立法會財務委員會

建議保留發展局工務科 2 個編外職位，即 1 個首席政府城市規劃師職位(首長級薪級第 3 點)和 1 個政府建築師職位(首長級薪級第 2 點)，由 2017 年 7 月 1 日起生效，至 2022 年 3 月 31 日止，為期 4 年 9 個月，以繼續推展起動九龍東的政策措施

因應 2017 年 3 月 24 及 25 日會議的跟進行動

財務委員會在 2017 年 3 月 24 及 25 日要求提供的補充資料載列如下：

(a) 政府當局為九龍東核心商業區提供社會福利設施的詳情，包括預留作社會福利設施的樓面面積及佔該核心商業區總面積的比率 (梁耀忠議員要求；會議時間:08:59:15)；

就社會福利設施的提供方面，相關部門會參考《香港規劃標準與準則》及諮詢區議會的意見，以確保提供足夠的設施。社福設施的提供規劃標準主要是以服務名額或淨作業樓面面積而非以土地或總樓面面積來計算，故不能將之與九龍東核心商業區的總面積作直接比對。現時在九龍東範圍內設有一所綜合青少年中心及兩所長者鄰舍中心，將來會因應遷入啟德發展區的人口而提供所需的設施。綜合而言，在包括九龍東的觀塘及九龍城區議會範圍內，現有及已規劃的社會福利設施數目詳列如下：

觀塘及九龍城區議會範圍內的社會福利設施

社會福利設施	現有設施數目	已規劃設施數目	總數
幼兒中心	7	-	7
綜合青少年服務中心	19	4	23
長者地區中心	7	1	8
長者鄰舍中心	28	3	31
長者日間護理中心	10	-	10
長者地區中心的長者日間護理單位	1	-	1
安老院舍的長者日間護理單位	1	1	2
安老院舍	19	2	21
綜合家庭服務中心	10	3	13

(b) 整個九龍東海濱用地的規劃藍圖，及確認所有有關的政府部門是否已備悉並同意有關的規劃及回應(如有的話) (姚松炎議員要求；會議時間:09:27:10)；及

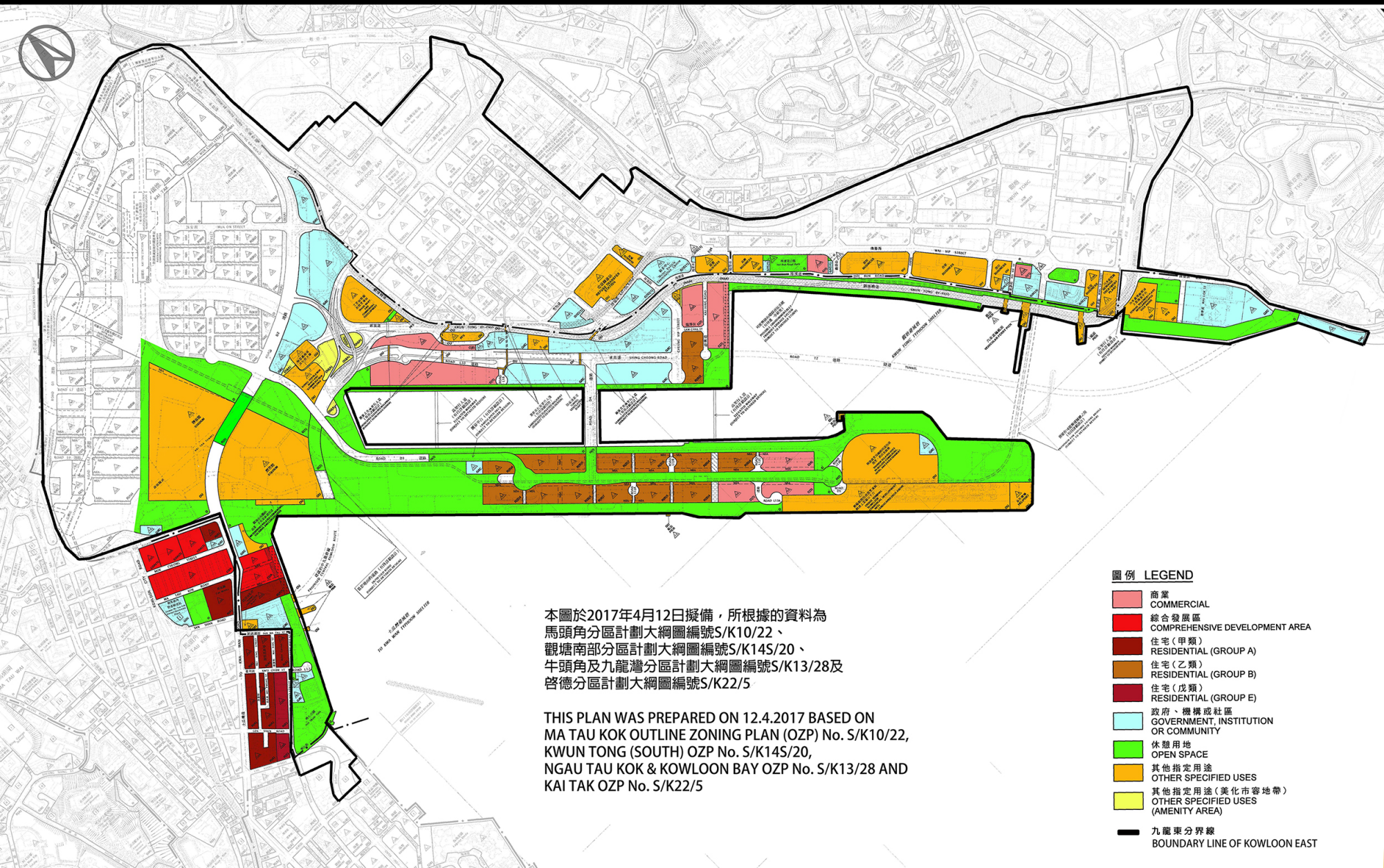
九龍東海濱用地的相關分區計劃大綱圖(即馬頭角、觀塘南部、牛頭角及九龍灣以及啓德分區計劃大綱圖(部分))載於**附件一**。該圖顯示相關的土地用途規劃。規劃署在擬備或修訂分區計劃大綱圖前，都按既定機制徵詢有關政策局及部門的意見，並按《城市規劃條例》的法定規劃程序進行公眾諮詢之後才呈交城市規劃委員會考慮。

