Harbour-Front Enhancement Review – Wan Chai, Causeway Bay and Adjoining Areas
優化灣仔、銅鑼灣及鄰近地區海濱的研究
Envisioning Stage: Views Collection Form
構想階段：意見收集表格

Your Views
你的意見

I have filled in the blanks as best I can;
briefly I support the tunnel options
with limited connecting roads.
At the East End a Tsing Kau type
bridge with a single central pillar
would be quite attractive.
Continuing Victoria Park across
a waterfront road, across the road
on a deck wd also be desirable
A board walk and cyle track beneath
the E1 Corridor would be an interesting
recreational facility
High rise development is obscuring the
mountains on both sides of the harbour
Commercial development must be limited. The Star Ferry
is a good (or bad) example of what can happen if profit
and not aesthetics ~~profit~~ is the sole
criterion. Advertisement
also needs to be strictly controlled. eg the
huge bill boards at the CH Tunnel obscure the harbour

Please use separate sheets, if necessary.
如有需要，請使用其他紙張。

To facilitate future contacts, please complete the following:
為方便將來聯絡，請填寫以下資料。

English Name 英文姓名: Chinese Name 中文姓名:

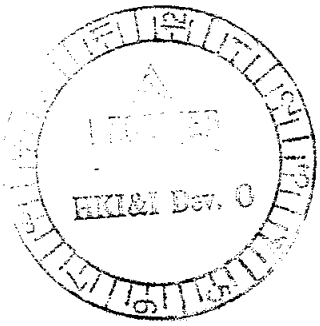
Organization 所屬機構:

Correspondence Address 通訊地址:

Tel 電話: Fax 傳真: Email 電郵:

Please fax to: 2576 9792
請傳真至：2576 9792

or post to the address on page 32
或郵寄往32頁上的地址



地鐵公司
MTR Corporation

HEC Sub-Committee on WDII Review
c/o Civil Engineering & Development Dept
13/F North Point Government Offices
333 Java Road
North Point
Hong Kong

Our Ref. : C/CDM/NW/F1500/15
Fax No. : 27502982
Date : 6th July 2005

Dear Sirs,

Harbour-Front Enhancement Review
Wanchai, Causeway and Adjoining Areas Envisioning Stage 2/9/50 HER

In response to your invitation for views in respect of the captioned review, the Corporation would like to express the following opinions:

1. The Corporation supports the eight "Harbour Planning Principles" stated in the Public Engagement Kit and would like to put forward the view that good accessibility is a pre-requisite for a world class and vibrant harbour. Habour-front activities must be designed to be viable 7 days a week, not just weekends, and therefore the harbour-front needs to be integrated into the fabric of daily activity.

2. Most parts of the waterfront of Wanchai and Causeway Bay are within walking distance from the nearby MTR stations. Access to the waterfront can be greatly improved by the introduction of footpaths or footbridges connecting the waterfront and the nearby MTR stations. The MTR-plus-pedestrianization concept will ensure the development of the waterfront will not generate excessive traffic demand on the road network.

3. The proposed North Island Line, will run on the seaward side of the existing Island Line on an almost parallel alignment between Central Station and Fortress Hill Station and will have stations located even closer to the waterfront. Its presence will, in addition to the relief of congestion on the Island Line, help bring the waterfront closer to the community. Consideration needs to be given to constructing this line at the same time as other improvements to the waterfront, in order to avoid major disruption at a later date.

.....Page 2

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MTR Corporation Limited

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4. Similarly the proposed Shatin to Central Link will be another significant item of infrastructure which will improve accessibility, but will also require consideration of implementation issues.

Yours faithfully

AMG/PHTjc/141

保護海港協會有限公司
Society For Protection Of The Harbour Limited
香港中環雲咸街69號賀善尼大廈6樓602室
602, Hoseinee House, 69 Wyndham Street, HK
Website: www.harbourprotection.org
E-mail: info@harbourprotection.org
Tel: (852) 3101-8191, 3101-8192
Fax: (852) 3101-9339

HEC Sub-Committee on WDII Review,
c/o. Civil Engineering & Development Department,
13/F., North Point Government Offices,
333 Java Road,
North Point, Hong Kong.

By E-mail & By Post

27th June 2005

RECEIVED
28 JUN 2005

Dear Sirs,

Response to 'Invitation to Participate'
Harbour-front Enhancement Review
Wan Chai, Causeway Bay & Adjoining Areas

24/30 HER

We send you herewith for your kind attention our response to the above Wan Chai Development Phase II Review the receipt whereof kindly acknowledge.

Yours faithfully,

[redacted]

Society for Protection of the Harbour Limited

Response to 'Invitation to Participate'

Harbour-front Enhancement Review

Wan Chai, Causeway Bay & Adjoining Areas

Dated the 27th day of June, 2005

In response to the 'Invitation to Participate' by the Harbour Enhancement Committee to solicit public views on the proper utilization of the harbourfront of the Wan Chai, Causeway Bay and Adjoining Areas, our Society states our position as follows:-

A. **The Harbourfront Environs:-**

1. Should be reserved for public use, such as a promenade, so as to enhance public enjoyment of the harbour;

2. Should not be sterilized by surface roads which generate additional traffic and cause more air pollution and noise pollution;

3. Should be people-friendly and must not be used for public works and offensive uses such as pumping stations, sewage treatment plants, waste collection and loading and unloading points, waste disposal stations, cargo handling, etc.; and

4. Should not be developed and/or sold for development thereby aggravating traffic congestion and creating the need for future reclamation.

B. **Further Studies** – For genuine public consultation, the Government should provide accurate and unbiased information based upon which the public can form their views. It is only with such information that the public consultation can be reliable and meaningful. Therefore the Government should carry out the following studies in an objective and unbiased manner in accordance with the letter and spirit of the Court of Final Appeal Judgment. The briefs for these studies and the results thereof should be fully disclosed to the public.

Transport and Traffic Study - To examine:-

(a) Whether there is an overriding public need to build the Central-Wanchai Bypass or whether the Bypass could be substituted by traffic management measures.

(b) Whether there is an overriding public need to build the proposed surface highway along the new waterfront (known as P2) especially if no further new developments were to take place on the Central Reclamation and Wanchai Reclamation.

Engineering Study:- To consider whether the Central-Wanchai Bypass could be built underwater by a submerged tube design without or with only very minimal reclamation.

Planning and Design Study:- To plan a minimum reclamation solution by using the surface of the Central-Wanchai Bypass as a public promenade.

C. **Court of Final Appeal Judgment ('the Judgment')**

The Judgment has not been sufficiently explained to the public. The public should be informed that the law requires the Harbour to be protected from harm and preserved and maintained in its present nature state (Paragraph 34 of the Judgment). Therefore the need must go far beyond something which is "nice to have", desirable, preferable or beneficial (Paragraph 47 of the Judgment).

The following 5 elements of the 'Overriding Public Need Test' which the present consultation paper 'Invitation to Participate' has failed to properly address:- should be clearly explained to the public

Overriding Public Need Test – A need which satisfies the following requirements (Paragraphs 44 – 49):-

Compelling – a need which has the requisite force to prevail over the strong public need for protection and preservation of the harbour

Present – the need must arise within a definite and reasonable time frame

Public – includes the economic, environmental and social needs of the community

Minimum – reclamation must not go beyond what is required

No Reasonable Alternative – where costs, time and delay would be relevant

D. **Conclusion**

Without the benefit of the above studies and clear guidance to the public on the legal requirements as prescribed by the Judgment, the present public consultation in asking what the public wants is unreliable.

[redacted]

07.07.2005 19:53

To: <mlee@cedd.gov.hk>
cc: <bpchan@cedd.gov.hk>
Subject: My views on harbour reclamation projects
☐ Urgent ☐ Return Receipt

Dear Mr Chan and Mr Lee,

I would like to give my views on the proposed harbour reclamation project to construct a Central-Wanchai bypass. I hope that my views will be noted as part of the consultation exercise launched by the Harbourfront Enhancement Committee.

I am a Hong Kong permanent resident, [redacted] and first came to the territory in 1982.

In my view, and that of almost everyone else I discuss the issue with, reclamation has been much too drastic over the years and has already come close to destroying one of the finest natural harbours in the world. With this in mind, there should be NO more reclamation for any reason whatsover within the harbour.

The Central-Wanchai bypass project does not even come remotely close to satisfying the "overriding public need" criterion set by the Court of Appeal. The rationale for the scheme rests on a series of short-sighted and flawed assumptions and dozens of letter-writers to the South China Morning Post in recent months have proposed alternative traffic management approaches.

As Britain and other countries have finally discovered to their cost, building new roads to cater for existing or anticipated demand simply does not work – you just end up fuelling the demand. Instead it is necessary to manage the demand. Britain is proposing a nationwide system of electronic road pricing, a system already successfully employed by Singapore and some other cities. Apart from adopting this, Hong Kong could also take a hard look at private car ownership, which has expanded enormously in the past two decades. In a small city with excellent public transport, car ownership is a luxury and not a necessity and should incur much heavier vehicle taxes than those imposed at present.

Staggered working hours in Central district, fiscal incentives to relocate some offices and businesses out of Central, restricting goods vehicles in the centre in peak hours and more efficient bus schedules could all also play a major part in reducing congestion in Central/Wanchai/Causeway Bay.

The government is clearly trying to create a fait accompli by pressing on with reclamation in Central for the first stage of the bypass but it is still not too late for a change of heart and a return to sanity. It should be noted that a complete halt to reclamation would be highly popular with the public at large -- a survey conducted by the Harbourfront Enhancement Committee and reported in the SCMP found only 19 percent in favour of building the bypass. About 23 percent wanted the government to try alternatives to manage traffic and 66 percent said the greening of the waterfront was their main wish.

All cities face congestion problems but most of them have concluded that there are some solutions which are simply unacceptable. Sydney has never contemplated filling in much of its harbour and there has even been talk of tearing down the Cahill Expressway at the back of Circular Quay. New roads through New York's Central Park or London's Hyde Park would be out of the question – indeed, London is solving its problem with a successful congestion charge. The people of Hong Kong seem to have a similar pride in their city – it's only elements of the government who seem determined to destroy its most priceless natural asset.

Yours sincerely,

[redacted]

PS please acknowledge receipt of this submission at some stage -- my postal address is

[redacted]

[redacted]

HONG KONG REGIONAL HELIPORT
HKRH WORKING GROUP

8 July 2005

RECEIVED
HKI&I Dev. O

HEC Sub-Committee on WDII Review
c/o Civil Engineering and Development Department
13/F, North Point Government Offices
333 Java Road, North Point
Hong Kong

2/4/50 HER

Dear Sirs,

Harbour-Front Enhancement Review – Wan Chai, Causeway Bay & Adjoining Areas

We have the pleasure enclosing our group's submission as our response to your call for comments from the public to assist the Harbour-front Enhancement Committee in its *Envisioning Stage*. Please note that we will be forwarding you a further 40 copies next week for distribution by you to your members and any other interested parties. If you require further copies please let us know as we would, of course, be happy to oblige.

We have appreciated the opportunity you have afforded us to participate in the very well organized public forums and community charrettes during the past weeks and very much look forward to having the opportunity of working with the Harbour-Front Enhancement Committee for an improved harbour-front for Hong Kong in the future.

We remain available at any time to discuss the contents of our submission in greater detail with you.

Yours faithfully,

[redacted]

BRINGING TOGETHER THE CENTRAL BUSINESS DISTRICT AND THE PEARL RIVER DELTA

香港商業中心區及珠江三角洲從此近在咫尺

A HELIPORT FOR HONG KONG 一個為香港而建的直升機場

Response to invitation by Harbour-front Enhancement Committee to participate in the Envisioning Stage of the Harbour-front Enhancement Review – Wan Chai, Causeway Bay and Adjoining Areas

承共建維港委員會邀請就「優化灣仔、銅鑼灣及鄰近地區海濱的研究」展開之構想階段作出回應

HONG KONG REGIONAL HELIPORT
HKRH WORKING GROUP

A Heliport for Hong Kong...

一個為香港而建的直升機場...

The Government of the Hong Kong Special Administrative Region is required to "... maintain the role of Hong Kong as an international and regional centre of aviation." Article 128 of the Basic Law

香港特別行政區政府需要致力「保持香港的國際和區域航空中心的地位。」

《基本法》第一百二十八條

"That, the Panel on Economic Services and the Panel on Planning, Lands and Works urge the government to expedite the provision of a permanent commercial heliport and associated facilities in the central business district of the Hong Kong Island, and, under the principle of no unlawful reclamation, allow the heliport at the Hong Kong Convention and Exhibition Centre to accommodate both commercial uses by helicopter operators and government uses."

Legco Joint Panel Motion, 28th February 2005

「經濟事務委員會及規劃地政及工程事務委員會促請政府加快在港島商業市中心內提供永久的商用直升機場及設施，並在不違法填海的原則下，容許商業直升機公司與政府共用香港會議展覽中心的直升機場。」

立法會聯席議案，二零零五年二月二十八日

活力十足及多姿多采的維港海濱...本地居民及訪港旅客將無限嚮往

A lively and vibrant harbour-front... enjoyed by resident and visitor alike

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成員

Who we are

The Hong Kong Regional Heliport Working Group (RHWG) represents the helicopter industry in Hong Kong. Its goal is to work with government and interested parties for the establishment of a permanent heliport in the Central Business District (CBD) as an amenity serving business, tourism and community needs within the Pearl River Delta (PRD).

Reason for our participation

The RHWG welcomes the opportunity to participate in the Envisaging Stage of the Harbour-front Enhancement Review (HER) – Wan Chai, Causeway Bay and Adjoining Areas. We believe there is a genuine and urgent need for a permanent public heliport for both domestic and non-scheduled cross-border services. We further believe that since the main advantages of a helicopter journey are speed and accessibility, a heliport must be located in the Central Business District in order to generate maximum benefit for the community at large. It should be conveniently located for tourists and the business community alike whilst also providing easy connectivity with other modes of transportation. We believe that the only sustainable location for such a permanent public heliport is adjacent to the Golden Bauhinia Square

Our general views on the development of the harbour

Hong Kong harbour is a living harbour, evolving with the changing times. From early days, the harbour has served our commercial needs. We now face overwhelming demands to open up the harbour for the enjoyment of the whole community. Public opinion will no longer support large scale reclamation in the inner harbour area. Therefore, the harbour-front land-use decisions that are made today will define our inner harbour and our city for the generations to come.

In planning for land use along the harbour-front, we must recognise that there are competing demands on what is a very precious and scarce resource. We strongly support the goal of opening up the harbour for community enjoyment. We do not support land reclamation for private commercial development. However, in order to improve access to and enjoyment of the harbour-front area, we believe that limited land reclamation must be considered within the strict standards of the Protection of the Harbour Ordinance.

Our proposals to the Harbour-Front Enhancement Review – Wan Chai, Causeway Bay & Adjoining Areas are detailed in the following pages.

Section A contains our response to the questions raised in the Envisioning Stage Public Engagement Kit.

Section B contains our proposals showing how a regional Hong Kong heliport can be integrated into a vibrant harbour-front for the enjoyment of residents and visitors alike.

小組簡介

香港區域直升機場工作組代表香港直升機業界，其目標為與政府及有興趣的團體攜手於商業中心區建立一個永久的直升機場，以配合珠江三角洲區內的商業、旅遊業及社區的需求。

參與的原因

香港區域直升機場工作組樂於參與就「優化灣仔、銅鑼灣及鄰近地區海濱的研究」而展開的構想階段。工作組相信香港真正急需一個永久性的公用直升機場，供民用及非定期的跨境航運專用。工作組更深信直升機航運的最大優勢是速度及近便，故此直升機場必須位於商業中心區，方能對社會發揮最大的作用。它必須位於方便遊客及商界上落的地點，亦同時要讓使用者容易轉乘其他交通工具。我們相信金紫荊廣場旁邊的位置是唯一一個適合興建永久公用直升機場的地點。

我們對海港發展的意見

維港是一個充滿生命的海港，其角色隨著時代演變。一直以來，維港主要作商業用途，但現在社會熱切要求將維港海旁開放，讓社區大眾能共同享用。由於市民將不會支持在海港範圍內進行大規模填海，所以我們今日就海濱用地所作的的任何決定，將會影響世代以後的海濱用途，亦影響我們的城市。

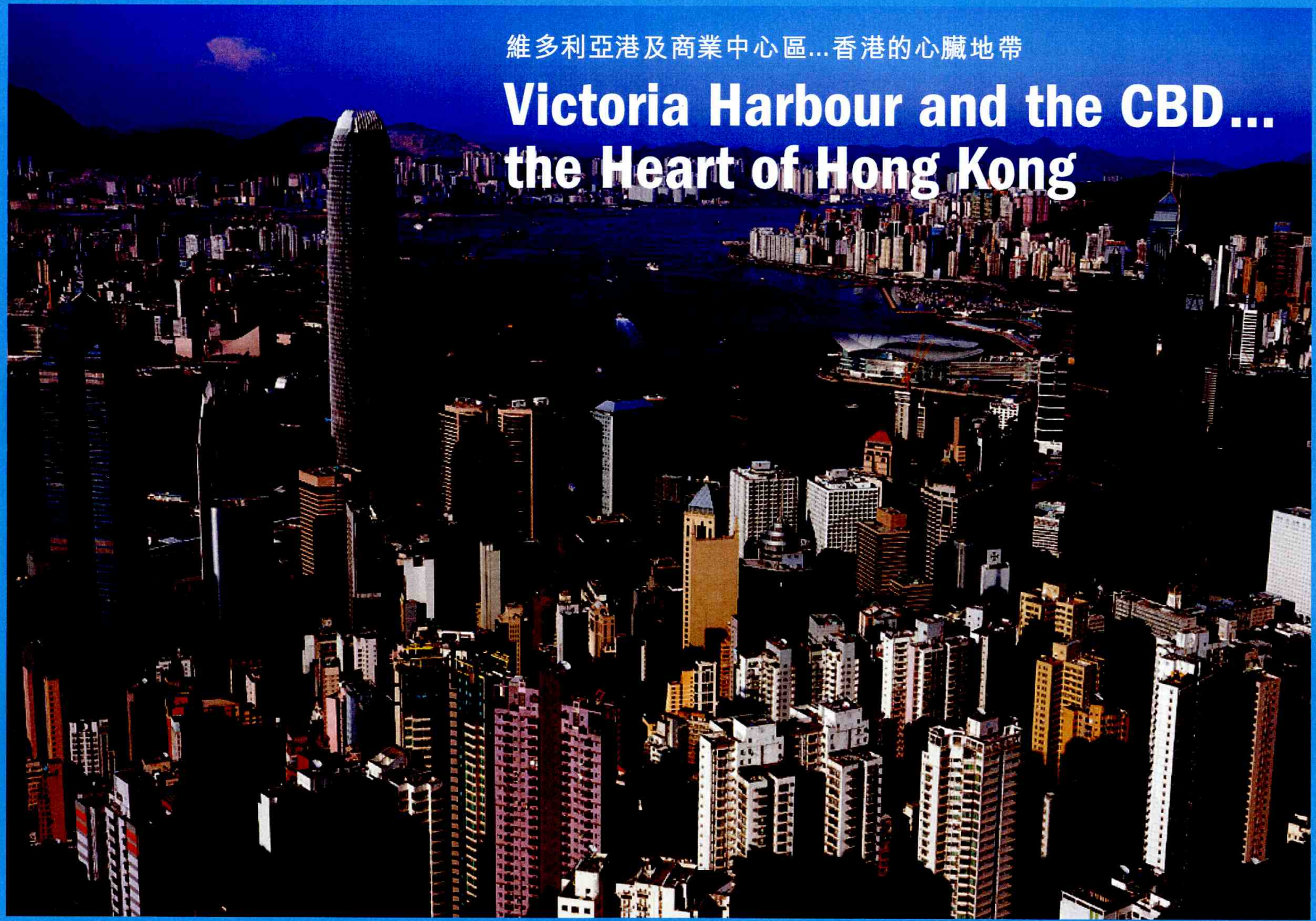
在規劃海濱一帶的用地時，我們必須明白社會對此珍貴及罕有資源的使用有不同的意見。工作組十分支持開放海旁的位置供社區大眾享用，但並不支持為私人商業發展而進行填海。然而，為方便市民到達海濱一帶，以及提昇他們使用該處環境設施的享受程度，我們相信在合乎《保護海港條例》的嚴格標準下，我們有需要考慮進行有限度的填海。

我們就「優化灣仔、銅鑼灣及鄰近地區海濱的研究」所作的建議將會詳列於後頁。

甲部詳列我們就「構想階段小錦囊」提出的問題所作的回應。

乙部詳列我們的建議，展示如何將香港區域直升機場融入多姿多采的海濱，讓本地居民及訪港旅客享用。

SECTION A — OUR RESPONSE
甲部 — 我們的回應



維多利亞港及商業中心區...香港的心臟地帶

Victoria Harbour and the CBD... the Heart of Hong Kong

1. Our Vision for a lively and vibrant harbour-front

We envision an uninterrupted harbour-front restricted to pedestrian use and removed as far as practical from vehicular traffic flows. Frequent pedestrian connections will provide easy access and egress to and from adjoining residential and commercial neighbourhoods.

