *Future Forms and Design for Sustainable Cities*. Amsterdam; Boston: Architectural Press. Retrieved on November 18, 2009, from http://www.loc.gov/catdir/enhancements/fy0625/2005049840-d.html

Lai, C. (2009). *SOS - Save Our Shoreline - Society for the Protection of the Harbour*. Retrieved on November 8, 2009, from http://www.saveourshorelines.bizland.com/project04.html

Lee, L. O. (2008). *City Between Worlds: My Hong Kong* (1st ed.). Cambridge, Mass.: Harvard University Press. Retrieved on November 7, 2009 from http://www.loc.gov/catdir/toc/ecip0716/2007017270.html

Leung, S., & Wong, C. (2009). *Hong Kong Tightens Real-estate-marketing Restrictions*. Retrieved on November 18, 2009, from http://www.bloomberg.com/apps/news?pid=20601080&sid=a0kSkbBjlNSM

Lo, C. P. (1992). *Hong Kong*. London: Belhaven Press.

Marine Department. (2009a). *Container Terminals*. Retrieved on November 20, 2009, from http://www.mardep.gov.hk/en/pub_services/sdfiles/contterm.html

Marine Department. (2009b). *Port and Maritime Statistics*. Retrieved on November 20, 2009, from http://www.mardep.gov.hk/en/publication/portstat.html#2

Marine Department. (2009c). *Marine Ferry Terminal*. Retrieved on November 20, 2009, from http://www.mardep.gov.hk/en/pub_services/ocean/terminal.html

Marine Department. (2009d). *Ranking of Container Ports of the World*. Retrieved on November 19, 2009, from http://www.mardep.gov.hk/en/publication/pdf/portstat_2_y_b5.pdf

Marine Department. (2009e). *Assessment of Typhoon Shelter Space Requirements 2005-2009*. Hong Kong: Hong Kong Marine Department

Marine Department. (2009f). *Existing Marine Uses and Activities*. Retrieved February 23, 2009, from http://www.harbourfront.org.hk/hec/eng/meetings/doc/agenda090513/Annex_I_eng.pdf

Merriam-Webster Online Dictionary. (2009). Retrieved December 9, 2009, from http://www.merriam-webster.com/dictionary/

Millspaugh, M. L. (2003). The Inner Harbour Story. *Urban Land*, November 23 2009.

Ng, M. K., & Cook, A. (1997a). Reclamation: An Urban Development Strategy Under Fire. *Land use Policy, 14*(1), 5-23. DOI: 10.1016/S0264-8377(96)00028-2

NYS DOS Division of Coastal Resources. (2009). *About Us*. Retrieved on November 19, 2009, from http://www.nyswaterfronts.com/aboutus.asp

Port of Bellingham. (2009). *The Waterfront District*. Retrieved on November 30, 2009, from http://www.portofbellingham.com/content/ArchivesItem_147_1656_v

Protection of the Harbour Ordinance, 531, (1997). Retrieved on November 11, 2009, from http://www.legislation.gov.hk/blis_pdf.nsf/6799165D2FEE3FA94825755E0033E532/A6F680241E02ADBD482575EF00152C69/$FILE/CAP_531_e_b5.pdf

Radio Television Hong Kong (Director). (2006). *Hong Kong's Harbourfront*. [Video/DVD] Hong Kong: RTHK.

Raine, G. (2006, May 13). Tourism dollars add up. *San Francisco Chronicle*. Retrieved, from http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2006/05/13/BUG0TIR3FC37.DTL

Royal Hong Kong Yacht Club. (2005). *History*. Retrieved February 28, 2009, from http://www.rhkyc.org.hk/default.aspx?c=131

Ryckbost, P. (2009). *Waterfront Redevelopment*. Retrieved on November 19, 2009, from http://www.umich.edu/~econdev/waterfronts/

The Salem Partnership. (2009). *The Salem Harbor plan*. Retrieved on November 8, 2009, from http://www.salempartnership.org/wharf.htm

Smith, D. (2008, May 30). Tourism Strong Despite Flagging Economy. *The Examiner*. Retrieved on November 18, 2009, from http://www.examiner.com/a-1415618~Tourism_strong_despite_flagging_economy.html

South Africa Venues. (2009). V&A Waterfront, Cape Town. Retrieved December 12, 2009, from http://www.sa-venues.com/attractionswc/waterfront.htm

Town Planning Board. (2008). *About Us*. Retrieved on November 14, 2009, from http://www.info.gov.hk/tpb/en/about_us/intro.html

Tsai, I., Pierce, M. A., Miller, M. P., Leung, W., Lemone, K. A., & Rong, Y. (2006). *Urban Planning and Development of Kai Tak*. Worcester, MA: Worcester Polytechnic Institute.

U.S. Census Bureau. (2008). *Household Income Rises, Poverty Rate Unchanged, Number of Uninsured Down*. Retrieved on February 23, 2010, from http://www.census.gov/Press-Release/www/releases/archives/income_wealth/012528.html

V&A Waterfront Company. (2009). *V&A Waterfront*. Retrieved on December 12, 2009, from http://www.waterfront.co.za/Pages/Welcome.aspx

van Zyl, P. (2005). *The V&A Waterfront Project in Cape Town, South Africa*. Retrieved on December 3, 2009, from http://www.springerlink.com/content/r9m2075x4067653u/

Wan, H., Eva. (2005). *Planning for Sustainable Waterfront Tourism in Hong Kong*. Retrieved on November 12, 2009, from http://sunzi.lib.hku.hk/hkuto/record/B35080668

The Waterfront Center. (2007). *Champions of Waterfront Excellence*. Retrieved on November 11, 2009, from http://www.waterfrontcenter.org/

Wikipedia contributors. (2009a). *List of Busiest Container Ports*. Retrieved on November 12, 2009, from http://en.wikipedia.org/wiki/List_of_busiest_container_ports

Wikipedia contributors. (2009b). *List of Cities Proper by Population*. Retrieved on November 12, 2009, from http://en.wikipedia.org/wiki/List_of_cities_proper_by_population

Wordie, J. (2002). *Streets: Exploring Hong Kong Island*. Hong Kong: Hong Kong University Press.

World Trade Organisation. (2009a). *World Trade Development Highlights*. Retrieved on November 20, 2009, from http://www.wto.org/english/res_e/statis_e/its2009_e/section1_e/its09_highlights1_e.pdf

World Trade Organisation. (2009b). *World Trade Developments in 2008*. Retrieved on November 20, 2009, from http://www.wto.org/english/res_e/statis_e/its2009_e/its09_world_trade_dev_e.htm

Zimmerman, P. (2004). *Building Consensus on Sustainable Planning Principles for the Harbour District*. Hong Kong: Designing Hong Kong Harbour District.

Appendix A: Sponsor Description

Designing Hong Kong, Ltd. (DHK) is a non-profit organisation focused on the revitalization of Hong Kong. The organisation was founded in 2006 by four individuals: Christine Loh, Markus Shaw, Peter Wong, and Paul Zimmerman. Other than the four founders, Designing Hong Kong is comprised of volunteers. DHK collaborates with other non-governmental and non-profit organisations in order to work towards the following goals:

1. To promote the health, safety, convenience and the general, social, and economic welfare of the community of Hong Kong today, without compromising the future;

2. To identify ways and means of enhancing the quality and sustainability of Hong Kong's living environment for the health, safety, convenience and welfare of residents and visitors;

3. To undertake research and studies into the design and development of Hong Kong's living environment;

4. To educate and raise the awareness among the community on the need to protect and enhance the living environment of Hong Kong, and the ways and means to do so;

5. To form alliances among members of the community with a common interest(s) in protecting and enhancing the living environment of Hong Kong;

6. To undertake any and all lawful acts and deeds which are necessary and conducive to attaining the objects of the Company.

(Designing Hong Kong, 2010, About Us)

The founders of Designing Hong Kong, Ltd. collectively represent a diverse group of associations. Christine Loh served on the Hong Kong Legislative Council from 1992 to 2000 and is the current CEO of the non-profit think-tank Civic Exchange. Markus Shaw has been the chairman of the Worldwide Fund for Nature since 2000 and a member of the WWF International Board since 2005. He is also a member of the Hong Kong Government's Advisory Council on the Environment. Peter Wong is a board member of the Global Reporting Initiative and a part of both the Greater Pearl River Delta Business Council and the Executive Committee of the Commission on Strategic Development.

Paul Zimmerman is the vice-chairman of the Coalition on Sustainable Tourism in addition to being the Convenor of Designing Hong Kong Harbour District, a consensus-

building initiative on designing a world-class harbour for Hong Kong. The initiative was organized by The Experience Group, Business Environment Council, and GML Consulting (the Consultants), and supported by over twenty organisations/individuals (Designing Hong Kong Harbour District, 2009, Acknowledgments). According to Designing Hong Kong Harbour District's official website, its primary objective is consensus building amongst government, business, and civic sectors on sustainable planning for the Harbour District.

Designing Hong Kong, Ltd. receives funding and support from individuals and other private organisations in Hong Kong (Hong Kong Harbour District, 2009, Acknowledgments). In addition to its direct association with the government, Designing Hong Kong Harbour District is sponsored by over 20 organisations and individuals, including the American Chamber of Commerce, Civic Exchange, Clear the Air, Fairmont Shipping, Friends of the Harbour, Green Lantau Association, Living Islands Movement, MF Jebsen International, Save Kai Tak Campaign, Save our Shoreline, and the Society for Protection of the Harbour, amongst others. In collaboration with many of the abovementioned civic organisations, Designing Hong Kong, Ltd. strives to improve the city of Hong Kong's tourism appeal and liveability for its residents (Jannetti et. al., 2009). Designing Hong Kong, Ltd. also receives non-financial support from organisations that provide studies and materials, distribute surveys, and organize events to discuss sustainable planning for Hong Kong.

Appendix B: Waterfront Evaluation Form

Site Information	
Action Area	Central
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 20th, 2010
Start Time	1:00PM
End Time	1:40PM

Marine Activities	
Transportation	Star Ferry, amongst others. The majority of the harbour's local ferry activity is seen in this action area.
Recreation	
Tourism	
Shipping	
Fishing	
Market	
Food and Dining	
Entertainment	
Services	There is immigration and customs boating.
Other	
Comments Part of waterfront is currently under construction due to reclamation.	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal ___ Handicap Access Pier 1: Government of Hong Kong Pier; Pier 2: Park Island; Pier 3: Discovery Bay; Pier 4: Lamma Island; Pier 5: Cheung Chau; Pier 6: Peng Chau (Western) and Mui Wo (Eastern); Pier 7: Star Ferry to Tsim Sha Tsui; Pier 8: Star Ferry to Hung Hom (Western); Pier 9: Public Pier; Pier 10: Public Pier under construction
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	_X_ Parking ___ Handicap Access Parking at government pier and the public piers - central piers no. 9 and 10
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area

	___ Boat launch
	___ Boat yard
	Comments
Tourism	**_X_** Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	_X_ Fire
	_X_ Marine Police
	_X_ Immigration Moorings for customs and immigration vessels
	_X_ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_X_ Toilets **_X_** Handicap Access
	___ Fresh water kiosk
	_X_ Piers/jetties **_X_** Handicap Access
	_X_ Landing step ___ Handicap Access ___ Sheltered
	_X_ Trash Receptacles
	Comments There are landing steps by the exhibition centre area. The public piers, Pier No. 9 and Pier No. 10 (currently under construction/not open) have six landing steps each. The central government pier, Pier No. 1, has some of the best landing steps in the harbour. There's a covered parking and waiting area, railings, good quality rubber fenders, etc; they are not publicly accessible

Site Information	
Action Area	Chai Wan
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 28th, 2010
Start Time	9:30AM
End Time	11:10AM

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	
Fishing	
Market	
Food and Dining	
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	**___** Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments The only recreation found was land-based. Chai Wan has parks and promenades.
Commercial	**___** Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	**_X_** Ticket kiosk
	___ Cruise terminal
	Comments
Services	**___** Harbour master

	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**___** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered There are three landing steps, one of which was completely fenced off.
	___ Trash Receptacles
	Comments The waterfront is pretty much inaccessible due to concrete walls bordering the edge of the waterfront.

Site Information	
Action Area	Hung Hom East
Evaluator	Brian Berard
Partner	Santiago Lora
Date	January 29th, 2010
Start Time	8:30AM
End Time	10:00AM

Marine Activities	
Transportation	Star Ferry, First Ferry, Bus Terminal, launch pickup/drop-off point
Recreation	Promenade
Tourism	
Shipping	
Fishing	Some land-based fishing areas
Market	Shopping centres
Food and Dining	Restaurants in ferry pier, café near promenade
Entertainment	
Services	Marine Police pier
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	_X_ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	_X_ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties _**X**_ Handicap Access
	_**X**_ Landing step _**X**_ Handicap Access _**X**_ Sheltered
	_**X**_ Trash Receptacles
	Comments

Site Information	
Action Area	Hung Hom West
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 23, 2010
Start Time	3:00pm
End Time	4:00pm

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	PCWA, container storage
Fishing	
Market	
Food and Dining	
Entertainment	
Services	Mail centre
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	**_X_** Container yard
	___ Mid-stream ops
	_X_ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties _**X**_ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	___ Trash Receptacles
	Comments

Site Information	
Action Area	Hong Kong Island East
Evaluator	Jarrad Fallon
Partner	Lucas Scotta
Date	1/20/2010
Start Time	12:41 PM
End Time	1:30pm 1/29/2010

Marine Activities	
Transportation	"First Ferry" terminal + handicap access, "Fortune Ferry" terminal + handicap access, "Kwun Tong Sam ka Tsuen" ferry
Recreation	Fishing is quite popular in multiple locations along the harbourfront (land based only), 1 man was swimming along the shoreline
Tourism	"Harbour Cruise Bauhina" harbour cruise with terminal + ticketing kiosk, Dangerous goods transport
Shipping	
Fishing	Multiple instances of land based fishing off of piers/docks/shoreline,
Market	"Fish market at First Ferry" terminal, wholesale fish market at east side of typhoon shelter
Food and Dining	7/11 at "First Ferry" terminal
Entertainment	
Services	
Other	Sea water intake service area
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	**___** Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	**___** Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	_X_ Boat yard 6+ shipyards located by the typhoon shelter, including ship repair and maintenance facilities
	Comments
Tourism	**_X_** Ticket kiosk

	___ Cruise terminal
	Comments
Services	___ Harbour master
	_X_ Fire
	_X_ Marine Police Full pier at typhoon shelter with 5+ vessels
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings Scattered everywhere along the Harbourfront
	___ Docking slips ___ Handicap Access
	_X_ Typhoon shelter ___ Size (Area) In Shau Ki Wan with covered waiting and bathroom with handicap access
	___ Breakwater
	___ Fuel station
	_X_ Sewage pumping station/boat
	_X_ Toilets **_X_** Handicap Access Two facilities with handicap access, one without
	_X_ Fresh water kiosk Two facilities for marine use only
	_X_ Piers/jetties **_X_** Handicap Access
	_X_ Landing step **_X_** Handicap Access **_X_** Sheltered
	___ Trash Receptacles
	Comments Multiple landing steps have no markings of label, lighting on a T-shaped pier, covered seating at public pier, Aldrich promenade in typhoon shelter

Site Information	
Action Area	Kennedy Town
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 20th, 2010
Start Time	10:30AM
End Time	11:15AM

Marine Activities	
Transportation	Lots of high-speed ferry traffic from cross-boundary ferries. Water taxis were picking up and dropping off passengers at landing steps
Recreation	A group of four jet skies passed through the area on their way to the western harbour
Tourism	
Shipping	Western District PCWA
Fishing	Many people were fishing off of the northern breakwater of the Western District PCWA
Market	
Food and Dining	
Entertainment	
Services	
Other	A lot of construction taking place was seen. This is a result of MTR construction, as the Island Line will reach Kennedy Town in the future.
Comments The water in this area of the harbour is very rough due to waves from high-speed ferry traffic	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	_X_ Cargo working area Cargo vessels were docked at the PCWA unloading cargo and getting fuel
	_X_ Boat launch Fenced-off ramp, inaccessible to the public
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk

	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	_**X**_ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**__ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	___ Trash Receptacles
	Comments There was a closed, locked government pier

Site Information	
Action Area	Lei Yue Mun
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	29 Jan. 2010
Start Time	9:15 AM
End Time	9:52 AM

Marine Activities	
Transportation	Water taxis, ferry pier/terminal to San Wan Ho
Recreation	
Tourism	Tin Hau Temple
Shipping	
Fishing	Fishing boats, land-based fishermen
Market	Seafood markets
Food and Dining	Seafood restaurants
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	_**X**_ Ferry terminal _**X**_ Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments Bus Stops
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire

	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings
	_X_ Docking slips ___ Handicap Access
	_**X**_ Typhoon shelter _small_ Size (Area)
	_X_ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments Life preservers (some real, some decoration)

Site Information	
Action Area	Kai Tak
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	29 Jan. 2010
Start Time	11:05 AM
End Time	11:50 AM

Marine Activities	
Transportation	ferry pier/terminal (to North Point)
Recreation	
Tourism	international cruise ship, harbour cruise ship
Shipping	
Fishing	land-based fishermen
Market	
Food and Dining	
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access Car ferry pier, North Point ferry pier, another pier for car ferries fenced off, Ma Tau Kok public pier lit covered 3 steps
	___ Launch/Water taxi ___ Handicap Access
	Comments Bus terminal
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments Benches
Commercial	___ Container yard
	___ Mid-stream ops
	_X_ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments

Services	**___** Harbour master
	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings
	___ Docking slips ___ Handicap Access
	_X_ Typhoon shelter ___ Size (Area) To Kwa Wan, Kwon Tong
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_X_ Piers/jetties ___ Handicap Access Kwun Tong public pier is sheltered, lit
	_X_ Landing step ___ Handicap Access ___ Sheltered Not all steps have lighting
	_X_ Trash Receptacles
	Comments

Site Information	
Action Area	Sai Wan
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 20th, 2010
Start Time	11:15 AM
End Time	11:25 AM

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	
Fishing	
Market	Western Wholesale Food Market
Food and Dining	
Entertainment	
Services	
Other	
Comments The Western Wholesale Food Market occupies the whole action area. Belonging to the wholesale food market are five piers which are currently unused.	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master

	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties ___ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	___ Trash Receptacles
	Comments

Site Information	
Action Area	Sai Ying Pun
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 20th, 2010
Start Time	11:25 AM
End Time	12:10 PM

Marine Activities	
Transportation	
Recreation	Promenade
Tourism	
Shipping	
Fishing	Fishing along promenade
Market	
Food and Dining	
Entertainment	
Services	Fresh water kiosk
Other	
Comments There was a promenade with a fresh water kiosk. Most of the site was under construction. In 2011, there will be a Sai Yat Sen Memorial Park and Swimming Pool Complex. The water in this area of the harbour is very rough due to waves from high-speed ferry traffic	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access Two landing steps
	Comments
Recreation	___ Club house ___ Handicap Access
	_X_ Parking ___ Handicap Access A parking lot for dangerous goods vehicles occupies the westernmost 500 metres of the waterfront, which is separated from the harbour by a barbed-wire fence
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments

Tourism	**___** Ticket kiosk
	___ Cruise terminal
	Comments
Services	**___** Harbour master
	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**___** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	_**X**_ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments

Site Information	
Action Area	Sheung Wan
Evaluator	Becky Yang
Partner	Eric Rosendahl
Date	January 20th, 2010
Start Time	12:10 PM
End Time	12:20 PM

Marine Activities	
Transportation	Hong Kong-Macau Ferry Terminal, helicopter pads
Recreation	
Tourism	
Shipping	
Fishing	
Market	
Food and Dining	
Entertainment	
Services	Marine Department vessel traffic centre
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	**___** Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	**___** Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	**_X_** Ticket kiosk
	___ Cruise terminal
	Comments
Services	**_X_** Harbour master
	___ Fire
	___ Marine Police

	_X_ Immigration
	_X_ Customs
	Comments
Mixed-use	**___** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties ___ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments Boats other than the ferries belonging to the Hong Kong-Macau Ferry Terminal are not allowed, according to the Marine Department.

Site Information	
Action Area	To Kwa Wan
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 29, 2010
Start Time	10:00 AM
End Time	10:20 AM

Marine Activities	
Transportation	Launches
Recreation	Promenade, park
Tourism	
Shipping	
Fishing	Land-based fishing
Market	
Food and Dining	
Entertainment	
Services	Water Services Department
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	_X_ Parking **_X_** Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	_**X**_ Typhoon shelter ___ Size (Area)
	_X_ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments

Site Information	
Action Area	Tsing Yi
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	20 Jan. 2010
Start Time	1:00 PM
End Time	2:30 PM

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	Cargo working areas, cargo vessels, small container ships
Fishing	Land-based fishermen, fishing boats moored
Market	
Food and Dining	
Entertainment	
Services	Pilot vessels, fire boat
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	_X_ Fire

	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_X_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_X_ Piers/jetties ___ Handicap Access
	_X_ Landing step ___ Handicap Access ___ Sheltered
	_X_ Trash Receptacles
	Comments

Site Information	
Action Area	Tsuen Wan
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	20 Jan. 2010
Start Time	10:30 AM
End Time	12:00 PM

Marine Activities	
Transportation	High speed ferries
Recreation	
Tourism	
Shipping	Commercial channel
Fishing	Land based fishermen (7), small fishing boats
Market	
Food and Dining	
Entertainment	Promenade
Services	Garbage collection boats, tugboats
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	_**X**_ Ferry terminal _**X**_ Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_X_ Piers/jetties ___ Handicap Access
	_X_ Landing step ___ Handicap Access ___ Sheltered
	_X_ Trash Receptacles
	Comments Floating dock, cleats on shore (16)

Site Information	
Action Area	Tsim Sha Tsui East
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 21, 2010
Start Time	4:30pm
End Time	6:00pm

Marine Activities	
Transportation	Star Ferry to Central, various chartered transports
Recreation	Promenade
Tourism	Star Ferry Harbour Tours, Avenue of Stars, Clock tower, various tourist cruises
Shipping	
Fishing	Land-based fishing in many areas
Market	Many shops nearby
Food and Dining	Many restaurants nearby
Entertainment	Party boat pick-ups, laser light show, Avenue of Stars
Services	
Other	Has great access to a bus terminal
Comments	

Marine Facilities	
Type	**Facility**
Transportation	_**X**_ Ferry terminal _**X**_ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	_**X**_ Ticket kiosk
	___ Cruise terminal
	Comments Various cruises operate out of the public pier's landing steps
Services	___ Harbour master

	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step _**X**_ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments

Site Information	
Action Area	Tsim Sha Tsui West
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 21, 2010
Start Time	3:30 PM
End Time	4:30 PM

Marine Activities	
Transportation	China/Macau ferry terminal
Recreation	
Tourism	A large hotel/mall area lines the waterfront, Ocean Terminal
Shipping	
Fishing	A few land-based fishermen, however prohibited
Market	
Food and Dining	Restaurants and hotels line the streets across from the waterfront, but there's no access from the water
Entertainment	
Services	Fire Department located near HKC ferry terminal
Other	
Comments The entire waterfront consists of a metal railing and a steep drop into the water	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	**_X_** Ticket kiosk
	_X_ Cruise terminal
	Comments
Services	___ Harbour master

	_X_ Fire
	___ Marine Police
	_X_ Immigration
	_X_ Customs
	Comments
Mixed-use	**___** Moorings
	___ Docking slips ___ Handicap Access
	_X_ Typhoon shelter ___ Size (Area)
	_X_ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	_X_ Trash Receptacles
	Comments

Site Information	
Action Area	Wan Chai East
Evaluator	Jarrad Fallon
Partner	Lucas Scotta
Date	Jan. 17 2010
Start Time	4:10 PM
End Time	5:52 PM

Marine Activities	
Transportation	Star Ferry terminal to TST, "New Ferry" terminal
Recreation	
Tourism	
Shipping	
Fishing	Land based fishing along multiple locations on the waterfront, most regions with people fishing contained between 4-11 individuals participating
Market	Only 1 place to purchase goods along the entire waterfront and it is a 7/11
Food and Dining	Food facilities only exist within the" Royal Hong Kong Yacht Club" and as it is a private club, these dining establishments are not open to the public.
Entertainment	There exists a Promenade, however it does not contain many visually appealing aspects
Services	
Other	Many unused/outdated moorings along the whole waterfront as well as ladders.
Comments	

Marine Facilities	
Type	**Facility**
Transportation	**_X_** Ferry terminal **_X_** Handicap Access
	_X_ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	**_X_** Club house **_X_** Handicap Access
	_X_ Parking **_X_** Handicap Access
	_X_ Boat launch Ramp and boat crane at RHKYC
	_X_ Boat storage Private boatyard at RHKYC
	Comments All of the above facilities are located within the RHKYC, and not available to the public
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	_X_ Boat yard At RHKYC

	Comments
Tourism	**_X_** Ticket kiosk
	_X_ Cruise terminal
	Comments The ticketing kiosks were actual establishments, not just fold up tables, kiosks were for "Dragon Pearl Cruise" and "Star Ferry"
Services	**___** Harbour master
	_X_ Fire Fire department for both land and water use
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings For the "Pacific Princess" and a salt water pumping station
	___ Docking slips ___ Handicap Access
	_X_ Typhoon shelter ___ Size (Area) Causeway Bay Typhoon Shelter
	_X_ Breakwater Breakwaters for the Causeway Typhoon Shelters, as well as the ex-PCWA by the RHKYC
	___ Fuel station
	___ Sewage pumping station/boat
	_X_ Toilets **_X_** Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_X_ Landing step ___ Handicap Access ___ Sheltered 7+ public landing steps in this action area
	_X_ Trash Receptacles Located in many areas along the waterfront
	Comments This action area also has multiple locations with covered seating, and a salt water pumping station. Life buoys are located all along the waterfront at close intervals. The docks at the RHKYC are only accessible by taking a boat to get to them.

Site Information	
Action Area	Wan Chai West
Evaluator	Jarrad Fallon
Partner	Lucas Scotta
Date	Jan. 17 2010
Start Time	3:20 PM
End Time	4:00 PM

Marine Activities	
Transportation	
Recreation	Multiple sites with land based fishing typically 4-8 people participating at each site, Exhibition centre is also in this action area
Tourism	Large numbers of independent tourists as well as tour groups
Shipping	
Fishing	Multiple sites where land based fishing occurs, and one boat was observed to be fishing slightly off shore in this action area however it did not appear to be location specific.
Market	
Food and Dining	
Entertainment	The promenade exists however it is not as visually appealing as it could be there are many rusted fences and general eyesores within a small radius.
Services	
Other	There are many life buoys along the waterfront spaced approximately 25 metres apart along popular waterfront areas
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal

	Comments
Services	**___** Harbour master
	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings The vast majority seemed unused and inaccessible to boats due to their location and lack of supporting facilities.
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles Located everywhere
	Comments This region contained a large amount of covered seating relative to its size most likely due to the proximity of the exhibition centre.