(c) 朱凱廸議員於會議席上提交的信件內臚列的問題

就朱凱廸議員的信件內臚列的問題，詳細回應載於**附件二**。

發展局
2017 年 5 月

九龍東海濱用地
Waterfront Sites In Kowloon East



附件二

朱凱廸議員於 2017 年 3 月 25 日提交的信件內的查詢:

(一) 改劃工作

(1) 感謝發展局及專員早前提供之資料，資料顯示九龍東將再有 7 塊商業土地行將售賣，另 18 塊土地改劃為商業用地後售賣。

請問政府，可否結合目前於城規會作公開諮詢的啟德大綱圖之改劃，說明「起動九龍東」三區不同用途的土地的增減?包括:

- **相對 2012 年，住宅用地增加或減少了幾多幅，每幅面積如何?**

用地數目	地點	用地面積 (平方米) (約)[(1)]
增加的用地		
1	啟德第 3E 區 1 號	7 100
2	啟德第 3E 區 2 號	7 700
3	啟德第 4A 區 2 號	18 300
4	啟德第 4C 區 1 號	9 500
5	啟德第 4C 區 2 號	9 800
6	啟德第 4C 區 3 號	11 000
7	啟德第 4E 區 1 號	5 700
8	啟德第 4E 區 2 號	11 000
減少的用地		
1	啟德第 4B 區 5 號	13 900

備註： 1. 用地面積以測量為準。

2. 每幅用地的地積比率有所不同，詳情請參閱分區計劃大綱圖的註釋。

- **住宅用地增加密度的土地有幾多幅，每幅增加樓面面積如何?**

用地數目	地點	新增樓面面積 (平方米) (約)
1	啟德第 1E 區 1 號	20 520
2	啟德第 1F 區 1 號	18 630
3	啟德第 1G 區 1B 號	5 760

用地數目	地點	新增樓面面積 (平方米) (約)
4	啟德第 1I 區 1 號	8 800
5	啟德第 1I 區 2 號	9 300
6	啟德第 1I 區 3 號	10 100
7	啟德第 1K 區 1 號	9 700
8	啟德第 1K 區 2 號	9 700
9	啟德第 1K 區 3 號	10 170
10	啟德第 1L 區 1 號	6 570
11	啟德第 1L 區 2 號	8 550
12	啟德第 1L 區 3 號	6 160
13	啟德第 2B 區 1 號	24 840
14	啟德第 2B 區 2 號	19 200
15	啟德第 2B 區 3 號	17 920
16	啟德第 2B 區 4 號	18 240
17	啟德第 2B 區 5 號	18 240
18	啟德第 2B 區 6 號	39 380
19	啟德第 4A 區 1 號	59 540
20	啟德第 4B 區 1 號	38 400
21	啟德第 4B 區 2 號	28 210
22	啟德第 4B 區 3 號	24 250
23	啟德第 4B 區 4 號	24 250
	總計：	436 430

- **商業用地(不包括酒店)增加或減少了幾多幅，每幅面積如何?**

用地數目	地點	用地面積 (平方米) (約)[(1)]
增加的用地 - 已改劃		
1	啟德第 1D 區 2 號	8 800
2	啟德第 3A 區 6 號	13 500
3	啟德第 3B 區 1 號	10 300
4	啟德第 3B 區 2 號	9 900
5	啟德第 3B 區 3 號	7 800
6	啟德第 3B 區 4 號	7 400
7	成業街商業用地	6 130

用地數目	地點	用地面積 (平方米) (約)[(1)]
增加的用地 - 待改劃		
8	九龍灣行動區	42 100
9	觀塘行動區	12 150
減少的用地		
1	啟德第 3E 區 1 號	7 100

備註： 1. 用地面積以測量為準。

2. 每幅用地的地積比率有所不同，詳情請參閱分區計劃大綱圖的註釋。

3. 九龍灣及觀塘行動區的規劃及工程研究正在進行，商業用地面積及地積比率有待確定。

- **商業用地增加密度的土地有幾多幅，每幅增加樓面面積如何?**

用地數目	地點	新增樓面面積 (平方米) (約)
1	啟德第 1E 區 2 號	16 990
2	啟德第 2A 區 1 號	31 680
3	啟德第 2A 區 2 號	15 030
4	啟德第 2A 區 3 號	15 680
5	啟德第 2A 區 4 號	14 700
6	啟德第 2A 區 5(B) 號[(1)]	- 10 750
7	啟德第 2A 區 10 號	21 650
	總計：	104 980

備註：1. 2A 區 5(B) 號用地較原有用地縮小，因此總樓面面積有所減少。

- **酒店用地增加或減少了幾多幅，每幅面積如何?**

用地數目	地點	用地面積 (平方米) (約)[(1)]
由住宅用地改劃作商業用地（包括酒店用途）		
1	啟德第 4B 區 5 號	13 900
由酒店用地改劃作商業用地（包括酒店用途）		
1	啟德第 4C 區 4 號	10 700

用地數目	地點	用地面積 (平方米) (約)[(1)]
2	啟德第 4C 區 5 號	9 500
減少的用地		
1	啟德第 4A 區 2 號	12 800 [(2)]
2	啟德第 4C 區 1 號	9 500
3	啟德第 4C 區 2 號	9 800
4	啟德第 4C 區 3 號	11 000

備註： 1. 用地面積以測量為準。

2. 用地面積較改劃後的住宅用地面積少。

3. 每幅用地的地積比率有所不同，詳情請參閱分區計劃大綱圖的註釋。

上述各幅用地的位置圖見**附件三。**

(2) 每塊土地改劃後之賣地日程能否提供?當局有否考慮有部份土地暫不作賣地，就土地用途進行真正活化、多元的公眾諮詢?