Facilities should be included for joggers. Landscaping should be provided to create a visual break from the adjoining building line for those located at ground level. Further landscaping should be planned to "break up" the line of the promenade thereby providing a continuing and changing aspect.

Other discreet but affordable public amenities (such as restaurants), items of interest (such as mini-museums), and sculptures should be located at suitable intervals. Appropriate planning will be given to moulding the recreational amenity atmosphere of the promenade with those other portions of the harbour-front that represent Hong Kong's "working" harbour such as ferry piers, heliport, tunnel entrance, etc.

The overall design of the harbour-front should be one that portrays an imaginative and sustainable concept through a balanced, effective approach and public involvement. The end goal should be a lively and vibrant harbour-front that can be enjoyed by resident and visitor alike.

2. Our views on reclamation

We consider that reclamation should only be permitted if there is an overriding public need and if there are no reasonable alternatives of meeting this need without reclamation. If these circumstances are met, the reclamation should then be kept to a minimum. It should also enhance the public's enjoyment of the harbour.

3. Provision of public transport facilities

We consider that the area is well served by high density public transport facilities either existing or planned for the future. However, in order to improve the connectivity between North and South Wan Chai we propose, as an added attraction for both local and tourist users, adjoining the promenade, the construction of a tram line upon which would run replicas of the historic trams that originally served the people of Wan Chai. This tramway would move at a pace that would enable users to board and alight at will. Although designed primarily for its connectivity role, it will also double as an attraction for the harbour-front promenade. Examples of such people movers exist in other cities which operate free of charge. One of the best known and most successful is in the centre of Denver, U.S.A. Additionally as dealt with later in this submission, we also believe that the Convention Centre area provides the only location for a Central Business District heliport.

1. 我們的願景 — 活力十足及多姿多采的海濱

我們展望一個暢通無阻，只供行人使用的海濱，並盡可能遠離車輛。海濱會透過設計完善的行人通道，與鄰近的住宅及商業中心連接起來。

海濱長廊應附設緩跑徑，並透過園林美化工程，一方面使海濱長廊與附近的地面建築物在視覺上有所分別；另一方面，在設計園林美化工程時，應將海濱長廊沿途的界線隱藏起來，使它有一脈相連的感覺，但各個部份又自有其特色。

另外，在可行的情況下，可在沿途適當的位置選擇性地提供一些公共設施(如餐廳)、特色景點(如小型博物館)及雕塑等。只要透過適當的規劃，將可為海濱長廊營造消閒休憩的氣氛，並與動力十足的海港設施，包括渡輪碼頭、直升機場和隧道入口等互相呼應。

海濱的整體設計應採取平衡和有效的方向，並歡迎公眾的參與，以表達一個具有想像力及可持續發展的概念。最終的目標為成就一個活力十足及多姿多采的海濱，為本地居民及旅客所嚮往。

2. 我們對填海的意見

我們認為填海只可以在有迫切性的公眾需要，而且沒有其他可應付這需要的合理選擇下才可進行。即使符合這些條件，亦應將填海的規模減到最小，且填海應提高公眾對海港的享受程度。

3. 公共交通設施的配備

我們認為該區現時及已規劃的公共交通設施已很充足，但為了改善灣仔北面及南面的連接，並提高對市民及旅客的吸引力，我們建議沿海濱長廊建設電車路，利用曾在灣仔區行駛的舊式電車提供服務。電車以緩慢速度行駛，方便乘客隨時上落。雖然電車主要為提供接駁之用，但亦會為海濱長廊添上特色、其他城市亦有此類的交通工具，而且供乘客免費使用，其中最著名及成功的例子為美國丹佛市中心。正如下文所述，我們相信要在商業中心區興建直升機場，會展中心乃唯一可供選擇的地方。

4. What traffic management measures might be taken?

4.1 The tolls of the three cross-harbour tunnels should be adjusted upwards and downwards as the case may be to attract traffic away from the central Cross-Harbour Tunnel.

4.2 Electronic Pricing is considered an effective measure to help resolve traffic congestion.

4.3 Consideration should be given to increasing the number of bus lanes through the Wan Chai and Causeway Bay areas.

5. Is it desirable to expand the Hong Kong Convention and Exhibition Centre (HKCEC) at the harbour-front?

It is not desirable for the Hong Kong Convention and Exhibition Centre to expand "at the harbour-front". However there would seem no reason why the HKCEC should not expand to the south as the owner of the HKCEC are currently proposing using for this purpose an expansion of the Phase 2 Exhibit Halls to extend over to and match comparable levels of Phase 1. Appropriate steps would need to be taken by the HKCEC management to ensure that its subsidiary road network can handle the extra traffic likely to be generated.

6. Should we have more ferry piers?

We see no reason for any expansion of the existing ferry piers. However, we propose that consideration might be given to revamping the Wan Chai Star Ferry Pier to improve its visual appearance. In this regard, we suggest that consideration should also be given to encouraging the operators to include within the pier structure a museum commemorating the history of The Star Ferry Company. This would then become one of the several public attractions located along the promenade.

4. 有甚麼交通管理的措施可以考慮？

4.1 三條海底隧道的收費應分別上調及下調，藉以減少車輛使用紅磡海底隧道。

4.2 電子道路收費會有助解決交通擠塞問題。

4.3 應考慮增加行走灣仔至銅鑼灣區的巴士專線。

5. 是否適宜在海旁擴建香港會議展覽中心？

香港會議展覽中心並不適宜向維港海旁方向進行擴建，但向南面的擴展建議則並非不可，而會展的管理層亦正循這方向策劃，將展覽廳第二期向展覽廳第一期的方向擴建，使之連接起來，並使兩期的層數相若；但他們需要引入適當的措施，以確保附設的道路網絡能夠負擔可能增加的交通流量。

6. 是否需要增建渡輪碼頭？

我們認為現時沒有增建渡輪碼頭的需要，但工作組建議重修灣仔天星小輪碼頭，以美化其外觀。我們亦建議鼓勵渡輪公司於碼頭的建築物內設立一個紀念天星小輪有限公司的歷史博物館，此建設將可成為海濱長廊上的其中一個公眾旅遊景點。

7. We support the construction of the strategic road link along the north shore of Hong Kong Island. In this regard, we propose:

7.1 There should be a *minimum* amount of additional reclamation for this purpose consistent only with the requirements of the road link itself coupled with the public amenity land required on the seaward side of the road link. i.e. a harbour-front promenade. We also support limited reclamation to deal with problems such as outlined in Points 11 and 17 on Page 12 of the HER Public Engagement Kit – poor water quality due to embayment.

7.2 The tunnel that is to be constructed within the Central portion of the Central - Wan Chai By-Pass should be extended in line with Fig. 4 of the illustrative ground-level arrangements shown on Page 26 of the HER Public Engagement Kit. Similarly the line of the tunnel should be as illustrated in the vertical section shown in the same Fig. 4 except that the line of the tunnel should run above the proposed Sha Tin – Central Line (SCL) tunnels. Construction of the tunnels in this manner would avoid reclamation within the Causeway Bay Typhoon Shelter.

7.3 Connectivity with adjoining areas will be facilitated through the placing of the By-Pass within tunnels. Space above the tunnels should be sufficient to include specific areas for sports grounds, children's playgrounds and youth activities such as skate boarding. These could be terraced and landscaped. Moreover the tram proposed earlier would more easily cross between the harbour-front promenade and residential areas.

7.4 We would not support the construction of any elevated roadways.

7. 我們支持在香港島北岸興建策略性的連接道路，並有如下意見：

7.1 應盡量縮小填海規模，填海工程只限於配合興建連接道路，以及在道路旁即海濱長廊興建公共設施的需要。我們亦贊成有限度的填海，以解決「優化灣仔、銅鑼灣及鄰近地區海濱的研究 — 公眾參與小錦囊」中第11及17點（第12頁）列出的問題，即由海灣形成所帶來的惡劣水質問題。

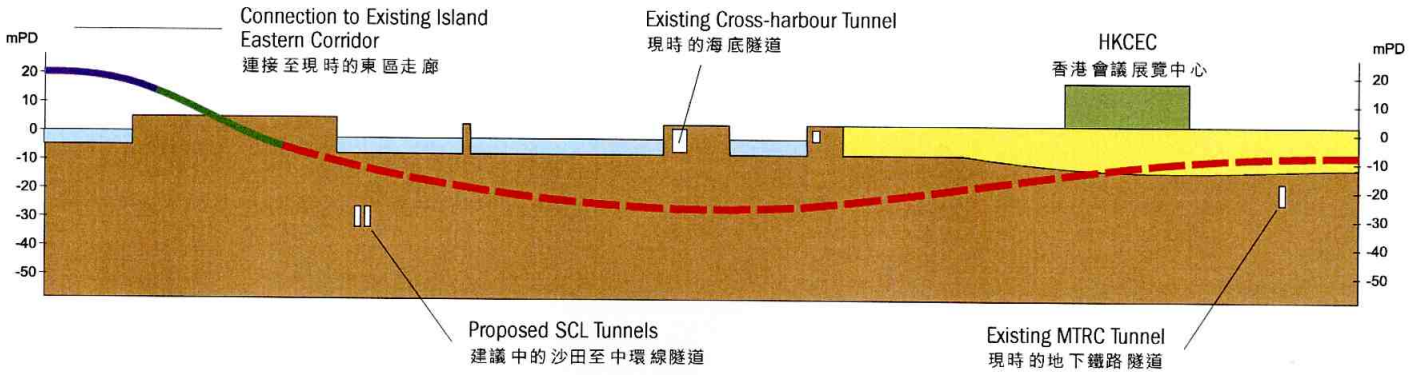
7.2 即將興建的中環 — 灣仔繞道，其中於中環部分興建的隧道應延長至圖四所顯示於地面的安排（「優化灣仔、銅鑼灣及鄰近地區海濱的研究 — 公眾參與小錦囊」的第26頁）。同樣，隧道的走線亦應與圖四顯示垂直的部分一樣，但隧道的走線應位於擬建沙中線隧道之上。循這方向建造隧道將可避免於銅鑼灣避風塘內進行任何填海工程。

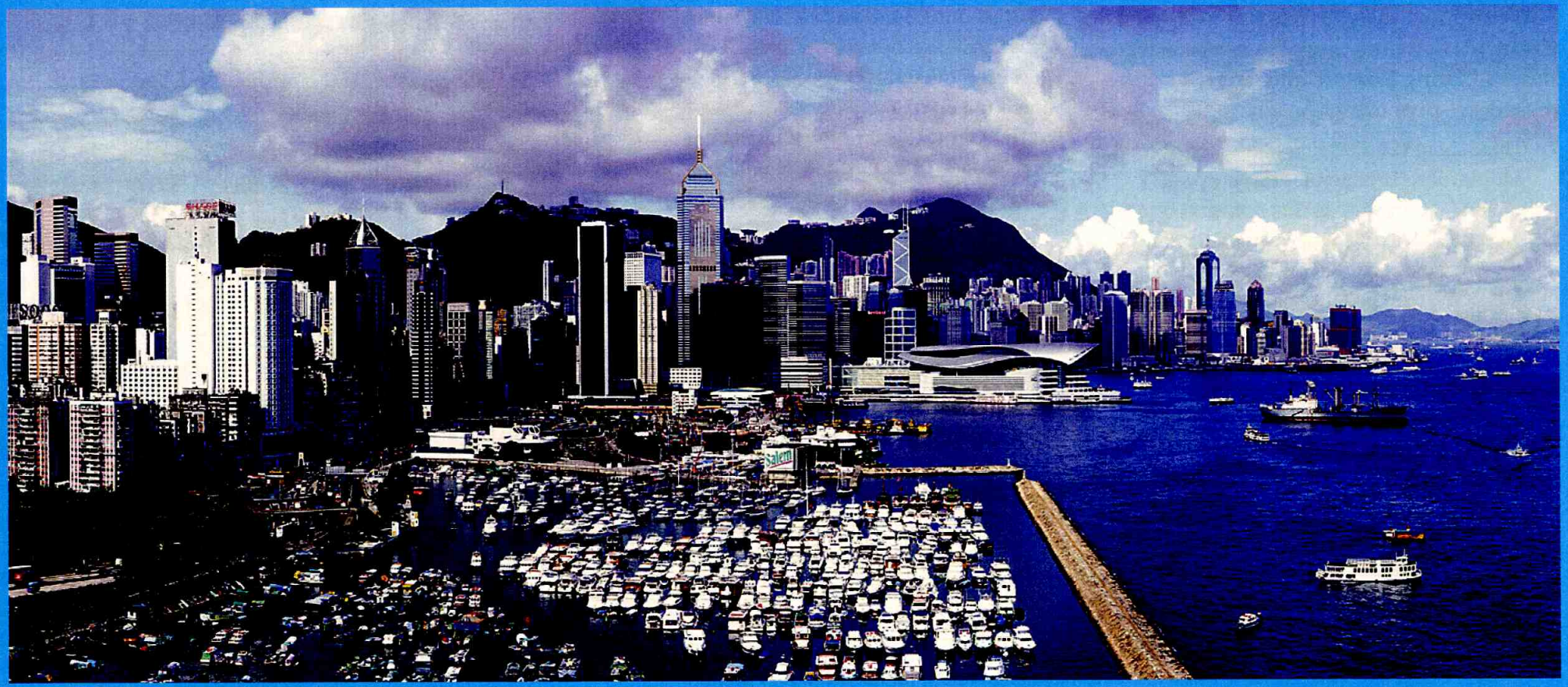
7.3 將繞道築於隧道內可加強與附近地區的連接性。隧道上蓋應有足夠的空間建設體育場地、兒童遊樂場，及為青少年活動（如玩滑板）提供場地。此空間亦應進行綠化及美化工程。同時，先前建議的電車可利用此空間穿梭海濱長廊及住宅區。

7.4 小組並不支持興建任何高架的道路。

A fully underground roadway (tunnel) with a minimum of reclamation represents the best solution for a viable, people-oriented harbour-front.

將通往海濱一帶的連接道路建於地底，只須涉及最小量填海，令計劃更加實際可行，而且以人為本。





Return the harbour-front to the people...

讓海濱重投市民懷抱...

8. We support the building of a promenade along the whole of the harbour-front. In this regard, we propose:

8.1 A promenade to run from the existing Victoria Park skirting around and including the Hong Kong Convention Centre ending at the Western end of the Central Reclamation Phase III.

8.2 An extension of the promenade eastwards of the Causeway Bay Typhoon Shelter by way of a deck under the Island East Corridor (IEC) elevated roadway.

8.3 An integrated of the promenade with the existing public attraction of the Noonday Gun with easy pedestrian access and egress by way of a pedestrian tunnel to Victoria Park.

8.4 Constructing a harbour-front promenade having a width of not less than 25 metres. It is considered that this width is sufficient for the promenade and its associated activities as well as including an appropriate area required for green landscaping. We do not support reclamation solely for the purpose of providing a promenade *except in the case of Causeway Bay*. Boardwalks or other solutions should be considered if the promenade would otherwise be interrupted.

8.5 Setting aside specific areas for alfresco dining and other activities (not necessarily shopping) yet to be determined. We would not anticipate any requirement for new buildings to be provided within the area set aside for the promenade other than possibly a series of one storey buildings for kitchen and associated covered facilities for alfresco dining, toilet facilities and general maintenance requirements.