Site Information	
Action Area	West Kowloon Cultural District
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 23, 2010
Start Time	1:00 PM
End Time	3:00 PM

Marine Activities	
Transportation	
Recreation	Promenade
Tourism	
Shipping	
Fishing	Land-based fishing, however prohibited
Market	
Food and Dining	
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	___ Mid-stream ops
	___ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	**_X_** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	_**X**_ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	_**X**_ Trash Receptacles
	Comments

Site Information	
Action Area	Yau Ma Tei
Evaluator	Brian Berard
Partner	Santiago Lora
Date	Jan. 23, 2010
Start Time	11:00 AM
End Time	1:00 PM

Marine Activities	
Transportation	Small boats carry passengers to various locations, motorboat charter service
Recreation	Brand new promenade
Tourism	
Shipping	PCWA, moorings for cargo ships, small private vessels unload cargo here
Fishing	Land-based fishing, fishing boats unload cargo here as well
Market	
Food and Dining	
Entertainment	
Services	Marine Department Harbour Patrol
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments Motorboat rental service
Recreation	___ Club house ___ Handicap Access
	___ Parking ___ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	**_X_** Container yard
	___ Mid-stream ops
	_X_ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments Cargo ship storage
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments

Services	**___** Harbour master
	___ Fire
	___ Marine Police
	___ Immigration
	___ Customs
	Comments Harbour Patrol
Mixed-use	**_X_** Moorings Large ships only
	___ Docking slips ___ Handicap Access
	_X_ Typhoon shelter ___ Size (Area)
	_X_ Breakwater
	___ Fuel station
	_X_ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	_X_ Fresh water kiosk
	_X_ Piers/jetties ___ Handicap Access
	_X_ Landing step **_X_** Handicap Access **_X_** Sheltered
	_X_ Trash Receptacles
	Comments

Site Information	
Action Area	Yau Tong
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	29 Jan. 2010
Start Time	9:54 AM
End Time	10:16 AM

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	Cargo vessels, container ships, barges
Fishing	Fishing boats
Market	Fish market
Food and Dining	
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	_**X**_ Parking _**X**_ Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	___ Container yard
	_**X**_ Mid-stream ops
	_**X**_ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	_X_ Customs
	Comments
Mixed-use	**_X_** Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	___ Piers/jetties ___ Handicap Access
	_**X**_ Landing step ___ Handicap Access ___ Sheltered
	___ Trash Receptacles
	Comments

Site Information	
Action Area	Yau Tong Bay
Evaluator	Alexander Wong
Partner	Alexander Muir
Date	29 Jan. 2010
Start Time	10:20 AM
End Time	10:46 AM

Marine Activities	
Transportation	
Recreation	
Tourism	
Shipping	Barges, container ships, cargo vessels
Fishing	
Market	
Food and Dining	
Entertainment	
Services	
Other	
Comments	

Marine Facilities	
Type	**Facility**
Transportation	___ Ferry terminal ___ Handicap Access
	___ Launch/Water taxi ___ Handicap Access
	Comments
Recreation	___ Club house ___ Handicap Access
	_X_ Parking **_X_** Handicap Access
	___ Boat launch
	___ Boat storage
	Comments
Commercial	**_X_** Container yard
	___ Mid-stream ops
	_X_ Cargo working area
	___ Boat launch
	___ Boat yard
	Comments
Tourism	___ Ticket kiosk
	___ Cruise terminal
	Comments
Services	___ Harbour master
	___ Fire
	___ Marine Police

	___ Immigration
	___ Customs
	Comments
Mixed-use	___ Moorings
	___ Docking slips ___ Handicap Access
	___ Typhoon shelter ___ Size (Area)
	___ Breakwater
	___ Fuel station
	___ Sewage pumping station/boat
	___ Toilets ___ Handicap Access
	___ Fresh water kiosk
	_**X**_ Piers/jetties ___ Handicap Access
	___ Landing step ___ Handicap Access ___ Sheltered
	___ Trash Receptacles
	Comments

Appendix C: Audit Data

					Coordinates		
District	Code	Type	Name	Maintainer	*latitude*	*longitude*	Gov Code
Central	C1	Landing Step	Central Landing No. 10	Civil Engineering and Development Department	22.287554	114.154440	HP048
Central	C2	Landing Step		Civil Engineering and Development Department	22.287892	114.154746	
Central	C3	Landing Step		Civil Engineering and Development Department	22.288000	114.154861	
Central	C4	Landing Step		Civil Engineering and Development Department	22.288144	114.154989	
Central	C5	Landing Step		Civil Engineering and Development Department	22.288388	114.155242	
Central	C6	Landing Step		Civil Engineering and Development Department	22.288909	114.155675	
Central	C7	Government Pier	Central Government Pier	Government	22.288490	114.155565	
Central	C8	Landing Step		Civil Engineering and Development Department	22.288798	114.155863	
Central	C9	Landing Step		Civil Engineering and Development Department	22.288585	114.155803	
Central	C10	Landing Step		Civil Engineering and Development Department	22.288443	114.155761	
Central	C11	Landing Step	Central Landing No. 5	Civil Engineering and Development Department	22.288270	114.155778	HP049
Central	C12	Ferry Pier	Central Pier No. 2	Park Island Ferry	22.288334	114.156563	
Central	C13	Ferry Pier	Central Pier No. 3	Discovery Bay Ferry	22.288129	114.157507	
Central	C14	Ferry Pier	Central Pier No. 4	Lamma Island Ferry	22.287940	114.158426	HP135
Central	C15	Ferry Pier	Central Pier No. 5	New World First Ferry	22.287717	114.159353	HP123
Central	C16	Ferry Pier	Central Pier No. 6	Hong Kong & Kowloon Ferry Holdings, Ltd	22.287431	114.160344	HP124
Central	C17	Ferry Pier	Central Pier No. 7	Star Ferry Co.	22.287149	114.161215	HP125
Central	C18	Ferry Pier	Central Pier No. 8	Star Ferry Co.	22.286782	114.162050	HP149
Central	C22	Public Pier	Central Pier No. 9	Civil Engineering and Development Department	22.286131	114.162719	HP150
Central	C29	Public Pier	Central Pier No. 10	Civil Engineering and Development Department	22.285404	114.162971	Unknown
Central	C33	Pontoon		Marine Department	22.281538	114.168918	
Central	C34	Landing Step	Fenwick Pier Street Landing	Civil Engineering and Development Department	22.281574	114.170173	HP081
Central	C35	Cargo Hoist			22.281590	114.170853	
Chai Wan	CW1	Landing Step		Unknown	22.275484	114.241972	
Chai Wan	CW2	Landing Step	Chai Wan Cargo Handling Basin	Civil Engineering and Development Department	22.271662	114.243393	HP147
Chai Wan	CW3	Landing Step	Siu Sai Wan Landing No. 2	Civil Engineering and Development Department	22.267830	114.250363	HP141
Chai Wan	CW4	Public Cargo Working Area	Chai Wan PCWA	Marine Department	22.268074	114.243019	
Chai Wan	CW5	Sheltered Anchorage	Chai Wan Cargo Basin Sheltered Anchorage	Marine Department	22.269841	114.243662	SA1
Hung Hom East	HHE1	Ferry Pier	Star Ferry Pier	Star Ferry Co.	22.300404	114.189303	
Hung Hom East	HHE2	Ferry Pier	First Ferry Pier	Ferry Pier	22.301179	114.190295	
Hung Hom East	HHE3	Landing Step	Hung Hom Landing No. 8	Civil Engineering and Development Department	22.301658	114.190939	KP006
Hung Hom East	HHE4	Landing Step		Waterfront Bar & Terrace	22.301990	114.192003	
Hung Hom East	HHE5	Landing Step	Tai Wan Shan Landing	Civil Engineering and Development Department	22.304554	114.192978	KP007
Hung Hom East	HHE6	Other			22.304609	114.193003	
Hung Hom East	HHE7	Other			22.305345	114.193493	
Hung Hom East	HHE8	Government Pier	Marine Police Dept. Pier	Marine Police Dept.	22.306122	114.193601	
Hung Hom West	HHW1	Private Pier	International Mail Centre Post Office	Hong Kong Post Office Trading Fund	22.299703	114.181869	
Hung Hom West	HHW2	Private Pier	MTRC Freight Yard	MTR Corp	22.298432	114.182819	
Island East	IE1	Public Pier	Tong Shui Road Pier	Civil Engineering and Development Department	22.293638	114.198546	HP105

Island East	IE2	Ferry Pier	North Point Ferry Pier	New World First Ferry	22.294170	114.199771	
Island East	IE3	Ferry Pier	North Point Ferry Pier	Fortune Ferry	22.294541	114.200785	
Island East	IE4	Landing Step		Unknown	22.294436	114.203072	
Island East	IE5	Ferry Pier		The Hong Kong & Yau Ma Tei Ferry Co. Ltd.	22.294826	114.203313	
Island East	IE6	Government Pier	North Point Fire Station Fire Boat Pier	North Point Fire Station	22.293512	114.207995	
Island East	IE7	Landing Step	North Point Police Station landing steps	Government	22.292204	114.209420	
Island East	IE10	Landing Step	Quarry Bay Park Landing No. 1	Civil Engineering and Development Department	22.289246	114.219832	HP069
Island East	IE11	Water Selling Kiosk		Water Supplies Department	22.287219	114.223300	WS004
Island East	IE12	Government Pier			22.286239	114.224974	
Island East	IE13	Government Pier			22.285439	114.225650	
Island East	IE14	Typhoon Shelter	Shau Kei Wan Typhoon Shelter	Marine Department	22.284638	114.228658	TS10
Island East	IE15	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 10	Civil Engineering and Development Department	22.284574	114.225186	HP068
Island East	IE16	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 1	Civil Engineering and Development Department	22.283836	114.225305	HP070
Island East	IE17	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 2	Civil Engineering and Development Department	22.283263	114.225931	HP071
Island East	IE18	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 3	Civil Engineering and Development Department	22.282965	114.226938	HP072
Island East	IE19	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 4	Civil Engineering and Development Department	22.282974	114.227807	HP073
Island East	IE20	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 5	Civil Engineering and Development Department	22.282989	114.229092	HP074
Island East	IE21	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 6	Civil Engineering and Development Department	22.283023	114.229572	HP137
Island East	IE22	Water Selling Kiosk	A Kung Ngam Water Selling Kiosk	Water Supplies Department	22.283058	114.230286	WS003
Island East	IE23	Landing Step	Shau Kei Wan Typhoon Shelter Landing No. 7	Civil Engineering and Development Department	22.283126	114.230544	HP075
Island East	IE24	Shipyard			22.283277	114.231806	
Island East	IE25	Landing Step		Unknown	22.283697	114.233370	
Island East	IE26	Landing Step	Quarry Bay Park Landing No. 1	Civil Engineering and Development Department	22.287464	114.222982	HP069
Island East	IE27	Pontoon			22.285780	114.225356	
Island East	IE28	Bunkering Area		Caltex	22.284477	114.225057	
Island East	IE29	Other	Shau Kei Wan Wholesale Fish Market		22.283504	114.233002	
Island East	IE30	Private Pier			22.293224	114.206717	
Island East	IE31	Private Pier			22.293054	114.207272	
Island East	IE32	Ferry Pier	Sai Wan Ho Ferry Pier		22.286183	114.224312	
Island East	IE34	Private Pier			22.293560	114.204879	
Island East	IE35	Landing Step		Unknown	22.284841	114.232585	
Island East	IE36	Stairs			22.284396	114.233387	
Kai Tak	KAIT1	Landing Step	King Wan Street Landing	Civil Engineering and Development Department	22.315615	114.192920	KP012
Kai Tak	KAIT2	Mooring Buoys			22.313042	114.194427	
Kai Tak	KAIT3	Private Pier			22.317318	114.193963	
Kai Tak	KAIT4	Ferry Pier	Kowloon City Ferry Pier	New World First Ferry Services Limited	22.317809	114.194369	
Kai Tak	KAIT5	Public Pier	Ma Tau Kok Public Pier	Civil Engineering and Development Department	22.318406	114.194345	KP048
Kai Tak	KAIT9	Public Cargo Working Area	Kwun Tong PCWA	Marine Department	22.314007	114.215077	
Kai Tak	KAIT10	Ferry Pier	Kwun Tong Ferry Pier	Fortune Ferry Company Ltd	22.306320	114.221562	
Kai Tak	KAIT11	Ferry Pier	Kwun Tong Car Ferry Pier	The Hong Kong & Yau Ma Tei Ferry Co. Ltd.	22.307937	114.220440	
Kai Tak	KAIT12	Public Pier	Kwun Tong Public Pier	Civil Engineering and Development Department	22.308541	114.220056	KP058
Kai Tak	KAIT16	Landing Step		Civil Engineering and Development Department	22.307865	114.220100	KP011
Kai Tak	KAIT17	Mooring		Marine Department	22.310913	114.211916	

		Buoys					
Kai Tak	KAIT18	Typhoon Shelter	Kwun Tong Typhoon Shelter	Marine Department	22.311057	114.215002	TS6
Kennedy Town	KENT1	Private Pier			22.283600	114.125534	
Kennedy Town	KENT2	Private Pier			22.283749	114.126357	
Kennedy Town	KENT3	Landing Step	Western PCWA Landing No. 1	Civil Engineering and Development Department	22.284727	114.128402	HP057
Kennedy Town	KENT4	Public Pier			22.289343	114.131902	
Kennedy Town	KENT5	Public Cargo Working Area	Western District PCWA	Marine Department	22.287484	114.132056	
Kennedy Town	KENT6	Landing Step	Sai Ning Street Landing No. 1	Civil Engineering and Development Department	22.281487	114.119270	HP058
Kennedy Town	KENT7	Landing Step	Sai Ning Street Landing No. 2	Civil Engineering and Development Department	22.282688	114.122979	HP059
Kennedy Town	KENT8	Private Pier	China Merchants Wharf	China Merchants International Holdings Co., Ltd	22.283707	114.122702	
Lei Yue Mun	LYM1	Landing Step	Sam Ka Tsuen Landing No. 3	Civil Engineering and Development Department	22.290972	114.236197	KP015
Lei Yue Mun	LYM2	Ferry Pier	Sam Ka Tsuen Ferry Pier	Coral Sea Shipping Services	22.290728	114.236408	
Lei Yue Mun	LYM3	Typhoon Shelter	Sam Ka Tsuen Typhoon Shelter	Marine Department	22.291309	114.237401	TS9
Lei Yue Mun	LYM4	Stairs			22.290832	114.236672	
Lei Yue Mun	LYM5	Stairs			22.291289	114.236638	
Lei Yue Mun	LYM6	Stairs			22.291750	114.237155	
Lei Yue Mun	LYM7	Stairs			22.292120	114.237629	
Lei Yue Mun	LYM8	Stairs			22.291205	114.238456	
Sai Wan	SAIW1	Other	Western Wholesale Food Market	Western Wholesale Food Market	22.289188	114.137198	
Sheung Wan	SHEW1	Ferry Pier	Hong Kong-Macau Ferry Terminal	Ferry Terminals Section, Marine Department	22.288814	114.152519	DA23, MFT
Sheung Wan	SHEW2	Other	Vessel Traffic Centre	Marine Department	22.289586	114.152685	
Sai Ying Pun	SYP1	Landing Step	Sheung Wan Landing No. 1	Civil Engineering and Development Department	22.289676	114.148904	HP076
Sai Ying Pun	SYP2	Landing Step	Sheung Wan Landing No. 1	Civil Engineering and Development Department	22.290165	114.146857	HP142
Sai Ying Pun	SYP3	Water Selling Kiosk	Western Water Selling Kiosk	Water Supplies Department	22.290031	114.147425	WS007
To Kwa Wan	TKW1	Private Pier			22.310344	114.192014	
To Kwa Wan	TKW2	Landing Step		Civil Engineering and Development Department	22.313433	114.191943	KP008
To Kwa Wan	TKW3	Typhoon Shelter	To Kwa Wan Typhoon Shelter	Marine Department	22.314325	114.198063	TS12
Tsim Sha Tsui East	TSTE1	Ferry Pier	Star Ferry Pier	Star Ferry Co.	22.293689	114.168105	
Tsim Sha Tsui East	TSTE2	Ferry Pier	Star Ferry Pier	Star Ferry Co.	22.293204	114.168635	
Tsim Sha Tsui East	TSTE3	Public Pier	Kowloon Public Pier	Civil Engineering and Development Department	22.293046	114.169619	KP070
Tsim Sha Tsui East	TSTE9	Landing Step	Tsim Sha Tsui Landing No. 2	Civil Engineering and Development Department	22.296600	114.177637	KP030
Tsim Sha Tsui East	TSTE10	Landing Step	Tsim Sha Tsui Landing No. 5	Civil Engineering and Development Department	22.298329	114.179741	KP029
Tsim Sha Tsui West	TSTW1	Landing Step		Tsim Sha Tsui Fire Department	22.300840	114.165304	
Tsim Sha Tsui West	TSTW2	Pontoon		China Ferry Services	22.300435	114.166911	
Tsim Sha Tsui West	TSTW3	Pontoon		China Ferry Services	22.300103	114.167005	
Tsim Sha Tsui West	TSTW4	Ferry Pier	HK China Ferry Terminal	Ferry Terminals Section, Marine Department	22.298902	114.165334	DA22, CFT
Tsim Sha Tsui West	TSTW5	Private Pier	Pacific Club	Pacific Club	22.297825	114.165880	
Tsim Sha Tsui West	TSTW6	Private Pier			22.296940	114.166291	
Tsim Sha Tsui West	TSTW7	Cruise Terminal	Harbour City Ocean Terminal	Marine Department	22.294862	114.166069	DA12, OT
Tsuen Wan	TW1	Public Pier			22.367294	114.084953	
Tsuen Wan	TW2	Other		LCSD	22.367341	114.086583	

Tsuen Wan	TW3	Public Pier	Yau Kom Tau Pier	Civil Engineering and Development Department	22.368310	114.098451	NP125
Tsuen Wan	TW4	Landing Step	Yau Kom Tau Pier	Civil Engineering and Development Department	22.368194	114.098554	NP125
Tsuen Wan	TW5	Landing Step	Tsuen Wan Area 2 Landing No. 2	Civil Engineering and Development Department	22.369063	114.099919	NP041
Tsuen Wan	TW6	Landing Step	Tsuen Wan Area 2 Landing No. 1	Civil Engineering and Development Department	22.371862	114.103673	NP040
Tsuen Wan	TW7	Private Pier		Water Supplies Department	22.367751	114.108964	
Tsuen Wan	TW8	Public Pier	Tsuen Wan Public Landing Steps (West Rail)	Civil Engineering and Development Department	22.367158	114.110132	KP093
Tsuen Wan	TW11	Ferry Pier	Tsuen Wan Ferry Pier (West Rail)	Civil Engineering and Development Department	22.366720	114.110693	KP092
Tsuen Wan	TW12	Pontoon	Floating Dock - Park Island Ferry	Park Island Ferry	22.366681	114.110523	
Tsuen Wan	TW13	Sheltered Anchorage	Tsuen Wan Sheltered Anchorage	Marine Department	22.368855	114.104069	SA5
Tsuen Wan	TW14	Sheltered Anchorage	Tsuen Wan Dangerous Goods Anchorage	Marine Department	22.364419	114.110819	
Tsuen Wan	TW15	Sheltered Anchorage	Ting Kau Pleasure Vessel Sheltered Anchorage	Marine Department	22.368173	114.082259	PV7
Tsing Yi North	TYN1	Shipyard			22.361950	114.092543	
Tsing Yi North	TYN2	Other			22.363693	114.100036	
Tsing Yi North	TYN3	Landing Step		Unknown	22.363672	114.103078	
Tsing Yi North	TYN4	Stairs			22.358161	114.109035	
Tsing Yi North	TYN5	Landing Step		Unknown	22.357415	114.108973	
Tsing Yi North	TYN6	Other			22.355072	114.109338	
Tsing Yi North	TYN7	Public Pier	Tsing Yi Public Pier	Civil Engineering and Development Department	22.354293	114.109481	NP123
Tsing Yi North	TYN9	Other			22.354694	114.109409	
Tsing Yi North	TYN11	Government Pier	Tsing Yi Fireboat Station		22.350644	114.110994	
Tsing Yi North	TYN12	Landing Step			22.350038	114.111339	
Wan Chai East	WCE1	Ferry Pier	New Wan Chai Ferry Pier	Savills Hong Kong	22.284792	114.174411	
Wan Chai East	WCE2	Ferry Pier		New World First Travel Services Limited, Dragon Pearl Cruise	22.283815	114.174562	
Wan Chai East	WCE3	Ferry Pier			22.281950	114.174848	
Wan Chai East	WCE4	Ferry Pier	Star Ferry Pier	Star Ferry Co.	22.282277	114.175656	
Wan Chai East	WCE5	Cargo Hoist			22.282220	114.176912	
Wan Chai East	WCE6	Other			22.283937	114.180492	
Wan Chai East	WCE7	Other			22.283259	114.180839	
Wan Chai East	WCE8	Landing Step		Royal Hong Kong Yacht Club	22.283914	114.181804	
Wan Chai East	WCE9	Ramp		Royal Hong Kong Yacht Club	22.284416	114.181760	
Wan Chai East	WCE10	Recreation	Royal Hong Kong Yacht Club	Royal Hong Kong Yacht Club	22.284381	114.182320	
Wan Chai East	WCE11	Ramp		Royal Hong Kong Yacht Club	22.284726	114.182887	
Wan Chai East	WCE12	Recreation		Royal Hong Kong Yacht Club	22.284101	114.182999	
Wan Chai East	WCE13	Stairs		Royal Hong Kong Yacht Club	22.284405	114.183332	
Wan Chai East	WCE14	Typhoon Shelter	Causeway Bay Typhoon Shelter	Marine Department	22.285320	114.185749	TS3
Wan Chai East	WCE15	Landing Step	Causeway Bay Typhoon Shelter Landing No. 3	Civil Engineering and Development Department	22.282845	114.183043	HP035
Wan Chai East	WCE16	Landing Step	Causeway Bay Typhoon Shelter Landing No. 4	Civil Engineering and Development Department	22.282326	114.183400	HP036
Wan Chai East	WCE17	Landing Step		Unknown	22.282670	114.183980	
Wan Chai East	WCE18	Landing Step			22.282841	114.184237	
Wan Chai East	WCE19	Landing Step	Causeway Bay Typhoon Shelter Landing No. 7	Civil Engineering and Development Department	22.283123	114.184635	HP037
Wan Chai East	WCE20	Cargo Hoist			22.284196	114.186031	
Wan Chai East	WCE21	Landing Step	Causeway Bay Typhoon Shelter Landing No. 8	Civil Engineering and Development Department	22.284228	114.186240	HP034

Wan Chai East	WCE22	Stairs			22.284198	114.186490	
Wan Chai East	WCE23	Stairs			22.284230	114.186611	
Wan Chai East	WCE24	Stairs			22.284374	114.187105	
Wan Chai East	WCE25	Stairs			22.284422	114.187280	
Wan Chai East	WCE26	Stairs			22.284464	114.187435	
Wan Chai East	WCE27	Stairs			22.284543	114.187710	
Wan Chai East	WCE28	Stairs			22.284629	114.188023	
Wan Chai East	WCE29	Stairs			22.284930	114.189202	
Wan Chai East	WCE30	Government Pier	Tung Lo Wan Fireboat Station		22.286658	114.188921	
Wan Chai East	WCE31	Landing Step	Watson Road Landing	Civil Engineering and Development Department	22.288234	114.189532	HP038
Wan Chai East	WCE32	Landing Step		Unknown	22.289681	114.190873	
Wan Chai East	WCE33	Other			22.289824	114.191004	
Wan Chai East	WCE34	Water Selling Kiosk	Causeway Bay Water Selling Kiosk	Water Supplies Department	22.284499	114.187524	WS001
Wan Chai West	WCW1	Other			22.281678	114.171804	
Wan Chai West	WCW3	Landing Step	Hong Kong Convention & Exhibition Centre Landing	Civil Engineering and Development Department	22.284676	114.173924	HP080
Wan Chai West	WCW4	Cargo Hoist			22.281761	114.173887	
Western Harbour	WH1	Public Cargo Working Area	Rambler Channel PCWA	Marine Department	22.360049	114.114749	
Western Harbour	WH2	Typhoon Shelter	Rambler Channel Typhoon Shelter	Marine Department	22.356667	114.114150	TS8
Western Harbour	WH3	Container Terminal	Container Terminal 5	Modern Terminals Limited	22.348818	114.117523	DA03
Western Harbour	WH4	Container Terminal	Container Terminal 1	Modern Terminals Limited	22.348402	114.120782	DA01
Western Harbour	WH5	Container Terminal	Container Terminal 2	Modern Terminals Limited	22.345417	114.121759	DA02
Western Harbour	WH6	Container Terminal	Container Terminal 3	CSX World Terminals Hong Kong Limited	22.342033	114.122761	DA10
Western Harbour	WH7	Container Terminal	Container Terminal 4	Hong Kong International Terminals	22.339551	114.125471	DA05
Western Harbour	WH8	Container Terminal	Container Terminal 6	Hong Kong International Terminals	22.334238	114.127741	DA06
Western Harbour	WH9	Container Terminal	Container Terminal 7	Hong Kong International Terminals	22.330885	114.128827	DA07
Western Harbour	WH10	Container Terminal	Container Terminal 8 (East)	COSCO-HIT Terminals (Hong Kong) Limited	22.325373	114.133044	DA09
Western Harbour	WH11	Container Terminal	Container Terminal 8 (West)	Asia Container Terminals Limited	22.323148	114.126641	DA11
Western Harbour	WH12	Container Terminal	Container Terminal 9 (South)	Modern Terminals Limited	22.333437	114.114580	DA24
Western Harbour	WH13	Container Terminal	Container Terminal 9 (North)	Hong Kong International Terminals	22.341214	114.112145	DA08
Western Harbour	WH14	Public Cargo Working Area	Stonecutters Island PCWA	Marine Department	22.319169	114.128283	
Western Harbour	WH15	Water Selling Kiosk	Lai Chi Kok Water Selling Kiosk	Water Supplies Department	22.327419	114.142264	WS005
Western Harbour	WH16	Landing Step	Cheung Sha Wan Landing No. 3	Civil Engineering and Development Department	22.328067	114.146117	KP004
Western Harbour	WH17	Bunkering Area		Marine Department	22.325838	114.147074	
Western Harbour	WH19	Bunkering Area		Marine Department	22.319050	114.149505	
Yau Ma Tei	YMT1	Landing Step	Tai Kok Tsui Landing	Civil Engineering and Development Department	22.319013	114.154926	KP026
Yau Ma Tei	YMT2	Pontoon			22.318273	114.154916	
Yau Ma Tei	YMT3	Pontoon			22.317980	114.154901	
Yau Ma Tei	YMT4	Pontoon			22.317826	114.154918	
Yau Ma Tei	YMT5	Stairs			22.315921	114.155010	
Yau Ma Tei	YMT6	Landing Step	Yau Ma Tei Typhoon Shelter Landing No. 5	Civil Engineering and Development Department	22.316851	114.155538	KP040
Yau Ma Tei	YMT8	Mooring Buoys			22.316112	114.157359	
Yau Ma Tei	YMT9	Landing Step	Yau Ma Tei Typhoon Shelter Landing No. 4	Civil Engineering and Development Department	22.316836	114.159126	KP039
Yau Ma Tei	YMT10	Sewage Pumping	Hoi Fat Road Public Cargo Working Area Sewage	Drainage Services Department	22.316239	114.159662	

		Station	Pumping Station				
Yau Ma Tei	YMT11	Water Selling Kiosk	Yau Ma Tei Water Selling Kiosk	Water Supplies Department	22.315949	114.159748	WS006
Yau Ma Tei	YMT12	Pontoon		Marine Department	22.315843	114.159794	
Yau Ma Tei	YMT13	Public Cargo Working Area	New Yau Ma Tei PCWA	Marine Department	22.312994	114.160294	
Yau Ma Tei	YMT14	Landing Step	Yau Ma Tei Typhoon Shelter Landing No. 2	Civil Engineering and Development Department	22.304320	114.157896	KP037
Yau Ma Tei	YMT15	Landing Step	Yau Ma Tei Typhoon Shelter Landing No. 1	Civil Engineering and Development Department	22.304181	114.157795	KP036
Yau Ma Tei	YMT16	Pontoon			22.304062	114.157672	
Yau Ma Tei	YMT17	Mooring Buoys			22.304317	114.156138	
Yau Ma Tei	YMT18	Typhoon Shelter	New Yau Ma Tei Typhoon Shelter	Marine Department	22.310680	114.157457	TS7
Yau Tong	YT1	Landing Step	Sam Ka Tsuen Landing No. 1	Civil Engineering and Development Department	22.294607	114.233065	KP013
Yau Tong	YT2	Landing Step	Sam Ka Tsuen Landing No. 2	Civil Engineering and Development Department	22.292615	114.234470	KP014
Yau Tong Bay	YTB1	Public Cargo Working Area	Cha Kwo Ling PCWA	Marine Department	22.301498	114.227338	

Appendix D: Interview Protocol and Interview Summaries

This appendix includes the list of all the stakeholders interviewed over the course of this project and their respective interview summary. The questions asked at each interview were created on an individual basis, focused on the interviewee's field of knowledge and the type of organisation represented.