2017-18年度賣地計劃包括位於啟德的十幅住宅用地及兩幅商業/酒店用地。詳情載於地政總署的網站 (http://www.landsd.gov.hk/tc/landsale/programme.htm)。至於九龍東其他用地的出售時間表，當有關用地準備妥當可供發展時，便會納入賣地計劃。一如以往，政府會在每年年初公布下一財政年度的賣地計劃。就公眾諮詢方面，《城市規劃條例》下有法定機制就分區計劃大綱圖進行諮詢。總括而言，任何涉及土地用途改劃，均須按《城市規劃條例》展示予公眾查閱，任何人士可就此提出申述，供城市規劃委員會考慮。

(二) 商業土地需要分析

(1) 規劃署近日公開之《檢討甲級寫字樓、商貿及工業用地的需求》，請問整項研究撥款多少? 為甚麼目前公布的版本，只是一個 22 頁的精華版本?能否提供全文予本委員會及公眾參詳?

正如上次發展局整理之資料顯示，目前已確認之新增商業樓面面積，已高達八百多萬平方米，相信連同待研究之項目，未來香港之新增商業樓面面積，將超過一億平方呎。

加上《2030+》正在公眾諮詢，本委員會及公眾在需要了解政府對商業土地需求之全盤理據。上次在會議講的問題 ── 即《2030+》之多個商業土地需求預估折線圖沒有趨勢分析(trend analysis)一事 ── 目前之22頁版本《檢討甲級寫字樓、商貿及工業用地的需求》亦未有清楚解釋，公眾並無法理解為何全港需要一億呎商業樓面。請發展局促請規劃署提供全文，讓本委員會更了解起動九龍東辦事處之工作方向之理據。

《檢討甲級寫字樓、商貿及工業用地的需求》研究(下稱「檢討研究」)的顧問費用約407萬元。檢討研究已經完成，顧問最後報告亦已上載至規劃署及《香港2030+》的網站。該報告涵蓋了顧問工作的大部分重要的資料，包括採用的方法、就不同經濟用途而作出的需求推算及供應預測，以及一套建議的概括空間策略。就回應如何得出需求推算的疑問作補充，我們將顧問提交的工作報告相關部分節錄並載於**附件四**以供參考。

在檢討研究中制訂合適的推算模型有不同考慮，例如是否能夠取得相關數據，以及有關模型是否較容易進行運算、監察及更新。對於長遠預測而言，無論採用那個模型，都無可避免有局限性。更重要的是在預測結果中分析當中的趨勢，供更新全港長遠發展策略之用。

值得注意的是在基本情況下，由計量經濟模型推算至2041年的整體長遠需求預測約為5,727萬平方米總樓面面積，與2015年底的存量比較，相等於每年平均有約0.74%的增長，這樣的升幅相比1985至2015年期間每年平均約1.64%的實際升幅是相對溫和的。

檢討研究只涵蓋五類經濟用途(即商業核心區甲級寫字樓、非商業核心區甲級寫字樓、一般商貿、工業及特殊工業)，而發展局在人事編制小組委員會文件(ESC43/16-17(01)號)所載的已改劃或待改劃的新土地，當中包括零售及酒店等更廣泛的用途。

根據顧問最後報告所述，檢討研究所採用的推算需求模型是計量經濟模型，當中考慮樓面需求與香港和廣東省本地生產總值的實質增長率之間的關係，並就可能積累的潛在需求作出調整。報告闡述所採用的具體模型方式，還包括整體樓面需求(而非個別用途需求)的趨勢分析。顧問工作報告內的相關細節節錄於**附件四**。

(2) 《檢討甲級寫字樓、商貿及工業用地的需求》第 6 頁註 9，請作進一步說明 ── 即清楚說明商業土地需要，與本港 GDP 增長及廣東 GDP 增長之關係。亦請提供顧問之整全資料，協助本委員會了解顧問如何分析兩地 GDP 增長之原因。

根據報告所載，計量經濟模型的主要基礎在於香港和廣東省之間的密切經濟聯繫，而這些聯繫更會從不同產業的支援辦公室空間及支援跨境經濟活動的物流／倉儲空間兩方面影響香港對就業土地的需求。

顧問分析了1991至2013年之間香港本地生產總值的歷史數據，結果顯示香港本地生產總值的實質增長率與已佔用樓面的增長率之間的關連甚為密切。

香港與廣東省的經濟緊密連繫，這一點可從香港在廣東省的實際利用直接投資中反映。截至2016年年底，這類投資的累計總額預計達19,845億港元，佔廣東省總額約64%(相對截至2013年年底的15,577億港元，約佔62%)。此外，對有意走向國際化的內地企業而言，香港是他們拓展業務的主要地點。因此，隨着內地企業在香港設立辦事處，預計會帶動對樓面(特別是辦公室)的需求。

相比全國的整體國內生產總值，我們認為廣東省本地生產總值的變動，是顯示香港就業類土地用途變動的一個較可靠指標。若論內地對香港的影響，廣東省應是最具代表性。另一方面，國家任何一項趨勢應可在廣東省的本地生產總值內反映，但國家生產總值未必會充分體現於對香港有直接影響的本地事宜。倘廣東省的本地生產總值大幅變動，而其他省份維持穩定，則香港經濟極可能受到重大影響，但國家整體生產總值只會略受影響。