8. 我們支持於整個海旁興建一條海濱長廊，並有以下意見：

8.1 海濱長廊應由現時維多利亞公園的外圍，沿香港會議展覽中心伸延至中區填海第三期的最西面。

8.2 當中包括在東區走廊下增建一層，使海濱長廊繼續由銅鑼灣避風塘向東伸延。

8.3 海濱長廊應跟現時的午炮旅遊景點融滙，並提供行人隧道，方便行人前往維多利亞公園。

8.4 海濱長廊的闊度不應少於25米。此闊度可提供足夠的空間予海濱長廊及其他相關的活動，並包括適當的空間作綠化工程。除了在銅鑼灣區，我們不支持為興建海濱長廊而進行填海。如海濱長廊中間有中斷的問題，可考慮利用小橋或其他方案解決。

8.5 是否應在海濱長廊撥出一些地方作露天茶座及其他活動（不一定是購物）之用仍有待決定。但除了可能需要興建一層高的建築物作露天茶座的廚房及其他有關的設施、洗手間設備及一般維修之用外，我們並不預期海濱長廊地段會興建任何新的建築物。

8.6 Converting the Wan Chai Public Cargo Working Area (PCWA) pier to multi-purpose pier with a canopy allowing for markets, fairs, concerts and festivals. The outer wall of the breakwater could be used as a pick-up and drop-off zone for island diners, junks, water-taxies and sightseeing vessels.

8.7 Reprovisioning the cooling water pumping station at Tonnochy Road extension underground.

8.8 Providing public toilet facilities at appropriate intervals along the promenade.

8.9 Including on the promenade a "people mover" in the form of a replica of the original trams that served the Wan Chai area. The tram would move along the promenade at a pace sufficiently slow so as to enable people to board and alight at will.

8.10 Including as a further feature of the promenade, an historic harbour basin that will illustrate in a manner both educational and recreational the background of Hong Kong's Marine History. It could include a reproduction of an historic harbour public quay modelled on that which would have existed in Hong Kong at the time of the China Trade Clippers. This historic harbour basin can naturally be located to the east of the Convention Centre in front of the Great Eagle Centre, i.e. already within an existing popular tourist area.

8.11 Considering if possible within the reclaimed area some semblance of a natural shoreline. It is not considered possible to retain any visual permeability between the harbour, hinterland, and ridgeline.

8.12 Consideration should be given to including within the reclaimed area additional pedestrian tunnels (as opposed to the more unsightly footbridges) to connect the Wan Chai and Victoria Park areas with the promenade. If this is done, there should be no requirement to provide any specific road connections as drop-off points for pedestrians, tourist or resident alike, seeking access to the promenade. We would support making these connections wider than necessary for pedestrian use so as to enable the provision of en route amenities.

8.6 將位於灣仔公眾貨物裝卸區的碼頭改建為一個多用途的碼頭，並設有天幕，使該處可作市集、賣物會及舉辦音樂會或慶祝活動等之用。防波堤的外牆可為前往離島用膳者、中國式帆船、水上的士及觀光船提供乘客上落區。

8.7 位於杜老誌道的冷卻水抽水站的擴建部分應重新於地底建設。

8.8 須於海濱長廊沿途適當位置設置公共廁所。

8.9 在海濱長廊上提供類似從前於灣仔區行駛的舊式電車。電車以慢速行駛，方便乘客隨意上落。

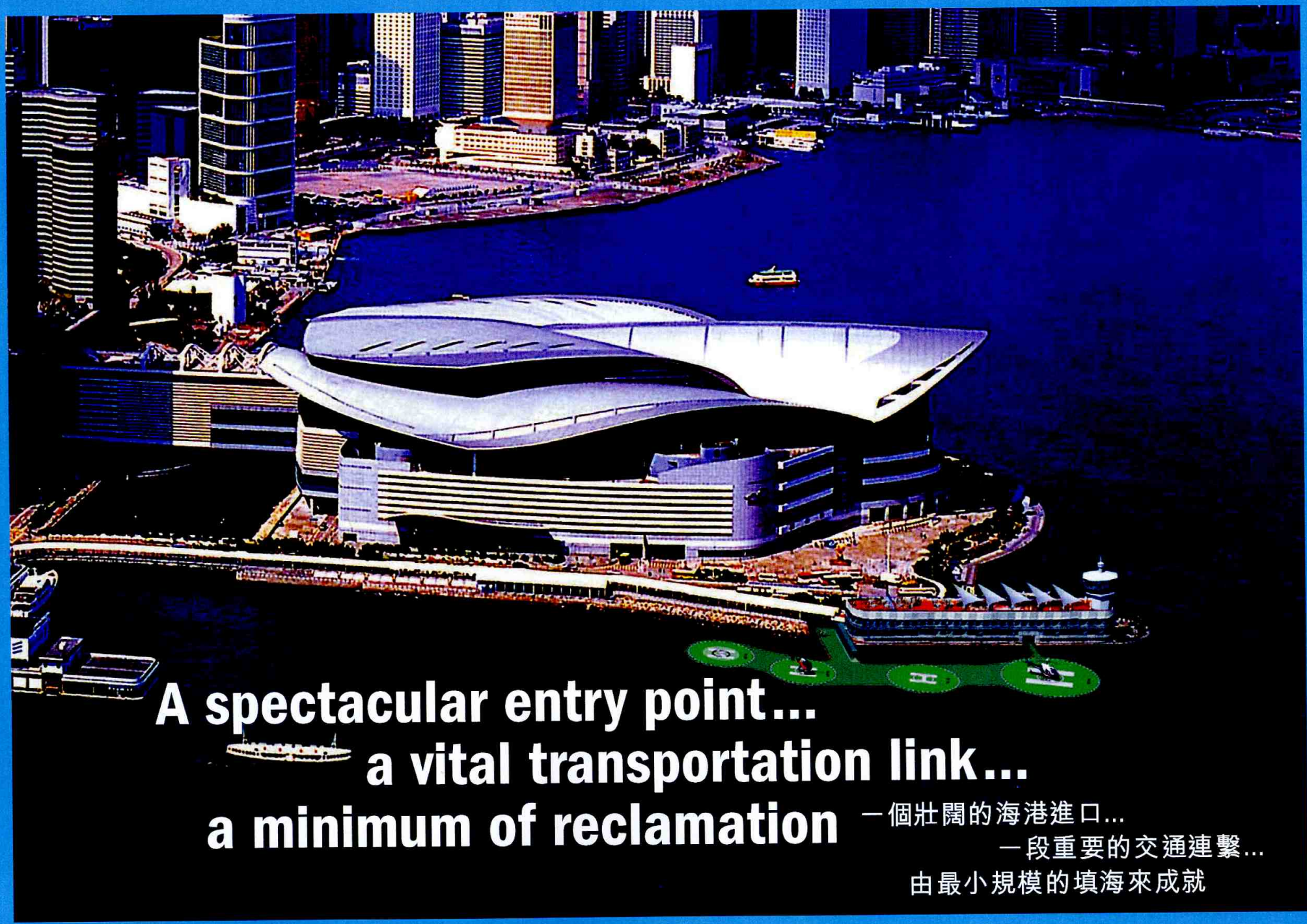
8.10 為增加海濱長廊的特色，可考慮興建一個有懷舊意義的港灣展區，用教育性及娛樂性的手法展現香港航海歷史的背景。可透過複製一個公眾碼頭，背景是當時經常有往來中國快速商旅帆船途經的香港。這個海灣展區可位於會展的東面，面向鷹君中心，該處現時已經是一個旅遊熱點。

8.11 如可行的話，可考慮於填海範圍內保留天然海岸線的面貌，但要保留現時海港、鄰近的地方及山脊線之間的能見度則似乎並不可行。

8.12 應考慮在填海的範圍增建行人隧道（相對於行人天橋，行人隧道不會對視覺造成影響），方便海濱長廊與灣仔及維多利亞公園等範圍連接起求。如果可落實興建行人隧道，便無需在沿途增設連接點作行人上落區，以方便旅客及市民前往海濱長廊。工作組支持這些連接點的闊度加寬，除應付行人的需要外，亦可以在沿途增建其他設施。

SECTION B — OUR VISION FOR A REGIONAL HONG KONG HELIPORT

乙部 — 香港區域直升機場 — 我們的願景


A spectacular entry point...
a vital transportation link...
a minimum of reclamation
一個壯闊的海港進口...
一段重要的交通連繫...
由最小規模的填海來成就

The Way Forward – a Hong Kong Regional Heliport

With the building of a heliport adjoining Golden Bauhinia Square, the helicopter industry intends to work with government, the community and other interested parties to create an attractive facility serving the local community, business travellers and tourists alike.

The heliport will be a gateway to the Pearl River Delta and a gateway into Hong Kong, spectacular in its setting, providing opportunities to showcase Hong Kong at its best.

展望未來 — 香港區域直升機場

直升機業界希望與政府、社會及有關團體攜手合作，在金紫荊廣場旁邊興建直升機場，並提供極富吸引力的設施，為本地社區、商務旅客及遊客提供服務。

屆時這個規模壯觀的直升機場，將成為通往中國的大門及進入香港的通道，將香港最好的一面展現眼前。

1. Our proposal

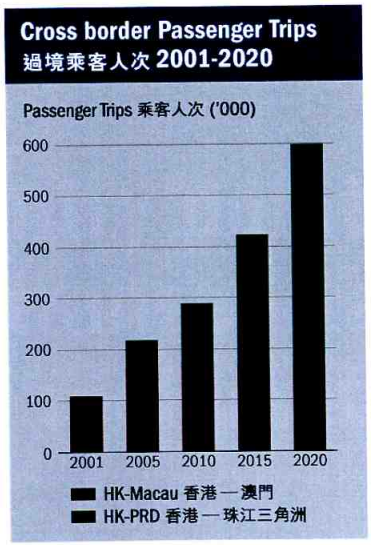
We propose that the heliport adjacent to Golden Bauhinia Square earlier earmarked for Government Flying Service exclusive use be redesigned for shared use. The heliport will be planned as a sustainable integral part of an existing harbour-front amenity area.

2. Why is a public heliport required?

The public heliport will bring significant direct and indirect economic benefits to Hong Kong.

2.1 There is a genuine and urgent need for a permanent public heliport for both domestic and single-engine *ad hoc* cross-border services for swift point to point transportation.

2.2 Government has estimated that between now and 2020, the demand for domestic private helicopter services will grow at an average of 6.3% per annum. At this rate, the number of domestic flights will increase by more than 50% between 2003 and 2010 [LC Paper No. CB(1)376/04-05(04)]. There is also a significant and growing pent-up demand for the yet untapped cross-border helicopter charter market. The MVA consultancy study on Helicopter Traffic Demand and Heliport Development in Hong Kong issued in August 2002 projected that the growth in demand for cross-border helicopter services between Hong Kong and the Pearl River Delta (including Macau) could be approximately 9.4% p.a. up to 2020. As illustrated in the MVA report, projected helicopter traffic between Hong Kong and the Pearl River Delta (excluding Macau) would actually be considerably greater. This further highlights the need for a ground level heliport in the CBD given that the vast majority of helicopter travel between Hong Kong and the Pearl River Delta is expected to be single-engine helicopters, which are forbidden to land on elevated helipads.



2.3 Hong Kong is the largest investor in the Pearl River Delta with total investment reaching HK$1,170 billion at the end of 2004. In recent years government, business and community groups on both sides of the border have stepped up efforts to promote the economic integration of Hong Kong and the Pearl River Delta. Inbound tourism from the Mainland is at a record high, and rising. In short, Hong Kong is emerging as the key service hub for the entire region.

2.4 To gain perspective of the size of the potential market to be served by the heliport, we would note that the area of the Pan Pearl River Delta encompasses some 420 million people; in other words the same number as the whole of Europe.

1. 我們的建議

香港區域直升機場工作組建議將位於金紫荊廣場旁邊、原定由政府飛行服務隊專用的直升機場重新設計，以供共同使用。此直升機場將會被規劃為現時維港海旁設施用地中可持續發展的主要部分。

2. 為甚麼需要一個公用直升機場？

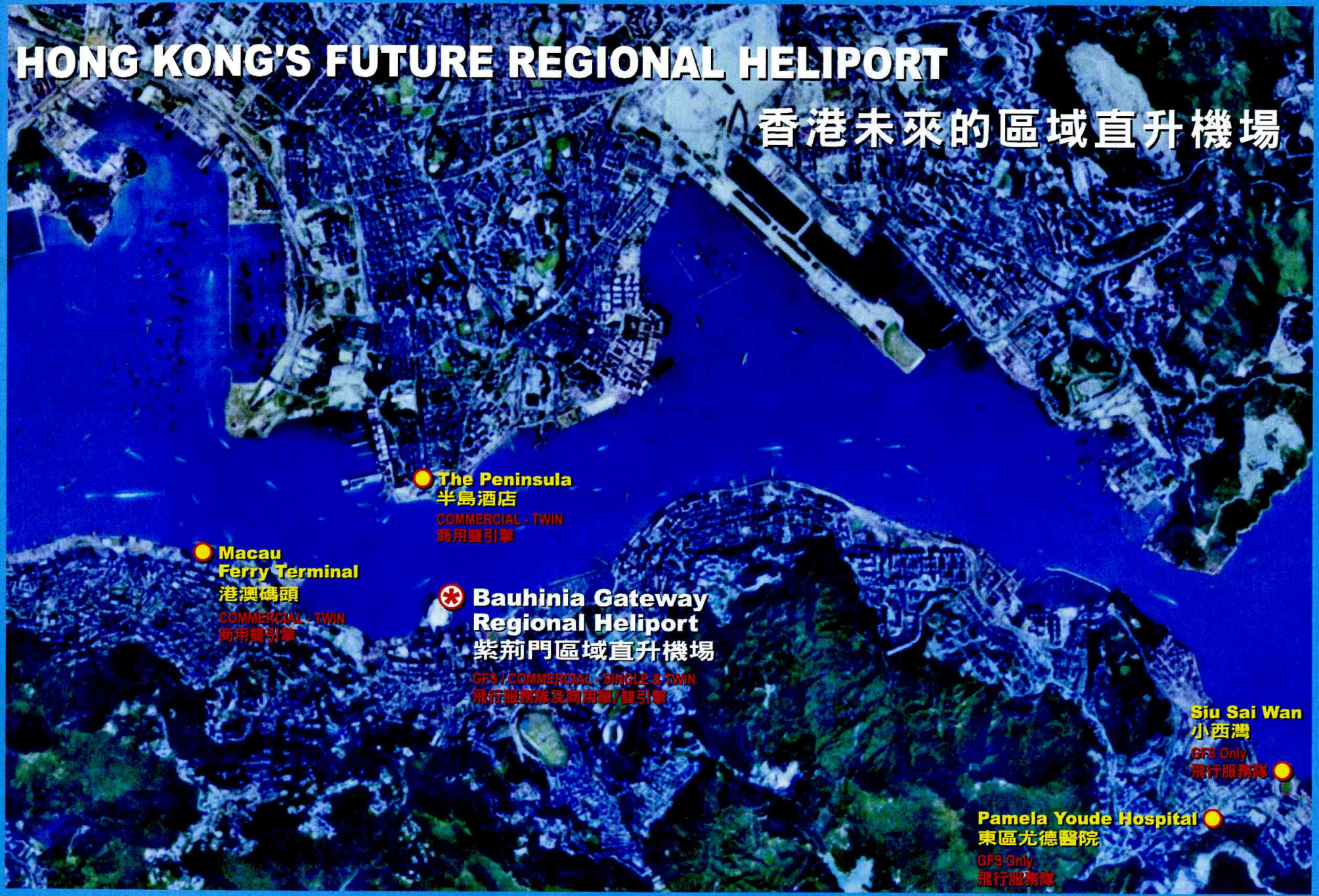
公用直升機場將為香港帶來直接及間接的重要經濟效益：

2.1 香港真正急切需要一個永久的公用直升機場，供民用及為單引擎、非定期的跨境航班提供快捷及點到點的交通服務。

2.2 根據估計，由現在至2020年，民用直升機的需求將會以每年平均6.3%的幅度增長。以此增長速度估計，由2003年至2010年民用直升機飛行次數將會增加超過50%[立法會文件編號CB(1)376/04-05(04)]。尚待開發的跨境直升機包機航班的市場亦相當龐大。根據香港弘達交通顧問有限公司於2002年8月就香港直升機交通需求及直升機場發展所作的研究報告估計，直至2020年，市場對來往香港與珠江三角洲(包括澳門)的跨境直升機服務的需求，每年的增長可能高達9.4%。該份研究報告亦顯示，預期來往香港與珠江三角洲(不包括澳門)的跨境直升機服務的需求實際將會更龐大，由於來往香港與珠江三角洲的大部分直升機都是單引擎型號，而單引擎直升機又不能在升高了的停機坪降落，因此香港實在需要一個設於地面的直升機場。

2.3 香港是珠江三角洲內最大的投資者，直至2004年底，總投資金額達到$11,700億港元。近年兩地的政府、商界及社區團體均致力推動本港及珠江三角洲的經濟融合，而訪港的內地旅客人數亦屢創新高。簡而言之，香港現正漸次發展為整個區域的服務樞紐。

2.4 要了解直升機場所服務的市場的潛力，可從該區的人口着眼。現時珠江三角洲共有約四億二千萬人口，即人口數目與整個歐洲相同。


HONG KONG'S FUTURE REGIONAL HELIPORT
香港未來的區域直升機場
The Peninsula
半島酒店
COMMERCIAL - TWIN
商用雙引擎
Macau
Ferry Terminal
港澳碼頭
COMMERCIAL - TWIN
商用雙引擎
Bauhinia Gateway
Regional Heliport
紫荊門區域直升機場
GFS / COMMERCIAL - SINGLE & TWIN
飛行服務隊及商用單/雙引擎
Siu Sai Wan
小西灣
GFS Only
飛行服務隊
Pamela Youde Hospital
東區尤德醫院
GFS Only
飛行服務隊

2.5 By helicopter, Hong Kong is only 30 minutes away from anywhere in the Pearl River Delta. A typical ferry or road journey could take two to four hours. The time advantage provided by helicopter services brings a real and valuable competitive business edge to Hong Kong. The Hong Kong economy and therefore the entire community will benefit greatly through unlocking this important yet virtually untapped market.

A working harbour-front should be regarded as a part of the economic engine of Hong Kong – essential to the SAR's prosperity and future development.

3. Why does the heliport have to be located in the Central Business District?

The main advantages of a helicopter journey are speed and accessibility. It therefore follows logically that a heliport must be located in the Central Business District in order to generate maximum benefit for the community at large. It should be conveniently located for tourists and the business community alike and should provide easy connectivity with other modes of transportation.