Index of Interview Summaries

Agopsowicz, Michael De Kantzow, Peter	Waterfront Air
Bowring, Arthur	Hong Kong Ship-owners Association
Downes, Warwick	Royal Hong Kong Yacht Club
Eastham, Roger	Royal Hong Kong Yacht Club
Fung, Chris Chan, Tony	Development Bureau
Genna, Laurent	Spysea Ltd.
Govada, Sujata	Urban Design & Planning Consultants Ltd.
Lee, Yuet	Lee Yuet & Associates
Poon, Priscilla Poon, Emanuel	Hong Kong Tourism Board
Simpson, Mike	Simpson Marine
Smith, Garry	Saffron Cruise and Saffron Marina Ltd.
Smith, Peter Cookson	Urbis Ltd.
Tupper, Roger	Marine Department
Wilson, Robert	Hong Kong - China Rowing Association
Wong, Miu-Sang	Hong Kong Midstream Operators Association
Yick, Frankie	Wharf Ltd.

Interview Protocol (General)

Date
Interviewer(s):

General Information of Interviewee
Name:
Company/Organization:
Position:
Contact Information:

Questions that apply to almost everyone:

How have your numbers grown in the past? Has your business/service gained or lost popularity or usage?

How do you feel your service/business will change in the future? Will your numbers increase or decrease?

What services does your business/service require?

Are they sufficient?

Will they continue to be sufficient?

What's the difference between what you currently need and what you want for the future?

Can you provide us with usage statistics of any kind?

Do you feel as though marine development demonstrates a public overriding need that can allow for necessary reclamation to take place?

Why? Do you have any way to support your belief?

In what ways could sheltered water be better utilized?

How do you think Hong Kong can improve its waterfront as a whole to support and/or enable marine users?

Can you provide us with any hard data relating to your field?

Can you provide us any proposals, studies, et cetera?

More specific questions:

People that use piers/landing steps:

Do you need more piers?

Where? Why? How many?

Do you want/need pontoons?

Where? Why? How many?

Would you pay money if it meant that you had access to better facilities?

People with power over the waterfront:

What is your mandate regarding the waterfront? (i.e. what do you control?)

Commercial Users:

Would you like to be or tolerate being located somewhere outside of the Eastern Harbour?

Would you consider consolidating the facilities in Eastern Harbour?

Would you pay for better facilities in the Western Harbour?

Plus any specific questions we need from the person

Agopsowicz, Michael

Date: 2 February, 2010
Interviewer(s): Eric Rosendahl, Lucas Scotta

General Information of Interviewee
Name: Michael Agopsowicz, Peter De Kantzow
Company/Organisation: Waterfront Air
Position: Founders

Where is Waterfront Air based?

- Based in Shenzhen, but would like to expand to Hong Kong as well.
- Plane maintenance, fuelling, etc all takes place in Shenzhen.

What are the current plans and challenges for expanding to Hong Kong?

- The seaplanes will be starting in January 2011 in China, with early 2011 also a hopeful launch for Hong Kong.
- Plan on using the Kowloon City Ferry Terminal as both the terminal and a small museum (pier built in the 1970s).
- 20 flights per day, 9am-5/6pm, half hour between flights, 150-200 passengers per day departing.
- Seaplanes hold 16 passengers and 2 pilots.
- Seaplanes used to be in Hong Kong and would land where the old Kai Tak runway is now.
- Have support from the Tourism Board and presented to the Harbourfront Enhancement Committee.
- Challenges:
    - Long-term regulatory process, especially environmental impact, noise pollution, etc. Process will take ~12 months for the environmental impact study.
    - Park/sports complex will be on the old runway: noise consideration, but people will want to watch the sea planes taking off, but only ½ as noisy as helicopters.
- Mega yachts could be interested in the area as well, perhaps within the typhoon shelter.
- Seaplanes require no new infrastructure, no reclamation, etc
- Could tie the two planes to the pier during a typhoon.

How would the seaplane business compete with existing ferries and helicopters?

- HK-Macau = mostly tourism, HK-Guangzhou = mostly business
- Seaplanes vs. helicopters:
    - 20-30% less $ than helicopter
    - Helicopter is HKD$2400 one way, HKD$5000 roundtrip
    - Seaplanes will be HKD$1600 one way
    - About the same travel time
    - Very different customer
- Seaplanes vs. ferries:
    - 6-7 million people per year on ferries
    - Not looking to compete; rather “add another slice to the pie”

Have you thought about land transportation to/from the Waterfront Air pier?

Not worried about public transportation to/from pier because target customer does not ride the bus or the MTR, but would take a taxi or be driven. There will be a "tourism hub" at Kai Tak in the future anyway.

What examples of successful seaplane businesses are there?

- Other locations with seaplane services:
  - Los Angeles
  - New York City
  - Sydney
  - Greece
  - Vancouver
- Vancouver:
  - Seaplanes operate right next to yacht club and cruise terminal
  - Added yacht marina, cruise terminal, sea planes, ferries, pleasure boats
  - Most successful model
  - 9th busiest Canadian airport is seaplanes in Vancouver
  - 400,000-500,000 passengers per year
- Roger Tupper (Director of Marine Department) is from Canada, and is familiar with the Vancouver model.

How will you interface with existing water and air traffic?

- Don't need to interface with the Vessel Traffic Centre. Seaplane is legally a vessel when it is on the water (Rule 18 – Handbook of Regulations, Collision Avoidance)
- Victoria Harbour is Class-C area, will need to call into HK ATC to take off and land (via radio).
- No flying over land, only flying VFR during day (if helicopters are not flying, neither are seaplanes)

What sort of details do you have on the area surrounding the Waterfront Air pier?

- Pier to west of Kowloon City Ferry Pier may be torn down for the under-Kowloon bypass tunnel.
- North Point/Kowloon ferry isn't making any money.
- There will be temporary barging when work on the tunnel begins.
- Dolphin for gasoline in typhoon shelter will be removed/demolished by the CEDD, but Kowloon Rock will stay.

Bowring, Arthur

Date: 22 January, 2010
Interviewer(s): Alexander Wong, Brian Berard

General Information of Interviewee
Name: Arthur Bowring
Company/Organisation: Hong Kong Ship-owners Association
Position: Director

What does the HKSOA represent and what are its responsibilities?

- HKSOA represents ship-owners, ship operators and ship managers resident in Hong Kong as well as companies supplying services to owners and managers
    - HKSOA is one of the world's largest ship-owner associations, but manages this with very few people compared to other similar associations
        - Japan has roughly 34 employees, London has 40, HK only has 4
        - HKSOA is the "voice of Asia" in terms of expressing the views of ship-owners
    - Over 100 million deadweight in ships owned, operated or managed by members of HKSOA
- The ships operate globally – possible to operate ships from anywhere
    - Not many HKSOA ships call at VH
        - Ships are usually too big to fit in VH
        - Very little activity seen within HK
    - Very few members operate in Hong Kong
        - OOCL, Star Cruises, HK Ferries

What are the goals of the HKSOA?

- HKSOA promotes and protects the interests of HK resident ship-owners
- A major goal is to maintain HK as a competitive maritime centre
    - HKSOA lobbies in Shanghai and Beijing
    - Works with IMO and ILO (both UN organisations)
    - Works with Civic Exchange and HK universities
        - Water pollution, air emissions, etc.
- HKSOA also represents the interests of many maritime services (legal, insurance, brokerage, etc.)

What do you think of the current waterfront development plans and projects?

- Any port city depends on its port → people live around the port → the port "grows" the city → the people begin to dislike the port for its noise and pollution → the people try to push the port out of the city
    - The most attractive harbours are those that combine the commercial activity of the port with recreational activities
        - Sydney has massive cruise ships right in the harbour alongside sailing boats and fishing boats
- HK is not blessed with good town planning
    - There is a lack of central town planning to stop the "wall effect" of advancing high rises along the waterfront

    - Ugly cargo areas, roadways along the waterfront (because that is cheaper than building tunnels), nowhere to walk along the waterfront (many walkways are tiled like lavatories)
    - It is planned to move the bus station and clock tower at TST to build a mall
    - Shanghai is an example of good development
        - There are yachts, cruise vessels, and ferries all operating in the river
- Access to the waterfront is critical (both physical and visual)
    - The Wan Chai redevelopment/reclamation near the RHKYC is going to cut off access
    - The people were promised that West Kowloon Cultural Centre would be a park – they have a massive wall at the moment and more construction
        - Trees, grass, and greenery give depth to the beauty that is the HK waterfront
        - Follow the example of Singapore
    - One should be able to walk all around the harbour
- The cargo areas should be removed because they are not needed, especially on the HKI waterfront
    - WKCC should be a park
    - Sheltered walkways should have roofs that are "/\" instead of "\/" to protect against rain and wind
    - The Central-Wan Chai waterfront should have a long, continuous promenade
        - Instead of the 6-lane highways sitting on concrete pillars that stick out of the water with sewage outflow pipes emptying into the water beneath

What facilities and services do you think VH should have that are currently nonexistent?

- Cruise vessels need deep water berths, bussing to and from the terminal
    - No one can see or get to the future cruise terminal being built at Kai Tak
        - View from Kai Tak consists of highways and high rise apartments across the harbour
    - The people on cruise ships that dock at the current terminal almost never want to leave the ship, preferring to just look at the city from there
        - They need to be able to get into the city quickly
    - The current terminal is obsolete – luggage handling, for example, is terrible, it would seem that the owners (Wharf Holdings) have a monopoly
- There needs to be high speed hydrofoils and water taxis to get around on the water easily
- Kwai Chung container port needs railway access from the mainland
    - Currently facing competition from Shenzhen
    - Cannot expand because of all the housing estates surrounding the facility
    - There are fuel stations, docking, and other facilities on Tsing Yi Island

What are your thoughts on recreational boating in VH?

- Places that have fuel stations for recreational boats on Lantau Island, Clearwater Bay, Middle Island, and Sai Kung Island
    - Would be great to have sailing boats to improve VH
    - Only time recreational boats can enter the harbour from the west is during the Round Island Race

        - High density of shipping lanes and moorings
    - MarDep trying to keep recreational boating east of TST peninsula
        - People should be able to see all types of vessels moving past in the harbour
- There are moorings for recreational craft only at the RHKYC, Shau Kei Wan, and some wharfs
    - Sampans are the only way to get on land from larger ships → they are disappearing
- The piers at Central are built on vertical seawalls that reflect the incoming waves out back into VH
    - Choppy waters of VH is a problem
    - Sloping seawalls would dissipate wave energy
- Grassy land on breakwaters are fenced off – no access
    - There are some parks on the waterfront, but they are disconnected and there are no facilities in them
    - Some plots of grassy land are simply land the government has yet to sell
- Yau Ma Tei typhoon shelter is simply a barge park

How would one enter VH as a commercial vessel?

- To enter VH: appoint an agent → agent corresponds with all the administrative bodies → make sure all forms are filled out → pick up a pilot → pilot will assist in sailing the ship into VH
- Dinghy sailing around Middle Island and some sailing around Stanley

Are there any other individuals you believe we should contact that will help us on our project?

- Cowen Chu: RHKYC member, sailor, outspoken person → talk to him about recreational sailing
- Philip Bowring: relative of Arthur Bowring, journalist, part of FCC

Downes, Warwick

Date: 25 January, 2010
Interviewer(s): Santiago Lora, Eric Rosendahl

General Information of Interviewee
Name: Warwick Downes
Company/Organisation: Royal Hong Kong Yacht Club
Position: Commodore

How do you currently use the harbour?

- Water sports are wanted by RHKYC, have been sailing in east harbour for 150 years, so want to keep that.
- Last November had some 40-ft catamarans (got some government members on boats for PR).
- Don't want to be in west harbour because of all the ferries and speed of boats and lots of waves.
- They're fine with Victoria Harbour being a working harbour, but want to keep sporting areas.
- Do around-the-island race, both sailing and rowing, every year, and the Marine Department lets them do it. This is the only time of the year they sail through the western harbour, where all the ferries and such are. Marine Department usually doesn't want sail boats going through the ferry areas.
- Sailing is main thing for RHKYC, rowing is also important (plus dinghies, etc).
- Little boats that people learn on don't usually go onto the harbour – it's mainly keelboats.
- People like to sail in the harbour because it's a beautiful place with all the surrounding buildings. Sydney has nice harbour as well but not so many tall buildings and such. But RHKYC likes east harbour because less shipping. Their most important races are out across the Lamma Channel where there is much less traffic. Also, they sail and cruise at Port Shelter near Sai Kung – even he was there last weekend.
- Typhoon shelter split 3 ways: private moorings (bigger boats, own their own moorings), yacht club (pay Marine Department fee for storing boats there), and the boat town thing without rents or anything. Private mooring people get moved out due to construction, other boats will all get juggled around, and some want compensation from government to leave. Some unsettling for the next 6-7 years, always moving boats around to different sections.
- Doesn't want to see much waterskiing and wakeboarding in Victoria Harbour, but it's done in Repulse Bay and northeast of Victoria Harbour. Smaller boats stay out of Victoria Harbour due to capsizing, so mostly lead keel boats in the harbour because they don't capsize.
- RHKYC has one of only real foreshores left in HK because it was an island at one point. Used to be storage for gunpowder. Beaches and trees there, probably only place in the harbour.
- Very happy with the location, 150 year lease, about 100 in. Get on well with govt.
- Very open to members who are sailors or rowers, but not power boaters because they don't have power boat facilities, anyone else invited to join the club. Probably biggest (one of them) yacht club in the world. 250 staff, like a medium-size company, 600 part-time staff, is a good HK employer.

What sort of future plans for the harbour have you been involved with?

- Have given proposals to governments, proposed things such as super yacht docks, talked to government about tunnels that are being put in. Yachts parked in typhoon shelter will need to be moved around due to construction of the Central Wan Chai Bypass.
- Wan Chai working basin: helipad is leaving to exhibition centre, what should be done with that area?
    - Currently listed as a designated water-sports centre, but need ideas of how to enhance it to make it better.
    - Can't put in breakwater to protect due to PHO.
    - Could be a way to put in baffles underneath the wall to stop water surges. Wouldn't be considered reclamation. Done at pier 10, "noodles" dissipate waves, idea comes from marine engineers.
    - Wan Chai basin not part of club, but would like to make it nice (boat launches, permanent pontoons).
    - Shore side area for future international sailing events in the harbour

How do you feel harbour uses will change in the future?

- Organises water races, and wants people to be able to see from the harbourfront, not just freeways.
- Sailing races are all in east harbour. Isn't too happy about cruise terminal at new Kai Tak area but can accept if not interfering with our weekend sailing races. Also, opportunity to build a super yacht berth behind the cruise terminal closer into Kowloon Bay.
- Bermuda only lets the cruise ships come in and out on Monday through Friday so that the weekend is still recreational for the locals. Try to keep them out on Saturday afternoon when races are going on. Will have to coordinate with Marine Department, etc. Try not to upset the commercial side of Hong Kong.
- Races sometimes start near Hung Hom, and go past Kai Tak. Harbour won't be closed for the Louis Vuitton HK Trophy but other boats will have to stay near southern shore. Spectator area is on Hung Hom, and a few areas by North Point and Quarry Bay. Park is being prepared east of Kai Tak (saw it on the harbour tour). People can watch from boats, too. Try to keep boats at Pier 10, and have race village around there. Have area to lift them out of the harbour so people can look at the boats. Have big screens for race footage. Have technical area to work on sails & such, people can watch. Will want a VIP area as well, and have food, bars, and outlets. A place for everyone to go watch with no entry fee. Government giving money to run the event, and they want to give it back. Government loves it because it's filmed and sent off around the world for TV coverage, which shows Hong Kong in a positive light. Club is hosting the event by facilitating, helping with on-water race management, but not actually running the teams. A few thousand people will come from overseas, (each boat 18 crew, 10-12 teams, plus support people), and total budget is around HK$40 M. It's the first one they've done in HK; they've been talking about it for a year. Takes place January next year.
- Looking at other sailing events, including one adjacent to the Western Cultural District, World Match Racing Tour (WMRT), want to have an event there (already 10 around the world), hot shot sailors, smaller boats, short races, just sailing around Western Cultural District, looking at that because there are lots of spectator areas. However large buildings may block wind. There is a bit of protected water because of turning buoy that ferries must go around. All filmed as well, so government likes it. They are talking to RHKYC to help facilitate.
- They would like to see super-yacht docks (etc) further north on Kai Tak. Wealthy people want to bring their yachts into Victoria Harbour, not outside of it. They can't put the boats on the east of runway because the water is too shallow.

- They would like a marina in the Causeway Bay Typhoon Shelter after construction is done. Would like to put tie points down to make marina when area is emptied, as piles would not work with tunnels below. This would be a more efficient way to get more boats in the marina. It would be nice to look at with boats on a marina instead of crammed on moorings in the shelter. Becoming problem as there are less and less places to store boats.
- Marina would be more efficient storage, easier to get out to the boat as opposed to getting the sampan service to drive you out. They have a marina in Sai Kung at their other clubhouse already.
- Storm drain in typhoon shelter that pollutes it badly, government promised to fix it at some point within the next 6 years. Sediment on waterbed made of pollution, will be taken away while construction is going on. Hopefully they'll have clean typhoon shelter at the end.
- Area east of North Point could have outdoor cafes and such for public to enjoy the harbour. People won't be swimming there, so perhaps water access not so important.
- A bit more shore space for public along north point and quarry bay would be good, and a place to park super yachts would be very good.

Does the RHKYC need more facilities, such as fuelling stations or boat launching facilities?

- People get fuel on the water by Cha Kwo Ling; get most of the fuel outside of the harbour. Used to have fuel on pier next to club, but that's gone now. Petrol stations nearby, so it could be done fairly easily if small amounts required. He believes it's not vital because they can get fuel outside the harbour easily without too much problem or use fuel barges.
- Club has cranes and travel hoist, and pull boats in and out of the water all the time. Little cranes that could become public if someone else wanted to access it. The dog park is closing, and will be storage area for construction; in the western Wan Chai basin (sports area) it would be nice to have another boat launch there. This area decided to be sports area because of the yacht club.
- Doesn't think ramp-launching facilities are a big deal because there are lots of cranes.
- Lots of powerboats and racking spaces around as more people buy them. All put in by boat handling areas, but RHKYC doesn't really service speed boats. Lots of boats stored in sheds in Aberdeen.
- Signboards around cross-harbour tunnel obscure view of harbour, which is bad, but government makes lots of money from advertising. Feels that they should always show off the harbour (visual access), to enjoy it.
- NOT ALLOWED TO TOW BOATS ON ROAD IN HONG KONG. Have to put on back of truck to drive around.
- Sewer openings have been moved out of Victoria Harbour.

Eastham, Roger

Date: 19 January, 2010
Interviewer(s): Alexander Muir, Lucas Scotta, Becky Yang

General Information of Interviewee
Name: Roger Eastham
Company/Organisation: Royal Hong Kong Yacht Club
Position: Marine Services Manager

Summary of Key Points

- Causeway Bay Typhoon Shelter is the only public place to tie up a boat in Victoria Harbour. However, the water quality is so bad; it rots antifouling paint in about a week. The landing step is also unsafe, unclean, and dangerous.
- The government's incentive to improve the waterfront include it being their duty, Hong Kong needs to maintain its reputation as a world city, and boating is the heart and soul of Hong Kong
- Not all development is bad… the Protection of the Harbour Ordinance is not what is forbidding; it is because of the government policy guidelines (technical memorandum). It is clear that the government is afraid of reclamation… the Club can't put in a bigger hoist to launch bigger boats because it would require reclamation. Wan Chai waterfront could be a mega-yacht facility with a floating breakwater for example.
    - Could be a wave attenuator, wouldn't provide typhoon protection
- There are five things boaters need: a safe (sheltered) harbour, clean water, fuel, potable water, and food
- There is nowhere to sit and eat on the waterfront besides RHKYC, Starbucks at Avenue of Stars, and HKF (who does dinner on the harbour).
- The EX. PCWA could use a fuel and water station
- Many world class sailing races have approached RHKYC to hold events there
    - Volvo Ocean Race
    - World Match Racing
    - Clipper Ventures
    - Formula 1 racing
    - Extreme 40's
    - Louis Vuitton Racing
- The above-mentioned organisations need areas for a racing village and supporting facilities; these events are world class and promote Hong Kong's harbour
    - EX. PCWA is an ideal location. The seawalls need to be wave absorbent and would need to be dredged to 5 metres
    - Fringing pontoon docks with ability to rearrange piers

Questions

What is your ideal waterfront?

- The waterfront is really just the starting point
- Most development has been focused on looking at the harbour; RHKYC actually wants to use the harbour
- Victoria Harbour needs to continue to be a working harbour, but also needs to balance the needs of recreational users and commercial interest in order to be a vibrant harbour
- Needs interfaces to get on and experience the harbour (needs good water quality)
- The harbour is too busy to organize novice user usage
- EX. PCWA could be used for sailing training (optimists)

Community involvement?

There have been Harbour Day Parades in the past which RHKYC have helped to organize. RHKYC would like to see this as an annual event. The main obstacle to getting it to happen again is the lack of interest by other participants.

- RHKYC also provide race logistics for dragon boat races in Stanley
- RHKYC also provide resources for other NGOs doing waterfront events
- RHKYC is currently organizing for the Louis Vuitton Hong Kong Trophy – to be held in January 2011

What kinds of activities take place at the yacht club?
There's Saturday afternoon racing in the East Harbour. Racing is in the area from Causeway Bay to Causeway Bay (Eastern Harbour) and approximately 40 boats participate each weekend.

- There are also 3 pursuit races a year (80 boats each race)
- There are also two regattas a year, taken place in the spring and autumn (120 boats)
- There's a race around the island held once a year (220 boats)
- There's also canoeing and rowing
- RHKYC also runs sail training from Middle Island, and organises at least one (normally two) offshore races to locations such as Philippines, China and Vietnam)

What specific infrastructure is available and used in the area surrounding the yacht club?
There are moorings, boat storage, and a boat yard that can handle up to 4.2 metre draft… but the club would like to handle many more boats.

What would you like to see appear around Victoria Harbour's waterfronts?
Waterfront dining and public access (docks)

What sort of obstacles do you face?
Capacity is an issue, especially with moorings… can only have 3.6 hectares for mooring area, and can't implement marina, which is more efficient, because of bypass construction. Bypass will impose on the mooring field for at least 8 years with SCL and CWB projects. For launching, small boats use a mobile crane and need a docking slip (pontoon system) to tie boats to after launching. Large boats (over 3 tonnes) are launched using a travel crane and need deep water and a pontoon dock to tie the boat to immediately after launching

- The club performs boat launching for non-members in this order of precedence: members, local partner clubs, visiting sailors (from overseas), then locals
  - Visiting sailors can stay up to three days free of charge. There are open facilities (shower, bar, etc.)

How do boats find their resources?
There are no petrol stations anywhere in the harbour… sailors need to locate a fuel barge on their own. Diesel only available from fuel barges at Lei Yee Mun

- For the general public, sampan is the only way to get from the water to their boat.

<u>Final Thoughts</u>

- The division of the west and east harbour is important to maintain
- The government needs a clear vision for the harbour

The DHK team should speak to HYF, the Convention Centre, Ocean Terminal, LCSD, and HK Sailing Federation.

Fung, Chris and Chan, Tony

Date: 11 February, 2010
Interviewer(s): Jarrad Fallon, Becky Yang

General Information of Interviewee
Name: Chris Fung, Assistant Secretary (Harbour) 1
Tony Chan, Assistant Secretary (Harbour) 2
Company/Organisation: Harbour Unit, Development Bureau

Summary of Key Points

- The Harbour Unit does not directly implement any projects but acts in a coordinating role supporting various harbourfront enhancement projects carried out by departments.
- There is currently no consensus on how the harbourfront should be enhanced.
- Sometimes the public view may become a challenge in renovating the harbour.
- In according priority to different harbourfront enhancement measures, we will consult the concerned district councils to see if there are any neighbouring conflicts. Consultation with the HEC, relevant stakeholders will also be carried out.
- Reclamation is the last, last, last resort.
- There may be some temporary reclamation for infrastructure works such as the works for Sha Tin to Central Link
- Forming a statutory authority may not be the best option, because harbourfront enhancement work needs strong lead in the Government, especially in resolving conflicts between various government objectives.
- They feel as if there are enough typhoon shelters.
- The need for the typhoon shelter is more than you can think of.
- Double decked piers at Kai Tak, took a long time to gather consensus. It's something that takes a long time through public engagement, participation, and consultation before we actually decide we need more of something.
- District Council represents public opinion, they vote in order to elect a representative.

Questions

What kinds of projects have you worked on in Victoria Harbour?

- The Harbour Unit does not directly implement any projects but acts in a coordinating role supporting various harbourfront enhancement projects carried out by departments. The Planning Department (PlanD) helps conduct surveys on planning approach of different areas. There are also a number of works departments that would help out such as CEDD, ArchSD and LCSD. The Development Bureau focuses on the policy aspect. Our aim is to create a vibrant, green, accessible and sustainable harbourfront.

In your expert opinion, what is the primary obstacle in developing land on the waterfront in Hong Kong?

- There is currently no consensus on how the harbourfront should be enhanced. Different groups of people may have different preferences and different requests. It takes time to get a consensus and whether it's actually financially feasible as well. In short, "balance" is the key word in developing the harbourfront.

Are there ways to overcome these obstacles?

- Sometimes departments don't want to relocate their facility. Incentives have to be given to them so they can allow some promenade spaces. Those are all challenges apart from the financial aspect. The main difficulty is with how to push for the change with the existing state of the harbourfront. We're not starting with a blank sheet of paper.
- Is anyone priorities needs given a higher priority than another?
- We try not to put anything on top priority; we have to consult the concerned district councils, HEC, and other relevant stakeholders.

Do you think more reclamation is required to make improvements to the harbour?

- The Government has no plan to reclaim more within the harbour. Try to identify open sites that exist and try to deal with those first, because reclaiming land tends to create more controversy. Reclamation is the last, last, last resort. There may be some temporary reclamation for infrastructure works such as the works for Sha Tin to Central Link and those reclaimed land will be moved after the construction. Both Central Reclamation Phase III and Wan Chai Development Phase II, have been proved that they had an overriding public need.

Additional Questions:

How will the traffic of barges be affected by future projects on the harbour like Kai Tak Cruise Terminal, Central Kowloon Route, T2, Sha Tin Central Link, Central Wan Chai Bypass, West Island Line, Guangzhou Express Rail and West Kowloon Cultural District? Specifically what will be their routes, duration of work, expected busy periods and number of barges for each project?

- We do not have the first hand information. CEDD is in a better position to provide relevant information.

What ordinance prevents diesel fuelling stations along the waterfront?

- Tony Chan said he would like to know the answer too. Chris says it's pretty difficult to find out the source too. (neither knew the answer)

What is the government's overall vision for the future of the waterfront? (I know they don't have one, but I want it in writing.)

- Our policy is to create a green, vibrant, sustainable and accessible harbourfront. Any development that does not in line with this will not be supported by us.
- For the new Central harbourfront site, we decided to create a distinctive civic node with mixed-use precinct, after a comprehensive public consultation that lasted for 2-3 years.
- Please also refer to the Harbour Planning Guidelines, Harbour Planning Principles which set out the guidelines for planning the harbourfront. (www.harbourfront.org)

How does the government plan on transporting people from the Kai Tak cruise terminal to Hong Kong Island?