(三)　環保運輸系統

(1)　會議文件提及土木工程拓展署會於 2017 年第一季(即現在)完成預備工作，好讓環保運輸系統項目得以開展諮詢。請公開予本委員會。

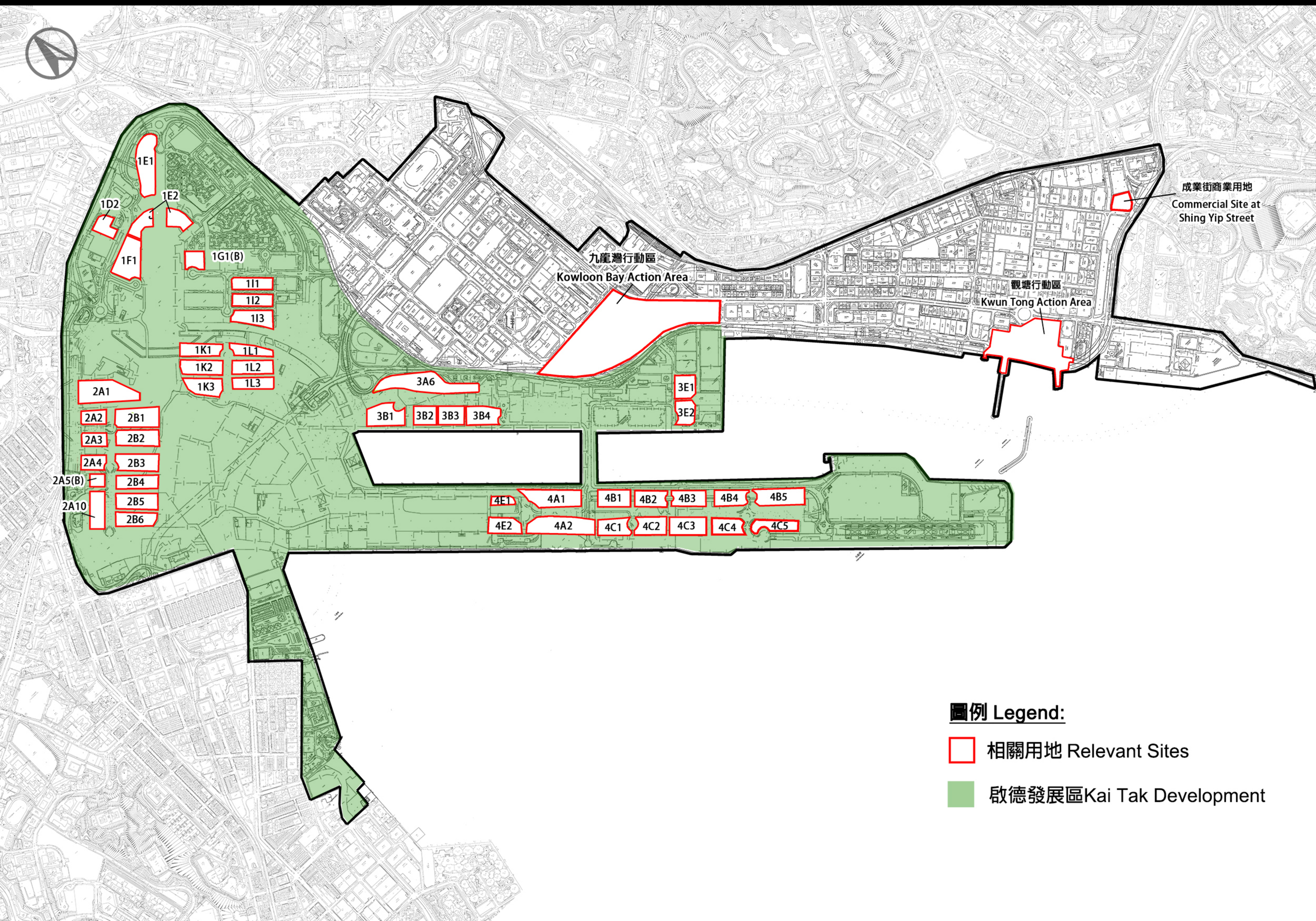
《九龍東環保連接系統詳細可行性研究》的首階段研究工作已完成，土木工程拓展署已於 5 月 2 日就九龍東環保連接系統首階段的詳細可行性研究結果展開為期兩個月的中期公眾諮詢活動。

(2)　正如本人上次來郵查詢時指出，環保運輸系統可行性研究撥款應為約 9200 萬元。為何撥款數年後，至今只使用約 1,700 萬元?是否研究內容有變?請簡介。

《九龍東環保連接系統詳細可行性研究》於 2015 年 10 月展開，預計約於 2017 年年底完成。該可行性研究的總顧問費用預計約 5,000 萬元， 截至 2017 年 3 月的支出約 1,900 萬元。該研究現階段的支出主要是首階段工作的顧問費用，研究的範圍並沒有改變。

九龍東相關用地位置圖
Location Plan of Relevant Sites in Kowloon East

附件3 Appendix 3



圖例 Legend:

- 相關用地 Relevant Sites
- 啟德發展區Kai Tak Development

附件　　就制訂推算模型及採用假設的補充資料 (只有英文)
(節錄自顧問的工作報告)

計量經濟模型的制訂

For econometric models, using R&VD data disaggregated by land use type can lead to biased projections – instead, aggregated data are preferred

Ideally, models to forecast future floorspace demand would make use of long data series on *actual* floorspace usage. In Hong Kong, a long data series on actual floorspace usage is not available. There is, however, a long data series available on 'intended' use of floorspace - available from R&VD. In principle, 'intended' use serves as an indicator of actual use – the stock, minus the vacancy, indicates occupancy for each floorspace type, and this in turn indicates actual floorspace usage. However, in practice, there has been a growing gap in Hong Kong between 'intended' use of industrial floorspace and its actual use – the former has not kept pace with changes in the latter.

Using econometric models estimated from a disaggregated R&VD dataset on 'intended' use for forecasting could lead to significant biases, due to the mismatch between actual and intended uses. For example, since actual office floorspace usage is higher than what the R&VD data would suggest, there would be a downward bias in office floorspace demand forecasts if R&VD data on office floorspace were used directly to make the forecasts.

To mitigate against potential biases, it is proposed that aggregated employment floorspace data be used for estimating econometric models. Aggregated data combines office and industrial uses – this avoids the problem of mismatch between actual and intended uses that arises when data are disaggregated by use.

Using aggregated employment floorspace models implies that assumptions need to be made on the distribution of overall floorspace between different land uses

In order to estimate future floorspace demand disaggregated by land use type, as required in the Review, it is necessary to make assumptions about how overall floorspace would be allocated to different uses in the forecasting typology. A starting point for the assumptions is the existing distribution of different property types as per R&VD data, as well as survey data from Area Assessment studies to understand the types of uses that take place within industrial buildings.