光陰無價...飛往珠江三角洲任何一處
只不過需要三十分鐘

The value of time... land anywhere in the Pearl River Delta in under 30 minutes

2.5 由香港利用直升機飛往珠江三角洲任何一處只需三十分鐘，而使用海上或陸路交通則往往需要二至四小時，這時間上的優勢可大大加強本港在商業上的競爭條件。香港經濟以及整個社會均可藉著打開這個重要但尚未開發的市場而得益。

一個動力十足的海濱應被視為香港經濟動力的一部分 — 對特別行政區的繁榮及其將來的發展是不可或缺的。

3. 為甚麼直升機場必須位於商業中心區？

直升機航運的最大優勢是速度及近便，故此直升機場必須位於商業中心區，方能對社會發揮最大的作用。而且，它必須位於方便遊客及商界上落的地點，亦同時要讓使用者容易轉乘其他交通工具。

4. How can the heliport be integrated into a vision of a vibrant and interesting harbour-front promenade?

Whereas there are obvious measures that have to be taken to ensure the security of the facility, there is certainly no reason why the spectacle of helicopters arriving and departing from the heliport cannot be enjoyed by the public. Indeed even the old heliport at Central attracted spectator interest with onlookers watching through the metal bars that created the barrier between the adjoining pavement and the facility. We propose retaining the existing three-storey ferry building at the Golden Bauhinia Square but only after considerably upgrading the structure to improve its overall visual appearance. Impressions of this structure after revamping are illustrated herein.

4. 如何將直升機場與多姿多采的海濱長廊融合起來？

只要有足夠的措施保障直升機場的安全，便可以讓市民觀賞直升機的降落及起飛。事實上，位於中環的舊直升機場亦有引來觀賞人士，他們透過分隔直升機場及其連接行人路的鐵柱圍欄觀看直升機的起降。工作組建議保留位於金紫荊廣場內樓高三層的渡輪大樓，但必須進行大規模的重修工程，以改善其整體外觀。重修後的渡輪大樓的外觀可參考下圖：

旅遊熱點...遊人往來如鯽

A destination ... a people place

This building would be redesigned to create easy access to the public for recreation purposes and will serve four important functions.

4.1 It will provide a noise barrier between the heliport proper and the adjacent Golden Bauhinia Square.

4.2 It will offer public restaurant facilities as well as a public viewing platform on the roof.

4.3 Part of the building could be used as exhibition space. Relevant options could include an exhibition celebrating the handover; a history of harbour reclamation; or a helicopter and seaplane museum highlighting the vital role both have played in Hong Kong's development forming the first intercontinental links between the North America and Asia.

4.4 It will provide mutually exclusive heliport facilities for the Government Flying Service and the commercial operators.

As will be clear from the illustrations of this building, its retention in its redefined form will add considerable interest to the surroundings and provide a valuable amenity that will be available to the general public whether they are using the heliport facility or not.

我們建議重新設計渡輪碼頭建築物，除方便市民前往該處休閒玩樂之外，更有以下四個重要用途：

4.1 為直升機場及旁邊的金紫荊廣場之間提供隔音設備。

4.2 提供給公眾使用的餐廳設施，並在屋頂設置觀景平台。

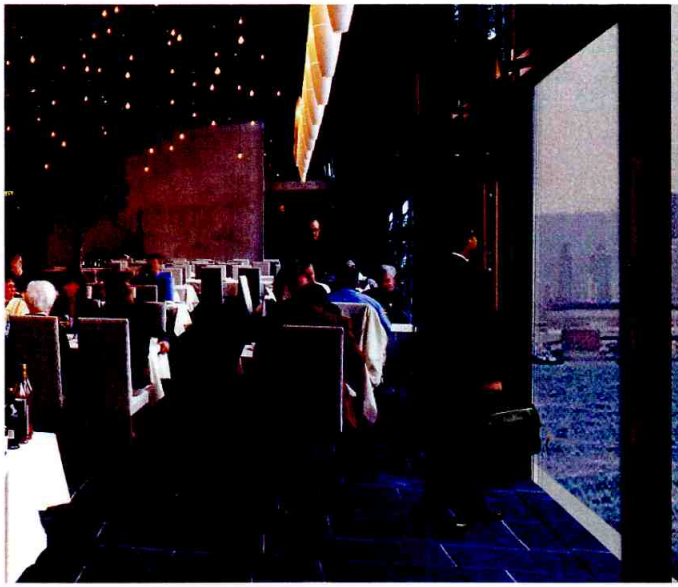
4.3 可考慮將大樓部分作展覽場地用途。展覽的內容可包括慶祝回歸、填海的歷史，或設立一個直升機及水上飛機博物館，表揚兩者在使香港發展成為美國與亞洲之間的首個跨陸地橋樑中所扮演的重要角色。

4.4 為政府飛行服務隊及商營直升機公司提供各自獨家使用的直升機設施。

從這建築物的插圖可見，重修後的建築物，為周遭環境增加相當色彩；對普羅大眾而言，無論他們是否使用直升機場，都可以享用這設施。

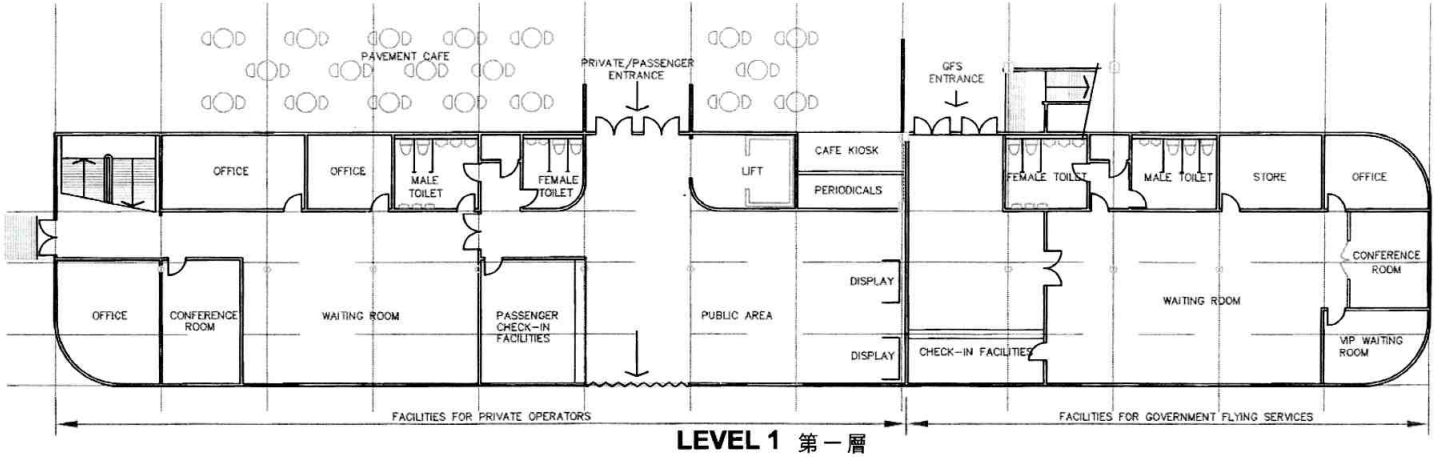
對造訪金紫荊廣場的遊人...日間和晚上各有各精彩

Day and night attractions... for visitors to Golden Bauhinia Square

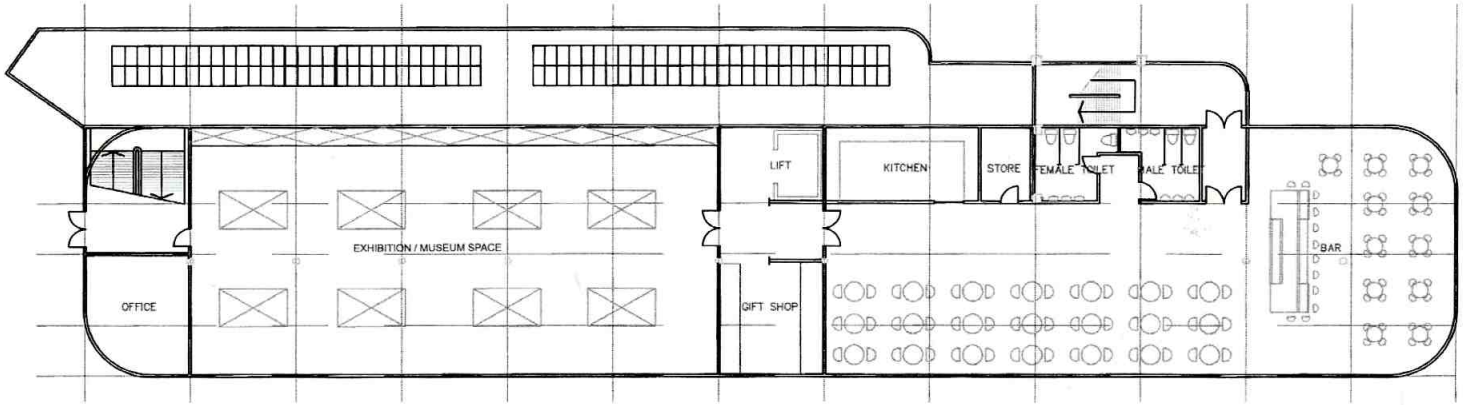


Preserve the existing ferry building... and exciting harbour views

現有的碼頭大樓...怡人的海港景色 — 一切不變



LEVEL 1 第一層



LEVEL 2 第二層

LONGITUDINAL SECTION 縱切面

0 5 10 15m

重修碼頭大樓...
為海濱注入新朝氣

Revitalising a disused terminal... giving life to the harbour-front

5. Can the additional reclamation required for the heliport be justified under the terms of the Protection of the Harbour Ordinance?

5.1 **A compelling present public need for reclamation.**
The argument has been made elsewhere that there is compelling and present need for a public heliport within the Central Business District to serve single-engine aircraft. If the heliport is to be provided of a size that will be sustainable for future requirements, limited reclamation cannot be avoided.

5.2 **There is no reasonable alternative.**
- Government Studies indicate that the only alternative site for a heliport is at Sheung Wan and this has been essentially now rejected as being located too close to the residential area at Western.
- Government Flying Service have indicated that the site adjacent to the Golden Bauhinia Square is the only site that meets their security needs.

5.3 **The reclamation is kept to the minimum.**
- The total reclamation involved for this site is 2,600 sq. metres. Taking into account the forecast growth of demand and the fact that this will be the only site in Hong Kong shared between the government and the single-engine commercial operators, this size is considered the minimum required within the restraints of the principle of sustainability.
- Recognizing the importance of this matter and the need to comply with the provisions of the Protection of the Harbour Ordinance, we have taken legal advice from eminent counsel and his advice is attached herewith as Appendix 2. This confirms our own belief that the construction of a heliport at this site of the size contemplated would be legal and thus fall within the terms and conditions of the Motion passed by the Legislative Council Joint Panels on 28 February 2005.

6. Why cannot the existing heliport at Sheung Wan be used?

6.1 Currently the only centrally located helipad on Hong Kong Island is at the Shun Tak Centre (Macau Ferry Terminal). This caters exclusively for twin-engine helicopters operating scheduled cross-border services. The restriction to twin-engine helicopters is dictated by Hong Kong Civil Aviation Department regulations that forbid operation of single-engine helicopters from elevated helipads.

6.2 Over 80% of the local private sector helicopter fleet are single-engine and this preference for single-engine helicopters is mirrored in international markets. Single-engine helicopters are fast, capable, safe and economical to operate. Operating statistics show that they are as safe or safer than twin-engine machines. Single-engine helicopters also generate less noise than twin-engine machines. However, they must be operated from ground level helipads.

5. 直升機場所需要的額外填海能通過《保護海港條例》的限制嗎？

5.1 填海有當前迫切的公眾需要
在商業中心區建設一個單引擎的直升機場實在有當前迫切的需要。如果直升機場的面積要合乎將來可持續發展的需要，則無可避免要進行有限度的填海。

5.2 沒有其他合理的選擇
- 政府的研究指出唯一可行的直升機場選址為上環，但此地點因為太接近西區的住宅範圍而遭反對。
- 政府飛行服務隊曾指出只有金紫荊廣場旁邊的選址能夠合乎服務隊的安全需要。

5.3 盡量減少填海
- 此選址的總填海面積是2,600平方米。考慮到增長需求的預測，以及選址為香港唯一由政府及商用單引擎直升機公司共用的直升機場，並且要符合可持續發展原則，此面積已經是最低的標準。
- 由於此項建議有相當重要性，但又需要遵守《保護海港條例》的條文，工作組遂向著名的法律顧問徵詢法律意見，並將其意見列在附件內。此意見書肯定了工作組就直升機場的面積所作的建議的合法性，及指出建議的內容合乎立法會於二零零五年二月二十八日聯席會議上通過議案的限制及條件。

6. 為甚麼不能使用現有上環的直升機場？

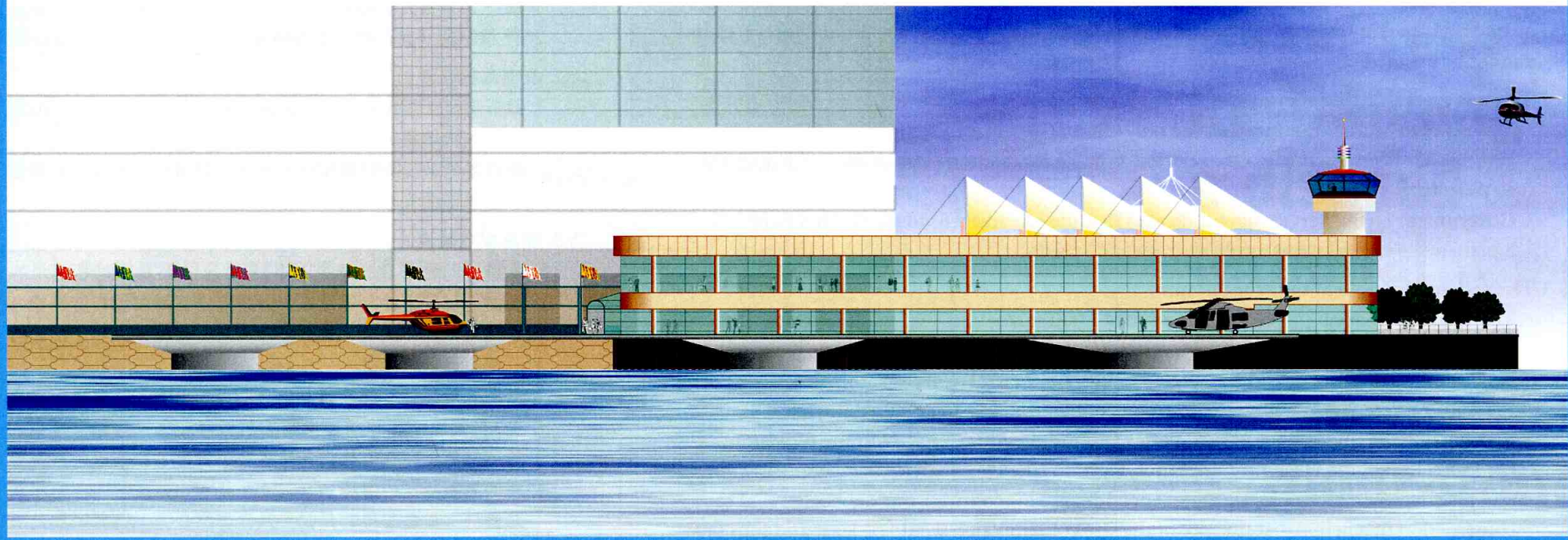
6.1 目前本港唯一的市區直升機坪位於信德中心（港澳碼頭），專供雙引擎直升機提供定期跨境航運服務之用。然而民航署規例只容許雙引擎直升機使用此停機坪，單引擎直升機則被禁止使用。

6.2 現時本港的直升機超過八成屬單引擎機種，而國際市場亦比較傾向使用單引擎機種。單引擎直升機的好處是速度快、有效率、安全及符合經濟效益，而統計數據顯示單引擎直升機對比雙引擎機種的安全程度有過之而無不及，前者比後者所產生的噪音亦更少。然而此機種只可於地面停機坪升降。

Bauhinia Gateway Regional Heliport

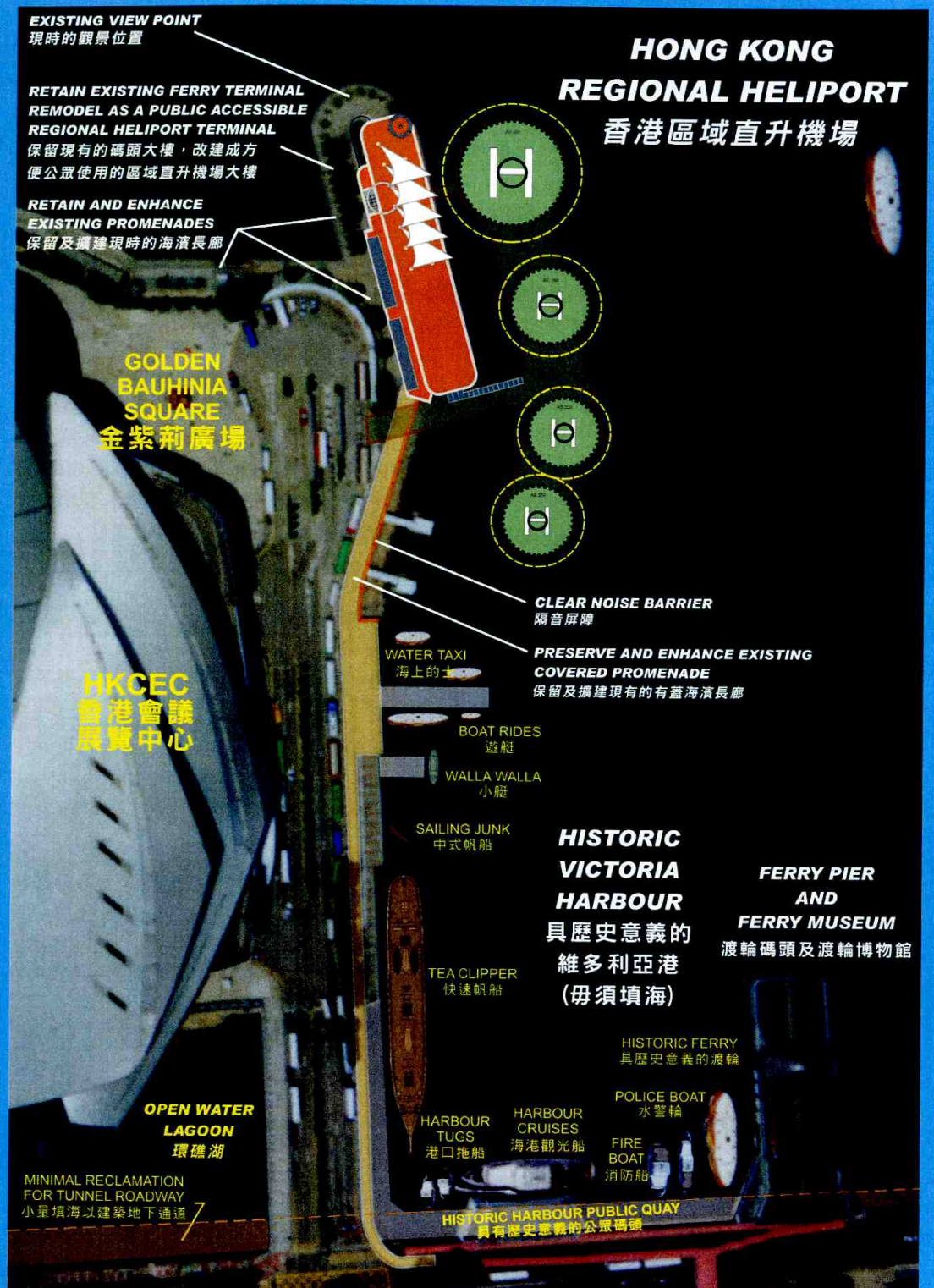
at the Hong Kong Convention and Exhibition Centre