- Various modes of transportation are planning right now (e.g. a monorail). There will be a Kai Tak station in the Kai Tak area which takes about 5 to 10 minutes for people to walk there from the Cruise Terminal. That station will link not only to Central, but other areas in Hong Kong as well.
- 2008, HEC had a visit with the San Fran Port Authority. After visiting San Fran, forming a statutory may not be the best option, because harbourfront enhancement work needs strong lead in the Government, especially in resolving conflicts between

various government objectives. A strong leadership from the government from a single source may be the more needed option than a statutory authority.

Have you heard of the "Integrated Harbour Vision and Delivery Plan" by the Harbour Business Forum? And what challenges would be presented by implementing such a system?

- Yes, we've heard of it before… that's not the road that they're going to go down.

Recommendations:

Sheltered water

1. Accommodations for increased boating
2. Off-season use
3. New sheltered water
4. Marine-focused land around sheltered water
5. Organisational structure (pontoons, docks, etc.)
    a. They feel as if there are enough typhoon shelters. Marine Development has the best information about typhoon shelters. They want to ensure there is vibrancy and accessibility along the waterfront. We would be happy to consider more shelters, but whether there is an actual demand, would have to discuss with the MarDep. It all depends on the demand from the public, if they are willing to listen, if there is a demand right here.
    b. There has been a typhoon in April before, and we shouldn't underestimate their power, because we don't really know when typhoons actually come. There is actually a lot of heavy rain in Hong Kong. The need for the typhoon shelter is more than you can think of.
    c. In terms for the actual demand, yes, we have the Causeway and Yau Ma Tei. There are a lot scattered around Victoria Harbour. If we're looking at how to use these typhoon shelters, there should be an overall approach on how to use these typhoon shelters in general. There should be a general… need to talk with the MarDep and keep the balance

Will any of these recommendations occur any time in the near future? And what effect do you think it would have on the waterfront users?

- As for fuel stations, there could possibly be a policy from the perspective of security? Handling of dangerous goods? That is something we have to look into before we actually say yes, we need more information.
- Double decked piers at Kai Tak, took a long time to gather consensus. It's something that takes a long time through public engagement, participation, and consultation before we actually decide we need more of something.
- District Council represents public opinion, they vote in order to elect a representative.

Have you approached some general members of the public?

- I think the public plays a very important role in harbourfront enhancement. The government emphasises consulting the general public to see what they really want at the harbourfront. Maybe you can seek public's views as well. Their ideas should be useful towards your study. Marine users' aspirations on harbourfront may not necessarily be the same as residents, locals, etc., on what they want. Government has battled in the past with being accused, and there was a lawsuit against government for the reclaiming land. That is why right now we want to avoid

Genna, Laurent

Date: 15 February, 2010
Interviewer(s): Santiago Lora, Alexander Muir

General Information of Interviewee
Name: Laurent Genna
Company/Organisation: Spysea
Position: Owner

How does mooring in Aberdeen affect your company operations?

- The main problem of mooring in Aberdeen is the long distance that needs to be travelled in order to pick up passengers at convenient locations like the Central pier and Tsim Sha Tsui public pier.
  - It takes for my boat, the Huan, 1 ½ to 2 hours of navigation from Aberdeen to Central. This means that each day of operation I have to pay for 3 to 4 hours of daily transportation from my mooring location to Victoria Harbour.
  - This represents higher costs in fuel consumption and crew.
- Another issue that adds to the cost is the need to use Sampans every time. It usually costs $10 per person during regular hours, but during late night hours, which is usually the time when the Huan returns after its trips, it costs $30 per person.
- Since the closest way to go to the harbour from Aberdeen is through the west side, we have to deal with the high traffic of cargo barges and high speed ferries. This is often dangerous for slow boats like the Huan.
- Also the public pier are not an ideal for our boat as being all in wood we could easily damage our boat as the pier protect but not enough for us. We are a single engine and with current and wind sometime could be hard to go to pier.

What are the main issues for your boat with respect to services and supplies?

- We currently have no problems with getting supplies like water and fuel for my boat.
- With respect to food, usually passengers bring their own, so that is not a problem either.

What facilities do you need in Victoria Harbour and where?

- The only facility that I would like to see is a special mooring/pier for the Huan where visitors can walk to it.
  - Imagine on central reclamation or Kowloon cultural reclamation a berth especially for the Huan where the boat while be covert by a glass pyramid where the boat could go in and out for daily tourist cruise. When boat under glass window all the big sail up with lighting and under glass window a restaurant looking at the boat and food and drink will be served on the deck of the boat. All managed by the LCSD in tender. I will be happy to give my boat for free in exchange to have the contract to manage the restaurant for few years.

Govada, Sujata

Date: 10 February, 2010
Interviewer(s): Eric Rosendahl, Alexander Wong

General Information of Interviewee
Name: Sujata Govada
Company/Organisation: Urban Design & Planning Consultants Limited
Position: Managing Director
Co-Chair Urban Design Committee, AIA HK

What kinds of projects have you worked on?

- Central harbourfront Designing Hong Kong competition → Urban Design & Planning Consultants (UDP) in Association with RTKL won 3rd place → government commented that it was practical and implementable and took the plans and said they would try to incorporate some of the ideas and integrate with their own proposal → government made their own proposal which was completely different→ A revised plan based on the winning competition entry was resubmitted as the Urban Design Alliance (UDA) submission as part of the public engagement input for the Central Harbourfront Urban Design Study. As a result
    - The 2 towers in front of the IFC on sites 1 and 2 of the government plan → moved to 'APA' area because of updated plan
        - P2 road development will be delayed if the proposed Inner Harbour(lagoon) is built → government will not do it even though recommended by Harbour Enhancement Committee (HEC)
    - According to public opinion, Queen's Pier and the Star Ferry clock tower should be restored
    - Updated plan includes for a marina-like facility, restoration of Queen's Pier, and a PLA berthing pier shifted away from the shore
        - Proposed more water taxis and interconnected promenades
    - The award winning Harbourfront Connectivity Study was well received by Govt. and the proposal have been incorporated in the Hong Kong Island East Study
    - The government's Island East plan includes part of their proposal
- Kai Tak is an opportunity for Hong Kong to develop a new land marine interface with the Nullah and work to clean it up rather than resort to reclamation to cover up the pollution
    - Use new developments to regenerate adjacent older urban areas
        - Develop and improve over time To Kwa Wan with marine repair shops/work shops
    - Green corridors to link the hinterland to the waterfront so there is better visual and physical access for the people of HK
        - Develop waterfront promenade so people can still use the waterfront during construction of the Kai Tak development behind, there is some green space
- Late W.K. Chan of the HEC was instrumental in including a 1.5 stage within the multi-stage pedestrian engagement for Kai Tak plan
    - Cruise terminal will probably be a problem in the future because it necessitates roads all along the runway, access is still an issue
    - Kai Tak should have an agency to control it, even if it is just a department similar to Marina Bay Development Agency in Singapore

What obstacles have you encountered in waterfront development?

- Redevelopment needs three things:
    - Strong vision → integration of all interests
    - Strong leadership → HK needs a Harbour Authority
    - Linkage between harbour commission and town planning board is critical
- Government is looking into partnerships with the private sector, but not sure how they

can help or such partnerships can be structured
    - South Bank study is a good example and a similar model could work for the other areas in Hong Kong, for example Central Harbourfront

How to make the government implement the proposals?

- The HK government will need input from the private sector to implement the harbourfront enhancement proposals → just need to make sure what gets put into practice is good for the public
    - The people generally know what they want → accessibility and vibrancy
    - Each waterfront-city has their own problems, HK is not unique

HK's biggest challenge, how to prove that harbourfront enhancement is an overriding public need?

- Need to ask the public
    - Harbourfront enhancement is overwhelming public need, will require some reclamation to ensure better land marine interface for finger piers, moorings etc.
    - Currently, > 60% of the harbourfront is inaccessible, and <10% of the waterfront is being used well, TST, although still not the best
- Government wants everything to run smoothly without any delays or controversy
    - Looks at engineering challenges but needs to look at whether the plan benefits the public

Will Hong Kong lose out against other Asian cities?

- An integrated study by the HBF highlights the loss of value in VH
    - There needs to be open spaces between the towers in urban areas
        - People need parks along the waterfront
- Vision → master plan → integrated urban design plans →high level of detail
    - Each area is distinctive but connected, one whole package
        - Both land and water ownership of the waterfront
- Cities on Water → 10 principles http://www.kavala-tourisme.info/en/wb/media/eisigisis/17/m.moretti-kavala%202007.pdf
    1. **- Secure the quality of water and the environment**
    2. **- Waterfronts are part of the existing urban fabric**
    3. **- The historic identity gives character**
    4. **- Mixed use is a priority**
    5. **- Public access is a prerequisite**
    6. **- Planning in public private partnerships speeds the process**
    7. **. Public participation is an element of sustainability**
    8. **- Waterfronts are long term projects**
    9. **. Re-vitalization is an ongoing process**
    10. **- Waterfronts profit from international networking**

Lee, Yuet

Date: 4 February, 2010
Interviewer(s): Eric Rosendahl, Alexander Muir

General Information of Interviewee
Name: Yuet Lee
Company/Organisation: Lee Yuet & Associates
Position: Owner

The government always sides with land developers, which is why the waterfront isn't very good.

The PLA building on HK Island (and the surrounding area) should be turned into another cultural district across from the existing one in TST.

- Hong Kong is a beautiful harbour city, but the government is doing bad things.

What future developments are you interested in?

- Hong Kong should be upgraded, especially around the Admiralty/Wan Chai area, because City Hall and Statue Square make up the soul of the city. The China PLA building should be taken care of with a land exchange, so that the whole area there can be redeveloped into another cultural district like at TST. That way, the two cultural districts are right across from each other on the harbour. This could lead to an upgrade of TST as well.
- The developer of the Intercontinental Hotel wants to redevelop that area, most likely to put another gigantic 50-60 story housing complex right up against the waterfront, which is a terrible use of it. Buildings along the waterfront should be low-rise, and then build up step-by-step to high-rise so that views of the harbour are not blocked.
- West Kowloon area could be developed to be another financial district (like Central) because Central is now "full" and can't hold any more large buildings because all the land is taken.
- Norman Foster proposed putting a giant glass canopy over the Western Kowloon Cultural District. This caused a public uproar (and got Lee Yuet into waterfront development), but it still took three years to get it overturned.
- He believes that we get different insights from different groups because each proposal affects different groups differently. A promenade, for example, may conflict with some peoples' interests. Another example is that some people want to have an MTR right near their home, and others don't.
- A lot of problems could be fixed with more public engagement and better communication between government bodies/bureaus.
- He suggests we add a question mark to the end of our project title: "Hong Kong: A Living Victoria Harbour?"

Poon, Priscilla

Date: 4 February, 2010
Interviewer(s): Brian Berard, Santiago Lora

General Information of Interviewee
Name: Priscilla Poon, Senior Manager, Trade Services, Greater China
Emanuel Poon, Assistant Manager, Tour Development
Company/Organisation: Hong Kong Tourism Board

How has tourism in Victoria Harbour changed since the handover in 1997? Are there more marine-related tourist attractions than in the past?

- We interview tourists at the airport and ask them what types of tourism activities they participated during their stay in Hong Kong
    - The number of harbour cruise users has grown from every visiting country
- Victoria Harbour is the number one asset for tourism in Hong Kong
    - It is the icon of Hong Kong
    - We promote the harbour by night and day
        - People are impressed by the skyline of the harbour
- Hong Kong has seen a changing dynamic in the mix of visitors
    - Many more Mainland China visitors each year
        - These "short-haul" visitors enjoy short trips around the harbour (approximately 45-60 minutes at the maximum)
    - Ten years ago, the visitors were all from Western countries
        - These "long-haul" visitors enjoy long sailing trips
    - Tourist boating is changing as a result
        - Shorter trips
        - Bigger boats
            - Short-haul tourists come in large tour groups
            - Long-haul tourists come in smaller groups
        - Ferries are becoming seen navigating in our harbour in addition to junks
- In 2006, Hong Kong added the Symphony of Lights
    - At first, it was only on the Hong Kong Island side, so people would watch from shore
- In 2007, the Kowloon side joined the Symphony of Lights
    - The best vantage is to watch from boats so that they can see both sides of the harbour
    - More and more boat trips occur during the light show

Can you increase the number of tourist activities in the harbour?

- Victoria Harbour is not a recreational harbour
- When we organized the dragon boat races, it required closure of certain part of the harbour.

Do we have enough piers? Are they any good?

- Most tourists are located in the hotels in Central, Causeway Bay, Tsim Sha Tsui, Hung Hom, and North Point
    - Piers near the tourist areas will be convenient
- Public ferries can't make use of public piers landing steps as they are double or triple decked.
    - Public ferries have piers at North Point, Hung Hom, Kowloon City, and Piers 3, 4, and 5
        - These piers are leased from the government
- Subject to lease conditions, these piers can share use between passenger ferries and tourist ferries
- It is the responsibility of the ferry owner to maintain the piers

How are other facilities?

- Landing steps are used by both locals and tourist services

- Hong Kong citizens constantly see the harbour
    - It's convenient to get to, but locals prefer to travel to the outlying islands instead
    - They board boats in the harbour because it's nearby, and then they leave the harbour
- Mainland visitors live inland, and they love to see the harbour to experience Victoria Harbour

What kinds of services occur in Hong Kong?

- Every night between 5-8pm, casino boats begin boarding
    - They use small shuttle boats to bring passengers to the anchorage where the cruise ship is parked
    - There are a few large casino ships that leaving Hong Kong for high sea cruise
- Saturdays and Sundays in the summer months are very busy with dining cruises, party boats, charter boats, etc.
- Any signs at piers are illegal
    - No hawking without a license, but no license exists for this type of sale
    - These services need commercial space to sell tickets, but there is currently no such place
- Not only tourists enjoy harbour tours
    - Companies will charter boats for corporate cocktail parties
    - Dinner parties

Simpson, Mike

Date: 19 February, 2010
Interviewer(s): Jarrad Fallon, Eric Rosendahl

General Information of Interviewee
Name: Mike Simpson
Company/Organisation: Simpson Marine
Position: Managing Director

In your expert opinion, what are the primary obstacles in developing land on the waterfront in Hong Kong?

- The government is slow to make up their mind. Thinks reclamation is an important issue, and it comes down to what is the harbour? It is Hong Kong's most valuable asset, but it's totally underutilized compared to any other waterfront community in the world, such as Sidney.

Do you think more reclamation is required to make improvements to the harbour?

- If they reclaim land for the common good that it would be the first good reclamation of land.
- They should stop further encroachments in the harbour for commercial uses.

What facilities do you think are necessary or would like to see in the future of Victoria Harbour?

- Instead of creating a cruise ship terminal, make a public place where super yachts can dock; you would have much higher revenue generated.
- Claims that there is not a single public marina in all of HK (would like to see more)
- The Kai Tak sheltered water for rowing is a good idea.

What is the government's overall vision for the future of the waterfront?

- If you think about any city on the water, they have made something of the waterfront, activities and such, and it becomes the heart of the city, but HK does not have that vision.
- Looking at Singapore, their development was stunted, but now they are allowing new development and it is starting to flourish.
- Comparing Hong Kong and Singapore, they are very similar, however Singapore has a vision of being the Monaco of the east, and so they have created super yacht associations because they can see that this will benefit their people. Hong Kong is doing nothing, they need to develop and independent vision of what they want to do.
- Need to look beyond the local opinion for developing the waterfront so you can get past the lack-lustre promenades.
- They are looking at what they have now and they see it as sufficient (facilities), but they lack the vision to see the potential. At this point they are not even playing catch up, just being ignorant of what others are doing.

How can sheltered water be better utilized?

- Every ship must have space in a typhoon shelter, but they are generally only half full, think that they should give it to a developer and have them redevelop it for yacht users because yacht use is fading away.

What are the demographics for marine users?

- Most of yacht buyers are from mainland China, some Hong Kong Chinese and expats.

Additional Information

- In Oakland when the Americas cup came through, super yachts accounted for 14 times more revenue than cruise ships.
- HK has most developed yacht market in all of Asia, but it is now stagnant.
- Developing marinas is seen as helping the rich, so it's politically negative; however it realistically generates revenue for all the surrounding people through the trickledown effect. The "trickledown effect" accounts for 6-10 times the initial money spent for yachting or whatever industry.
- Would like to see a public boat show, but wont because of the competing private interests. This is preventing Hong Kong from being seen as a maritime community.
- All of their business and efforts (Simpson marine) are moving to China, "Hong Kong is handing over a huge business opportunity to china"

Smith, Garry

Date: 9 February, 2010
Interviewer(s): Alexander Muir, Becky Yang

General Information of Interviewee

Name: Garry Smith
Company/Organisation: Saffron Cruise and Saffron Marina
Position: Managing Director

Summary of Key Points

- Hong Kong has Discovery Bay marina, which they have chosen to live on water rather than of land, because of better properties, facilities, and lifestyle. For six million dollars, you can get 1,100 square metres with 4-5 bedrooms with their money than living in the high-rises on land.
    - The problem is that it's full
- Could sell probably 50% more boats if there were more marinas.
- One good thing is the cruise line that is coming into the old Kai Tak. Queen Mary II can't, and it stops at Tsing Yi. Sydney Harbour is beautiful, and then you come to Hong Kong and its "container pretty." Hong Kong now hardly gets any traffic through here.
- It's a destination; it's not just about the waterfront. Victoria Harbour is a fantastic place, it's iconic, there's no harbour like it. I don't understand their angle whatsoever.
- Same as Roger Tupper… putting boats, stern to shore, if it was able to be sheltered somehow. The pointed walk way is perfect for it. Sheltered water (where Alex pointed) would be ideal. There's a speed limit where the area that's talked about is. Designed it so if the bigger boats were parallel, they would act as a wave breaker for the little boats.
- The little entrance next to the Yacht Club is great for demos and exhibitions. Jet Ski races are there. Extreme Yachts came in to park in there. Hong Kong is about high fliers and stuff like that.
- The Exhibition Centre needs these… yachts on either side. For lunch, get out on a yacht. The Centre is where all people come. Take it to the next stage further, and it would be awesome to have something there.
- Why don't they put a cheap pontoon system in with power and water, instead of $65,000 blocks of concrete with a rope? With Aberdeen at least, they're trying to work something out now. They totally missed the mark by kilometres. You can either leave your boat and pay $880 a month to the government, or if they just put a walkway in, even if they donate half of it, and you pay $6,000… They can make more money, more beneficial, and there be better boats there. There's a development in Aberdeen and it's the place to be.
- The government said because they have to move because they're going to move all the boats from Causeway Bay to the bypass, they need to organize it. But all they're going to make more of the same thing. Instead of doing it properly by putting moorings in. I'd be willing to put the moorings in if they give me the right to manage it. If they want to pay $880 for the block of concrete, I'll pay them double for that, and I'll pay for the infrastructure, and then I'll charge be able to charge whatever I want people want to moor it. Nothing wrong with paying 6,000 for a 50 foot boat and at the moment they're paying $1200 for a 60 foot boat. If they did (what I suggested) they'll have power and water they could get money from, the boats will be in better condition. It's just a win-win situation. Discovery Bay Marina is an example of how they did it right (they put pontoons in, etc). There is nobody with a clear vision in these typhoon shelter areas. There is a clear lack of vision.
- To pass your marine license to drive a pleasure craft is 1,600 dollars. To become an estate agent is 600 dollars. These are government fees. The pass rate of marine

license is around 28%, so some people will spend thousands of dollars to get a marine license. The government see there's money in it, but they don't take the next step where it would be better for everybody to do this. THEY NEED A PRACTICAL EXAM to make it SAFE

- What do you think about the Harbour Protection Ordinance? Do you see
- Protection of that has to go to a whole new level. Biggest problem with HK are the dredges. They just comb the bottom of the ocean and collect everything. There's no chance ever you'll get growth coming back. There is no one that is self financed. If I set up an agency and said you're in charge for FINEING boats that pollute in HK waters or do not have waste pump-out system etc, whatever, an what we do is keep 60% of the fines, we'll make a profit , offer a great service to HK and its self financing.
- Fishing's dead! It was killed years ago. But the boats are great… turning them into floating hotels or something. Restore 20 fishing boats, and sell them as a fantastic concept in Aberdeen and museum. Forget that you'll get the fishing back. Re-educate and they won't do that. Ideological things.
- Whatever you try to do, they'll spoil it by trying to spoil it by sponsorship. I just don't think there's enough government initiatives with water based projects. Hong Kong comes from the harbour… it's in their blood. Yet there's not much done with it.
- Improving pier facilities in order to make them better to your interest. There's no protection, the only one is Pier 9, which… there should be break water here and develop some area. The piers are just useless on the Kowloon side.
- Aqua Luna that is not very successful, only to finance the restaurants. The actual boats themselves are loss makers. (8:58 left)
- Cheung Chau is a great outlying island that has great seafood, but where do you park your boat? Why don't they think of building a jetty for boats that come through the day and that will spend a shitload of money at the restaurant? And then get on the boat and home? There is nowhere in Hong Kong that is boat friendly except for Lamma, which everybody has done a million times and even still that's not that friendly. It's just a public pier where you just drop off people on junk trips. Private boats need destinations.
- Sand barges, put beautiful sand in and put music systems. Have some sort of facility and all the boats dock along side. And go and have different destinations. Can have decent food, chill out, walk around the platform and walk around see these beautiful boats that would be moored up. A floating BBQ area. Each month it could be a different hotel group or catering company that hosts it.
- Standing in his way of doing this… something he would put together, but licenses granted, would I get mooring space for it, would we be allowed to move it, what kind of notices we gave. The logistics of it would just stop it and make it not doable, when really it shouldn't be a big issue. Where would you go with this proposal?
- This is probably obvious, but how much better would Hong Kong be with better waters? It just embarrasses me that there are all these beautiful boats, but you have to sail 100 kilometres before you see blue water.
- There should be initiatives to tell boat cleaners not to use soap and chemicals. Fishing boats… no sustainability, never given a chance to come back. They go out to sea and they come back. And even with their Styrofoam lunchboxes, they'll just throw over the side. There's no education.
- Aberdeen could be a fantastic place. A hotel on the water down there for changing it to proper pontoons, start to get decent looking boats instead of half drowning… everyone could benefit from it. Government makes money, better facilities, etc.

Questions

Do you think there's a demand for living inside the harbour?

- There's a demand for boating spaces and moorings anywhere. One of the biggest weaknesses seen for boating is that there are over 3,000 boats in Hong Kong (some worth over $20 million US dollars), yet there is no international boat share in existence. Monte Carlo's marina should be put where the RHKYC is and a walkabout should be made. The country would get a lot of money with international boat show, especially when more manufacturers are going to China nowadays. It's one area that is so blind to see that it could help in a million angles and move all these beautiful boats from Aberdeen into the harbour and make it a world-class city.

From your perspective, do you see the facilities (land/water interfaces) as holding you back more?

- One problem is that the harbour got much narrower; causing a sort of washing machine effect with the water… water is banging up against the side. There needs to be some way to shelter that; currently it has not been done very well. I don't want to go there and smash my boats. Try to get people from not getting on boats on the harbour, because it's dangerous. To ask people to get on at TST is not good.

If I were to charter a boat, where would you suggest I get on?

- To charter a boat, get on at Aberdeen or at RHKYC instead, which at least goes into a marina that is protected. There should be a central protected area where it's ideal. In the summer, we have 30 boats out a weekend. It's dangerous at the moment; the harbour could be full of boats. They're not thinking of the logistics of what is actually happening. There are plenty of piers, but they're not practical piers.
- To get from Aberdeen to the harbour is about an hour. The problem coming through is that they have to pass through where all the Macau ferries are, and they're leaving at a 5-10 minute interval and going 28 knots. We're trying to keep them out of the harbour, because it's dangerous. It's more risky for us, but well, that's the place it should be.
- There's no way for them to keep the boats. It would be great if RHKYC was a bigger area. Shau Kei Wan would be a good place, but it's just so rundown and smelly. East side of Central is just suicide. Hung Ham Fairway is the most underutilized area.

Do you see your charter operations more tourists based or a lot of locals that just don't have boats?

- It's a lot of locals… about 80/20… the locals have birthday needs, leaving parties, weekend trips out, reunions. You work hard in Hong Kong, so during the weekend you want to go out, have a good time and charter your own boat. When tourists come, they're usually here in small numbers, so they want to go on a water taxi. They don't allow us to really market and advertise and set something up. You can't have anything if it's not there all the time. People who walk past don't see anything don't see anything that exists. If you're there and there's no traffic, why do it?
- Mainly English based, not a complete picture.

What are the demographics for boat share operations?

- The boat shares are not really taking off (Saffron Marina). It's very difficult. Boat share doesn't work. It's a nice concept, but it just doesn't work. It's too much of a problem where it's like communism works in theory but not in practice.

Have you seen an increase in demand for leisure vessels in the last few years, either in terms of your chartering or people who want to buy boats?

- Definitely, not long enough to give realistic figures, but what we've seen is a higher demand for quality boats. Before it would be typical wooden junk with a local and his wife. Now it's more to a cruiser with high quality food and beverage on there, entertainment systems, and iPods, and much higher quality service and they expect that. The boats are in better condition, and the expectations got higher. Junks are still popular with the younger ones, but cruisers have now got into play.

What about your boat building operations?

- Where would you put them with the lack of marina?

What about Hong Kong having a sort of port authority (like San Francisco)?

- Marine Dept is great, but there should be a government department for either luxury vessels or vessel crafting that tie in with lifestyle. There should have someone in charge of that specific area, but he has to have vision himself.

Smith, Peter Cookson

Date: 3 February, 2010
Interviewer(s): Santiago Lora, Brian Berard

General Information of Interviewee
Name: Peter Cookson Smith
Company/Organisation: Urbis Ltd.
Position: Director

Summary of Key Points

- Piers are only currently used for their utilitarian purpose. There could be a plethora of additional uses for piers that would enhance the waterfront and its surrounding area.
- The dynamics of city planning have changed in Hong Kong, but the government has yet to fully recognise this. Thirty years ago, all development focused around providing housing, removing squatter areas, and developing the New Towns. The result has been that almost half of Hong Kong's population now live in the New Territories. There is now an opportunity to shift the focus to regeneration. Housing complexes need upgrades, residential areas need improvement, and recreational opportunities must increase. The changing dynamics of urban development are directly linked to the waterfront, as forms for new activities and pedestrian connections.
- The Hong Kong government has lost one of its great assets – strong leaders. Past leaders would oversee the completion of projects, and ensure that necessary projects came to be. Today, the planning and development process is overrun by bureaucracy. The government would benefit from an upgrade of the Harbour Enhancement Committee to a powerful governing entity that could ensure that harbour projects are completed. However, the catalyst of change and regeneration must come from the government, and this must mean firm commitments for the public good.
- The Protection of the Harbour Ordinance prevents any new reclamation along the harbour edge, unless for an 'overriding public purpose'. However it massively constrains the integration of necessary water-related uses along the harbour edge. The government must realise that marine activities and new pedestrian promenades etc represent an overriding public need.
- Chai Wan typhoon shelter could be converted into a marina, featuring a large waterfront promenade on all three sides.
- The WPI project team represents an entirely new voice in Hong Kong.
- It is an opportunity to state facts and make suggestions and proposals in an uncompromised way.

We've heard that you're currently conducting a study on Island East. Could you please explain to us the goals, methods, and desired outcomes for the project?

- The idea behind the study is to analyse the area from Causeway Bay to Chai Wan – about 5km of coastline
    - We wish to see if it is feasible to create a pedestrian walkway and related activity nodes that extends the length of the study area
    - We are looking at the issues and oppositions to connecting inland areas to the waterfront
        - There is currently a severe lack of connectivity, and getting to the waterfront is quite difficult
            - Roads and railway corridors separate some of the densest areas in Hong Kong from the waterfront, e.g. Yau Ma Tei, Mong Kok and Sham Shui Po. We need to look at this situation pro-actively, and propose a new waterfront district, and possibly a revitalised West Kowloon typhoon shelter, as a strong

waterfront recreational focus, linked back into the older districts.