To ensure reliable forecasts from econometric models, the structural break around 1990 in growth of floorspace implies that models should be estimated for the period post-1990

In the 1980s, occupied floorspace experienced substantially higher growth rates than in the 1990s and 2000s. This break in trend (or 'structural break') is illustrated in Figure 4.1 and Figure 4.2.

In technical terms, growth in floorspace is 'non-stationary' when considering the whole time period 1980-2013, but is stationary when considering the period after 1990. As noted in Section A4.2.5.1, if a variable of interest is not stationary it may be difficult to infer stable relationships between it and other explanatory variables. The implication is that, to ensure reliable projections from econometric approaches, it may be preferable to estimate coefficients only for the period after 1990 (i.e. excluding observations pre-1990).

Figure 4.1 Log of occupied floorspace, 1980-2013

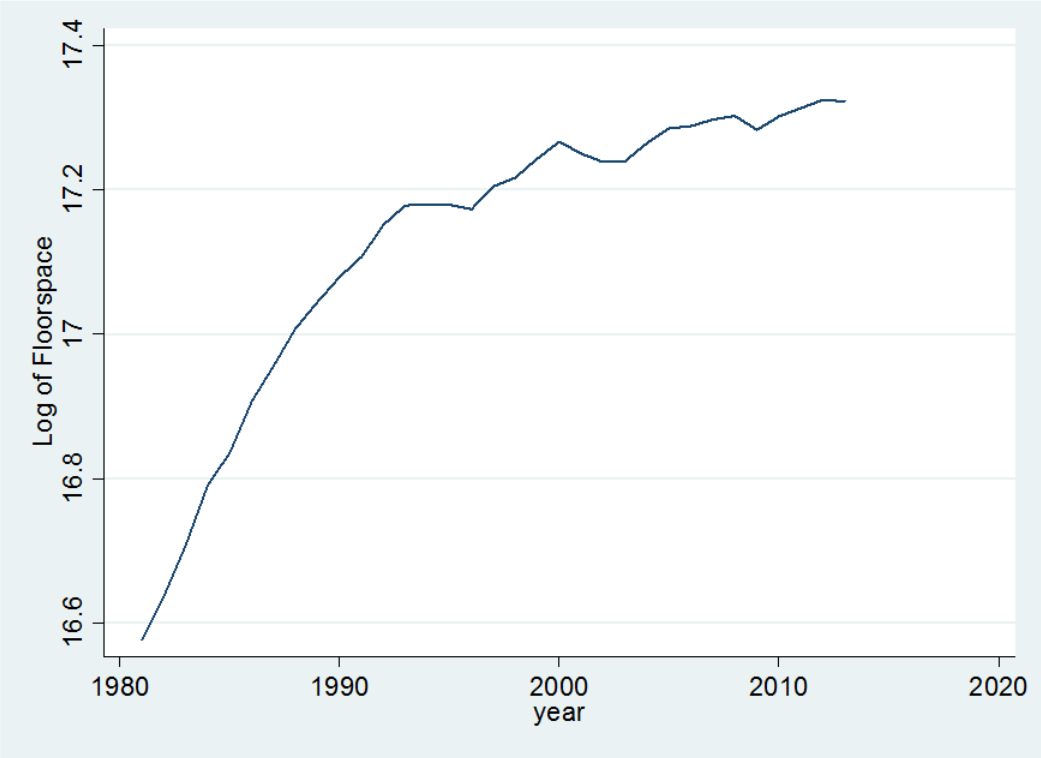
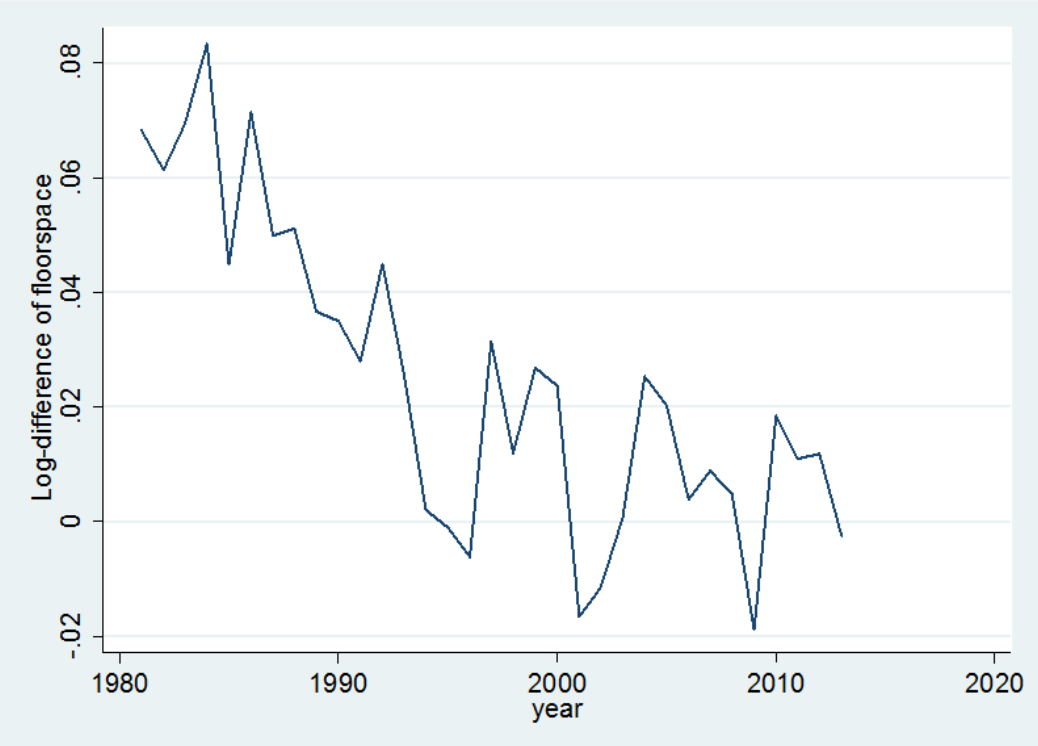


Figure 4.2 Growth rate of occupied floorspace, 1980-2013



For econometric models, Hong Kong's GDP growth is preferable to employment growth for inclusion as an explanatory variable

An inspection of historical data suggests that Hong Kong's real GDP *growth rate* moves closely with the *growth rate* of occupied floorspace. This can be seen in Figure 4.3 - the peaks and troughs of the two series tend to coincide. The fluctuation in Hong Kong's real GDP growth rate is also greater than that of occupied floorspace.