位於香港會議展覽中心的紫荊門區域直升機場



Well integrated with surrounding facilities... part of a vibrant harbour scene

與周遭環境適當的融合起來...成為多姿多采的海港的一部分


EXISTING VIEW POINT
現時的觀景位置
RETAIN EXISTING FERRY TERMINAL
REMODEL AS A PUBLIC ACCESSIBLE
REGIONAL HELIPORT TERMINAL
保留現有的碼頭大樓，改建成方
便公眾使用的區域直升機場大樓
RETAIN AND ENHANCE
EXISTING PROMENADES
保留及擴建現時的海濱長廊
HONG KONG
REGIONAL HELIPORT
香港區域直升機場
GOLDEN
BAUHINIA
SQUARE
金紫荊廣場
HKCEC
香港會議
展覽中心
CLEAR NOISE BARRIER
隔音屏障
PRESERVE AND ENHANCE EXISTING
COVERED PROMENADE
保留及擴建現有的有蓋海濱長廊
WATER TAXI
海上的士
BOAT RIDES
遊艇
WALLA WALLA
小艇
SAILING JUNK
中式帆船
HISTORIC
VICTORIA
HARBOUR
具歷史意義的
維多利亞港
(毋須填海)
FERRY PIER
AND
FERRY MUSEUM
渡輪碼頭及渡輪博物館
TEA CLIPPER
快速帆船
HISTORIC FERRY
具歷史意義的渡輪
POLICE BOAT
水警輪
HARBOUR
TUGS
港口拖船
HARBOUR
CRUISES
海港觀光船
FIRE
BOAT
消防船
OPEN WATER
LAGOON
環礁湖
MINIMAL RECLAMATION
FOR TUNNEL ROADWAY
小量填海以建築地下通道
HISTORIC HARBOUR PUBLIC QUAY
具有歷史意義的公眾碼頭

SIZE COMPARISON OF THREE HONG KONG ISLAND HELIPORTS
港島區三個直升機場的面積比較
9,700
SQ. METRES
平方米
2,600
SQ. METRES
平方米
5,300
SQ. METRES
平方米
0 20 40
SCALE IN METRES
CENTRAL HELIPORT
位於中區的直升機場
TEMPORARY - SHARED USE
CLOSED NOVEMBER 2003
臨時性質-共同使用，
已於二００三年十一月關閉
BAUHINIA GATEWAY
REGIONAL HELIPORT
紫荊門區域直升機場
PROPOSED - SHARED USE
建議興建作共同使用
WAN CHAI PCWA PIER
灣仔公眾貨物裝卸碼頭
TEMPORARY GFS USE ONLY
臨時性質，只供
政府飛行服務隊使用

7. What are government's and the helicopter industry's views regarding the sharing of the heliport planned to be adjacent to the Golden Bauhinia Square?

7.1 **Government**

The Permanent Secretary for Economic Development and Labour has stated in a letter dated 17 March 2005 that, "We have come to the view that the best way forward is to proceed with the re-provisioning of the government helipad at HKCEC and, having taken into account the Legco's Joint Panel's motion, to allow the shared uses of such facility by commercial operators."

7.2 **Legislative Councillors**

Legco's Joint Panel's Motion of 28th February, 2005 stated "That, the Panel on Economic Services and the Panel on Planning, Lands and Works urge the government to expedite the provision of a permanent commercial heliport and associated facilities in the central business district of the Hong Kong Island, and, under the principle of no unlawful reclamation, allow the heliport at the Hong Kong Convention and Exhibition Centre to accommodate both commercial uses by helicopter operators and government uses."

7.3 **Industry**

We believe that Hong Kong's interests are best served by combining a single heliport to be shared by both the private sector and Government Flying Service.

- The helicopter industry has hitherto always shared heliports with the Government Flying Service without difficulty on either side.
- A single, shared facility would create economic synergies and help the community make better use of scarce harbour resources.
- The contour of the shoreline at this site allows the heliport to be optimally integrated into an active harbour-front.
- The ground-level site adjacent to Golden Bauhinia Square is the most suitable for the combined facility. This location, at a maximum distance from the foreshore, restricts helicopter flights to a less noise sensitive area over the water.

7. 政府及直升機業界對於共用建議於金紫荊廣場旁邊興建的直升機場有甚麼意見？

7.1 政府

經濟發展及勞工局常任秘書長於一封二零零五年三月十七日的書信提及到「我們認為最佳的前景就是考慮立法會聯席會議上的議案，重新考慮在香港會議展覽中心的直升機坪容許商業經營者的共用。」

7.2 立法會議員

立法會於二零零五年二月二十八日聯席會議上的議案提及「經濟事務委員會及規劃地政及工程事務委員會促請政府加快在港島商業市中心內提供永久的商用直升機場及設施，並在不違法填海的原則下容許商營直升機公司與政府共用香港會議展覽中心的直升機場。」

7.3 業界

工作組相信興建一個直升機場供私人及飛行服務隊共同使用，將會最符合香港的利益。

- 而長久以來，直升機業界與政府飛行服務隊已共用機場，雙方均沒有任何不便。
- 一個單一的設施可以有效發揮經濟協同效益，並且可善用珍貴的海港資源。
- 選址的海岸線可容許直升機場適當地融入活力十足的海濱。
- 金紫荊廣場旁邊的位置最適合建設此合併設施。由於此處距離沿岸地帶最遠，故此可將直升機飛行噪音局限於較為不受噪音影響的海面範圍。

Far from residential buildings... the best location for a people friendly heliport

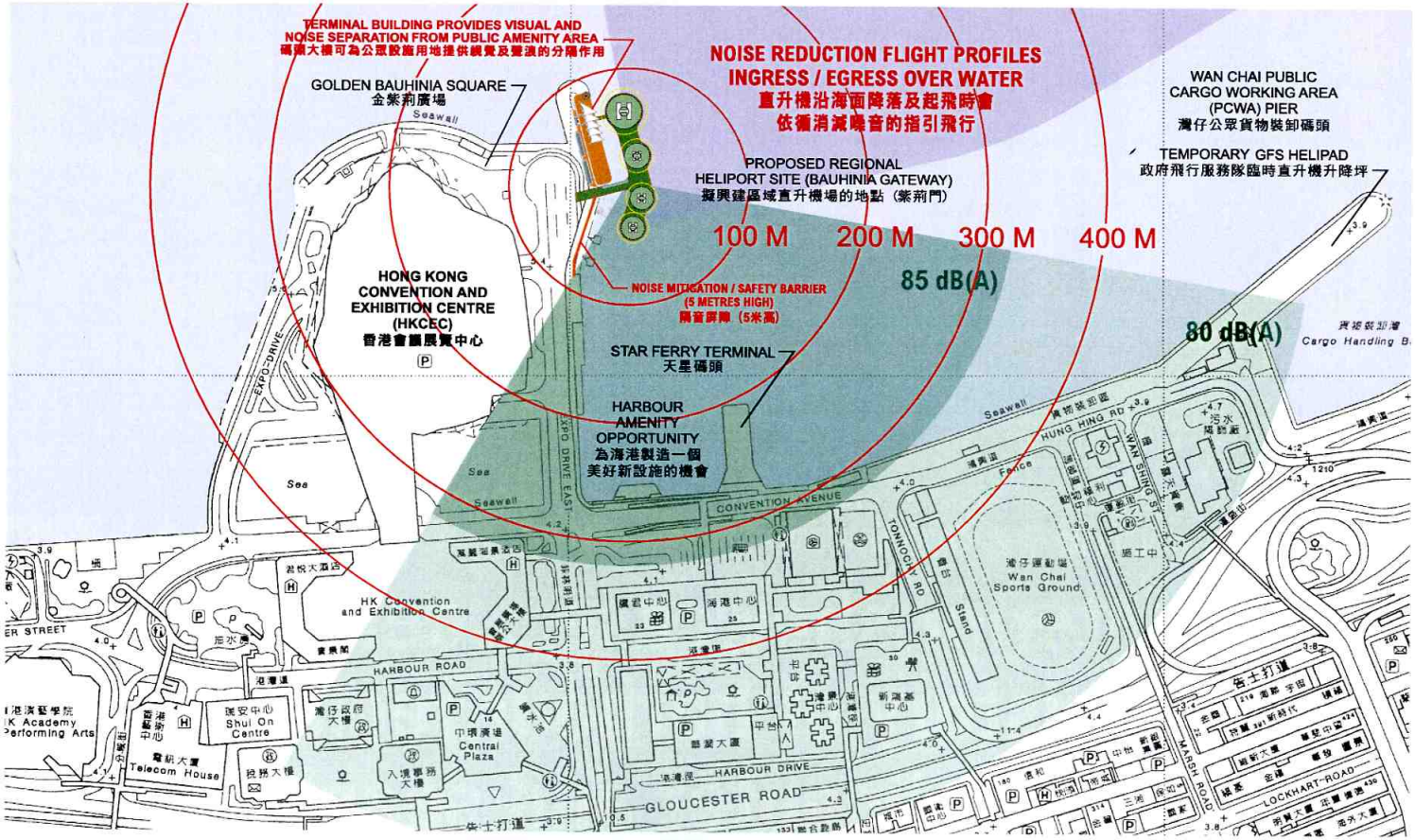
遠離民居...直升機場的首選地點

NOISE ABATEMENT PHILOSOPHY

- Typical passenger helicopter noise at source is on the order of approximately 90 dBA. Perceived intensity of this noise will vary inversely with the square of the distance from source. As the distance from the source is doubled, the noise intensity is decreased by a factor of four. For noise sensitive receivers at 400 metres from the source, the perceived noise will be on the order of 30 dBA - typically less than the ambient urban noise levels.
- The two-storey terminal building will itself provide a natural noise and visual barrier in the immediate vicinity.
- An engineered noise barrier will be installed on the west and south boundaries of the heliport.
- The latest in noise mitigation technology will be included in the design and construction of the heliport.
- Noise reduction flight profiles and techniques will be rigorously adhered to.
- Hours of operation would be limited in response to community needs.

消減噪音原則

- 直升機乘客所感受到的直升機聲浪約為90分貝。聲浪的強度會和距離的平方成反比，如果和聲源的距離增加一倍，則聲浪的強度會減弱至四分一，如果距離聲源400公尺，則感受到的聲浪約為30分貝 — 明顯低於市區的背景聲浪。
- 樓高兩層的直升機大樓將可作為直升機場和鄰近環境的聲浪及視覺屏障。
- 直升機場的西面及南面邊緣都會裝設一道隔音的機械屏障。
- 在設計及建造直升機場時，均會採用最尖端的隔音技術。
- 直升機起飛及降落時會嚴格遵守消減噪音的指引及技術。
- 營運時間會按社區人士的意見而設訂。



直升機場大樓內貌...回歸慶典；填海的歷史；或直升機及水上飛機博物館

Interior showcase ... celebrate the handover; a history of harbour reclamation; or a helicopter and seaplane museum

隔音屏障亦無礙欣賞海港美景...

Noise barriers do not need to shut out harbour views...

8. Will the heliport as envisaged by the RHWG result in any additional pedestrian and vehicular traffic and if so, how will this increase be dealt with?

The additional volume of traffic both pedestrian and vehicular generated by the construction of the heliport will be negligible relative to what exists today and is anticipated in the future. The existing road network and pedestrian bridges linking the area with Wan Chai are more than sufficient to meet the heliport's requirements.

9. Should the heliport be for domestic use only or should it also cater for cross-border movements?

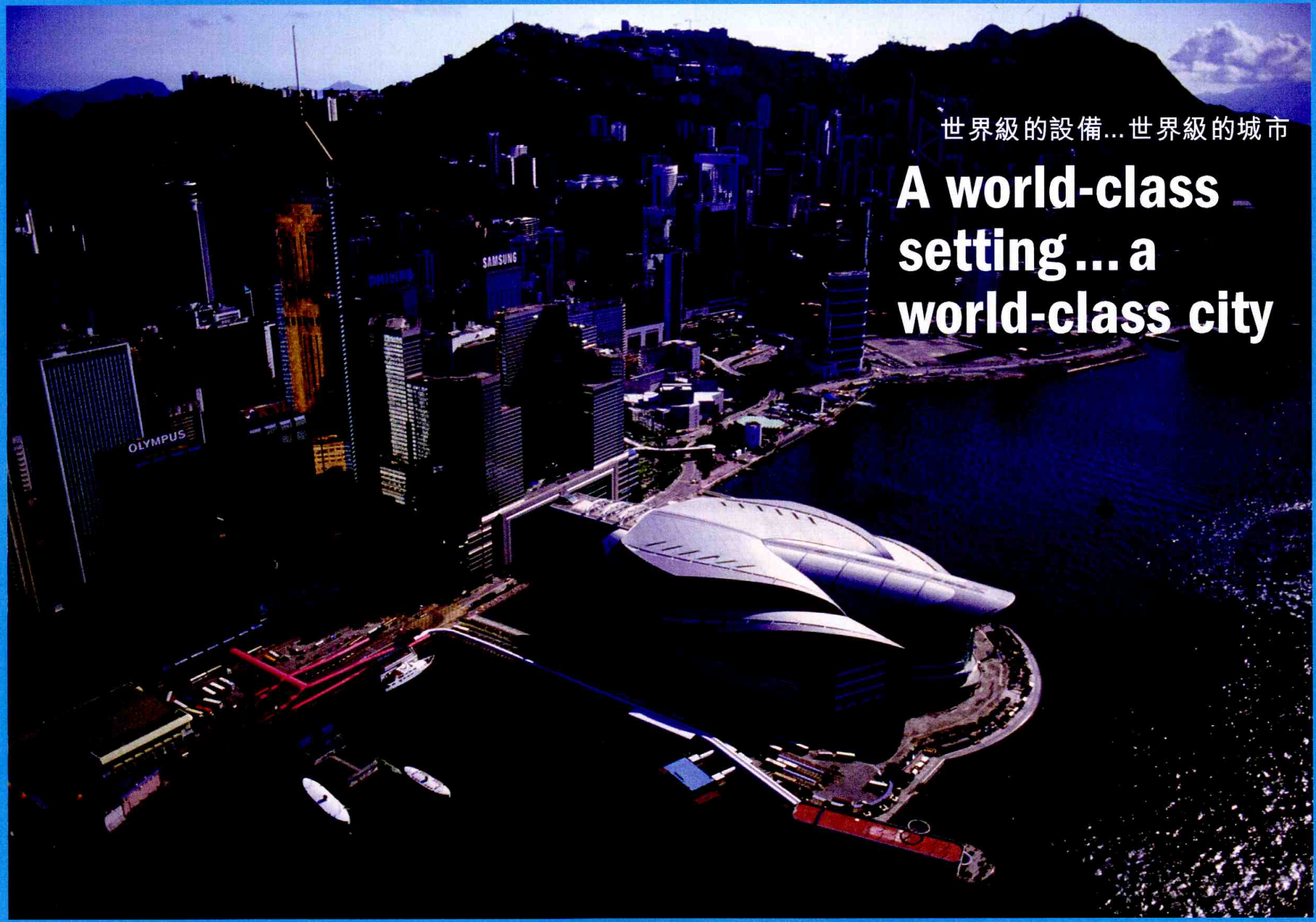
To meet the potential for both domestic and Hong Kong-Pearl River Delta charter demand, any proposed ground-level heliport within the Central Business District must cater to both domestic and cross-border services.

8. 工作組計劃的直升機場會否帶來額外的行人及車輛？如有，應怎樣處理這些增長？

由興建直升機場引致的額外行人及車輛數目，相對現時及將來預計的交通容量是極少的。現時連接灣仔的道路網絡及行人天橋足以應付直升機場引致的需求有餘。

9. 直升機場應只提供本地服務還是應顧及本地及跨境的航班服務？

要配合對本地及來往香港與珠三角航運服務增長的需求，任何設於商業中心區的地面直升機場均應同時作境內及區域性服務之用。



世界級的設備...世界級的城市

A world-class setting... a world-class city

10. Will the proposed heliport adjacent to the Golden Bauhinia Square create a noise problem for the residents of Wan Chai and adjoining areas?

10.1 The proposed site adjoining Golden Bauhinia Square is located well away from residential buildings and is thus far less noise sensitive than any other on the north shore of Hong Kong Island. At the residential buildings along Jaffe Road, the noise of helicopter traffic would be indistinguishable from the background noise. (See the Mott Connell Ltd.'s study on noise impact assessment at Appendix 1.)

10.2 There is no alternative site on the harbour-front that can be located further from a residential area than the proposed site. An alternative site originally proposed at Sheung Wan was heavily criticized by the Central and Western District Council as being too close to residential areas.

11. How will the Hong Kong public benefit from the construction of a heliport?

11.1 The RHWG's goal is to make the Hong Kong Regional Heliport a key attraction in its own right, designed to encourage active participation and enjoyment by the broad community. Experience from Hong Kong's previous centrally located heliports has shown that helicopters are a popular attraction for both Hong Kong people and visitors. With a creative approach, the Hong Kong Regional Heliport adjacent to Golden Bauhinia Square will be a popular community amenity.