Does the Island East proposal contain any plans for land/water interfaces?

- The area under the study already contains a few operational ferry piers, but they are largely utilitarian.
    - It's highly doubtful that more piers will be built
        - That is, of course, unless the government needs additional piers for new service.
    - Current piers are only utilitarian structures
        - There's a whole plethora of other uses possible for them

How do you go about proposing a project to the government?

- The problem with regard to the harbour is that there is no overriding vision.
    - Thirty years ago, the government focused on building new houses and developing the New Towns
    - Nowadays, studies are all done separately
        - They focus on questions such as, "What can we do?" and "What problems are there?" rather than, "How can we make this happen?"
- Sydney, Singapore, and San Francisco all have one type of overriding Authority to manage their waterfronts
- The current process in Hong Kong involves a series of long-winded consultation
    - The development process requires public consultation, but the public doesn't know how to comment, and there is no real way to reconcile comments.
    - Pamphlets are developed for public distribution, and comments are collected
        - The government spends large amounts of time analysing every comment, but does not then make clear statements of intent.
    - **The tail wags the dog** – the consultation controls the planning process, but this is not real public engagement or participation.
    - After 18 months, you have developed all of your plans with the considerations provided by every party involved, backup plans, and feasibility studies
    - The recommendations go to the planning committees involved, so it is likely that visionary proposals are watered down every step of the way, or possibly abandoned altogether.
- In the Western World, planning works with the communities, but not with every single member of the population
- The government should take responsibility and set out a comprehensive vision for the waterfront
    - It would foster a better development process
- Development along the waterfront is to provide amenities for the people
    - It's not talking about a sensitive issue such as knocking down existing buildings, so clearly there has to the some level of compromise.
- The Protection of the Harbour Ordinance causes a huge problem in waterfront development
    - It is far too Draconian
    - Reclamation in Yau Ma Tei should be acceptable. It would enhance the WKCD, and it's not even in the Central Harbour (where the real reclamation problem was)
    - The PHO has fostered straight, featureless areas
        - It's time for common sense
- The Island East objectives are impossible to achieve in practice without a challenge to the Protection of the Harbour Ordinance
    - One would think that a beautiful, functional waterfront would represent an overriding public need
- No previous study has examined such a large area of existing waterfront in depth.

- This study may be the first to succeed

What can be done to push a project through to completion?

- There really is no answer to that question
- Young people from Hong Kong travel to places like Sydney, Shanghai, and San Francisco and wonder "Why aren't we doing this?" or "Why don't we have this?"
  - It's because these places have strong leaders, who have a vision and set agendas
- Hong Kong has lost one of its major assets from the past – strong decision makers
  - People don't stand up for what they believe in
- Hong Kong should be looking at development in a more proactive fashion
  - Regenerating the waterfront of Hong Kong should be top priority
  - Hong Kong can and should be the best harbour in the world
- One EXPECTS to see marine uses in a harbour
- There are great opportunities in Hong Kong, but the system demands a joint connected effort among all government departments to make it happen, and there is nothing or no-one driving this to make bold moves

Have your experiences provided you with "Good Planning Principles" for waterfront developments?

- As Consultants we of course bring our own knowledge and experience to bear
- Hong Kong has some Planning Principles
  - The HEC came into being 3 years ago, but
    - They have no power over the waterfront whatsoever – only an informed voice
    - It's likely to evolve into something else
    - There have been people that have proposed an overall governing authority, but the future of the HEC is up to the Secretary for Development
- Planning in urban areas is a funny business
  - 20 years ago, there was no Planning Department
  - Now there is a huge one, but planning in the urban area is more to do with urban management than urban design
  - Urban areas are managed by zoning, which is an incredibly simplistic way to look at the complexities involved in the urban area
    - Urban design doesn't even enter into the equation
  - The current emphasis on zoning causes the government to focus on efficiency and not on urban design
  - Redevelopment is being done mechanically
    - Good ports around the world have an air of informality. That's what makes them good
    - Lands and financial criteria govern everything
- Hong Kong is missing a valuable opportunity
  - How can you improve an area through design?
- Kai Tak is being developed like the New Towns
  - Very expedient
- The Lands Department can put land packages on the market where and when they want them, not necessarily as components of a coherent plan
- Hong Kong's planning and urban design process is 5% design and 95% bureaucracy
- If you want an exciting waterfront, we need to be bold
- Public and private sectors must work together
- Animate a place for the public
  - Look at the bigger picture
  - Water basins are for public enjoyment and need to gradually focus on this

    - Find new uses for piers
- Nothing says "harbour" better than active waterfronts, which embody a strong recreational interface with marine activity.

Other Thoughts:

- There is currently no proposed district plan for the West Kowloon Cultural District
    - It shouldn't just be a cultural, it should be mixed-use
- The essential planning problems in Hong Kong have changed over the past 30 years
    - The population in Hong Kong is static now
    - Massive new housing and new town projects are no longer required
    - Urban densities have gone down
    - Redevelopment is the new issue
- Mong Kong and Yau Ma Tei are filled with over-crowded and extremely poor conditions
    - The Urban Renewal Authority is not working sufficiency to resolve this, nor is it looking properly at regeneration. Instead its main focus is on comprehensive redevelopment which wipes out older communities and areas of heritage
- Regeneration of older residential areas should be linked to regeneration of the waterfront
- The typhoon shelter in Chai Wan could be regenerated into a pedestrian area and water based recreation, tall ship mooring and leisure boat anchorages
    - The old warehouses nearby have been large converted for office function
    - It is unlikely that business from the Kwun Tong PCWA will move to Chai Wan
    - The fishing boat moorings should be preserved, but better facilitated
    - Recreational areas should fill the waterfront
- Now is the time to look at the Eastern Harbour for recreational uses
    - Cargo work is shifting West
    - There is space for the development of recreational marine uses
- The Harbour Authority is moving in the right direction
    - Build momentum
- If you think of the harbour as a jigsaw puzzle, the government is just throwing pieces randomly on the table, except these pieces are glued down. They should be working to assemble the entire puzzle in the correct order.
- The WPI team presents an 'outside' voice – it is sensibly examining and evaluating all the issues first, but should not be necessarily restricted by too many constraints. It should establish priority and opportunity areas, and realms of continuity with a series of imaginative recreational – oriented nodes to generate identity and diversity around the harbour.

Tupper, Roger

Date: 2 February, 2010
Interviewer(s): Alexander Muir, Alexander Wong, Jarrad Fallon

General Information of Interviewee
Name: Roger Tupper
Company/Organisation: Marine Department
Position: Director

Also present: Mr. Paul Zimmerman
Mr. Ping Zou
Mr. Adam Lai

Is the Vessel Traffic Centre (VTC) only for commercial vessels in VH?

- The VTC is for all vessels in VH in that it provides for safety of navigation.
    - It is used to track larger ships,
        - Smaller boats have patrol craft tracking them
    - Eastern VH has very few ships → primarily cruise ships,
    - Most vessels carry AIS
        - VTC is able to handle small vessels and mega-yachts that have AIS

Are cruise vessels permitted to enter the Western Harbour?

- The commercial hub of the harbour is in the west which accommodates most cargo ships leaving the eastern harbour with light traffic. Vessels exceeding 120 m in length require special permission to cross through the central harbour from west to east.
    - Cruise ships are the major ships that transit and almost always receive permission
- Even if more Mega-yachts are expected they would remain a small percentage of overall harbour traffic
    - Given their size they are treated the same as any other vessel entering or leaving VH
        - At peak times at dawn and dusk the VTC convoy ships enter and exit allocated 5 minute slots between vessels for safety and efficiency.
- Cruise vessels have approximately 8.5-9 m draft
    - Central harbour passage has a limit at 11 m draft because of the tunnels
    - For cruise ships coming in from Kwai Chung area and proceeding through the harbour, buoys have to be moved in order to increase the turning area needed by those vessels

Which department handles which aspect of the Harbour?

- CEDD handles affairs to do with dredging, maintenance, and reclamation
- Home Affairs Bureau handles recreational policy
- Should talk to the Commerce and Economic Development Bureau and Jonathan McKinley from the Leisure and Cultural Services Department (LCSD)

We have found that many port cities around the world have centralized port authorities, has Hong Kong considered consolidating its many departments that have some degree of influence in the development of VH?

- There are many forms of port authorities, there is no one single type that will be suitable for all harbours

    - London is very similar to HK: where land is controlled by a land agency and the Port Authority, only controls the ship movement
    - HK has considered a unified port and port land authority
        - Present arrangements were considered sufficient at that time
        - Land management falls under one of a number of government agencies or private owner of each part of the waterfront
    - One must think about what is the desired objective and then decide on the method of achieving that goal
    - District councils are doing a good job because each one is involved in the territory they represent
        - Fewer objections to its plans from within its district
- In HK large strategy ideas are proposed, but effective consultation of the affected people on such a large scale has proven problematic.
    - Each district should be able to determine its own plans for the waterfront
    - Larger design strategies should then integrate the district plans to provide a cohesive whole.
        - Everybody should have access to the waterfront but local opinion should have a lot of influence on the outcome
        - You need to prove what you are doing in the harbour is a good idea

What are the regulations governing typhoon shelter usage and moorings?

- Cannot create land by doing water reclamation unless it can be proven to be essential
    - Build a ferry pier at the WKCD
- Vessel licenses are for safety purposes, include access to typhoon shelters
    - Everyone has access to typhoon shelters
        - Some use them as their base of operations
    - Yau Ma Tei primarily for commercial vessels, Causeway Bay for pleasure crafts, Shau Kei Wan for fishing community
        - Vessels do not have to leave the typhoon shelters after the typhoon warning has passed however in shelters not used as a base such as Kwun Tong they do leave.
    - Cannot establish a private mooring within the typhoon shelters without special license
        - If typhoon shelter space is to be reassigned it is necessary to provide an equal amount of typhoon shelter space elsewhere in compensation
    - Sam Ka Tsuen
- Moorings require licenses
    - There are very few inside of typhoon shelters
        - Usually no allowed in typhoon shelters
    - Some dolphins provided for public use
    - Some moorings for ferries placed near the entrances of typhoon shelters
- Boat people cannot be moved unless an agreed alternative is provided i.e. space or compensation.
    - Should be encouraged to upgrade their sampan operations, possible turn the area into a marina
    - Do not have official rights to moor in typhoon shelters but they have historical ties to the area
        - Would need their support (local support) to get redevelopment done

How will the boats at the Causeway Bay typhoon shelter be affected by the Central/Wan Chai Bypass project?

- Boats in Causeway Bay are being moved to Aberdeen for the Central/Wan Chai project
    - MarDep fought to have better marina style moorings provided after the development but lost
    - 350 boats being sent there for 6 years

What is the feasibility of building marinas in the Harbour?

- Marinas are part of land development → not considered worthwhile because a land rights around the marina are required as well
- Yau Tong Bay could be made for municipal use through private development (though not likely)
    - Requires a lease on the seabed from Lands Department
- Movement towards pontoons and away from sinkers
    - Need lease from Lands Department and approval from MarDep (would be given as long as more moorings are being created)
        - Hebe Haven Marina is an example

What do you think about rowing activities at Kai Tak?

- Kai Tak area is suitable for rowing activities
    - Requires 1000 m
    - Would not infringe on typhoon shelter space
    - Sluice gates are ok to build
    - Would need to move the breakwater to protect the ex-PCWA from typhoons
- VH should have different thing happening on the water to add to the visual appeal

We saw a boat graveyard at the To Kwa Wan typhoon shelter, what will happen to the boats there?

- To Kwa Wan is not a boat graveyard
    - Vessels are to be re-serviced for use and are awaiting marine works such as reclamation and bridge construction.

The commercial users at the Stakeholder Conference were reporting insufficient access to typhoon shelters within VH.

- Typhoon shelter at Hai Ling Zou can allow ships up to 75 m in length as opposed to the 50 m restriction in other typhoon shelters
    - Commercial operators dislike the location because of distance, lost working time
        - Seafloor is not rocky as they claim, actually quite sandy
- Can setup public access interface to Yau Ma Tei PCWA for the public to observe port operations

What about developing the Kennedy Town waterfront for commercial and recreational uses?

- Kennedy Town can potentially be mixed-use
    - Would need public transit to that area
    - Short/medium term use will be as a barging point
    - Send supplies to outlying islands as a long term use

        - Could take passengers out at a later point, more important to maintain commercial links

Another person we have interviewed talked about potentially using waterfront space at Central for large yachts.

- Hung Hom pier can be used for water taxis
- Can get government allocated land on HKI to build pontoon infrastructure, "Mediterranean moor" for docking space for visiting ships such as yachts
    - Require permission to moor
    - Charge time-based mooring fee for use
    - Ensure safety
    - Figure out how to manage the boats that use it

Can fuelling stations be established elsewhere in the harbour?

- Nowhere else but Tsuen Wan and Tsing Yi Channel for oil tankers to go
    - Area is quasi-industrial, despite having extensive promenades

How have the numbers of different types of ships in VH changed?

- Commercial licenses
    - Fishing fleet vessel numbers are down
    - Cargo ships down in number, but increase in size
    - Number of launches and ferries stable, larger in size
    - More catamarans being used
    - Pleasure craft numbers up

What should be done about the number of PCWAs in the Inner Harbour?

- PCWA berths are allocated for 3 years at a time to operators, have to be reserved
    - Number of PCWAs going down, existing ones have to absorb operators from one that are being closed
        - Cha Kwo Ling and Kwun Tong being closed in 2-5 years
        - Statistics are going to be skewed until after that

We heard of plans to centralize the refuse collection network.

- Recycling being shifted to Chai Wan
- MarDep contracted someone for vessels to clear refuse from the water
    - Contractor also visits typhoon shelters to collect refuse from ships
    - Small boats → large boats → trucks → landfill

Should new public piers and docks be built?

- Public piers should be built where there is expected to be a hub of activity for water taxis to use.
    - Off Convention Centre, WKCD, Avenue of Stars (TST East), Kai Tak
    - Ferry piers in Central are underused
        - Higher fees = fewer patrons
        - Do not need new ones on Kowloon

What are the regulations for chartering boats?

- Harbour/dining cruises sometimes use pleasure vessels
    - Pleasure crafts are for personal use only
    - Can use converted ferries and other passenger-carrying vessels

        - Ticketing for ferries and other passenger-carrying vessels can be sold anywhere
    - Chartered boats have more insurance, are safer, and are more comfortable than boats of other classes
        - Vessels must be surveyed before being allowed to charter use

Wilson, Robert

Date: 5 February, 2010
Interviewer(s): Santiago Lora, Brian Berard

General Information of Interviewee
Name: Robert Wilson
Company/Organisation: Hong Kong, China Rowing Association
Position: President

Summary of Key Points

- Kai Tak offers the potential to create an international course for rowing, canoeing, dragon boating and other water sports and activities by using the sheltered water that is already there. The project proposes enclosure of the area with a breakwater. Sluice gates would create a flushing system that would forcibly replace the water in the basin with each rise and fall of the tide, thus helping to clean up and maintain the water in the basin in a healthy condition.
- It is important to make water sports available for people near to where they live. People don't want to go somewhere remote for daily sport practice.
- Sport facilities in Hong Kong should be built and maintained by the government, but activity should be organized by the community through sports clubs. The government appears not to understand that sports is a social activity that people like to do with their friends and that it is best organized by the people themselves and that they do not need it to be organized by the government.
- Rowing participation has increased. Rowing at Sha Tin began in 1982 and has grown from 25 rowers to more than 2,000 today.

How has rowing participation changed in the last years?

- Rowing was introduced at the earliest time of Hong Kong being a British colony.
- The Hong Kong Amateur Rowing Association was set up in 1978. Today, two big rowing centres are located in Sha Tin which has grown to have more than 2,000 members. Now the Association is seeking to expand by building a rowing course that follows international standards from the International Rowing Federation. This course not only requires the water space, but also appropriate land facilities.
- A 5 million study was done to determine the feasibility of making an international rowing course at Sha Tin. The proposal required building an inflatable dam to prevent tidal flow. This was opposed by the Environmental Protection Departments on environmental grounds. The objection appears ill-founded, since the proposal was to raise the inflatable dam only for about a week during major competition and this would not be environmentally damaging. The idea of locating a course in a reservoir has been opposed by the Water Supplies Department, although such courses are common in the rest of the world and are environmentally compatible with reservoir operation, so this objection also seems to have no merit.

Could you explain to us the project proposal for the rowing course at Kai Tak?

- Kai Tak site offers the potential to become a major international course by using the sheltered water that is already there. The project proposes enclosing of the area with a breakwater and some sluice gates which would control the tidal flow. Sluice gates located at the southern end of the old airport runway would allow clean water coming from the Lei Yue Mun channel to enter the basin when the tide is rising. When the tide is falling, water in the basin would be expelled through another sluice /channel that would be open through/under the runway north section and into the To Kwa Wan typhoon shelter. This would create a flushing system that twice daily would take millions of cubic metres of clean water into the basin, and expel the same amount of

water into the typhoon shelter, thereby cleaning the water inside the basin and improving tidal flushing of the To Kwa Wan typhoon shelter.

- The government Planning Department previously said the Kai Tak Approach Channel is too polluted for water sports, but the same was said about Sha Tin, and there all the pollution problems have been solved. Sha Tin had terrible pollution from pig and chicken farms, old local sewage systems, dyeing and plating factories and sludge from water treatment works, but the government took care of all this and now the water is very clean. The Sha Tin water area is 4 times bigger than Kai Tak! In conjunction with other remediation methods, the tidal flushing system will create a clean water basin acceptable for sport.
- This course, apart from holding major regattas, would be used daily for a variety of water sports and be a major recreational facility for the community.
- The project to build a sports stadium at Kai Tak and the new MTR station would create the necessary accessibility.
- The breakwater would be reclamation under the Protection of the Harbour Ordinance. People supporting the PHO have said that they have no problem in allowing the breakwater in order to have a clean water sports area and to transform an area that has been notoriously polluted into an outstanding water park for public use and enjoyment, both on the water and in a landscaped area surrounding the basin.

How would these facilities be managed, is it like a private club?

- No, I don't like to talk about this as "private" since everyone should be able to use the water sports centre by joining one of the clubs based there. Water sports obviously carry a certain level of risk and for safety reasons people need to be able to swim and have a certain level of technical proficiency and training before they can go out on the water. Community based clubs and their associated national sports associations are the best means of delivering water sports to the general public.
- I would like Hong Kong to follow the example of European countries, where, for example in Denmark it's the responsibility of the local governments to build and maintain sport facilities, but activities are managed by sports clubs. Denmark has a sports system that works beautifully; they have won dozens of Olympic medals and world championships in many different sports, and more than 35% of the population belong to sports clubs.
- Hong Kong has a failed sports system due to the government trying to run sport itself instead of letting the community get on with it.
- In Europe kids practice sports every afternoon after school by going to one or other of their many local sports clubs. Direct organisation of sport by schools has many disadvantages, not the least of which is the huge dropout rate when kids leave school. This is another benefit of clubs, because children can join when they are very young and continue to take part throughout their life without any break in continuity of organisation. Nothing changes when they leave school; they continue to develop within the club, all the way up to national level if they have the talent and the desire and this is something that is not possible when the government tries to organize activity.
- Following the European system, sport facilities in Hong Kong should be built and maintained by the government. The sports facilities run by the LCSD have many restrictions like not allowing boats on the water before 9 a.m. or after 4 p.m. This is because the government doesn't understand the needs of the community and does not know that sport is a social activity that people prefer to do with their friends and not by signing up for some government organized course that leads nowhere and has nothing to do with organised sport.
- The Kai Tak water sports centre should not be a public boating pond where you can hire a paddle boat for an hour. It should be focused on delivering properly organized instruction, training and competition for rowing, canoeing and dragon boat racing

and other water sports.

- Organisation of sport through clubs is much more effective and cost efficient than anything the government can provide. Just one of the Sha Tin rowing centres provides more activity for more people than all five government water sports centres. This shows how club managed facilities are better utilized than government managed facilities.

What is the main reason why a rowing course should be built at Kai Tak?

- Because we can make rowing and other water sports accessible to a few million people that will have easy access to this location. Hong Kong is very short of sports facilities, and the few that exist are inefficiently managed by the government. The Kai Tak water sports centre can benefit a lot of people if it is properly developed as a water park and provide other activities like cycling, walking and running by building a nicely landscaped park around the water basin. Open-air auditoriums could provide venues for plays and concerts. It would be transformational for East Kowloon.
- It is important to make water sports available for people in a close location, people don't want to go too far for daily sport practice.
- While there could be places in the New Territories for water sport, people from the main urban areas would only go there on weekends. Having a facility at Kai Tak would allow for extended daily use.

Is rowing participation growing?

- Yes, rowing at Sha Tin started in 1982 and has grown since then. Today, the Rowing Association has more than 2,000 members.

What will happen with the airport taxi bridge?

- We understand that the bridge is to be replaced. We just need to make sure that when it is rebuilt it they leave enough clearance under it and a wide enough clear span so that it would meet the requirements for international rowing, canoeing and dragon boat competitions.

What is the participation on these international competitions? How many people would be drawn here?

- For rowing, world championships are organized by the world rowing federation. There are several categories, the biggest one being the Masters championship which could bring around 5,000 competitors, plus their family members. Other world championships are held for juniors, under 23s and senior rowers. Then there are Asian and other championships. Canoeing and dragon boating have similar events.

Would you have to register these races with the Marine Department?

- Probably not, because this will be an enclosed basin which doesn't affect other boats movement.

Would this be a possibility for dingy sailing?

- Dinghy sailing doesn't need sheltered water and a narrow channel and would be better in the open water of the harbour. There could (should) be several dinghy sailing centres located around the harbour. One could be at North Point, under the highway (Eastern Corridor). Others could be on the western side of the old airport runway and at To Kwa Wan.

Other points mentioned

- I don't think there would be any problem in using the basin as an overflow typhoon shelter, since during typhoons no rowing would be happening, but the need for typhoon shelters seems to have diminished considerably so this might be

unnecessary.

- During heavy rain, the Nullah will send dirty water into the basin, but the tidal flushing system will quickly restore the basin to a clean state
- Like most people, I don't see the planned cruise terminal being at a good location, but it will not affect the water sports centre.
- I had previously proposed the use of seaplanes to ferry people to remote areas in the New Territories. The proposed seaplane business would be good for Hong Kong as long as it is not operating in the basin, where it would be incompatible with water sports activities.

Wong, Miu-Sang

Date: 28 January, 2010
Interviewer(s): Jarrad Fallon, Alexander Muir

General Information of Interviewee
Name: Miu-Sang Wong
Company/Organisation: Hong Kong Midstream Operators Association
Position: Captain

What kinds of projects or work have you done in Victoria Harbour?

- He was formerly the captain of an ocean vessel, but now is in charge of mid-stream operator's association.

What are some problems your business faces when dealing in the harbour?

- HK Container births are privately owned and operated
- Because there are so many people using the land there is a lack of space on the shoreline therefore they have need midstream site with water front and their loading and offloading operations off shore.
- To get items from the shore to the ships they have small transport ships to load up the barge offshore.
- The MSO that is almost handling Inter-Asia shipping lines and they cannot handle huge container ships.
- Because some shelter area of the hard rock seabed, anchoring doesn't work so typhoon shelters are not as effective or safe.
- Wong feels that the government has difficulties allocating land for everyone, and that in particular MSO gets overlooked.
- Shore facilities- MSO needs more space, the current facilities are inadequate, and there are only 2 pieces of permanent land for MSO in stone cutter island.
- Sheltered water
    - During typhoons- Yau Ma Tei, Kwun Tong, To Kwa Wan, Sheung Wan, Hei Ling Chau are where the large local vessels go and some also seek natural shelter.
    - Wong claims that government provided 150 hectares of water to house their ships in typhoon shelters but only suitable 75 hectares for them.
- Railway station
    - Wong does not think that it will work because it takes a long time to transport, the volume of transport is low and the cost is higher to transport on land.

Additional information

- The midstream operations that captain Wong is in charge of only exports, not importing and they cannot handle large container ships.
- Almost all cargo is produced in mainland (#1 factory in the world), and that MSO business will go down because of mainland development of container ports, however HK is a duty free port and mainland is not, therefore they will continue to have business.
- They have lost a good portion of their business to Shenzhen/Guangdong.
- HK is at a disadvantage because land is very expensive; cost of labour is higher, so HK lost a lot of business to Pearl River delta operations.

- HK is the only place that has MSO, others have tried but the “labour’s regulation is unsafe so it doesn’t end up working.
- HK shipping is going down because of other surrounding ports; a lot of business is going to Mainland, China.
- HK costs about 1600/container where most others cost 1000/container
- Their largest barge is 49.5 metres, because at 50 metres they can’t enter PCWA and the max draft is -5 metres (government mandated)

Yick, Frankie

Date: 3 February, 2010
Interviewer(s): Alexander Muir, Alexander Wong

General Information of Interviewee
Name: Frankie Yick
Company/Organisation: Wharf Limited.
Position: Director

Also Present: Mabel Lam - Wheelock Properties

How does the Star Ferry compare as a form of transportation relative to the other services such as the MTR?

- The Star Ferry has existed for 110 years
    - It is a supplementary service; main focus of the government is on the MTR system
        - People also take the busses
    - Needs more feeder services to bring passengers to the piers
    - Government thought of removing the franchise designation from Star Ferry but gave up because it is a heritage
        - Franchise → 10-15 years (currently set at 10 years)
        - License → 3 years

What percentage of the passengers are tourists?

- Over 30% of the users are tourists, rest are daily commuters
    - More competition and declining patronage → possibly focus more on tourists
        - Approx. 65% of income is from fare box
    - Star Ferry has a separate license for the harbour tour service
        - Converted from a ferry and has an open air deck
    - Star Ferry is using 4 piers: TST, Central, Wan Chai, and Hung Hom
        - Inner Harbour tour goes through all 4 piers in 1 hour

What are your thoughts on recreational boating in VH?

- VH is very crowded, more marine activities are ill-advised
    - More and more high-speed ferries without seawalls = choppy waters
        - Improved breakwater technology being implemented now

What type of fuel do the ferries run on?

- Ferries run on marine light diesel
    - Safety concern too great for land-based fuel station outside of Tsing Yi because of choppy waters
    - Also use oil barges in less choppy waters
    - Hong Kong Ferry has its own fuelling station in Tai Kok Tsui.

Is the Star Ferry considering expanding any time soon?

- Government considering allowing ferry services to WKCD and Kai Tak
    - Will be based on the passenger numbers – will invest if there is business
    - Star Ferry does an annual survey on the passengers
        - Relies on local university students; numbers may be skewed because they are less likely to talk to tourists because of language barrier
        - Locals are more demanding of the service, tourists just want to enjoy VH

How difficult is it to obtain fare increase approval?

- Political environment is difficult for service providers to get fare increase application approved
    - Need to get approval from Transport Department → endorsement from transport advisory committee → LegCo Transport Panel → Executive Council approval and then legislative council's - vetting

What facilities does the Star Ferry own and operate from?

- Star Ferry repairs at small shipyards on the north coast of Tsing Yi
- All piers belong to the government
    - Can raise concerns to the government only
        - Government handles repairs
    - Star Ferry spent 3 years in convincing the government to provide the new Central piers with its current look
        - Paid for an international architect firm to design – replica of 1912 style
        - Got support from the public

How has the redevelopment projects on HKI affected the Star Ferry?

- Government builds promenades to give the waterfront back to the public which SF strongly supports
- Star Ferry lost 18% of its patronage because of having to move 300 m due to the Central/Wan Chai bypass project
    - HK passengers dislike any kind of inconvenience
    - Merge between KCRC (government-owned) and underground MTR to provide interchange discount which reduce the gap on fares

What about recreational boating in the Eastern Harbour?