In contrast, the growth rate in Hong Kong's persons engaged showed weaker patterns of co-movement with floorspace demand (see Figure 4.4). The implication is that, to generate reliable forecasts from econometric approaches, it may be more preferable to include GDP growth as an explanatory variable as compared to employment growth.

Figure 4.3 Relationship between % change in floorspace ($\Delta log(FS)$) and % change in Hong Kong's real GDP ($\Delta log(HKGDP)$), 1991-2013

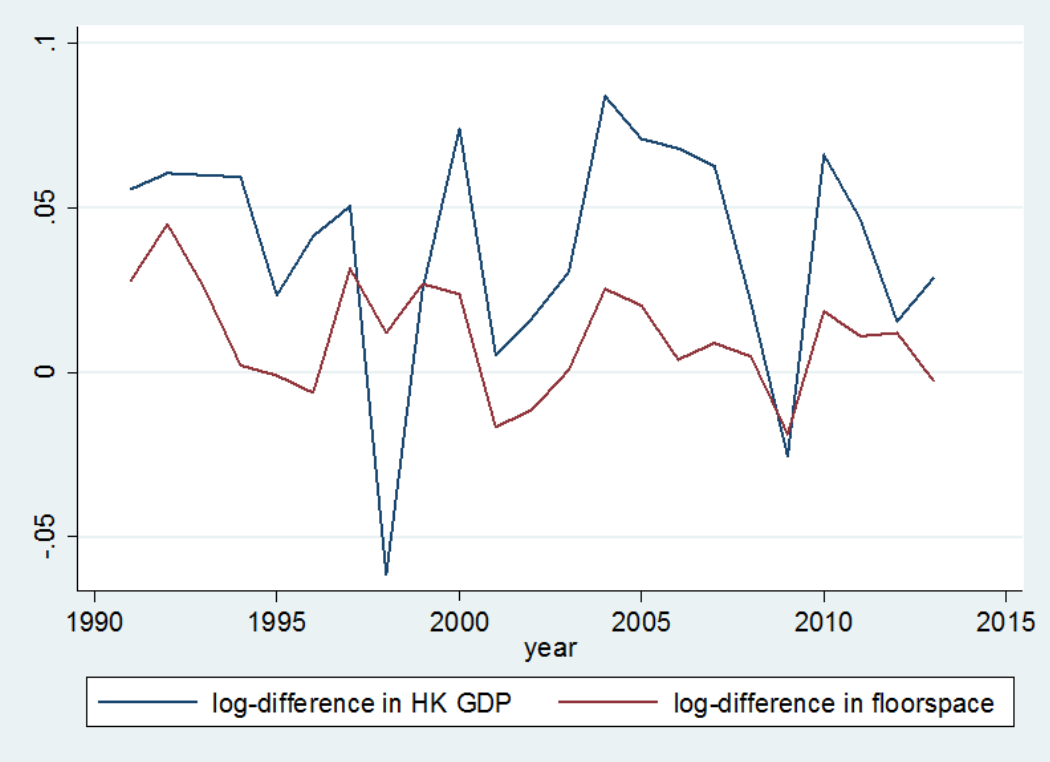
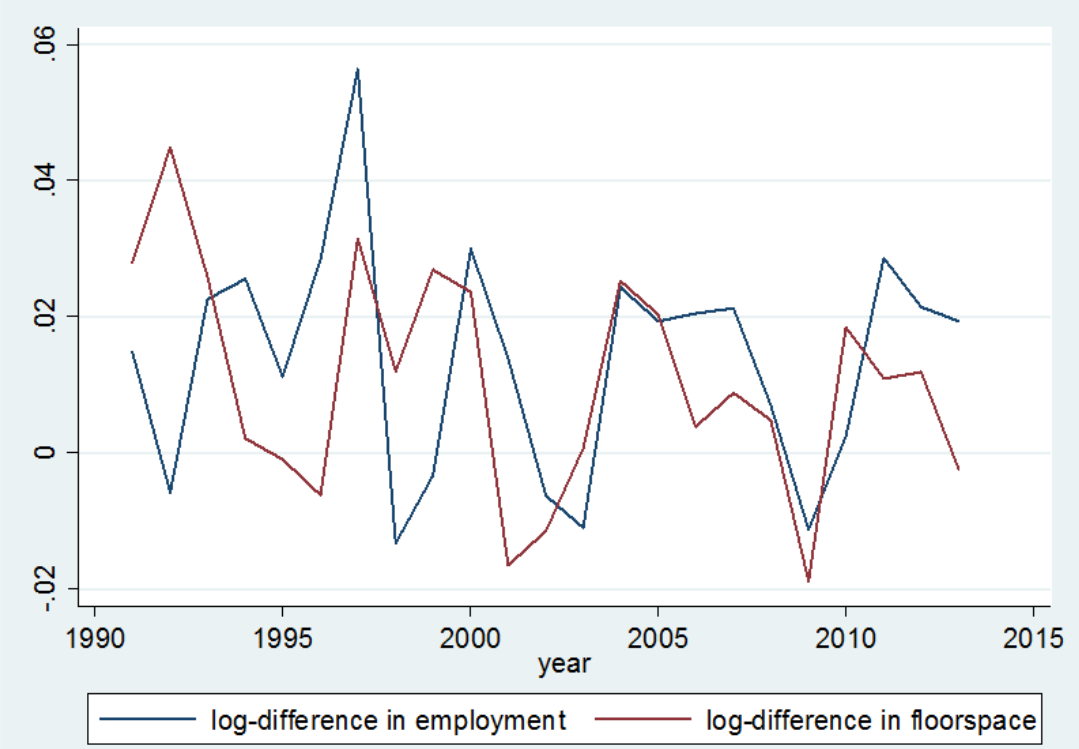