11.2 The views of the community are being sought on the best way to integrate the heliport within the harbour-front promenade. Subject to the community's views, the existing harbour-front ferry pier can be outfitted with a viewing lounge and a helicopter/aviation museum to entertain and educate both the young and adults. In addition, other public amenities could include aviation themed gift shops, educational displays, restaurants, coffee shops, etc.

11.3 A heliport, if properly designed and integrated into the urban fabric, will be an attractive amenity providing one element of a vibrant, active, accessible and interesting harbour-front.

10. 建議位於金紫荊廣場旁邊的直升機場會否為灣仔及附近一帶的居民帶來噪音?

10.1 建議中的地點位處金紫荊廣場旁邊，遠離住宅大廈，故此比較在港島北面任何地方興建直升機場所造成的噪音滋擾更低。就謝斐道一帶的住宅大廈為例，直升機所造成的噪音將會與該處背景噪音相若（請參考附件一由Mott Connell Ltd. 編製的噪音影響評估）。

10.2 現時並沒有其他位於維港海旁的位置比這選址更遠離民居。原先建議於上環的選址便是因為太接近民居而受到中西區區議會的猛烈批評。

11. 香港的普羅大眾怎樣能從建議興建的直升機場得益?

11.1 工作組的目標是將該直升機場發展成為一個熱門觀光點，吸引市民前往參觀及享用。過往設於市區的直升機場均成為一個受市民及遊客歡迎的觀光點。只要配合更具創意的設計，這個位於金紫荊廣場旁邊的香港區域直升機場將可以發展成為一個極為吸引的社區文娛熱點。

11.2 我們現正收集社會人士對如何將直升機場與海濱長廊融合一起的意見。視乎他們的支持，現時臨海的渡輪碼頭將會重修，設有觀景廊、直升機/航空博物館，為成人及青少年提供教育與娛樂意義兼備的景點。除此之外，更會設置其他公共文娛設施，包括以航空為主題的禮品店、教育設施、餐廳及咖啡店等。

11.3 只要設計得宜，並且與市區的特色融合起來，直升機場將可成為一個富吸引力的景點，使海濱長廊更具朝氣和活力，亦方便公眾人士往返。

12. Criteria to be Applied in the Selection of a Surface Level Heliport in the CBD

We believe that the site adjacent to Golden Bauhinia Square is the only site that meets all the criteria.

12. 選擇在商業中心區興建地面直升機場的準則

香港區域直升機場工作組相信金紫荊廣場旁邊是唯一符合所有準則的地點。

12.1 Ground level: The Hong Kong Civil Aviation Department will not allow single-engine helicopters to land on any raised structure. This restriction would apply even to single-story structures such as the roofs of passenger ferry piers. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria. **Other potential sites:** Whilst it is possible to come up with theoretically suitable sites such as Victoria Park, the reality of the situation is that no inland site would be acceptable for the construction of a heliport.	**12.1 建於地面**：香港民航處將不會容許單引擎直升機降落於任何建築物上。此限制亦會包括單層的建築物，例如渡輪碼頭的天台。 **金紫荊廣場側的地點**：此地點符合是項準則。 **其他可供考慮的地點**：雖然理論上應該有其他合適的位置，例如維多利亞公園，但實際情況是並沒有內陸的地點會適合建設一個直升機場。
12.2 On the harbour-front: Although strictly speaking it is not necessary to have the heliport located on the harbour-front at ground level, for all practical purposes due to the approach and landing glide slopes and other inland activities, the helipad needs a location on the harbour-front. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria. **Other potential sites:** There are sites available other than that of Golden Bauhinia Square. One is the Wan Chai PCWA Pier off the Yacht Club now used by the Government Flying Service. It may also be possible to "carve out" a section of the current reclamation in Central although no particular part of this reclamation currently appears suitable for this.	**12.2 臨海而建**：雖然嚴格來說，直升機場不一定要建於臨海的地面，但實際上，為照顧直升機於接近及降落時的滑行斜面及其他於內陸進行的活動等原因，直升機坪需要位於海旁的位置。 **金紫荊廣場側的地點**：此地點符合是項準則。 **其他可供考慮的地點**：除金紫荊廣場外，亦有其他可用的地點。其中一個為政府飛行服務隊現時使用、位於遊艇會旁的灣仔公眾貨物裝卸碼頭。另一個是在現時中區填海範圍中劃出一部分，雖然現時的填海範圍並沒有特別一處位置適合作此用途。
12.3 As far as possible from residential areas: Although the noise from helicopters is less than that of a busy thoroughfare, residential areas usually object to having a heliport sited in their close vicinity. Thus ideally any heliport should be placed on a promontory within the harbour well away from residential blocks of flats. Proximity to offices and other non-residential buildings does not present a problem on account of noise due to the fact that such buildings are invariably well insulated against sound. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria and would have no adverse effect on the Wan Chai Residential District. **Other potential sites:** The use of the PCWA Pier off the Yacht Club was objected to by the Wan Chai District Council with such objections sufficiently vocal as to prevent its use by the commercial helicopter operators. Similarly a site in Sheung Wan was objected to by the Central and Western District Council as being too close to residential buildings. Unless a site can be found on the new Central Reclamation, it would appear that there are no other sites for the heliport other than that adjacent to Golden Bauhinia Square.	**12.3 盡量遠離民居**：雖然直升機發出的音量比繁忙的道路所製造的噪音還要小，但住宅區通常亦會反對於民居附近興建直升機場。因此，比較理想的情況是將直升機場建於海港的邊緣，並且遠離住宅樓宇。由於寫字樓及非住宅樓宇有較好的隔音設備，直升機場即使鄰近這些建築物亦不會構成問題。 **金紫荊廣場側的地點**：此地點符合有關準則，並不會為灣仔的住宅區帶來不良的影響。 **其他可供考慮的地點**：灣仔區議會反對選用香港遊艇會附近的灣仔公眾貨物裝卸碼頭，而反對的聲音足以令商業直升機公司不能佔用該位置。同樣地，於上環的選址亦受到中西區區議會因選址太接近住宅樓宇而反對。除非在新的中區填海區找到適當的位置，否則金紫荊廣場旁邊將成為直升機場唯一的選址。

12.4 Central Business District Location: The whole essence of a heliport is that it provides a fast and convenient mode of transportation to the community. This is most needed in the Central Business District being the nodal hub of the SAR's existing transportation network. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria. **Other potential sites:** There are no other potential sites within the Central Business District that meet all the requisite criteria.	**12.4 鄰近商業中心區：**直升機場的主要意義是它能夠為社區提供快捷及方便的交通模式。作為特別行政區交通網絡中樞的商業中心區便最需要這種交通模式。 **金紫荊廣場側的地點：**此地點符合是項準則。 **其他可供考慮的地點：**商業中心區內並沒有其他地點符合有關準則。
12.5 Road Access: Although not by any means a major generator of traffic, there must be easy vehicular access to the heliport. Anything other than minimal vehicle parking is not required. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria. **Other potential sites:** There are no other potential sites within the Central Business District that meet all the requisite criteria.	**12.5 車輛出入容易：**雖然直升機場並不會帶來很多交通往來，但車輛進出直升機場範圍亦必須方便容易。除了供少量的車輛停泊之外，其他設施都不是必要的。 **金紫荊廣場側的地點：**此地點符合是項準則。 **其他可供考慮的地點：**商業中心區域內並沒有其他地點符合是項準則。
12.6 Public Transportation Links: A sizeable proportion of users of the heliport will wish to use public transport. Accordingly there must be available close by ferry, bus and MTR connections. **Site adjacent Golden Bauhinia Square:** This site meets the required criteria. **Other potential sites:** There are no other potential sites within the Central Business District that meet all the requisite criteria.	**12.6 公共交通的連接：**大部份直升機場使用者都會使用公共交通工具。因此，直升機場必須鄰近渡輪、巴士及地鐵網絡。 **金紫荊廣場側的地點：**此地點符合是項準則。 **其他可供考慮的地點：**商業中心區內並沒有其他地點符合是項準則。
12.7 Assimilation with the Surrounding Area: Any heliport must be part of a vibrant and working harbour-front and not separated from it as has always been the case in the past. **Site adjacent Golden Bauhinia Square:** This site only meets the required criteria if the existing ferry terminal building is joined with the heliport thus providing a natural noise barrier thereby providing a means for assimilation with other harbour-front activities. If the scheme originally proposed by government were adopted, the ferry terminal building would be demolished and the heliport would be totally alienated from its surroundings by the erection of noise barriers. **Other potential sites:** There are no other potential sites within the Central Business District that meet all the requisite criteria.	**12.7 融入周圍的環境：**直升機場一定要成為多姿多采且動力十足的海濱的一部分。一如既往，直升機場不能跟海旁分隔。 **金紫荊廣場側的地點：**如果現時渡輪碼頭的建築物能夠連接直升機場，便可提供一個自然的隔音設備，讓直升機場與其他海旁的活動融入起來，使此地點符合是項準則。如果實施政府原先的建議，渡輪碼頭的建築物將會被拆卸，而直升機場便會被周圍豎立的隔音設備和鄰近的環境隔離。 **其他可供考慮的地點：**商業中心區內並沒有其他地點符合是項準則。

12.8 Sustainability: The heliport must be constructed to a size that meets the requirements of the foreseeable future. **Site adjacent Golden Bauhinia Square:** This site would meet the requisite criteria but only if some minimal reclamation amounting to 2,600 sq. metres is permitted. **Other potential sites:** There are no other potential sites within the Central Business District that meet all the requisite criteria.	**12.8 可持續發展**：興建直升機場的規模必須能夠配合可見將來的需求。 **金紫荊廣場側的地點**：如達2,600平方米的填海面積獲得批准，此選址便符合是項準則。 **其他可供考慮的地點**：商業中心區內並沒有其他地點符合是項準則。
12.9 Community Involvement: The heliport must be sufficiently accessible and include public recreational amenities. **Site adjacent Golden Bauhinia Square:** This site is very accessible and our proposal is to retain the existing building partially for public recreational amenities. **Other potential sites:** There are no other potential sites within the Central Business District that meet this criteria.	**12.9 社區的參與**：直升機場必須方便公眾人士往返，並設有公眾休閒康樂設施。 **金紫荊廣場側的地點**：往返金紫荊廣場非常容易，我們建議保留部分現在的建築物作公眾休閒康樂設施。 **其他可供考慮的地點**：商業中心區內並沒有其他地點符合是項準則。

MATRIX TO DEMONSTRATE THE HELIPORT'S SUSTAINABILITY PRINCIPLES AND INDICATORS 矩陣 — 表列直升機場可持續發展的原則及指標

1 Vibrant and Attractive Harbour-front 動力十足和多姿多采的海濱	2 Maximize Opportunities for Public Enjoyment 充份提高公眾享用的機會	3 Accessible Harbour-front for all Ages, Social Groups and Disabilities 方便所有年齡、社群和傷健人士使用
SOCIAL INDICATORS 社會指標		
• Pedestrian mobility • Accessible for all ages, social groups and disability conditions • Free access • Diversity in activities for different times and age groups • 行人往來容易 • 所有年齡、社群和傷健人士均容易前往 • 自由出入 • 多元化的活動，配合不同時段及不同年齡人士的需要	• Free entry for all • 免費供社會大眾享用	• Accessible for all ages, social groups, and disability conditions • Freely accessibility to all • 所有年齡、社群和傷健人士均容易前往 • 所有人士均可自由出入
ECONOMIC INDICATORS 經濟指標		
• Provision of business opportunities (for both daytime and night time) • Facilitate wide range of economic activity • 創造營商機會（日間及夜間） • 有利不同類型的經濟活動在該處舉行	• Provision of business opportunities (for day time and night time) • 創造營商機會（日間及夜間）	
BUILT ENVIRONMENT INDICATORS 建築環境指標		
• Safe and convenient access • Sensitive building height profile • Create activity nodes/landmarks – identity icon • Infrastructure that will facilitate both water and land activities • 往來的通道既安全又方便 • 建築物的高度恰當 • 為該處的活動模式/地標建立鮮明的形象 • 提供可方便進行水陸活動的基建	• Enhance openness • Provision of landscaped area with trees • Minimize land for infrastructure and utilities • 景觀開揚 • 廣植樹木，綠化環境 • 盡量少用土地作基建及公用設施用途	• Linkage to public transport facilities • Linkage to the inner old districts • Extent of a continuous promenade • 與公共交通設施連接 • 與舊區連接 • 維持海濱的連貫性
NATURAL ENVIRONMENT INDICATORS 自然環境指標		
• Minimize noise pollution • 儘量消減噪音		• Visual access to harbour-front • 確保望向海濱的視野無阻

4 Preserve Natural and Cultural Heritage and Identity 保存自然及文化遺產和特色	5 Enhance Visual Amenity, Landscape and Quality of Space 優化景觀、加強綠化、善用空間	6 Enhance Social Interaction 促進社群交往
SOCIAL INDICATORS 社會指標		
• Provision for cultural and social activities along harbour-front • Provision of local activities to enhance social attachment to the harbour • Enhancing the heritage value of the harbour • 沿海濱提供文化及社交活動 • 籌辦地區性活動，以加強社會對海港的歸屬感 • 提高海港的歷史價值	• Open space suitable for all ages, social groups and disability conditions • Provision of a secure and safe environment • 為不同年齡、社群及傷健人士提供適當空間 • 提供穩妥和安全的環境	• Open to the public • Free for the enjoyment for all ages, social groups and disability conditions • 開放給公眾使用 • 不同年齡、社群及傷健人士可以隨意使用海濱
ECONOMIC INDICATORS 經濟指標		
• Provision of the economic activities with cultural value • 提供具有文化價值的經濟活動	• Provision of opportunities for small business • 為小本經營者創造營商機會	• Extension of the economic activities from the hinterland including the inner old districts to the promenade • 將腹地(包括舊區)的經濟活動擴展至海濱
BUILT ENVIRONMENT INDICATORS 建築環境指標		
• Visual permeability • Design elements that enhance harbour image • Minimize reclamation • Minimize risk of future reclamation by not allowing large scale/developments with significant traffic impact • Compatible land-use with the natural environment • 視野無礙 • 利用設計元素提高海港形象 • 盡量減少填海 • 禁止進行會引致大量交通需求的大型發展，以減低未來需填海的風險 • 土地使用應與自然環境配合	• Flexible use of space • Provision of facilities to cater for a diversity of user groups • Enhance openness • Provision of landscape areas with trees • 靈活運用空間 • 為不同類型使用者提供設施 • 景觀開揚 • 廣植樹木，綠化環境	• Provision of facilities to cater for a diversity of user groups • Provision of facilities for year-round activities • Provision of community facilities • Provision of open-air venues • Provision of themed promenade • 為不同類型使用者提供設施 • 提供適合全年活動的設施 • 提供社區設施 • 提供空曠的活動場地 • 提供設有主題的海濱
NATURAL ENVIRONMENT INDICATORS 自然環境指標		

7 Ensure Land/Marine Use and Design Compatibility between the Water-front and the Adjoining Areas 確保海濱一帶和鄰近地區的水/陸用途和設計均互相配合	8 Minimize Energy Consumption and Optimize the Use of Existing Infrastructure 盡量減少能源消耗並善用現有基建	9 Improve Traffic Conditions and Pedestrian Connectivity 改善交通情況及行人往來通道
SOCIAL INDICATORS 社會指標		
• Provision of facilities to attract movement between existing and new areas • 提供設施，鼓勵公眾人士往來新舊兩區		• Shorter travelling time within and between districts • Provision of activity nodes along the links • Ease of access by pedestrians including the disabled • Provision for different modes of access • 縮短區內及區與區之間的交通時間 • 沿行人通道提供活動點 • 確保行人包括傷健人士往來容易 • 提供各種不同途徑，方便公眾人士往來海濱
ECONOMIC INDICATORS 經濟指標		
• Promotion and revitalization of local business • 推廣及刺激本地經濟活動	• Cost effectiveness in infrastructure investment • 基建投資更具成本效益	• Reduction in cost due to shorter travelling time • Provision of business opportunities along the link • 縮短交通時間有助降低成本 • 沿行人通道提供營商機會
BUILT ENVIRONMENT INDICATORS 建築環境指標		
• Land use and design compatibility • Provision of strong linkages and physical connections • Creative use of 3-dimensional space • Control development within constraints of land and infrastructure • 土地用途及設計必須互相協調 • 加強地區之間的接駁和連繫 • 使用有創意的三維空間 • 在土地及基建的限制下規管進一步發展	• Reuse existing ferry terminal building • Better utilization of existing infrastructure • 徵用現有的渡海碼頭大樓 • 善用已有的基建	• Provision of landscaped network to enhance pedestrian experience • 綠化環境，使往來行人更感愉快
NATURAL ENVIRONMENT INDICATORS 自然環境指標		
• Visual connectivity between the existing and new areas and the harbour • 確保新舊區域及海港一帶能在視覺上恰當地融合起來	• Lower noise emission • Extent of reuse of natural resources • 減低發出的聲浪 • 天然資源循環再用	• Visual connectivity between existing and new areas and the harbour • 確保新舊區域及海港一帶能在視覺上恰當地融合起來

APPENDICES
附件

Appendix 1 – Noise Impact Assessment for a Hong Kong Regional Heliport Adjacent to the Existing Wan Chai Ferry Pier – Mott Connell Ltd.

附件一 — 毗鄰灣仔渡輪碼頭的香港區域直升機場的噪音影響評估(由Mott Connell Ltd. 編製)

Appendix 2 – Counsel's Opinion on Legal Implications of Reclamation for a Heliport – Mr. Michael Thomas, Q.C.

附件二 — 法律顧問(Mr. Michael Thomas, Q.C.)就因為直升機場而需進行填海所牽涉的法律問題提供的意見

An introduction to the appendices:

Appendix 1

We recognized from the outset that the impact of background noise arising from helicopter operations is one of, if not *the* most important issue that must be considered when selecting a site for the construction of a heliport in the CBD.

We believe that the *only* site within the CBD that meets the requirements and the expectations of the community regarding noise levels is that which it is now being proposed adjacent to the Golden Bauhinia Square.

In order to demonstrate the noise impact arising from the construction of the heliport at this site, we have appointed the firm of Mott Connell Ltd. as our consultant to carry out an appropriate noise impact assessment study. A copy of their report follows in Appendix 1.

Appendix 2

We have prepared this submission in the full knowledge that any proposal to carry out reclamation within the harbour is extremely sensitive. We sincerely hope that the planning considerations behind our current proposal will be viewed in their totality, and will be seen to be balanced and sensitive to community aspirations.