- Eastern VH less busy, but has some commercial vessels from China
    - Yacht club weekend races considered to be dangerous, esp. for dinghies
    - Water contamination in Kai Tak waters → need more efforts to clean up
        - Waters are calm, good for water sports, little traffic, simply needs boundaries
        - Water quality major concern in all typhoon shelters, sheltered water areas
        - Wave action also something to be concerned about

Has the idea for a single port authority come up in HK before?

- Idea of a single port authority has been raised before, but thought to be too big a change for HK bureaucracy
    - Good idea but not easy for implementation
    - Could propose better coordination between different government departments

Some other interviewees we have talked to suggested building a rail system to the Kwai Chung container facility to help it remain competitive.

- Marginal growth in container industry
    - Advantages in HK gradually disappearing, China is now part of the WTO
        - A big challenge for HK to maintain as a logistics hub
    - Most people don't see the need for a rail system for the commercial port
        - Current demand for more land is for container port operations, using land

for the rail system is another big challenge
    - There are three terminals in the Southern China : Kwai Chung, Shenzhen East and Shenzhen West
        - Lower land costs at Shenzhen and proximity to the origin of the goods
    - No change during handover
        - 2046 too far off to tell how China's policies will affect HK
        - Substantial progress in China has been in the last 15 years
    - Over time possible leisure use in Western VH when commercial industries move away from the area

What are your thoughts on moving the high-speed ferry terminal to Kennedy Town?

- Convenience issue for passengers with moving the high-speed ferry terminal to Kennedy Town
    - Road traffic at Kennedy Town area is a concern
    - Located near the Central Business District has advantage for passengers
- There is no right or wrong in redevelopment, just perception
    - Consulting with stakeholders is one of the important things to keep in mind
    - Balance between profit and public interest
- Government considering linking all promenades on HKI from North Point to Shau Kei Wan and possibly from Kwun Tong to WKCD on Kowloon
    - Can focus on improving accessibility and associated facilities on promenades
        - Nowhere to buy drinking water at Wan Chai promenade

How is the HK government management of waterfront redevelopment?

- Government needs to leave management to another organisation or else nothing would get done → private partner
    - Steering clear of waterfront development to avoid public protests
    - Project assessments did not cover all public comments
        - Wan Chai project has planned for over 10 years, government wants it to continue smoothly and finish

Are you aware of any waterfront redevelopment in Lei Yue Mun?

- There are over 20 owners at Yau Tong Bay
    - Proposal for residential complex before Harbour Protection Ordinance, but new proposal needed now because of "no reclamation" policy
        - Had idea for marina in the proposal
    - YTB naturally collects the refuse from VH because of its U-shape, water quality needs serious work

Appendix E: Stakeholders' Conference Outline and Results

This appendix includes the summaries of the individual discussions from each of the four tables and the summary of the final general group discussion. Where possible, we wrote the exact conversation. In addition, data provided by the stakeholders on predicted 5, 10, and 15 year trends for marine users and facilities is included in this appendix.

Event Details
Location: Royal Hong Kong Yacht Club – Chart Room
Date: 27 January, 2010 Time: 12:15 PM

Green Table
WPI Students: Alexander Muir, Eric Rosendahl

Stakeholders:		
	Patrick Lau	District Council
	Silas Liu	Planning Department
	Ray Parry	Royal Hong Kong Yacht Club
	Lee Yuet	Lee Yuet and Associates
	Ping Zou	Marine Department

Blue Table
WPI Students: Jarrad Fallon, Lucas Scotta

Stakeholders:		
	Maggie Brooke	Harbour Business Forum
	Ian Brownlee	Masterplan Ltd.
	Roger Eastham	Royal Hong Kong Yacht Club
	Sujata Govada	Urban Design & Planning Consultants Limited

Red Table
WPI Students: Alexander Wong, Becky Yang

Stakeholders:		
	Kim Lui Choi	Hong Kong Mid-Stream Operators Association Ltd.
	Chi Wan Kwok	Motor Boats & Tug Boats Association Ltd.
	Thomson Lee	Motor Boats & Tug Boats Association Ltd.
	Bonnie Wong	Hoi Kong Container Services Co. Ltd.
	Terri Ma	Designing Hong Kong Ltd.

Yellow Table
WPI Students: Briand Berard, Santiago Lora

Stakeholders:		
	Tony Chan	Development Bureau
	Horace Leung	Hong Kong Tourism Board
	Patricia Poon	Harbour Business Forum
	Peter Cookson Smith	Urbis Ltd.
	Robert Wilson	Hong Kong, China Rowing Association
	Paul Zimmerman	Designing Hong Kong Ltd.

MARINE USERS

Please enter 1 for increase, 2 for stay the same, 3 for decrease

Types of Vessels	5 years	10 years	15 years
Local ferries			
Cross boundary ferries			
International cruises			
Harbour cruises			
Barges, dredgers, tugs			
River cargo vessels			
Ocean-going cargo vessels			
Fishing vessels			
Floating restaurants and dining cruises			
Launches, walla wallas, water taxis			
Junks and sampans			
Yachts			
Sailboats			
Rowing, canoeing, dragon boating			
Others:			
Others:			
Others:			

Name of respondent:

MARINE FACILITIES

During our study we look for marine supporting facilities along the harbourfront.
Please mark for which users (more are needed) (sufficient) (less are needed) in Victoria Harbour.

Sheltered water for ..... (more needed) (sufficient) (less needed)

Sheltered water for ..... (more needed) (sufficient) (less needed)

Piers for ..... (more needed) (sufficient) (less needed)

Piers for ..... (more needed) (sufficient) (less needed)

Landing steps for ..... (more needed) (sufficient) (less needed)

Docks for ..... (more needed) (sufficient) (less needed)

Docks for ..... (more needed) (sufficient) (less needed)

Moorings for..... (more needed) (sufficient) (less needed)

Moorings for..... (more needed) (sufficient) (less needed)

Launch facilities (slips, hoists) ..... (more needed) (sufficient) (less needed)

Fuel stations (diesel) ..... (more needed) (sufficient) (less needed)

Fresh water kiosks ..... (more needed) (sufficient) (less needed)

Cargo areas/yards ..... (more needed) (sufficient) (less needed)

Boat repair yards ..... (more needed) (sufficient) (less needed)

Boat storage for..... (more needed) (sufficient) (less needed)

Club house/parking ..... (more needed) (sufficient) (less needed)

Ticketing kiosk for ..... (more needed) (sufficient) (less needed)

Others:

Others:

Others:

Name of respondent:

MARINE FACILITIES DESIGN

Please mark any suggested design amendments for marine facilities.

Sheltered water/typhoon shelters/bays:

Public piers:

Ferry piers:

Landing steps:

Docks:

Moorings:

Launch facilities (slips, hoists):

Fuel stations:

Fresh water kiosks:

Cargo areas/yard:

Boat repair yard:

Boat storage facilities:

Club house/parking:

Ticketing kiosks:

Others:

Name of respondent:

OBSTACLES

Please comment on licensing and others which impact your use of the harbour and harbourfront.

1. Ease/difficulty in obtaining licenses for mooring and berthing facilities in the harbour

2. Ease/difficulty in obtaining the use of harbourfront land

3. Have development projects (Central/Wan Chai Bypass, Kai Tak Cruise Terminal, etc) impacted your interest?

4. Are there facilities currently on the waterfront which you have had difficulty with because of disrepair or neglect?

5. Are there other obstacles which you have faced in promoting and expanding your interest which are not listed here?

Name of respondent:

(please use additional sheets in case there is not enough space for your responses)

Discussion Summaries

INDIVIDUAL TABLE DISCUSSISIONS

Red Table

There are not enough facilities for commercial marine users

- Users have to adapt to what government decides
  - HK government ignores commercial users: does not ask their opinion, does not listen to their requests
  - Government design is unilateral
- Marine users have little bargaining power with government
  - High-rise building projects have top priority over facilities such as repair yards and boat storages which are taken from commercial users without compensation

Commercial vessels generally use area in Yau Ma Tei for typhoon shelters

- Tugboats not allowed to enter typhoon shelters
- Construction sites dump into sheltered areas and typhoon shelters
  - Sedimentation occurs → "sandbars" in shelters
  - Water level decreasing in such areas
- Sewage drainage into similar areas

Public/general piers being dismantled and not replaced with new ones elsewhere

- Queen's Pier → example of reclaimed pier
- Piers are more useful than landing steps, more people can use them
- Not enough by government, no replacement for removed pier – such as they suggested parting/transport turn-around space in pier (not listened by government).

Ferry piers

- Should be built in different district
  - More safe for passenger (esp. in fireworks day)
  - More piers can facilitate were harbour activities (commercial).

Sheltered water/typhoon shelters/bays

- Seldom get opinion from public/users
- Political considerations, e.g. Pier 9 and 10 removed

Landing steps are a "temporary" solution

- They are walled off, isolated with no way to get anywhere
  - No land-based transportation infrastructure connected to landing steps
- Not enough, just for temporary
- Transport connect with landing steps – landing facilities/transport for tug for cargo loading; labour change shift especially not enough in Kowloon side (e.g., Tai Kok Tsui).

Cargo

- Kowloon severely lacking infrastructure for moving supplies, equipment, and even cargo to /from ships
  - Need roads and areas to park vehicles
  - Ramps extending into the water are not permitted in Victoria Harbour
- Periodic land reclamation in the past had adversely affected their access to docks in Kowloon
  - 15 years ago they had to move their facilities/interfaces, now they can move back, but their construction will take another 4 years
- Almost nonexistent land-based fuel stations

- Mainly fuels ships and tankers on the water that bring fuel out to the commercial vessels

Moorings
- Restricted for use – under control by government
- Permission to use moorings is heavily restricted
  - Current users are relatively ok – although there is a chance they can lose their access, but it is almost impossible for new users to obtain access/licenses

Fuel Stations
- Only in Sai Wan Ho. Most use floating oil barging

Insufficient freshwater kiosks
- Small boats cannot approach areas that have many of those facilities because of the wave action generated by catamarans and jetfoils
- Only in Sai Wan Ho, Yau Ma Tei, -→ big current, not suitable for small boats.
- Consider proper location

Not enough cargo handling areas
- Require calmer waters
- Many small areas incapable to handle high volumes of traffic or the large vessels that the cargo is transferred to/from
- People living nearby complain of noise and pollution, even in areas specifically designated for commercial activity such as Kwai Chung
  - Cargo handling areas around residential areas have heavy restrictions on hours of operation and schedule
  - Citizens sometimes report noise to police
- People want a pristine harbour without dirty commercial working areas and the associated vessels – they only want to see the harbour and white sailing boats/yachts
- Should not be removed just because they are unsightly
- Under utilize in Hong Kong Island, industry prefer Kowloon side (transportation cost).

Boat repair yard
- Not enough
- Real estate projects in top priority
- Always take away the facilities without replacement

Others
- Many facilities take away from marine users but no replacement
- Sometimes complaints by residents/land users
- Sand bank after raining in typhoon shelter
- Drainage put in typhoon shelter
- Typhoon shelter in Hei Ling Chau with sand base, not suitable for typhoon shelter
- Wrong design/place “dolphin” in Yau Ma Tei typhoon shelter

Yellow Table

- (Cookson) Current planning in Hong Kong is urban management, it's not proactive in nature.
  - There's a major gap between ideas and implementation
- (Wilson) Kai Tak approach channel should be made into a world-standard race course for rowing and canoeing
  - Very Polluted area
  - The government should add an enclosed basin in the area that contains a tidal flow management system
    - This will replace the government's removal of 600 cubic metres of runway
- (Peter) Will take us through his previous plans of the waterfront (that he's allowed to release)
  - These include feasibility studies
  - Protection of the Harbour Ordinance prevents proactive developments
- (Paul) Sheltered water is the most valuable space in Victoria Harbour
  - We must use the land along the waterfront
  - Prioritize land use for water users
  - People in places of power don't understand boating
  - Yau Tung Bay asks for 20m promenade
    - Only contains landing steps, nothing else
- (Cookson) Hong Kong government has no overall plan for the development of recreational facilities
  - It has great plans, but encounters problems in implementation
    - It's not the Planning Department's fault
- (Paul)The amount of ferries will decrease initially because there aren't as many people using the waterfront, but as the waterfront becomes more popular, they will see much greater usage
- (Cookson) The Planning Department sometimes has a bad attitude
  - If they didn't plan it, it has no merit
  - They have no power to implement their plans
  - There's no integrated way of looking at things
  - They have "no objection", but "no authority"
- (Wilson) The harbour used to be the most important economic resource in Hong Kong
  - Now it's a "derelict area"
- Out-of-territory ferries require a 10 minute walk to get to the nearest MTR station
- (Paul) No one is on the waterfront, so local water transport will decrease
  - No licenses for water taxis
  - Not allowed to just jump on a walla-walla or water taxi
  - The Lunar cannot legally sell tickets
    - It must go through a travel agent
  - Junks cannot sell tickets to individual passengers, just to organisations
- (Leung) The Marine Department reports to the Transport and Housing Bureau
- In order for the number of marine users to increase, many users must be further enabled
- (Wilson) If you're to redevelop a typhoon shelter for recreational uses, you need to add a yacht club, not just moorings
- (Wilson) Coastal Rowing is proving to be a popular and growing sport
- (Paul) If more marine facilities are to appear, who will manage them?
- (Wilson) there are no government facilities for rowing
  - One private club manages more water activity than five government facilities
  - Need club management

    - Rowing doesn't want to move its facilities, it wants to expand and become more available to the general public
        - More accessible = more participation
- (Wilson) A watersports facility at Kai Tak would be used daily by everyone
    - Eastern Kowloon is exceptionally short of recreational facilities
    - High % of people in Sha Tin using rowing facility because it's nearby
- (Paul) Sheltered water already exists – why not make the best use of it?
- (Cookson) The addition of recreational boating is visually appealing
- (Leung) Piers and landing steps
    - Need parking, boarding, and lighting
    - No lights at landing steps in Hung Hom
    - Ticket kiosks are needed if they're allowed
    - The government claims that there is "no land"
        - Not true
- (Leung) Food market at the piers in Kennedy Town are low-usage
- (Leung) Piers that are good are license only, and public piers are in disrepair
- Need a pier in Kai Tak
- (Paul) Piers take on a new importance because of the Protection of the Harbour Ordinance
- (Leung) We need a network of well-provisioned public piers
    - All the piers currently have different managers
- (Wilson) We need more piers for dinghy sailing
    - Need hardstandings, launches, slipways, club houses
    - Sailing doesn't necessarily need sheltered water
    - Launching area doesn't need to be too sheltered
    - Waves are not a problem for sailing
- (Cookson) The Protection of the Harbour Ordinance needs amending
    - The government says recreational uses are not an "overriding public need"
- (Wilson) There could be a North Point and Yau Tong Bay sailing club
    - Clubs can easily share mooring space with the general public
- (Leung) Ferry piers can be better used
    - Add stories for restaurants, shops, etc.

Green Table

Marine Users

Circular ferries
Yuet: Circular ferry could only work for tourists but not Hong Kong public. Star Ferry is still enjoyable for people with time.
Perry: Agreed, tourists' experience should be more sampan than ferry-related.
Yuet: Agreed.
Lau: Marine users should be separated: tourists vs. residents.
Zou: The ferry is for residents, harbour tours are for tourists.
Lau: Local ferries should focus on transportation. Argument was that ferries should be put into transport policy. Recreation would be room to expand for transportation uses.
Liu: People prefer ferry to MTR if it's shorter or to a place that MTR doesn't go, or if it would take too much time on the MTR (such as Hung Hom to North Point). He enjoyed the Discovery Bay ferry, despite the expense. He also believes the ferry should separate tourism from transport.
Zou: Believes there will be a slow increase in ferry usage over time.
Yuet: Harbour plan needs to be looked at to see ferry service to outlying islands. When you consider the ferry services, we must consider the *Inner* Harbour. It is both a working harbour and a tourism/leisure harbour. For outlying islands, ferry should be based outside the harbour.
Parry: This depends on how the rest of the transport system changes. If the MTR and ferry work together, then the ferry traffic will increase.
Zou: If service is good, more people will ride. Can vary by many factors. At least, ferry traffic will not decrease.

Cross-border ferries
Zou: Can depend on prices. Lower prices means better use.
Yuet: The opening of the express train means these could drop.

Cruises
Yuet: Harbour may be congested after the giant cruise terminal built at Kai Tak. Pearl River Delta cities may be getting huge yachts, so RHKYC should be upgraded. Could be very congested in 10 years, so the working harbour should be moved out of the harbour.
Parry: Medium- and long-term may decrease as China becomes more and more attractive. Singapore can steal them away because they don't have a nasty harbour, and they're not far from downtown when they land.
Liu: Needs more feeder ferry terminals that would link to international terminals. If you want to go to Central, there should be a ferry that would take you directly there, so nobody has to rely on the MTR.
Yuet: A water taxi would be more "iconic Hong Kong."

Tugboats and barges
Zou: Barges will significantly increase over 10-15 years because of the works.

River cargo vessels
Zou: 2004-2008 saw volume increases, and 2008-2009 saw a decrease due to the dropping world economy. Shouldn't change much in the next 5-10 years. Everyone will be looking for greener ways of transportation. The facilities for the river cargo vessels are lacking, and must change for growth.
Yuet: Believes it should decline, as containers should go down. Was told 20 years ago that businesses drop because big container ports are just across the water. This could also be affected by the Hong Kong-Macau Bridge.

Ocean-going cargo vessels
Zou: Would decrease because ships get larger and larger. Fewer boats, but they will be bigger. Cargo volume should not decrease.
Yuet: Hong Kong cannot compete with China in cargo-handling cost, so Hong Kong's only advantage is its efficiency. However China is catching up. Thinks that cargo volumes should decrease.
Liu: Hong Kong waterfront vs. Victoria Harbour is a very important distinction to make. Cargo should be moved out of the harbour. There should be no more cargo handling *in* Victoria Harbour, but there could be an overall increase anyway.

Fishing
Zou: Decrease because there are no fish to catch!
Yuet: Fisherman are banned from fishing for 2 months a year (around September?)
Zou: Because the fish are laying eggs.

Floating restaurants and dining cruises
Yuet: Definitely great demand because harbour is nice looking. It's very popular, and could be tied in to the cruise terminal. I believe we are not making the best use of ferry piers, like San Francisco does.

Launches, walla-wallas, water taxis
Parry: It's an issue of Kai Tak. There will be a need to be a support system for the cruise terminal. At the moment, it's difficult because you can't get on or off the boats. They will need this to be able to grow.

(Motor) Yachts
Parry: Increasing demand for all types. People who already have them want bigger ones, and there are new people buying them all the time. Revenue for super yachts is huge, and if Hong Kong doesn't get with it, then someone else will take them away.
Yuet: The main competitor is Hai Nan Island on the southern tip of China, which is being developed as a duty-free vacation spot like Hawaii.

Rowing, canoeing, dragon boating
Parry: RHKYC does see an increase. Outriggers are the increasing trend (ocean-going).

<u>Marine Facilities</u>

Sheltered water
Yuet: PHO makes this very difficult.
Parry: As long as PHO exists, it could be very difficult.
Zou: Demand is large and there's not enough shelter, but there is no place to put more. Everyone needs more shelter because it's not sufficient. "Local" vessels are smaller, and some need the shelter. There are some other sheltered water areas outside the harbour as well.

Piers
Yuet: Doesn't see demand for docking private boats in Central. Ideally, would like to relocate Hong Kong-Macau ferry terminal to Kennedy Town to reduce the water traffic in the Inner Harbour. Believes it's at the worst spot and causes congestion.
Zou: Passengers may want to get directly into the city.
Yuet: MTR will have a station in Kennedy Town.
Liu: Must link to the MTR because traffic would be quite heavy around that area, or use some other type of land transport.

Landing steps

Yuet: Doesn't agree with Paul Zimmerman in some cases, because a super-accessible waterfront could at times be unsafe. Sometimes railings are needed along the water.
Parry: Lots of the "unclaimed" landing steps may be left over from original town developments. Steps are more for local vessels. It can be very difficult for lots of local communities to get to and from their boats.

Docks
Parry: Issue of reclamation and the PHO remains even with floating docks because they still cover the water.

Moorings
Zou: They are sufficient for merchant vessels, but insufficient for local and leisure boats.
Yuet: Very in-demand for yachts and that type of boat.

Landing facilities
Parry and Lau: All are on the south side, and probably sufficient.

Fuelling
Muir: Some law prohibits shore refuelling, so most do it in the western harbour?
Lau: Can do fuelling elsewhere, outside of the Inner Harbour. Doesn't want to see fuel boats in the Inner Harbour.

Fresh-water kiosks
Yuet: Not a problem. "Let sleeping dogs lie."
Parry: Should be left alone because it is sufficient. Good local business.

Cargo areas
Liu: Must be balanced, but locations must be convenient. Hard to do with competing uses from different users. Must find a balance. They should be at the periphery of the Inner Harbour.
Parry: Adds to vibrancy; vibrancy means mixed use. Needs industry, or else it's a park.

Boat storage
Parry: Lots of boat storage outside the harbour, not needed *in* the harbour.

Clubhouses and parking
Parry: Other areas of Hong Kong are better suited than the Inner Harbour. Inner Harbour is better for public access than club houses.

Ticketing kiosks
Yuet: Permanent structures are better than folding tables. Harbour cruise is major tourist-generating industry. Fails badly. San Francisco and Melbourne have very good reception areas. The Tourism Board would need to be shaken to get any change.
Zou: Ideally, but Hong Kong land is limited and the population is quite large. Of course they can plan it better.
Lau: Depends on how cruise ship businesses are run. Doesn't see them as organized enough to figure it out. Doesn't see anything stopping them.
Parry: Technology will dictate this. If it's octopus you won't need it for the ferry. It's the responsibility of the businesses to get their own area. They're taking the free route at the moment.
Yuet: Ocean Terminal would be the perfect place for the harbour cruise centre. They did not see this, so they have the current arrangement. But it could be fixed, in 5, 10, or 15 years if there is space set aside at the cruise terminal.

Blue Table

Major points:

1. **On the PHO -** "Good reclamation" is possible. The PHO was meant to be helpful, but it has been restrictive for things that need to happen. It has been an obstacle for needed new facilities and improvements to existing facilities; for example, it is necessary and beneficial to increase the size of typhoon shelters so they can accommodate more boats and make the harbour vibrant. The problem is less with the ordinance itself, which allows for these things. The problem is with the government's policies and enforcement of the ordinance – they are too restrictive and their policies need to change. The ordinance does not need to be changed, the government needs to apply it properly.
2. **Typhoon shelters –** Need sufficient typhoon shelter space to accommodate existing vessels in the harbour, cannot facilitate growth. Some shelters are unused 350 days per year. They could be utilized for special marine events, visiting vessel mooring. Could be dual-function facilities. Many typhoon shelters lack pedestrian access: pedestrians can't walk along the edge of many of the typhoon shelters. Pedestrian access is important, but lacking. For shelters with PCWAs, promenades would have to avoid the working areas for safety.
3. **Water quality** – Drainage from the land goes into typhoon shelters and makes the water quality terrible.
4. **PCWA –** less PCWAs are needed. PCWAs are very important for a diverse, vibrant harbour, but they can be modernized and centralized and better maintained.
5. **No mega-yacht facilities** – huge potential economic benefit. No current facilities.
6. **Causeway Bay –** grade 1 location with grade 3-4 facilities. Low density of moorings due to fore/aft mooring system. Pontoon system could increase density without requiring reclamation or moving the existing breakwater. Public access facilities are pitiful. Water quality is terrible.
7. **Central/Wan Chai bypass:** this huge project should have a provision to fix the water quality issues in the causeway bay typhoon shelter.
8. **Events –** important. Difficult to organize due to the number of organisations involved that need to be contacted. If you want marine events, make it easy to organize them. 23 separate organisations are responsible for the development of the harbour.
9. **Fuel stations –** no petrol stations in the harbour. Nearest is 19 kilometres away in Aberdeen
10. **No ramp to get boats into the water** – need boat launches

FINAL GENERAL GROUP DISCUSSION SUMMARY

Stakeholder's Conference Group Discussion Notes

- There are many typhoon shelters that could be put to different uses, and still be used during typhoons
- Commercial users welcome the idea of a facility for visiting yachts
    - However, we need to have space for existing vessels in Hong Kong first, because there isn't enough right now
- Some typhoon shelters can and/or should not be used for recreation
    - Water quality is very poor
    - There are only certain shelters that can accommodate big ships
        - Some shelters don't allow Lighters due to length and height restrictions
- There must be a distinction between PCWA and typhoon shelters
    - The commercial aspect of the harbour must be maintained & enhanced while providing recreational uses at the same time
- The government should amend its policy of management of the typhoon shelters
    - Pleasure vessels aren't adequately included in plans for typhoon shelters
- We must discover locations where there are opportunities for expansion, and consider the users
- The government must apply the Protection of the Harbour Ordinance properly
    - They are perfectly capable of expanding typhoon shelters, but will not see an "overriding public need"
    - Any proposal that benefits recreation in or around Victoria Harbour should meet the requirements of the Protection of the Harbour Ordinance
- Pedestrians should be considered as an important user of the typhoon shelters as well
    - They can't currently walk around the shelters
    - Pedestrians cannot possibly walk through cargo working areas, the promenades should go around
- Causeway Bay is a 1st class typhoon shelter with 3rd or 4th class facilities
    - The mooring strategy in the shelter is poor
        - A pontoon system would manage space much more effectively and allow more boats to fit
    - Storm drains must stop draining into the shelter
    - The redevelopment of Causeway Bay typhoon shelter would be a great flagship project
    - Causeway Bay shelter was the best shelter in the 70s and 80s
        - It catered to the needs of the general public
            - We should restore that type of environment
- There was a group consensus on the need for more public piers
- Very few people in government understand the marine users
    - We must work together to educate the public and the government about the needs of the marine user before it's too late

Marine Users

Raw data:

5 Years

NAME	Local Ferries	Cross-B Ferries	Int'l Cruises	Harbour Cruises	Barges, Tugs	River Cargo	Ocean Cargo	Fishing vessels	Floating restaurant	Water taxis	Junks, sampans	Yachts	Sailboats	Rowing, canoeing	Working boats	Heli-copters	Special events	Gov't workin g boats
Ian Brownlee	1	1	1	2	3	3	2	2	1	1	2	1	1	1				
Ray Parry	1	1	1	1	1	3	3	3	2	1	1	1	1	1	1			
Choi Kim Lui	2	2	1	3	2	1	3	3	3	3	3	2	2	1				
Patrick Lau	1	1	1	1	3	3	3	3	1	3	2	1	2	2				
Roger Eastham	2	1	2	2	1	2	2	3	1	2	2	1	1	2		1	1	
Ping Zou	1	2	1	1	1	2	3	3	1	1	2	1	1	2				1
Silas Liu	1	2	1	3	2	1	3	3	3	2	2	2	2	1				
Maggie Brooke	2.5	1	2	2	1	2	2	3	2	2	2	1	2	2.5		1		
Bonnie Wong	2	2	1	2	3	1	3	3	3	3	3	2	2	1				
Kwok Chi Wan	2	2	1	3	1	1	3	3	3	2	2	2	2	1				
Paul Zimmer-man	3	1	1	2	1	2	2	3	1	2	1	1	1	1				
Peter C-S	2	2	2	2	3	3	3	3	2	2	2	2	2	2				
Tony Chan	2	2	2	2	1	2	2	3	2	2	3	2	2	2				
Horace Leung	2	2	1	2	3	2	2	3	1	2	2	2	2	2				
Patricia Poon	2	2	2	2	2	2	2	2	1	2	2	2	2	2				
Robert Wilson	3	3	1	1	3	3	3	3	2	3	2	1	1	1				
AVERAGE S	1.84375	1.6875	1.3125	1.9375	1.9375	2.0625	2.5625	2.875	1.8125	2.0625	2.0625	1.5	1.625	1.53125				