Figure 4.4 Relationship between % change in floorspace ($\Delta log(FS)$) and % change in Hong Kong's employment ($\Delta log(EMPL)$) , 1991-2013



計量經濟模型 – 方程式及輸入假設

- Projection of Hong Kong's real GDP growth rates
- Projection of Guangdong's real GDP growth rate* (which can be used to construct the change in Guangdong's GDP growth rates)

The equation used in this section is shown below:

$$\Delta log(Floorspace)_t = \alpha + \beta_1 \Delta \log(\mathrm{HKGDP})_t + \beta_2 \Delta\Delta \log(\mathrm{GDGDP})_t + \mu_t$$

$$\mu_t = \theta_1 \varepsilon_{t-1} + \varepsilon_t$$

Δlog represents log-difference, which approximates to percentage change (or growth rates). The interpretation of β_1 is that a 1% increase in Hong Kong's real GDP leads to a β_1 % increase in floorspace. $\Delta\Delta$log, or difference of log-difference, approximates to the change in growth rates. The results obtained would then be adjusted for backlog of latent demand.

The model parameters are estimated using data from 1991-2009, with observations in 2009-13 being used for cross-validation. Model predicted values are used, rather than actual observed values – the model outputs are the main interest in the econometric model. The first year for which forecasting results are shown is 2013, which is effectively the 'base year' for the econometric model. The base case input assumptions and data sources are shown in Table 6.2 below.

Table 6.2 Base Case Input Assumptions and Data Sources for Econometric Model

	Base Case	Data Sources / Rationale
Hong Kong Real GDP growth	■ GDP growth of 2.5% for 2014 ■ Government's official forecasts: 1-3% for 2015 (mid-point of 2% taken in base case), 3.5% for 2016-2019 ■ WGLTFP base case assumptions for the remaining years (i.e. real growth rate of 3.5% in 2020-21; 3% in 2022-25; and 2.5% in 2026-41)	■ 2015-16 Budget ■ Medium-term outlook for the Hong Kong Economy (from 2014 Economic Background and 2015 Prospects) ■ Report of the WGLTFP
Guangdong Real GDP growth[175]	■ 2013-23: Gradual change from 8.5% to	■ Contractor's assumptions – Guangdong's growth is expected to slow down as its economy

* Guangdong GDP is adopted because of close economic links between Hong Kong and Guangdong. For example, at the end-2013, the cumulative value of Hong Kong's realised direct investment in Guangdong was estimated at HK$1,557.7 billion (US$200.9 billion), accounting for 61.9% of Guangdong's total. The close economic ties affect Hong Kong's employment land use demand in terms of supporting office space for these industries and logistics and warehousing. The economic links between Hong Kong and China's remaining provinces are less direct. Therefore in terms of the influence of mainland factors Guangdong is considered most representative. Any national trends should be reflected in the Guangdong GDP but the national GDP won't fully reflect local issues that have a direct bearing on the Hong Kong. If there is a major fall in Guangdong's GDP it is likely to have a significant impact on Hong Kong's economy but would only have a marginal effect on China's overall GDP if the remainder of the country remained stable. Therefore, any change in total GDP of China is less likely to be a reliable indicator of changes in employment land use in Hong Kong than the Guangdong GDP. The increase in mainland companies setting up regional headquarters in Hong Kong (thereby demanding Grade-A office space) is more a function of policy changes, such as those related to increase in Renminbi trading and increased international focus, rather than as a direct relationship to China GDP growth.

人口就業模型 – 方程式及輸入假設

- Projection of Hong Kong's labour force
- Assumption on unemployment rates
- Assumption on the percentage of employment requiring employment floorspace covered by the Review
- Assumption on floorspace per worker (or 'worker densities')

The equation used for the DEB model is:

$$\begin{aligned} &Employment\ Floorspace\ Demand \\ &= (Labour\ force) \times (1 - Unemployment\ Rate) \\ &\times (\%\ of\ employment\ taking\ up\ employment\ floorspace) \times (Floorspace\ per\ worker) \\ &+ (Adjustment\ to\ exclude\ floorspace\ in\ Science\ Park\ \&\ Industrial\ Estates) \\ &+ (Adjustment\ to\ reflect\ backlog\ of\ latent\ demand) \end{aligned}$$

The model is initialised by using the actual 2013 data, so this effectively acts as the 'base year' for the DEB model. The base case input assumptions and data sources are shown in Table 6.3 below.

Table 6.3 Base Case Input Assumptions and Data Sources for DEB Model

	Base Case	Data Sources / Rationale
Labour force	■ As per Census and Statistics Department (C&SD) Labour Force Projections	■ C&SD Hong Kong Labour Force Projections (September 2013 issue) ■ The C&SD Projections already take into account (1) higher retirement ages, and (2) increased participation rate of women
Unemploy-ment rate	■ 2013-23: Gradual change from 3.4% to 4.6% ■ 2023-41: 4.6%	■ Assumption made based on the consideration of average unemployment rates over varying time periods: – 5-year average (2010-14): 3.5% – 10-year average (2005-14): 4.1% – 20-year average (1995-2014): 4.6% – Post-2000 average (2001-14): 4.9% ■ The Contractor has taken the 20-year average unemployment rate as the long-term unemployment rate. In the base case, there would be gradual shift towards 4.6% unemployment by 2023.
Percentage of employment requiring employment floorspace	■ 2013-41: Stable at 48.0%	■ The percentage is calculated by working backwards from R&VD employment floorspace, labour force figures (excluding foreign domestic helpers), unemployment rates, and floorspace per worker assumptions. ■ The 48.0% figure is the averaged percentage when considering figures from 2000-2013. ■ The percentage is comparable to that used in HK2030 study WP3 (50.7%), noting that HK2030 study included floorspace in the Industrial Estates & the Hong Kong Science Park, which is excluded in the current Study. ■ However, it was not possible to comment on the methodology adopted in HK2030 WP3 – the percentage assumption was made by dividing Hong Kong's total employment into broad sectors. For each sector, assumptions were then made on the percentage of employment requiring employment floorspace.