But Community acceptance alone is not sufficient. Any proposal must also pass the strict standards laid down by the Protection of the Harbour Ordinance.

Prior to proceeding with preparation of this submission, we secured a legal opinion from an eminent Counsel in London, Mr. Michael Thomas, Q.C., to assist us in understanding the statutory obligations under the Ordinance. We firmly believe that this legal opinion provides a sound legal basis for consideration of the proposal contained within our submission. A copy of the Opinion follows in Appendix 2.

附件簡介：

附件一

工作組從開始便知悉要在商業中心區選擇一地點興建直升機場，首要考慮的是由直升機運作所製造的聲浪對環境的影響。

我們相信，在商業中心區內唯一一個可以符合社區對聲浪水平的要求及期望的，就只有我們所建議的金紫荊廣場側的地點。

我們為了解在該處建造直升機場會引致的噪音問題，特別委任Mott Connell Ltd.為我們的顧問，進行噪音影響評估研究。該份研究報告詳列於附件一。

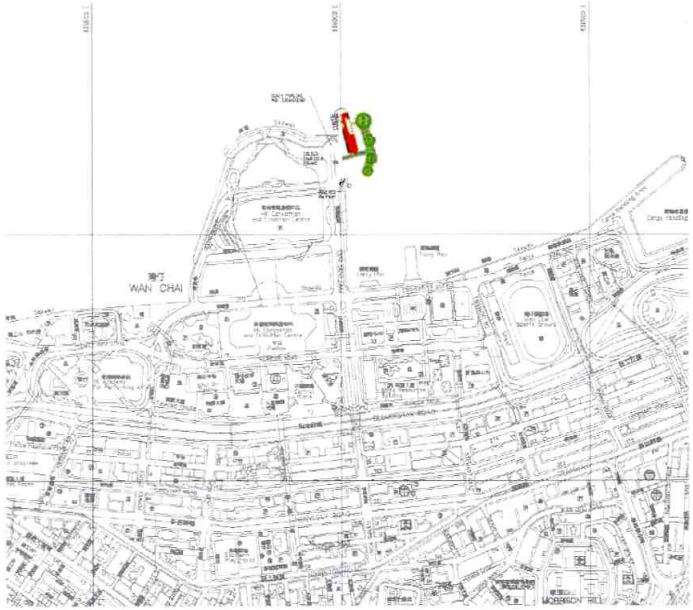
附件二

工作組在準備這份文件時，清楚知道任何有關填海的建議都極度敏感，我們衷心希望大家能全面地、整體地去了解這項建議背後的各項考慮因素，亦知悉有關建議已充份兼顧並且致力平衡社區的期望。

但單靠得到社區的接納並不足夠，任何建議亦必須通過《保護海港條例》的嚴格標準。

在準備這份文件前，我們曾向來自英國倫敦的法律顧問Mr. Michael Thomas, Q.C.徵詢法律意見，他協助我們明白了該條例的法定責任，我們相信有關的法律意見為我們所提交的建議提供了充足的法律依據。有關的法律意見詳列於附件二。

Hong Kong Regional Heliport
Working Group



Noise Impact Assessment for Hong Kong Regional Heliport at the Convention and Exhibition Centre

June 2005

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1. BASIC INFORMATION

1.1 Introduction

In March 2005 Mott Connell Ltd was commissioned by the Hong Kong Regional Heliport Working Group[1] (HKRHWG) to assess the implication of helicopter noise on nearby residential developments for forming of a heliport adjacent to the existing Wanchai Ferry Pier.

To cope with the increasing demands of domestic and cross-border helicopter services, a Hong Kong Regional Heliport adjacent to Golden Bauhinia Square has been proposed by the HKRHWG for shared use by commercial operators and the Government Flying Service. The heliport is planned as an integral part of a public waterfront amenity area in the Central Business District to service business, tourism and community needs. The proposals being considered respond to the needs and are currently being considered in terms of feasibility and practicality.

1.2 Background

The helicopter industry and the government have shared helipads for over 40 years in the Central Business District (CBD). The Central Heliport has now been closed since 2003 with no replacement of heliport in the CBD. At present, the only helipad near the CBD is located at the Macau Ferry Terminal at the Shun Tak Centre operating twin-engine helicopters for cross-border services. This elevated helipad is restricted to twin-engine helicopter operations by Hong Kong Civil Aviation Department (CAD) regulation whereas single-engine helicopters may only operate from ground level helipads.

It is understood that over 80% of helicopters worldwide are single-engine helicopters. Merits of worldwide use of single-engine helicopters are because they are fast, capable, safe and economical to operate. Single-engine helicopters are usually smaller in size and thus generate less noise than twin-engine helicopters.

With the two sites for the north shore of Hong Kong Island proposed by the government, the HKRHWG believes that the ground level site adjacent to Golden Bauhinia Square is the most suitable for shared use with the Government Flying Service. Firstly, the site will be located at a maximum distance from the foreshore, thus restricting helicopter flights to a less noise sensitive area over the water. Secondly, the site will provide a more effective use of scarce waterfront. Thirdly, the contour of the shoreline will allow the future heliport to be optimally integrated into an active harbour front.

[1] The Hong Kong Regional Heliport Working Group (香港區域直升機場工作組) represents the helicopter industry in Hong Kong. Its goal is to work with government and interested parties for the establishment of a permanent heliport in the Central Business District as an industry serving business, tourism and community needs within the Pearl River Delta.

1.3 Site Location

The proposed site for the regional heliport is located adjacent to the existing Wanchai Ferry Pier at Golden Bauhinia Square next to the Convention and Exhibition Centre. Location of the proposed site is well away from residential buildings.

1.4 Scope of Assessment

The noise impact assessment is to evaluate the noise impacts arising from the operation of the proposed heliport to surroundings and follows the relevant guidelines and criteria including those set out in Annexes 5 and 13 of the Technical Memorandum on Environmental Impact Assessment Process (EIA-TM). A comparison of environmental noise is included in **Appendix A** which demonstrates the typical level of helicopter noise compared to other environmental noise.

The data from noise monitoring which was carried out for other heliport studies is used to determine the "worst case" mode of operation (as required by EPD). Similar assessment methodology approved by EPD for previous projects is adopted to examine the potential noise impacts from helicopters. Mitigation measures, if required, are proposed to ensure the noise levels are acceptable.

1.5 Scale of the Proposed Heliport

The proposed heliport will include four landing/take-off (LTO) pads. Specifications are outlined as follows:

Concept Plan

Details of Helipad Size : 1 – 28.5m landing/take-off pad, Super Puma capable
1 – 21.45m landing/take-off pad, EC 155 capable
2 – 19.5m landing/take-off pads, AS 350 capable
Refuelling : 30,000 litres

Terminal Building : 1,100m^2 x 2 + roof

The existing Wanchai Ferry Pier will be transformed into a multi-use terminal allowing for possible educational amenities, restaurants, coffee shops, aviation themed gift shops, helicopter/seaplane museum, viewing lounge, etc.

2. DEVELOPMENT OPTIONS

2.1 Conceptual Layout Plan

A concept plan for the regional heliport has been proposed by the HKRHWG for shared use with the Government Flying Service. Advantages of shared use and the selected site location include the best use of resources, the maximisation of connectivity by locating in Central Business District and minimisation of noise impact by locating well out in the harbour.

The heliport facility proposed in the concept plan will include four LTO pads. The largest landing pad will be reserved for use by the Government Flying Service and other pads for use by either the Government Flying Service or the commercial helicopter operators.

It is proposed the types of helicopters to be operated could range from the Eurocopter AS 332 L2 Super Pumas by the Government Flying Service to the Aerospatiale AS 350 Ecureuil used by the commercial helicopter operators.

For this assessment the flight path is assumed to be parallel to the shore in an easterly direction with departures over the harbour taking off in a north/northeasterly direction. This assumption would need to be confirmed with CAD. It is also assumed that when a helicopter is landing or taking off from the LTO pad, the adjacent pads are restricted to flyover or idling modes only. This has been assumed for normal safe operations.

2.2 Landing Pad Formation

Three options for the landing/take-off pad formation were examined in a landing pad formation assessment report. These are:

- Reclamation option as shown to MCL during the meeting on 23rd February 2005
- Piled deck option
- Floating pontoon

All of the above are assessed in the report to determine their feasibility, noting the constraints imposed by the Harbour Protection Bill, access for medical rescue services etc. Broad order of costs of the three options identified above will be provided along with the engineering appraisals in the Technical Note on Engineering Issues.

2.3 Construction Programme

The provision of the regional heliport adjacent to Golden Bauhinia Square is proposed by the Hong Kong Regional Heliport Working Group. The helicopter operations are anticipated to commence in 2008.

3. MAJOR ELEMENTS OF THE SURROUNDING ENVIRONMENT

3.1 Existing Environment

The site of the proposed heliport to be formed will be located adjacent to the existing Wanchai Ferry Pier at Golden Bauhinia Square next to the Convention and Exhibition Centre at Wan Chai. The major noise source is the traffic noise from adjacent roads named Expo Drive East, Convention Avenue, Fleming and Harbour Road etc.

3.2 Noise Sensitive Receivers

Within 300m of the project limit there are no Noise Sensitive Receivers (NSRs). Representative NSRs surrounding the proposed heliport beyond 300m limit have been identified according to the criteria set out in the EIA-TM and Noise Control Ordinance (NCO), through site inspections and review of land use plans.

At this site the shortest horizontal distances to the proposed heliport have been identified and are summarised in **Table 3.1** below. Locations of the NSRs are shown in **Figure 1**.

Table 3.1 Locations of Noise Sensitive Receivers

SRs	Receiver Description	Usage	No. of Storey(s)	Shortest Horizontal Distance to the Proposed Heliport
NSR 1	Causeway Centre	Residential	39	391m
NSR 2	Kam Kwok Building	Residential	17	624m

4. POTENTIAL NOISE IMPACTS

4.1 Introduction

This section outlines the potential noise impacts arising from provision of the proposed helicopter LTO and refuelling adjacent to Golden Bauhinia Square. A noise impact assessment has been undertaken based on the conceptual heliport layout plan to define the nature and scale of potential environmental impacts, specifically in terms of the effects in the vicinity of sensitive receivers. Potential noise impacts arising from the operation of the proposed regional heliport have been assessed and mitigation measures, if necessary, have been identified to determine whether residual impacts can be reduced to acceptable levels.

4.2 Potential Sources of Impact

The noise levels generated by helicopters vary in different operating modes including take-off, approach, flyover and idling. A majority type of helicopters would be expected to be used including Eurocopter AS 332 L2 Super Pumas, EC 155 (used by the Government Flying Service) and Aerospatiale AS 350 Ecureuil and Sikorsky S-76 by the commercial helicopter operators.

4.3 Prediction of Potential Impacts

According to Table 1A in Annex 5 of EIA-TM, the noise criteria for evaluating helicopter noise are in terms of Lmax in dB(A) between 0700 and 1900, and the criteria for different uses are listed in **Table 4.1** below.

Table 4.1 Noise Standards for Helicopter Noise

Uses	Helicopter Noise Standards Lmax in dB(A), 0700 to 1900
All domestic premises including temporary housing accommodation	85
Hotels and hostels	85
Offices	90
Education institutions including kindergartens, nurseries and all others where unaided voice communication is required	85
Places of public worship and courts of law	85
Hospitals, clinics, convalescences and homes for the aged, diagnostic rooms, wards	85

Notes:
The above standards apply to uses which rely on opened windows for ventilation.
The above standards should be viewed as the maximum permissible noise levels assessed at 1m from the external façade.

The noise impact from helicopters can be evaluated as a point source, since the proposed heliport and the helicopter flight path are far from noise sensitive receivers. It is considered that when a helicopter is landing or taking off from the LTO pad, the adjacent pads are restricted to flyover or idling modes only due to safety reasons.

For the take-off, approach and idling modes, the noise source point is assumed at the centre of the heliport and 6m above the helipad surface. This is because the noisiest components of helicopter are the rotor / engine which are at the top of the helicopter at about 3.5m above ground plus 1.5m hovering height. In accordance with information provided previously by Civil Aviation Department (CAD), the slope of the take-off climb is about 8%. This implies the climb up/drop down height for take-off/approach to/from a higher point is about 1m. Therefore, the noise source at 6m (3.5m + 1.5m + 1m) above ground at the pad centre has been assumed in this assessment. Taking a conservative approach, the assessment points at receivers are assumed to be the same level as that of the source point (for take-off, approach and idling modes), i.e. the shortest distance between assessment point and noise source equals to the horizontal distance regardless of the height difference.

For the flyover mode, the nearest point to the identified NSRs along the flight path is considered as the noise source point. This noise source point is also assumed at the centre point of the heliport and 152m (500ft) above ground as well as the assessment points at receivers.

For the assessment purpose, the noise levels for AS 332 (in EPNdB) in different operating modes were measured in accordance with the norms of International Civil Aviation Organisation (ICAO) and released through the Government Flying Service. The noise levels for S-76 and AS 350 (in L_{max} dB(A)) were from previous projects. These noise data are tabulated in **Table 4.2** below.

Table 4.2 Noise Data for Helicopters in Different Operating Modes

		Noise Data in dB(A)
AS 332[1]	***Take-off***	94.6
	Approach	96.1
	Flyover	93.5
S-76[2]	***Take-off***	89.6
	Approach	91.2
	Flyover	78.6
	Idling	87.2
AS 350[2]	***Take-off***	91.4
	Approach	86.5
	Flyover	83.7
	Idling	72.9

Notes:

1 Noise data of AS 332 (in EPNdB) were measured in accordance with the norms of International Civil Aviation Organisation (ICAO) Annex 16 of Chapter 8 and released through the Government Flying Service.

2 Noise data of S-76 and AS 350 (in Lmax dB(A) normalised at 120m) were adopted from previous heliport projects.

In practice, the noise levels in EPNdB can be converted to Lmax by deducting 13, i.e. Lmax = EPNdB - 13. Based on this approximate relationship,

the noise levels of AS 332 in EPNdB are converted to Lmax in dB(A). The Lmax and the respective reference distance are summarised in **Table 4.3** below.

Table 4.3 Lmax for SA332 in Different Operating Modes

		Reference Distance* in m	Lmax in dB(A)
AS 332	***Take-off***	156	81.6
	Approach	120	83.1
	Flyover	150	80.5

Note:
* The reference distances are based on the measurement procedures stated in ICAO Annex 16, Chapter 8.

The helicopter noise impact assessment is based on standard acoustic principles. The Lmax (in dB(A)) at NSRs is predicted from the noise data shown in **Tables 4.2** and **4.3** by applying the distance correction and façade correction. The following equation is adopted in the assessment.

(1) Lmax[at NSR] = Lmax[reference] – 20 log (D[NSR-source] /D[reference])+ 3

where

- Lmax[at NSR] = Lmax in "dB(A)" predicted at NSR
- Lmax[reference] = Lmax reference in "dB(A)" provided by manufacturer or by noise measurements
- D[NSR-source] = the shortest slant distance in "m" between NSR and the noise source
- D[reference] = the reference distance between the measurement location and the noise source in "m" for the Lmax[reference]
- + 3 is the façade correction

In accordance with the above equation (1), the Lmax at the representative NSRs is predicted and summarised in **Tables 4.4**.

Table 4.4 Predicted Noise Levels in Lmax at NSRs for Concept Plan

	Predicted Lmax at NSRs in dB(A)						
	Pad 1 -AS 332			Pad 2 - S-76 (or EC 155)			
NSR ID	***Take-off***	***Approach***	***Flyover***	***Take-off***	***Approach***	***Flyover***	***Idling***
NSR1	74	74	73	81	82	69	78
NSR2	71	71	70	78	79	66	75

Predicted Lmax at NSRs in dB(A)

	Pad 3 - AS 350				Pad 4 - AS 350			
NSR ID	***Take-off***	***Approach***	***Flyover***	***Idling***	***Take-off***	***Approach***	***Flyover***	***Idling***
NSR1	83	78	75	65	84	79	76	65
NSR2	80	75	72	61	80	75	72	61

4.4 Evaluation of Impacts

The predictions show that the helicopter noise levels from each individual pad in different operating modes are in compliance with the noise criterion of 85dB(A) as stated in EIA-TM. When more than one helicopter operates from the heliport at any given time, cumulative noise impacts will be encountered. In order to assess the cumulative impacts, a matrix has been established to evaluate various combinations.

Four operating modes are divided into two groups: 1. take-off or approach, 2. flyover or idling; where the highest noise level among that group is adopted in the matrix assessment to evaluate the worst case scenario and allow flexibility. For example, AS 350 generates a higher noise level during take-off than approach, so take-off is selected as the representative in Group 1 for AS 350. Similarly, noise level of flyover is assumed for AS 350 Group 2 operating since it is noisier than idling mode. The matrix results for the concept plan are discussed below.

Concept Plan

There are four LTO pads shown in the concept plan; Pad-1 is AS 332 capable, Pad-2 is S-76 (or EC 155) capable and Pad-3 & Pad-4 are AS 350 capable. If all LTO pads are in use for the noisiest operating modes at the same time (i.e. Pad-1, Pad-3 & Pad-4 for take-off, Pad-2 for approach), the cumulative impacts would exceed the noise criterion of 85dB(A). In reality, however, this would not happen as helicopters cannot land or take-off from adjacent pads at the same time due to safety reasons. It is thus assumed that while a helicopter is landing or taking off (Group 1) from a pad, the adjacent pads are restricted to flyover or idling (Group 2). Based on this principle, the following matrix is developed.

	Operating Mode				Predicted Lmax, dB(A)	
Options	***Pad-1***	***Pad-2***	***Pad-3***	***Pad-4***	***SR1***	***SR2***
1	Group 1 (T)	Group 2 (I)	Group 1 (T)	Group 2 (F)	85	82
2	Group 2 (F)	Group 1 (A)	Group 2 (F)	Group 1 (T)	87	83
3	Group 1 (T)	Group 2 (I)	Group 2 (F)	Group 1 (T)	86	82
4	Group 1 (T)	Group 2 (I)	Group 2 (F)	Group 2 (F)	82	79
5	Group 2 (F)	Group 1 (A)	Group 2 (F)	Group 2 (F)	84	81
6	Group 2 (F)	Group 2 (I)	Group 1 (T)	Group 2 (F)	85	82
7	Group 2 (F)	Group 2 (I)	Group 2 (F)	Group 1 (T)	86	82

Notes:
Shaded figure denotes noise exceedance, i.e. exceed Lmax of 85dB(A) as stipulated in EIA-TM.