10 Years

NAME	Local Ferries	Cross-B Ferries	Int'l Cruises	Harbour Cruises	Barges, Tugs	River Cargo	Ocean Cargo	Fishing vessels	Floating restaurant	Water taxis	Junks, sampans	Yachts	Sailboats	Rowing, canoeing	Working boats	Heli-copters	Special events	Gov't working boats
Ian Brownlee	2	2	1	2	2	2	3	1	1	1	2	1	2	1				
Ray Parry	1	3	2	2	2	3	3	3	1	1	1	1	1	1	1			
Choi Kim Lui	3	2	1	1	3	1	3	3	3	2	3	1	2	1				
Patrick Lau	2	1	2	1	3	3	3	3	1	1	2	1	1	2				
Roger Eastham	2	1	1	1	2	2	2	3	2	1	1	1	1	2		1	1	
Ping Zou	1	2	1	1	1	2	2	3	1	1	2	1	1	2				1
Silas Liu	2	3	1	3	3	1	3	3	3	3	3	2	2	1				
Maggie Brooke	2.5	1	1	1.5	2	2	3	3	1	1	2	1	1	2		1		
Bonnie Wong	3	2	1	2	3	1	3	3	3	3	3	2	2	1				
Kwok Chi Wan	2	3	1	2	2	1	3	3	3	2	2	2	2	1				
Paul Zimmer-man	1	2	1	1	3	2	2	2	1	1	1	1	1	1				
Peter C-S	2	2	1	2	3	3	3	3	1	2	3	2	2	2				
Tony Chan	3	2	1	2	2	2	2	3	2	2	2	2	2	3				
Horace Leung	2	1	1	1	3	2	3	3	1	1	2	1	2	2				
Patricia Poon	3	1	2	3	2	2	2	3	1	1	2	2	2	2				
Robert Wilson	3	3	2	1	3	3	3	3	2	3	2	1	1	1				
AVG.	2.1562	1.9375	1.25	1.65625	2.4375	2	2.6875	2.8125	1.6875	1.625	2.0625	1.375	1.5625	1.5625				

15 Years

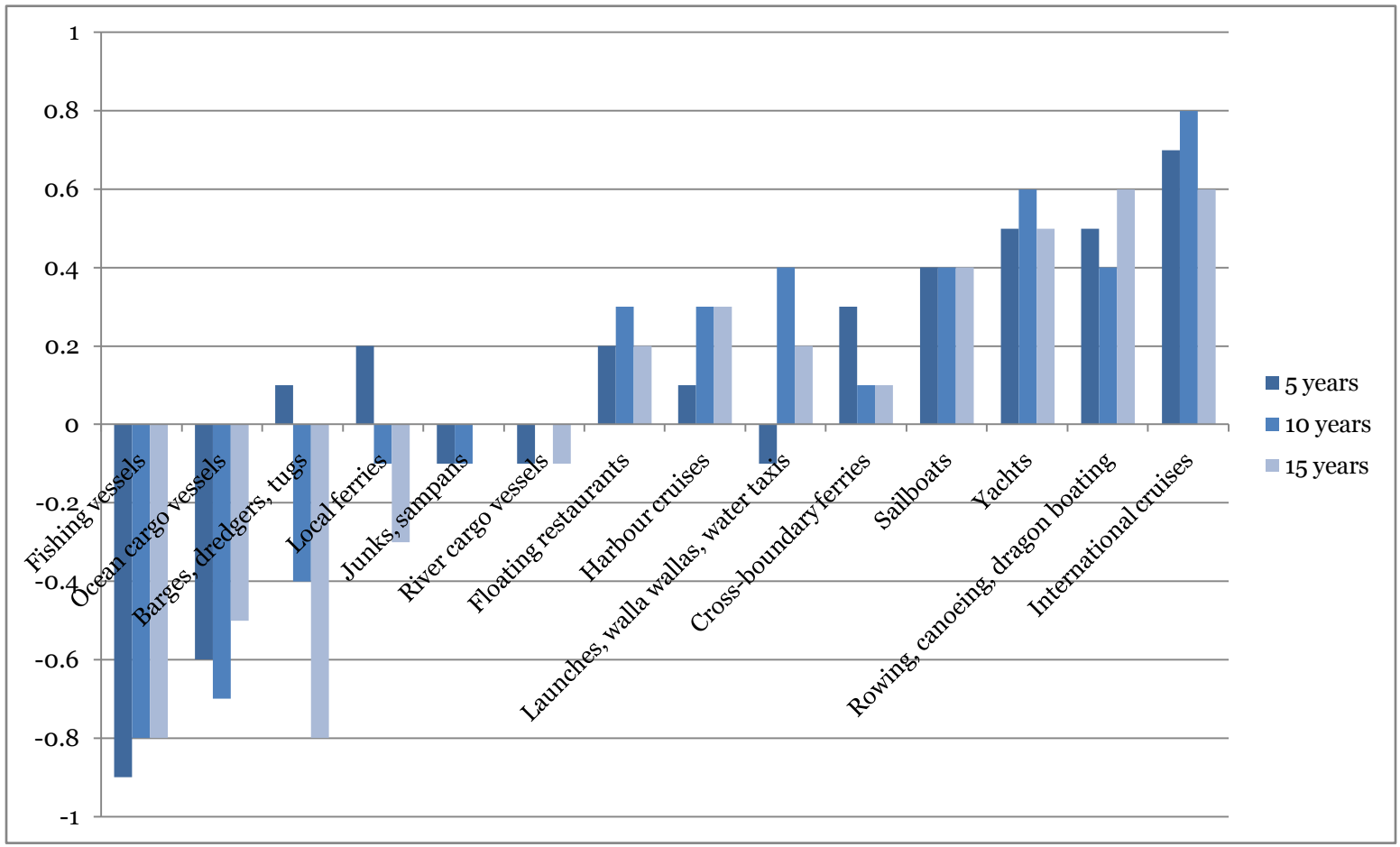
NAME	Local Ferries	Cross-B Ferries	Int'l Cruises	Harbour Cruises	Barges, Tugs	River Cargo	Ocean Cargo	Fishing vessels	Floating restaurants	Water taxis	Junks, sampans	Yachts	Sailboats	Rowing, canoeing	Working boats	Heli-copters	Special events	Gov't working boats
Ian Brownlee	2	2	1	2	2	2	3	1	2	2	2	1	2	2				
Ray Parry	3	3	3	3	3	3	1	3	1	2	1	1	1	1	1			
Choi Kim Lui	3	2	1	1	3	1	3	3	3	3	3	1	2	1				
Patrick Lau	3	1	2	1	3	3	3	3	1	2	2	2	2	2				
Roger Eastham	3	1	1	1	3	2	2	3	2	1	1	2	2	1		2	1	
Ping Zou	2	2	1	1	2	2	2	3	2	1	2	1	1	2				1
Silas Liu	2	3	1	3	3	1	3	3	3	3	3	3	2	1				
Maggie Brooke	2.5	1	1	1.5	3	2	3	3	1	1	1.5	2	1	1		2		
Bonnie Wong	3	2	1	2	3	2	3	3	3	3	3	2	2	1				
Kwok Chi Wan	2	3	1	2	3	1	3	3	3	2	2	2	2	1				
Paul Zimmer-man	1	2	2	1	3	2	2	2	1	1	1	1	1	1				
Peter C-S	1	1	1	1	3	3	3	3	1	1	3	1	1	1				
Tony Chan	2	2	1	2	3	1	1	3	2	2	2	1	1	3				
Horace Leung	1	1	1	1	3	3	3	3	1	1	2	1	2	2				
Patricia Poon	3	1	2	3	2	2	2	3	1	1	2	2	2	2				
Robert Wilson	3	3	2	2	3	3	3	3	2	3	2	1	1	1				
AVG.	2.28125	1.875	1.375	1.71875	2.8125	2.0625	2.5	2.8125	1.8125	1.8125	2.03125	1.5	1.5625	1.4375				

Calculated data:

	5 years	10 years	15 years
Local ferries	1.84375	2.15625	2.28125
Cross-boundary ferries	1.6875	1.9375	1.875
International cruises	1.3125	1.25	1.375
Harbour cruises	1.9375	1.65625	1.71875
Barges, dredgers, tugs	1.9375	2.4375	2.8125
River cargo vessels	2.0625	2	2.0625
Ocean cargo vessels	2.5625	2.6875	2.5
Fishing vessels	2.875	2.8125	2.8125
Floating restaurants	1.8125	1.6875	1.8125
Launches, walla wallas, water taxis	2.0625	1.625	1.8125
Junks, sampans	2.0625	2.0625	2.03125
Yachts	1.5	1.375	1.5
Sailboats	1.625	1.5625	1.5625
Rowing, canoeing, dragon boating	1.53125	1.5625	1.4375

	5 years	10 years	15 years
Fishing vessels	-0.9	-0.8	-0.8
Ocean cargo vessels	-0.6	-0.7	-0.5
Barges, dredgers, tugs	0.1	-0.4	-0.8
Local ferries	0.2	-0.1	-0.3
Junks, sampans	-0.1	-0.1	0
River cargo vessels	-0.1	0	-0.1
Floating restaurants	0.2	0.3	0.2
Harbour cruises	0.1	0.3	0.3
Launches, walla wallas, water taxis	-0.1	0.4	0.2
Cross-boundary ferries	0.3	0.1	0.1
Sailboats	0.4	0.4	0.4
Yachts	0.5	0.6	0.5
Rowing, canoeing, dragon boating	0.5	0.4	0.6
International cruises	0.7	0.8	0.6

Graphical representation:



Marine Facilities

Raw data:

	Ian Brownlee	Ray Parry	Choi Kim Lui	Patrick Lau	Roger Eastham	Ping Zou	Silas Liu	Maggie Brooke	Bonnie Wong	Kwok Chi Wan	Paul Zimmerman	Peter C-S	Tony Chan	Horace Leung	Patricia Poon	Robert Wilson
Sheltered water for				1			1			1		1				
...mooring	1															
...recreational use	1	1		1		1					1	1	1		1	1
...visiting yachts		1														
...barges			1						1							
...small vessels			1			1								1		
...events					1											
...cargo handling					3								3			
Piers for							1			1					1	
...land activities	1															
...small boat transfers	1		1					1			1					
...public use		1			2			1				1			1	
...direct city access		1														
...water transport				2												
...private boats				2												
...ferries					2							1	2		3	
...merchant ships						2										
...cruisers						1			1		1			1		
Landing steps for	2			2		1	1		1	1						1
...local vessels		1									1	1	1	1		
...ship supplies			1													
...public access					1											

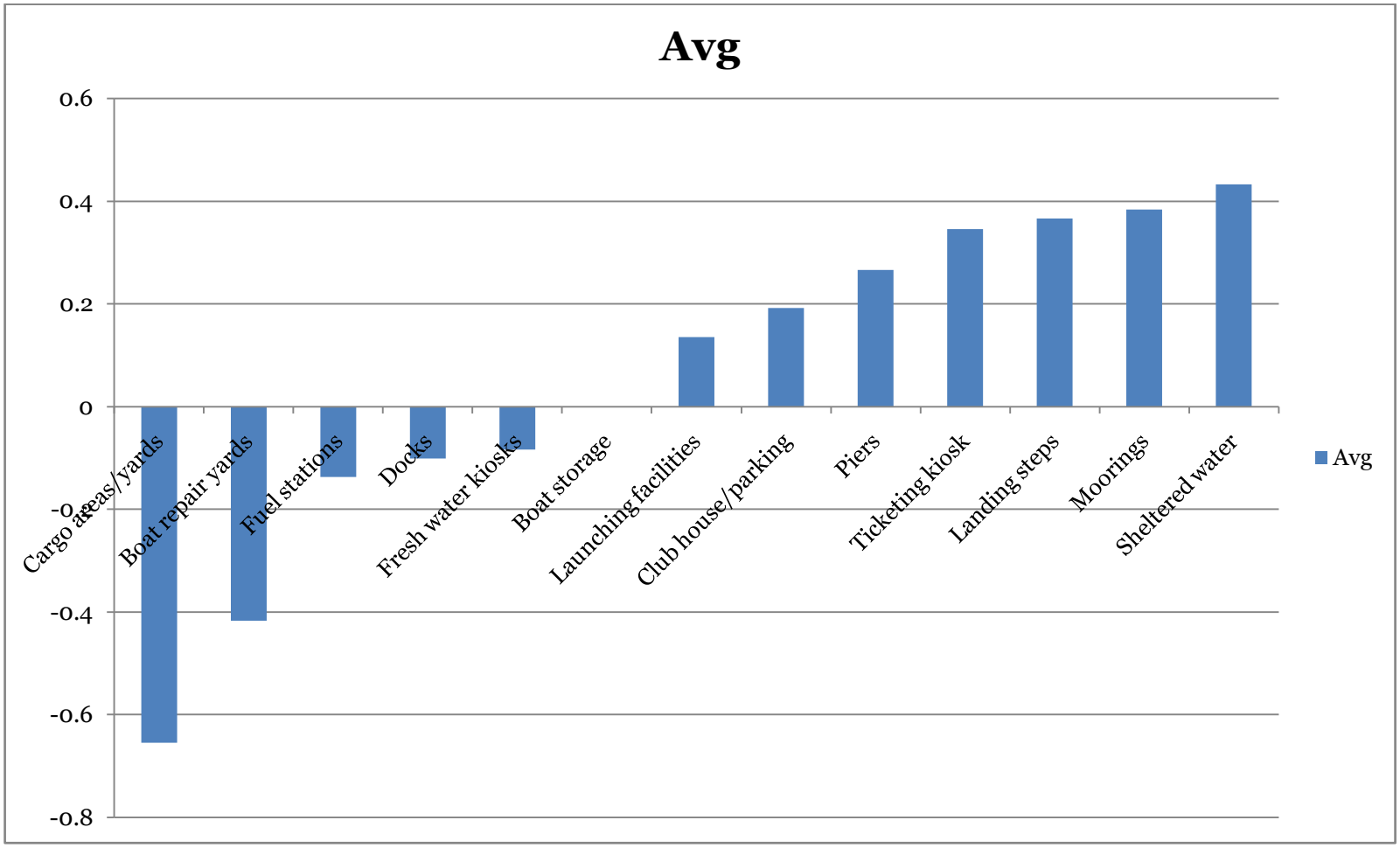
Raw Data (cont.):

	Ian Brownlee	Ray Parry	Choi Kim Lui	Patrick Lau	Roger Eastham	Ping Zou	Silas Liu	Maggie Brooke	Bonnie Wong	Kwok Chi Wan	Paul Zimmerman	Peter C-S	Tony Chan	Horace Leung	Patricia Poon	Robert Wilson
Docks for	2			2		2										
...repair of vessels	2															
...pleasure vessels					1			1								
Moorings for							1			1		1				
...smaller commercial	1							1	1							
...private recreation	1							1								
...local vessels		1														
...commercial vessels		2		2		2										
...launches			1													
...pleasure boats				1	1	1					1	1	1			
Launching facilities	1	2		2	1	1	1	1	1	1	1		3			
Fuel stations	2	3		3	1	1	1	1	1	1	1		3			
Fresh water kiosks	2	2	1	2	1	1	1	1	1	1	3		3			
Cargo areas/yards	2	2	2	3	3	2	1	2	2	1	2	3	3			
Boat repair yards	2	2	2	2	2	2	1		2	1	1	3	3			
Boat storage for		2		3		2	1	1		1		1	3			
...recreational vessels	1				1						1					1
...small boats			1													
Club house/parking	2	2		2	2	1	1	1	1	1	1	1		1		1
Ticketing kiosk for						2	1	1	1	1		1		1		
...tourists	1															
...harbour cruise		1			2						1					
...launches			1													
...cruise industry				1												

Calculated data:

	Ian Brownlee	Ray Parry	Choi Kim Lui	Patrick Lau	Roger Eastham	Ping Zou	Silas Liu	Maggie Brooke	Bonnie Wong	Kwok Chi Wan	Paul Zimmerman	Peter C-S	Tony Chan	Horace Leung	Patricia Poon	Robert Wilson	**Average**
Sheltered water	1	1	1	1	2	1	1		1	1	1	1	1	1	1	1	1.066667
Piers	1	1	1	2	2	1.5	1	1	1	1	1	1	2	1	1		1.233333
Landing steps	2	1	1	2	1	1	1	1	1	1	1	1	1	1		1	1.133333
Docks	2			2	1	2		1									1.6
Moorings	1	1.5	1	1.5	1	1.5	1	1	1	1	1	1	1				1.115385
Launching facilities	1	2		2	1	1	1	1	1	1	1		3				1.363636
Fuel stations	2	3		3	1	1	1	1	1	1	1		3				1.636364
Fresh water kiosks	2	2	1	2	1	1	1	1	1	1	3		3				1.583333
Cargo areas/yards	2	2	2	3	3	2	1	2	2	1	2	3	3				2.153846
Boat repair yards	2	2	2	2	2	2	1		2	1	1	3	3				1.916667
Boat storage	1	2	1	3	1	2	1	1		1		1	3			1	1.5
Club house/parking	2	2		2	2	1	1	1	1	1	1	1		1		1	1.307692
Ticketing kiosk	1	1	1	1	2	2	1	1	1	1	1	1		1			1.153846

Graphical representation:



Appendix F: Google Earth Database User Guide

One of the goals of our project was to identify the existing land/water interfaces in the harbour. We created a database using Google Earth to help organize the data we collected during our audit and photographic survey. The database may be helpful for others, so we are releasing it for free on the Harbour Business Forum's website. The database is for reference purposes only.

About Google Earth

Google Earth is a geographic information system (GIS) that was created by Keyhole, Inc. in 2004 and is now developed by Google. This program maps the Earth using satellite imagery and aerial photographs and provides the images in its database for free to all users. In order to operate this program, a user must simply download Google Earth and install it on their system. Google Earth comes standard with thousands of points of interest that are easily toggled by various categories. Google provides several "layers" which contain an impressive amount of information about Hong Kong and Victoria Harbour, including roads, public transportation, businesses, attractions, photos, videos, and 3d buildings and terrain.

You can supplement Google Earth's default database by adding 3rd party geographic data contained in a KML file. KML is a file format used to display geographic data in an Earth browser such as Google Earth and Google Maps. You can use Google Earth to open a 3rd party KML file and view the geographic data it contains. Our database is packaged in a KML file available on the Harbour Business Forum's website.

Accessing Our Database

The Victoria Harbour Database is a database of the existing marine infrastructure in Victoria Harbour. It includes the land/water interfaces we identified during our audit and a photographic survey of the harbour, development plans and proposals for the harbourfront, and important marine-supporting infrastructure located in other areas of Hong Kong.

You can access part of our database on the web using your browser. Alternatively, you can download the full database and view it using Google Earth.

On the Web (Google Maps)

Google Maps contains only the audit data. For the full database, please use Google Earth

- Using your web browser, go to the harbour business forum's website…
- The sidebar has folders for each category of land/water interface
- You can choose what to display on the map by checking the corresponding folder or placemark
- Click on a placemark to display additional information including its photo and description

In Google Earth

- Download and install Google Earth. It is available for free at http://earth.google.com/
- Open Google Earth
- Download the KML file from the Harbour Business Forum's website
- Open the file using Google Earth. You should be able to double click it. You also can use the File > Open menu in Google Earth or drag the file onto the Google Earth window if you have Google Earth running.

- When you open the KML file, it creates a new folder within the **Temporary Places** in Google Earth's sidebar. The folder is called **Designing Hong Kong** and contains the database. When the KML file finishes loading, Google Earth should automatically zoom in on Victoria Harbour.

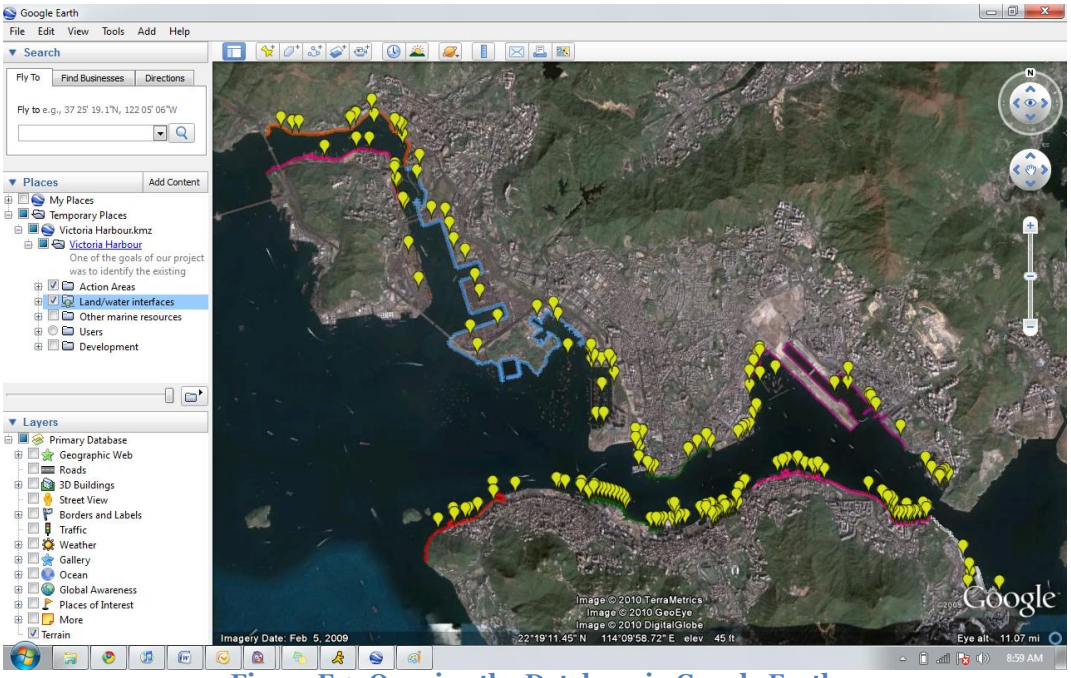


Figure F.1: Opening the Database in Google Earth

Tips

- The database opens by default in the temporary places folder, meaning it will not appear the next time you open Google Earth; You can move the database folder to the 'My Places' folder to make it permanent
- You can search the database with the Edit > Find menu or by pressing Ctrl + F; this opens a search box in the Places section of the sidebar
- It is also possible to replace the satellite images View > Historical Imagery to replace the satellite images of the harbour with historical imagery of the harbour at different points in time, as far back as December 1979. This imagery clearly shows how the shape of harbour has changed due to land reclamation.
- The database can be used offline, but an internet connection is required to view any the images of the land/water interfaces, since they are hosted on the Harbour Business Forum's website. Google Earth caches images you have viewed, and they will be available offline as long as they remain in the cache.

The Database (Using Google Earth)

The database contains five folders:

- **Action Areas** – the 23 sections of harbourfront audited during the study
- **Land/water interfaces** – the land/water interfaces identified during the audit of the harbour, organized in folders by category
- **Other marine resources** – major land/water interfaces located outside of the harbour and other marine resources such as fairways, ferry routes, and mooring areas
- **Users** – shows the user groups that primarily use each section of the harbour
- **Developments** – harbourfront development proposals and confirmed plans

Check the box next to each folder to display it. You can expand the folders to view their contents and toggle the display of individual subfolders or placemarks.

Action Areas

The "Action Areas" folder displays the 23 sections of harbourfront we audited during the study. These action areas may be toggled on/off as a whole, or individually by checking the boxes corresponding to each action area. Double-clicking on the name of a specific action area in the sidebar will cause the map to zoom to that area.

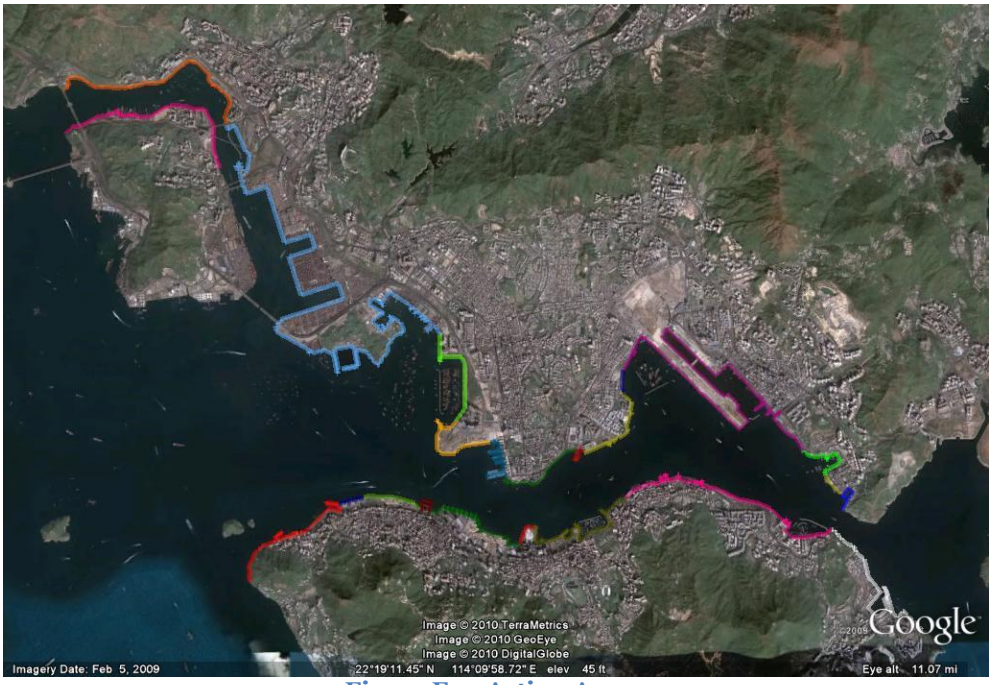


Figure F.2: Action Areas

Land/water interfaces

The "Land/water interfaces" folder contains all of the land/water interfaces we identified during our audit of the harbourfront. The land/water interfaces are grouped into sub-folders by category. Yellow markers indicate the location of each land/water interface on the map. We assigned a code to each land/water interface corresponding to the action area it is located in. To display additional information, such as a photo or description, click on a marker to bring up the desired content.

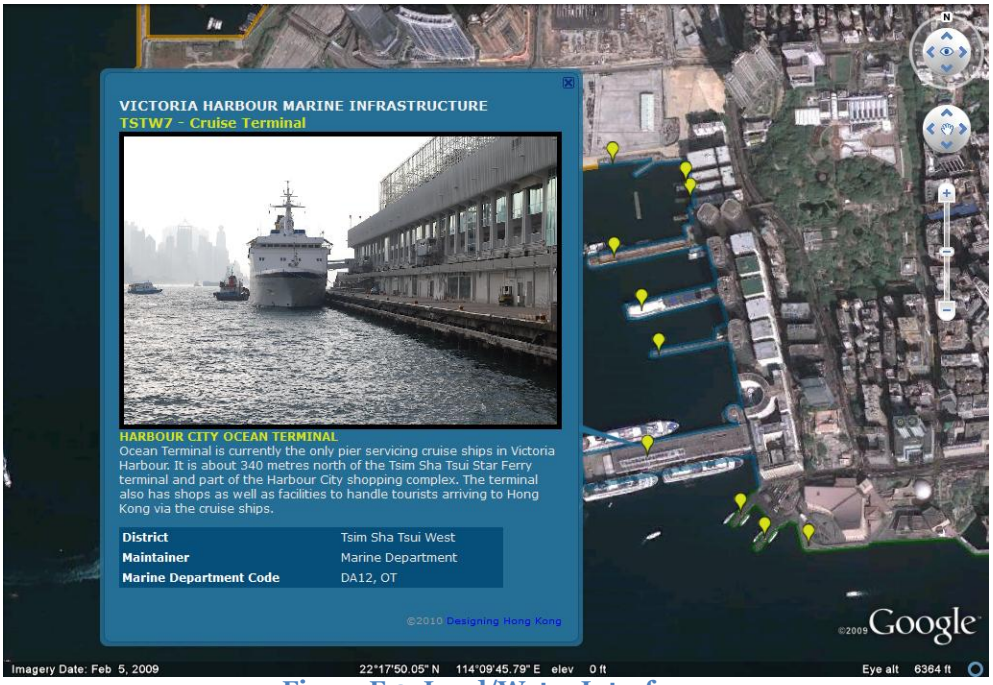


Figure F.3: Land/Water Interfaces

Other Marine Resources

The "Other marine resources" folder contains major land/water interfaces located outside of the harbour and other marine resources such as fairways, ferry routes, and mooring areas. This information was compiled through desk research, and many of the sub-folders have descriptions with links to the sources of this information. In order to access the information, click on the link on located in the sidebar.