Group 1 includes "take-off" and "approach" modes
Group 2 includes "flyover" and "idling" modes
(T) means "take-off"
(A) means "approach"
(F) means "flyover"
(I) means "idling"

Noise exceedances are predicted in Options 2, 3 and 7 where Pad-4 is used for AS 350 take-off. To attenuate the cumulative noise levels to an acceptable level (below noise criterion of 85dB(A)) even when Pad-4 is used for take-off, further options are considered and tabulated below.

	Operating Mode				Predicted Lmax, dB(A)	
Options	***Pad-1***	***Pad-2***	***Pad-3***	***Pad-4***	***SR1***	***SR2***
8	Group 2 (F)	Group 2 (I)	Group 2 (I)*	Group 1 (T)	85	82
9	Group 2 (F)	Group 2 (F)*	Group 2 (F)	Group 1 (T)	85	81
10	-----	Group 2 (I)	Group 2 (F)	Group 1 (T)	85	82

Notes:
Group 1 includes "take-off" and "approach" modes
Group 2 includes "flyover" and "idling" modes
* quieter modes in Group 2 are assumed in the assessment, i.e. flyover for S-76 and idling for AS 350
(T) means "take-off"
(A) means "approach"
(F) means "flyover"
(I) means "idling"
----- means not in use

It should be noted that normally not all four LTO pads would be in use at the same time. The above results only demonstrate the worst case scenario and show that there are many feasible options for operating the proposed heliport.

4.5 Mitigation Measures

From the noise impact assessment, noise exceedances are not anticipated in the conceptual plan given good management of helicopter operations. Many feasible options are available for heliport operations at the proposed location without causing unacceptable noise impacts. In view of this, any noise mitigation measures provided will exceed requirements and further improve the local ambience.

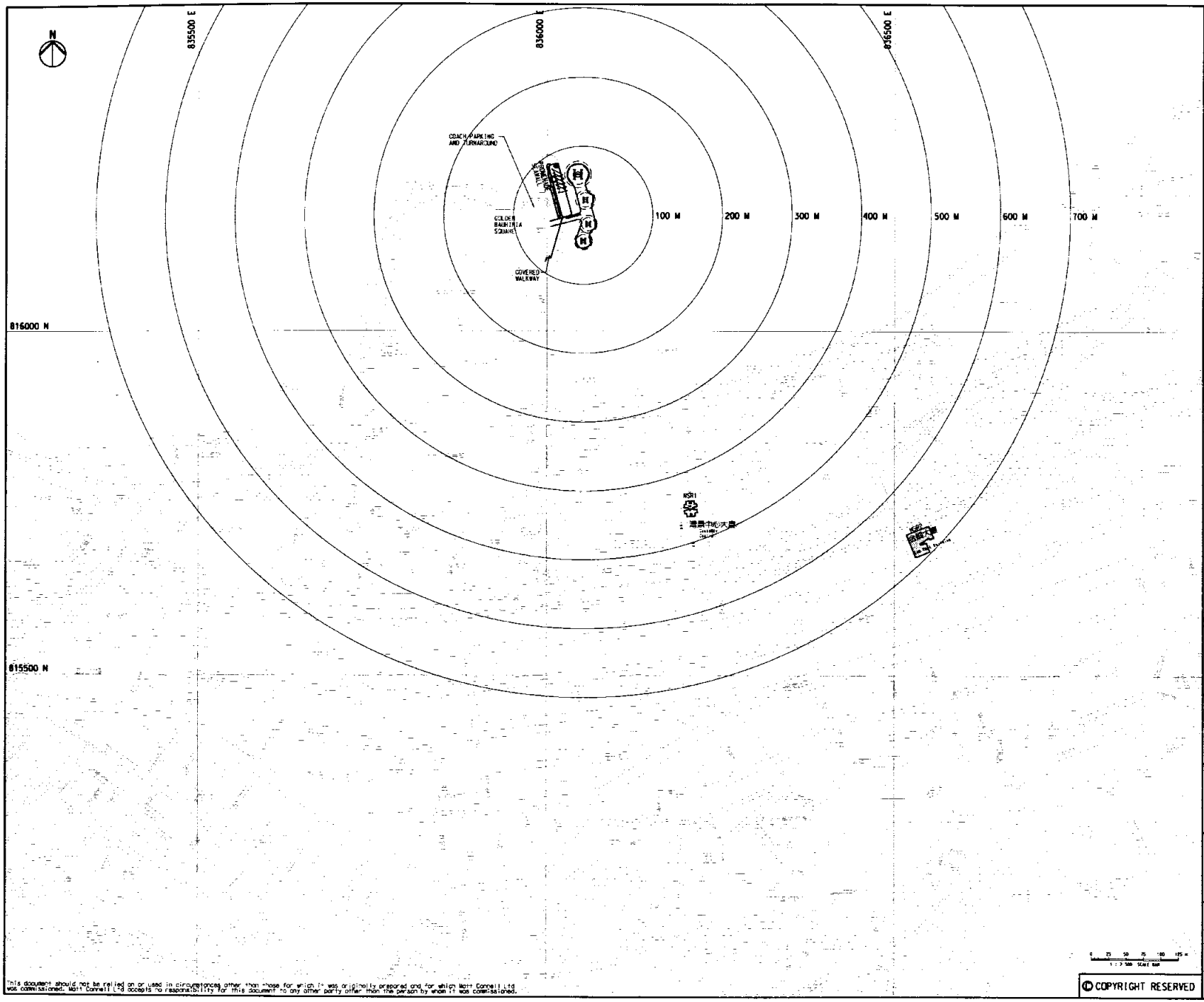
5. CONCULSIONS

5.1 Noise

During the operation of the proposed regional heliport, helicopter noise impact is anticipated to be acceptable as the proposed heliport is sufficiently distant from the nearby NSRs. The predicted noise levels at all NSRs from each LTO pad comply with the noise criterion without additional mitigation measures. There are also many feasible operating scenarios allowing the simultaneous utilisation of the various LTO pads.

This assessment has focused on the technical requirements of a Noise Assessment. It has defined and identified noise sensitive receivers and suggested benefits in terms of overall noise reduction.

While the users of the waterfront, and passers-by are not classed technically as "Noise Sensitive Receivers", it must be remembered that the intention is that the proposed heliport will be both a vital transportation link as well as an attractive waterfront amenity. A working harbourfront will, by design, encompass areas of activity, quiet zones and some mixed areas. In order to assess the compatibility of a regional heliport in the context of a waterfront amenity, an assessment has been conducted to determine the potential impacts of the helicopter operations on the users of the waterfront at two locations; 1. Golden Bauhinia Square, about 30 metres away from the terminal building of the proposed heliport, and 2. the existing ferry pier about 200 metres south of the heliport. The calculations indicate compliance with the noise standards assuming a barrier alongside the walkway is established. To illustrate the exposure to helicopter noise, a noise contour plot for Option 1 (Pad-1 & Pad-3 for take-off, while Pad-2 for idling and Pad-4 for flyover) is shown in **Figure 2**. This simplified noise contour plot presents the worst case scenario without considering the screening effect from building structures or noise barriers. In general, buildings or noise barriers can attenuate the helicopter noise by 5dB(A) up to 20dB(A). It should be noted that in addition all efforts will be made to reduce noise levels through the application of surfacing materials on the helipad, the use of "fly friendly" approaches and takeoffs, the inclusion of an effective and functional noise barrier with aesthetically pleasing qualities, and all other technically feasible measures.



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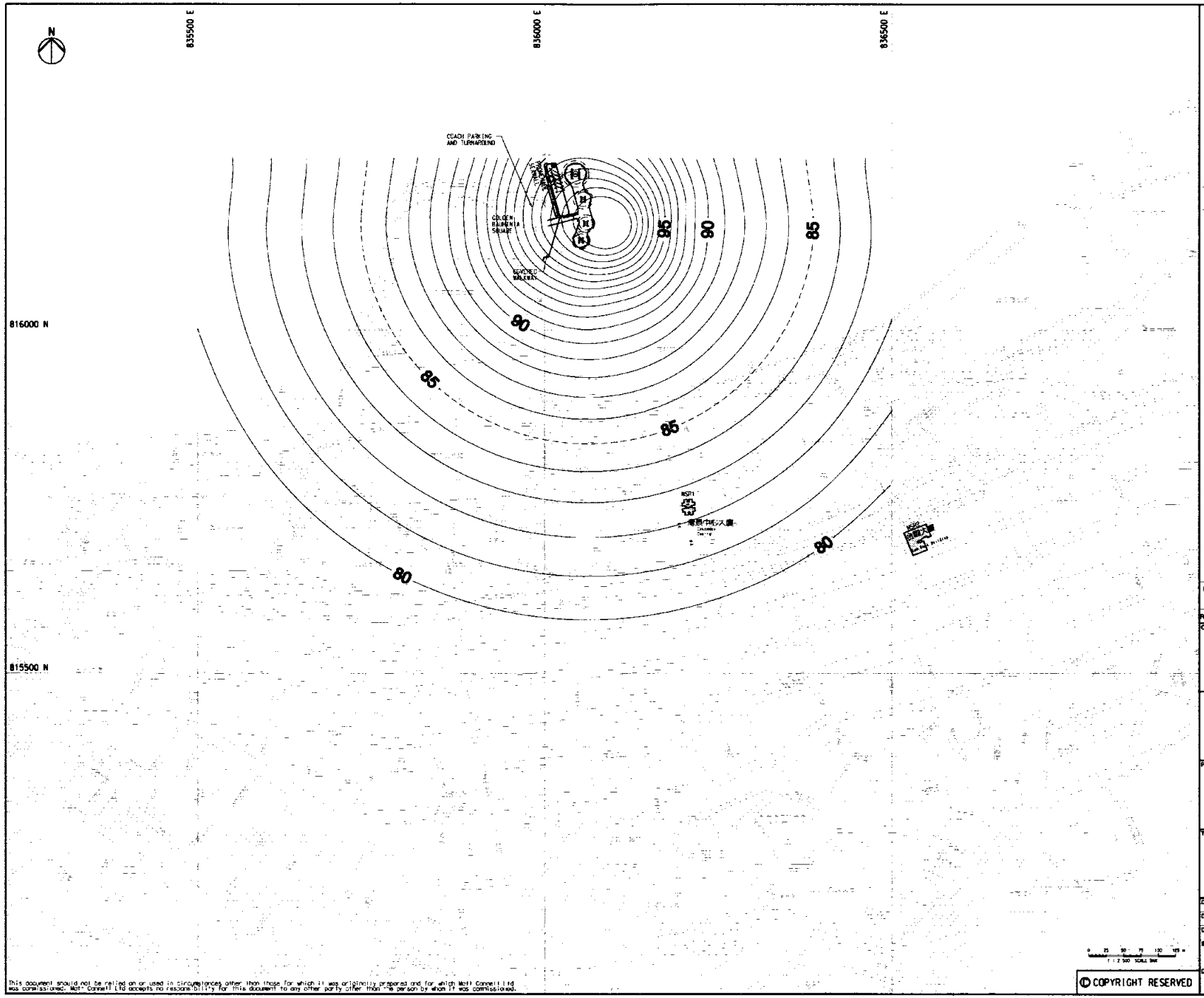
APPENDIX 1 附件一



NOTES:

1. PREDICTED NOISE LEVELS ARE UNDER FREEFIELD CONDITION.
2. THE NOISE CONTOURS PRESENT THE NOISE LEVELS AT THE SAME LEVEL AS THAT OF THE SOURCE POINT (FOR TAKE-OFF, APPROACH AND IDLING MODES), i.e. ABOUT 6 mPD.
3. SCREENING EFFECT/CORRECTION FROM BUILDING STRUCTURES OR NOISE BARRIERS IS NOT TAKEN INTO ACCOUNT.
4. PLEASE REFER TO THE NOISE ASSESSMENT REPORT FOR THE DETAILED RESULTS.

LEGEND:

REPRESENTATIVE NOISE SENSITIVE RECEIVER

NSR1 CAUSEWAY CENTRE

NSR2 KAM KWOK BUILDING

90 PREDICTED HELICOPTER NOISE LEVEL CONTOUR Lmax, dB(A)

85 CONTOUR OF Lmax 85dB(A), NOISE STANDARD FOR HELICOPTER NOISE

Rev	Date	Drawn	Description	Ch'k'd	App'd
P1	JUN 05	KL	FOR FINAL NOISE ASSESSMENT REPORT		

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Project

HONG KONG REGIONAL HELIPORT AT THE CONVENTION AND EXHIBITION CENTRE

Title

NOISE CONTOUR PLOT FOR OPTION 1

Designed | Eng.Chk.
Drawn KL | Approved
Dwg.Chk.
Scale 1:2500@A1 | Project 219873 | Status
CAD File J:\219873\drawing\FIG-3.dgn
Drawing No. FIGURE 2 | Rev P1

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APPENDIX A COMPARISON OF ENVIRONMENTAL NOISE

Environmental noise includes transportation noise, construction noise, industrial / commercial noise and noise from domestic premises or public places etc. In Hong Kong, noise problems mainly arise from road traffic, train services, aircraft and construction sites. Typical noise levels for various types of environmental noise are shown as follow.

SPL dB(A)*	*Environmental Noise Source*
120	• Aircraft landing / taking off • Ship's engine room
110	• Percussive piling at 10m
100	• Loud music in disco • Noise from textile mills
90	• **Helicopter taking off / approach at 120m** • Jack hammer / breaker used in construction site at 10m
80	• Diesel freight train running at high speed at 25m
70	• Average road traffic at 25m from busy primary distributor road
60	• Conversation in quiet living room
50	• Activities in business office
0	• Threshold of human hearing

Note: * SPL denotes Sound Pressure Level in dB(A).

Legal Opinion secured from Mr. Michael Thomas, Q.C. on the placing of a commercial heliport adjacent to the Golden Bauhinia Square as proposed by the Hong Kong Regional Heliport Working Group, taking into account the provisions of the Protection of the Harbour Ordinance.

OPINION re PROPOSED HELIPORT

1. It is clear that if and insofar as the proposed commercial heliport will require land to be reclaimed from the sea-bed or foreshore of the harbour, reclamation works to form that land can only lawfully be approved by public officers and public bodies if there is a public need for reclamation which overrides the statutory presumption against reclamation. This is broadly the effect of section 3 of the Protection of Harbour Ordinance Cap. 531 as judicially interpreted.

2. The provisions of this Ordinance have recently been considered by the Court of Final Appeal in Town Planning Board v. Society for the Protection of the Harbour [2004] 1 HKLRD 396. The Court took the opportunity to spell out the meaning of the Ordinance by reference to the intention behind the legislation, and the mischief that it was addressing. The Court did this by stating a 'demanding test' that must be met in order to rebut the statutory presumption against further reclamation. There are three main elements.

   Overriding public need. The decision-maker must be shown cogent and convincing materials that demonstrate a public need (in the form of some economic, social and/or environmental communal need) so compelling and present as to prevail over the strong public need for protecting and preserving the heritage of the harbour which is explicitly recognised by the statute. Only in that way can the statutory 'presumption' against reclamation be rebutted.

   No reasonable alternative. It is inherent in that approach that it must be shown that in all the circumstances (including economic, environmental and social implications, and the cost and time involved) there is no reasonable alternative to the reclamation.

   Minimal impairment. It is also inherent in that concept that it must be shown that reclamation is not beyond the minimum of that which is needed so that the harbour is impaired by the reclamation to the least possible extent.

3. The 'position paper' prepared by the Working Group appears to me to demonstrate a sound case for a commercial heliport in Central that would satisfy the demanding test articulated by the Court of Final Appeal to justify harbour reclamation works. The arguments and data put forward demonstrate cogently and convincingly that the proposed heliport would meet the CFA criteria for lawful reclamation. There is a clear and obvious communal need for such a facility in this location for good economic, social and environmental reasons.

4. HKG already asserts the need for a heliport in that location to serve the needs of passengers travelling on official business. Meeting the modern travel needs of public servants is but a small part of meeting the modern travel needs of the community at large, including investors and traders, those whose business takes them to and fro the Pearl River Delta, tourists and other travellers whose time is precious. The public need for a commercial heliport for general usage must be even stronger and more compelling than the need for a helicopter facility for use by public servants only.

5. It is difficult to see how there can be any reasonable alternative to a heliport adjacent to the harbour somewhere in the Central area of Hong Kong to secure optimum access to transport links, to avoid over-flying the congested town centre, and to satisfy safety and noise control standards. The HKG plan suggests the need for an area of only 720 m. The proposed works of reclamation to form land for the construction of a heliport are therefore relatively small in extent (compared with the 2.7 hectares for the harbour park or the waterfront promenade in the CFA case), and would result in no more than a minor extension of the existing reclaimed land presently occupied by the Convention Centre. There would be minimal impairment of the harbour.

6. The proposal for a heliport contemplates that it should either be built upon reclaimed land, or instead built as a platform structure standing upon piling driven in to the sea bed. If it were to be said that the latter design provides a 'reasonable alternative' to the reclamation contemplated by the former design, the additional costs of a piled structure, both in construction and in subsequent maintenance, can properly be prayed in aid to show that piling is not a reasonable alternative to reclamation. The CFA acknowledges that costs are relevant in the consideration of a reasonable alternative.

7. It also seems to me that the latter design (if adopted) would not fall within the scope of the Protection of the Harbour Ordinance and therefore would not be subject to the statutory presumption. The Ordinance precludes 'reclamation' of the harbour in order to protect and preserve the harbour. 'Reclamation' is specifically defined by section 2 to mean 'any works carried out or intended to be carried out for the purpose of forming land from the sea-bed or foreshore.' These words are not apt to include the construction of a platform or pier supported upon the existing sea-bed by piling. In that design, no 'land' has been formed by reclamation works. The only relevant 'land' is the existing sea-bed in its unchanged state. The nature and extent of the harbour remains for all practical purposes the same. The works are not irreversible in the same way as land formed at the expense of the harbour.

8. I have been reminded that in different statutory contexts and for other purposes, 'land' has often been defined to include buildings or structures erected upon land. There are many such instances in the Laws of Hong Kong. But that is not to the point. Cap. 531 is not directed at the use of land, or any use made of the bed of the harbour, but at the formation of land 'from the sea-bed or the foreshore'. It is reclamation that is the mischief. Land formed by reclamation negates the protection and preservation of the harbour. There is nothing in the Ordinance to suggest a presumption against piers and structures mounted over the sea-bed. On the contrary, these have always enabled harbours to be used and enjoyed.

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