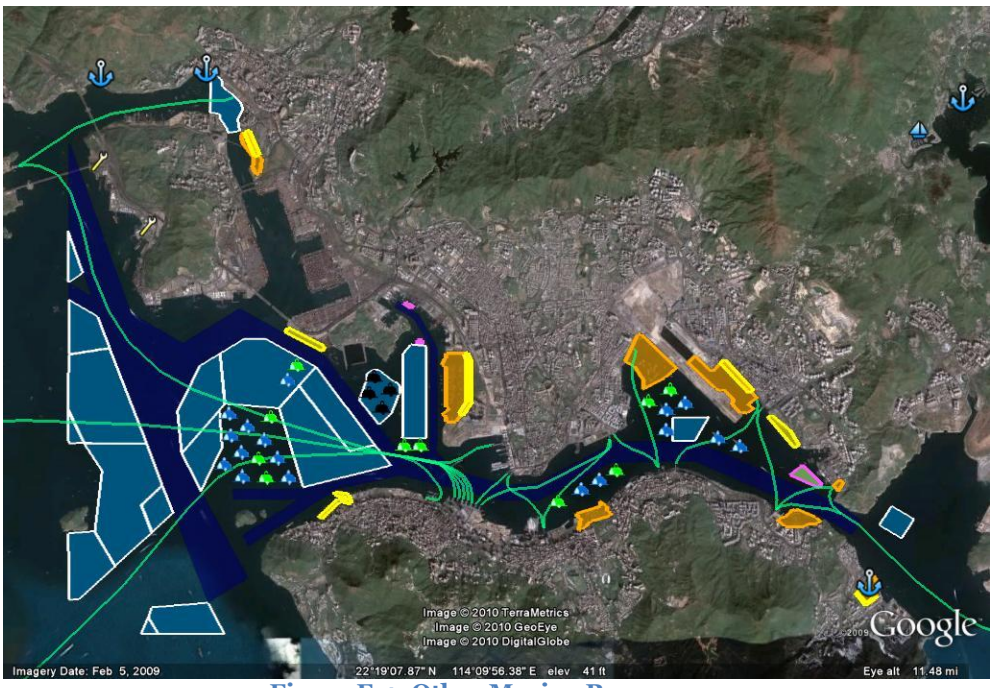


Figure F.4: Other Marine Resources

Users

The "Users" folder shows the major user groups in the harbour and the sections of the harbour in which they are located. You can select which user groups are displayed by checking the boxes next to each one.

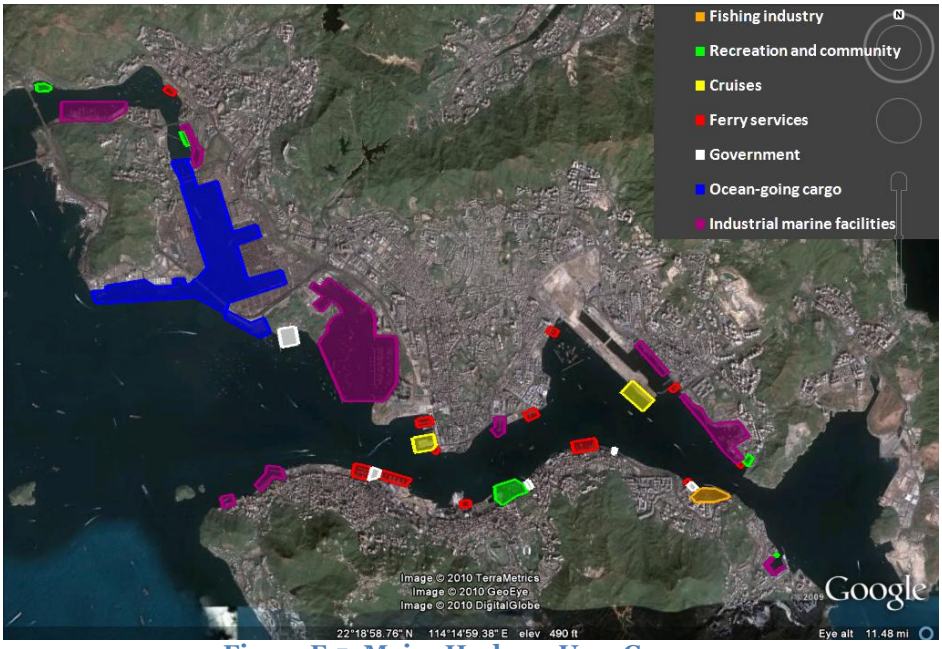


Figure F.5: Major Harbour User Groups

Development

The “Development” folder contains harbourfront development proposals and confirmed plans. Some of the plans are overlaid on the terrain, and others are simply outlines. Click on an overlay or shaded area to see additional information, including web links and plan documents.

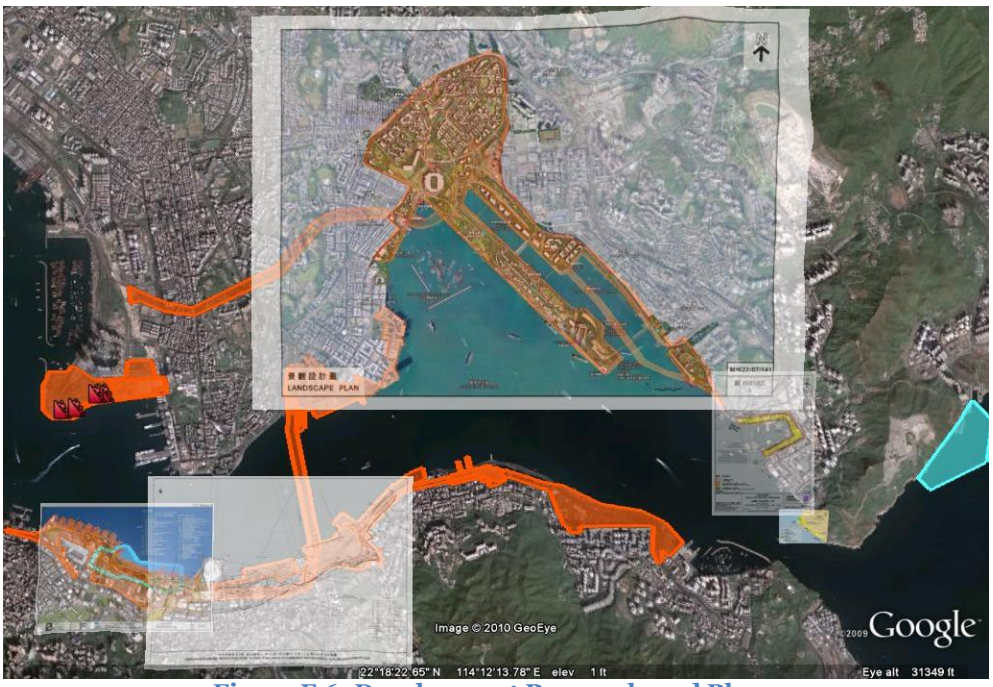


Figure F.6: Development Proposals and Plans

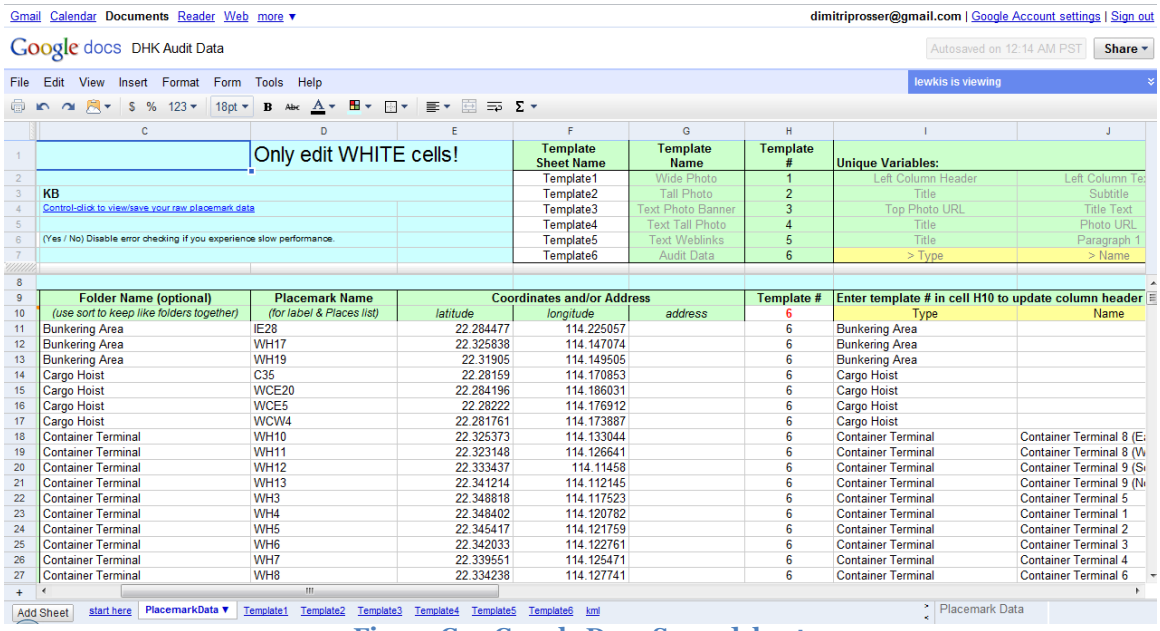
Appendix G: Google Earth Database Maintenance Guide

This maintenance guide is provided for the Harbour Business Forum and Designing Hong Kong Ltd., who will be hosting the database. It explains how the database works and how to make changes to it.

Editing/adding land/water interface placemarks

The land/water interfaces folder is actually a network link. The information in this folder is not contained in the KML file; Google Earth downloads the placemarks in this folder from a Google Docs spreadsheet using the internet. The spreadsheet generates KML automatically using a series of formulas. The spreadsheet can store up to 400 placemarks. More details about how the spreadsheet works can be found on the Google Earth Outreach page here:

- http://earth.google.com/outreach/tutorial_spreadsheet.html



Gmail Calendar **Documents** Reader Web more ▾ — dimitriprosser@gmail.com | Google Account settings | Sign out

Google docs DHK Audit Data — Autosaved on 12:14 AM PST — Share

File Edit View Insert Format Form Tools Help — lewkis is viewing

Only edit WHITE cells!

KB

Control-click to view/save your raw placemark data

(Yes / No) Disable error checking if you experience slow performance.

Template Sheet Name	Template Name	Template #	Unique Variables:	
Template1	Wide Photo	1	Left Column Header	Left Column Te
Template2	Tall Photo	2	Title	Subtitle
Template3	Text Photo Banner	3	Top Photo URL	Title Text
Template4	Text Tall Photo	4	Title	Photo URL
Template5	Text Weblinks	5	Title	Paragraph 1
Template6	Audit Data	6	> Type	> Name

Folder Name (optional) (use sort to keep like folders together)	Placemark Name (for label & Places list)	Coordinates and/or Address latitude	longitude	address	Template # 6	Enter template # in cell H10 to update column header Type	Name
Bunkering Area	IE28	22.284477	114.225057		6	Bunkering Area	
Bunkering Area	WH17	22.325838	114.147074		6	Bunkering Area	
Bunkering Area	WH19	22.31905	114.149505		6	Bunkering Area	
Cargo Hoist	C35	22.28159	114.170853		6	Cargo Hoist	
Cargo Hoist	WCE20	22.284196	114.186031		6	Cargo Hoist	
Cargo Hoist	WCE5	22.28222	114.176912		6	Cargo Hoist	
Cargo Hoist	WCW4	22.281761	114.173887		6	Cargo Hoist	
Container Terminal	WH10	22.325373	114.133044		6	Container Terminal	Container Terminal 8 (E
Container Terminal	WH11	22.323148	114.126641		6	Container Terminal	Container Terminal 8 (W
Container Terminal	WH12	22.333437	114.11458		6	Container Terminal	Container Terminal 9 (S
Container Terminal	WH13	22.341214	114.112145		6	Container Terminal	Container Terminal 9 (N
Container Terminal	WH3	22.348818	114.117523		6	Container Terminal	Container Terminal 5
Container Terminal	WH4	22.348402	114.120782		6	Container Terminal	Container Terminal 1
Container Terminal	WH5	22.345417	114.121759		6	Container Terminal	Container Terminal 2
Container Terminal	WH6	22.342033	114.122761		6	Container Terminal	Container Terminal 3
Container Terminal	WH7	22.339551	114.125471		6	Container Terminal	Container Terminal 4
Container Terminal	WH8	22.334238	114.127741		6	Container Terminal	Container Terminal 6

Add Sheet — start here — PlacemarkData ▾ — Template1 — Template2 — Template3 — Template4 — Template5 — Template6 — kml — Placemark Data

Figure G.1: Google Docs Spreadsheet

To edit the land/water interfaces in the database, you will need access to the Google Docs spreadsheet. Select the tab for the **Placemark Data** sheet at the bottom of the screen.

The spreadsheet generates placemarks using a template. The template gives all the placemarks a common icon style and formats the description automatically. Each row corresponds to a land/water interface. Each column in the spreadsheet is used to fill in part of the template. To edit a land/water interface placemark, change the appropriate cells. To add a new placemark, copy/paste an existing row (some columns use formulas).

- Coordinates - the placemark location is denoted by the latitude and longitude coordinates in decimal degrees. You can use Google Earth to determine the coordinates for the placemark. An easy way to do this is to create a temporary placemark in Google Earth at the location you want, and copy the coordinates into the spreadsheet.
- Sorting by column – you can sort the spreadsheet alphabetically by any column using the grey bar between rows 7 and 8 to make it easier to edit. Make sure it is sorted by folder name before publishing it; rows with the same folder name must be grouped together in the spreadsheet in order to end up in the same folder in Google Earth.

- Changing the placemark names – the name column uses a formula and currently points to the code column. To display a different column for the placemark names in Google Earth, you can change the formula.
- Changing the placemark template – select the sheet for Template 6 at the bottom of the screen. The descriptions are generated by the cell titled 'Balloon HTML layout'. The variables in this cell refer to the columns in the 'Placemark Data' spreadsheet.

Make your changes to the spreadsheet, then in the top-right, click **Share -> Publish as a web page**. Users will automatically see the changes when they restart Google Earth, or when they right click the land/water interfaces folder and click **Refresh**. The Google Maps database on the HBF website also points to the KML generated by this spreadsheet and will update automatically.

Editing other folders

The placemarks, paths, and images in the other folders are embedded in the KML file. They can be edited using the Google Earth client. After making changes, right click on the top-level folder and export the KML to a file. Upload the new KML file to the HBF website. Users will have to re-download the KML file to see your changes.

Hosting images and other network resources

Photos of the land/water interfaces are hosted on the Harbour Business Forum's website. The folder structure is important: the Google Docs spreadsheet generates the absolute path to the image files based on the name of the action area, which corresponds to a folder of images. There are two copies of each image - a full-size version and a thumbnail. The root path to the photos is specified in the Google Docs spreadsheet. If the images are moved to a different server, the spreadsheet template must be updated to point to the new location.

Appendix H: Marine Terms

Access Road – A road giving entry to a specific region.

Barge – Flat-bottomed boat, primarily for transport of heavy goods in rivers and canals due to its shallow draft, they may or may not be self-powered – often can be pushed or towed by tugboats/towboats.

Berthing – A bed or beds. Sometimes also used to refer to when a boat comes to rest at a docking facility.

Boat Storage – An area designated for the storage of currently inactive watercraft.

Boat Yard – A place that builds and repairs ships.

Bollard – A thick, low post, usually of iron or steel, mounted on a wharf or the like, to which mooring lines from vessels are attached.

Breakwater – Human made barriers constructed near shorelines to protect the coast from strong weather. It offers protection for anchored boats from strong waves and winds. It also reduces the effects of coastal erosion due to reduction of wave intensity.

Buoy – A distinctively shaped and marked float, sometimes carrying a signal or signals, anchored to mark a channel, anchorage, navigational hazard, etc., or to provide a mooring place away from the shore.

Canoes – A small long and narrow boat, propelled by one or more people (depending on the size of canoe), using single-bladed paddles. The paddlers face in the direction of travel, in either a seated position, or kneeling on the bottom of the boat. Canoes are open on top, and pointed at both ends.

Cargo Handling Area – Designated areas for the purpose of handling cargo.

Clubhouse – A building that is occupied by a social club.

Coaster – Flat-bottomed boat, larger than barges, used to transport goods from port to port through deep and shallow water, but not between continents.

Container Yards – Outdoor storage areas for shipping containers.

Cruise Ship – A passenger ship used for pleasure voyages, where the voyage itself and the ship's amenities are considered an essential part of the experience.

Cruise Terminal – A port where cruise ships are able to dock.

Dinghy – A small sailboat with only one mast, often used for recreation.

Dock – A platform built out from the shore into the water and supported by piles; provides access to ships and boats.

Dolphin – A man-made marine structure that extends above the water level and is not connected to shore.

Draught – The depth of a vessel's keel below the surface (especially when loaded).

Fresh Water Kiosk – A small shack or building near a dock, pier, or quay, etc, where a vessel may take on water or a person can get a drink.

Fuelling Station – A facility located at the waterfront that supplies petrol or diesel fuel for vessels.

Harbour Cruise – A sea (in this case harbour) voyage, usually taken for pleasure.

Hoist – A mechanical device used to lower boats into the water, often placed at the seawall.

Junk – Chinese sailboat-type vessel for ocean-going purposes, now only used for leisure applications.

Kai-to – Small, motorized ferry used mainly for passenger transport.

Landing – A place along the shoreline where one may pull up a boat, usually a natural beach.

Landing Step – a staircase built into the seawall or a pier that permits foot access to/from boats that pull up alongside.

Launch – A small boat with an open deck, often used to get from shore to a moored vessel.

Marina – A sailing club, frequently characterized by a clubhouse, docks and/or moorings, and one or more methods of launching boats. Marinas require space both on land and in the water for proper operation.

Mid-stream Operations – The process of loading / unloading a container ship while at sea.

Mooring – A permanent or semi-permanent float, usually in water protected from weather, to which vessels can tie to.

Parking – Space in which vehicles can be parked.

Pier – A raised walkway over water, supported by widely spread piles or pillars.

Pontoons –Wooden structures on top of floating containers that one can walk on and tie up their boat; they are often connected to the land.

Quay – A manmade structure to which a vessel ties up to in order to load or unload. This is also sometimes called a wharf.

Rain Shelter – Overhead barrier that protects someone or something from the rain.

Ramp – An area where roads continue down into bodies of water so that boats on trailers can be backed into the water and launched (on a declined plane).

Rowing Boat – Any boat propelled only by oars; especially one used for recreation or sport.

Sailboat – Sailboats are classified or recognized by:

- The shape and number of working sails.
- The location and number of masts.

The various combinations are referred to as rigs, meaning the way they set their sails. The main components of a rig are the mast (supporting the halyards and the front

edge of the mainsail), the boom (supporting the bottom edge of the mainsail), the stays and the sails themselves.
There are single rigs that have one mast and divided rigs that have two (or more) masts.

Single Rig:

Catamaran - A catamaran is distinguished from other boat types by its two hulls. A catamaran has one mast, and one or two sails, depending on the boat size. Therefore, catamaran is not really a "rig" type, but rather a boat type. Catamarans are fast boats.

Catboat - A catboat has one mast and one sail, with the mast usually stepped forward and equipped with a gaff-rig. Since there is no second sail on a catboat, it is a good choice for sailing shorthanded or with children.

Sloop - A sloop has one mast and two sails, a jib and a mainsail. The sloop rig is the most popular rig for small and medium-size sailing craft because of its efficiency and simplicity.

Sunfish - A sunfish has a single mast with a lateen sail (rig) and daggerboard. The sunfish, a boardboat, is a popular boat due to its small size and easy portability. It is also a good boat to use when learning how to sail.

Divided Rig:

Ketch - A ketch has two masts, with the mizzenmast being the shorter of the two. This mizzenmast is set forward of the rudder post. A ketch has three of four sails. A ketch is closely related to a yawl. The advantage of a ketch is that the addition of the mizzen sail splits the rig as a whole into more manageable proportions. This is helpful with a small crew.

Schooner - A schooner has two masts with the taller mainmast in the aft position. This aftermast carries the mainsail. A schooner has three or four sails. The classic appearance of the schooner is the type that most people associate with the romantic past of sailing vessels.

Sampan – A small transportation vessel with an outboard engine.

Sewage Discharge – The releasing of waste water into a larger body of water; whether from a vessel or municipal sewer.

Sheltered Water – An area of water with reduced wave action.

Sinkers – Moorings that are anchored to the seabed with a floating drum tied to it.

Slip – A specialized docking facility that receives a ferryboat or train ferry.

Super-yacht – A large, luxurious cruising yacht. A very large, well-equipped, and luxurious motor or sailing vessel for cruising.

Tall Ship – Traditionally rigged sailing vessel; may have square and gaff rigs with separate topmasts and topsails – the rigging is more complicated than modern systems. Types include topsail schooners, brigantes, brigs, and barques.

Ticketing Kiosk – A place where you buy/get tickets. Kiosks might be automated or attended by a human. On Victoria Harbour, these kiosks might be used to get tickets for the different transportation services such as ferries.

Typhoon Shelter – Shelters in the shape of a small bay with a breakwater that closes its exit except for a small opening through which boats can go through. This shelter protects fishing and other kinds of small to medium boats from the violent typhoon weather.

Waiting Area – A space where a unit waits for something. It might be a space in water for boats to wait for a space to dock. Or for people to wait to ride on a service.

Water Depth – The distance between the surface of the water and the floor of the body containing the water.

Water Plane – Fixed-wing aircraft capable of taking off and landing in the water; floatplanes have pontoons beneath the fuselage to raise the plane above the water whereas flying boats use fuselage as the hull, which remains in contact with the water. Types include floatplanes and flying boats.

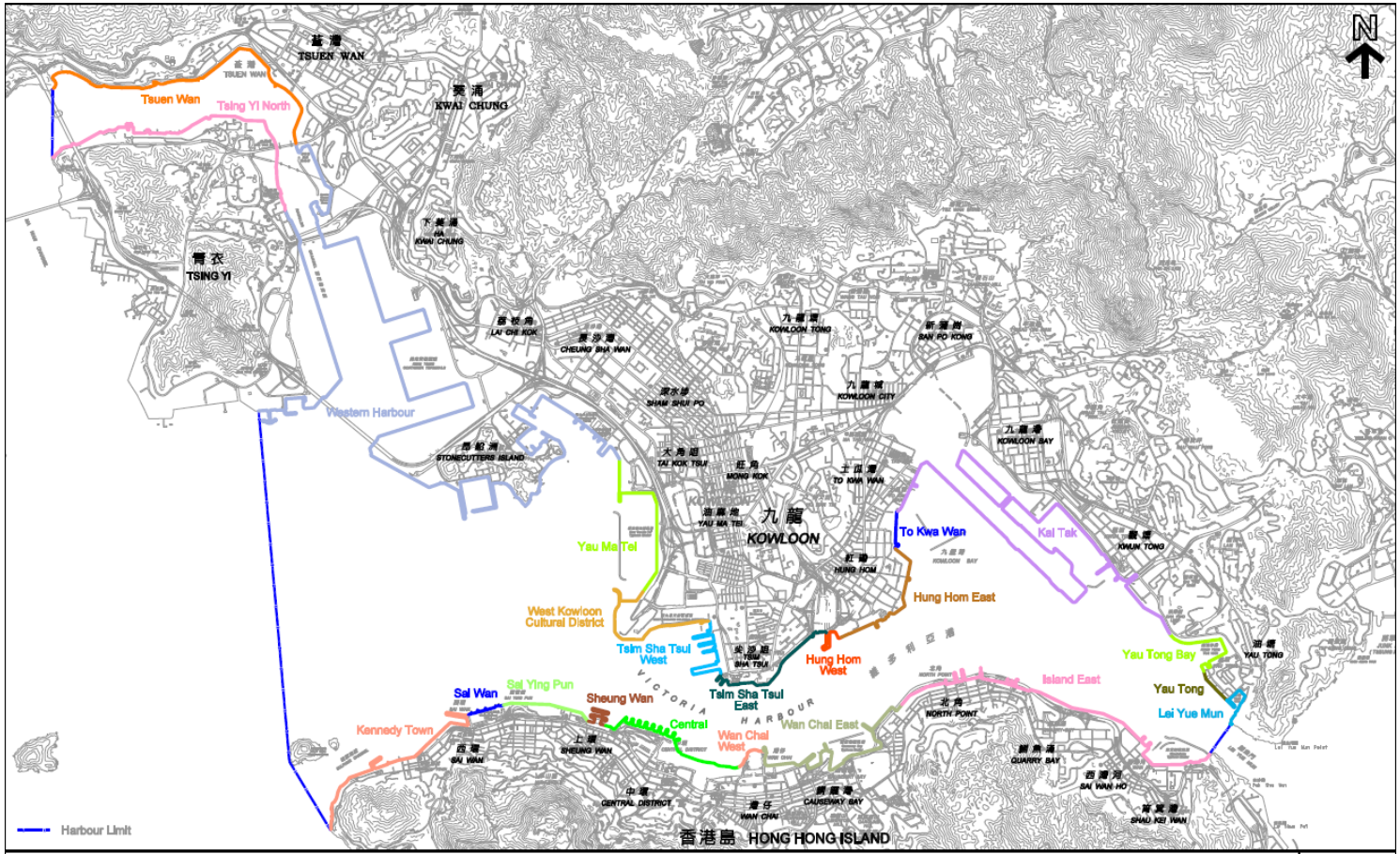
Water Taxi – A boat that can transport groups of passengers for a fee, particularly from shore to a moored vessel.

Winch – A mechanical device that is used to pull in (wind up) or let out (wind out) or otherwise adjust the tension on a rope.

Windsurfing – The sport or activity of riding a sailboard.

Yacht – Any of various recreational watercrafts: as A) a sailboat used for racing, B) a large usually motor-driven craft used for pleasure cruising

Appendix I: Action Area Map



Appendix J: List of Acronyms

CC – Charles Center

CC-IH – Charles Center-Inner Harbor Management, Inc

CD – Committee for Downtown

CEDD – Civil Engineering and Development Department

CKR – Central Kowloon Route

DHK – Designing Hong Kong, Ltd.

HBF – Harbour Business Forum

HEC – Harbourfront Enhancement Committee

HK – Hong Kong

HKD$ – Hong Kong Dollar

GIS – Geographic Information System

LCSD – Leisure and Cultural Services Department

LOA – Length overall

MarDep – Marine Department

MTR – Mass Transit Railway

PCWA – Public cargo working area

PDSR – Port Development Planning Review

PlanD – Planning Department

RHKYC – Royal Hong Kong Yacht Club

T2 – Truck Road

TEU – Twenty-foot equivalent unit

TKO-LTT - Tseung Kwan O – Lam Tin Tunnel

TPB – Town Planning Board

UDA – Urban Design Alliance

UDP – Urban Design and Planning Consultants

V&A – Victoria & Alfred Basins

V&AW – Victoria & Alfred Basins Waterfront

VH – Victoria Harbour

VTC – Vessel Traffic Centre

WKCD – West Kowloon Cultural District

WSD – Water Supply Department

WTO – World Trade Organization