	Base Case	Data Sources / Rationale
Floorspace per worker	■ 2013: 20.07 sqm/worker ■ 2014-41: +0.25% p.a.	■ Base year figure calculated by considering the 4-year average floorspace per worker between2010-13. Data sources include: – C&SD annual business survey data provided by the Client (for floorspace data) – C&SD composite employment estimates (for employment data) ■ Floorspace per worker is assumed to increase over time, due to the following trends: – Increased automation – with decreasing labour force it is likely that labour-saving practices are favoured. The combination of additional machinery that the floorspace per worker would go up over time – Planning vision – when reserving employment floorspace the planning vision could be more spacious working spaces – which would translate into higher floorspace per worker – Hong Kong's current floorspace per figure is low when compared internationally. Views from the Contractor's Planning Workshop suggest that the current floorspace per worker is very low, and the scope for further reduction is limited; there may also be 'diminishing returns' to the reduction in floorspace per worker, with limits what is possible.

積累潛在需求的概念

Adjustment to Reflect Backlog of Latent Demand

Backlog of Latent Demand

Latent demand arises when demand for land to support some economic activity is not satisfied, or only partially satisfied. It is difficult to quantify the extent of latent demand, and so the Contractor recommends the use of sensitivity checks to test this.

If the supply of floorspace is tight in the property markets, there may be market demand that is suppressed, which may manifest itself in two forms:

- The demand effectively 'disappears' from the market – tight supply pushes up prices; some market participants who would have demanded floorspace under a healthier market 'drop out' from the market. This forms a backlog that is not satisfied due to the tight market
- The demand may move on to take up space that would ordinarily be vacant under healthier markets. The vacancy rates are compressed below natural vacancy rates, i.e. vacancy rates under healthy markets. Floorspace that is typically vacant due to churn and market friction is taken up by market participants, with possible mismatches (an example being where modern logistics service providers move on to less well-suited floorspace)

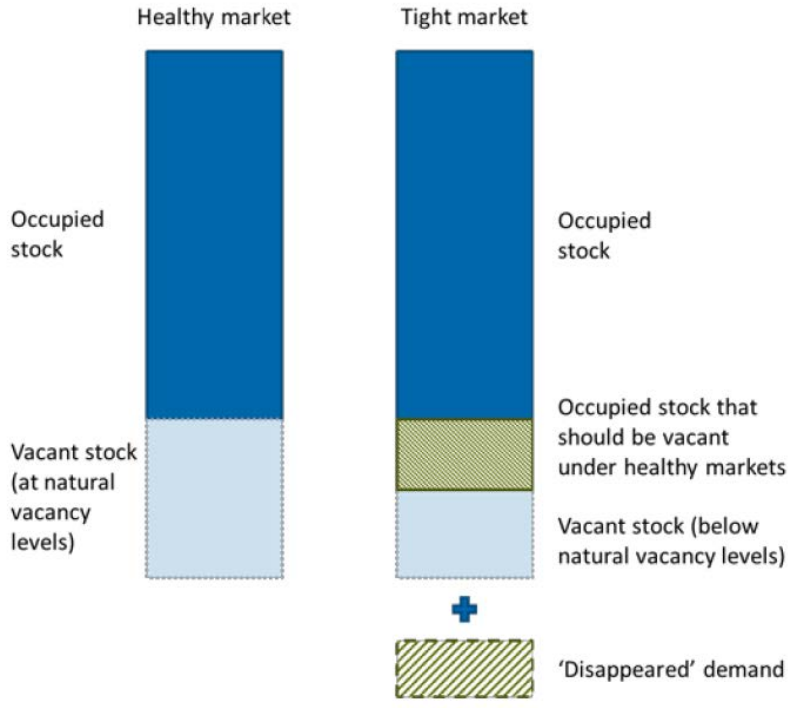
There is therefore difficulty in estimating the 'true' extent of latent demand – there is a component that has 'disappeared', and is therefore not observable in the market. More involved demand modelling could be used to estimate this component: the demand curve of market participants at different price/rental levels would have to be modelled; in parallel, price/rental levels under healthy markets would have to be estimated as well. Such models are difficult to estimate, due the lack of reliable counterfactual data, and evolving floorspace markets.

On the other hand, occupied stock that compresses vacancies below natural rates can be observed in the market. This distinction is illustrated in Figure 5.14. This portion of demand could be used to estimate the extent of the 'disappeared' demand, with the following rationale: if this additional occupied stock is larger, it means that the market is tighter, and as a result the level of 'disappeared' demand should be higher.

A simplifying assumption could be adopted, whereby half of the suppressed demand 'disappears' while the other half enters the market (occupying space that should ordinarily be vacant). For example, if the natural vacancy in the market is 5%, and observed vacancy levels are at 2%, then the difference (5 - 2 = 3%) multiplied by the current occupied stock could be used to estimate the 'disappeared' demand, in other words, the latent demand.

This method has its limitations – while the 'disappeared' demand should be positively related to the 'ordinarily vacant' occupancy, whether they increase on a one-to-one basis is a question. However, in the absence of more involved demand modelling (where reliability is still a question) this calculation can provide a guidance to the level of latent demand present in the market.

Figure 5.14 Comparison between healthy market and tight markets



How Much Should the Adjustment Be?

To adjust the floorspace results for the backlog of latent demand, a percentage assumption would have to be taken, on the basis of (1) current vacancy rates, and (2) natural vacancy rates in the logistics floorspace market.

Current vacancy rates

In the logistics floorspace market, there appears to be a discrepancy between R&VD Private Storage vacancy rates, and the vacancy rates of other market participants with R&VD showing much higher vacancy rates than what market participants do (while noting that the Contractor does not have access to the study methodology of other market participants). This difference is illustrated in Table 5.8. For example, in Q2 2014, property consultants such as CBRE and Savills estimated vacancy rates to be under 1%. Although, R&VD does not show mid-year figures, the vacancy rates appear to hover around 5% or more. In part, this is due to how vacancy is defined: R&VD counts properties that are under renovation as vacant. In addition, R&VD might not be formally notified of tenancies, especially if the logistics uses are for short-term (or contain an element which may not be legal in nature).

Natural vacancy rates

The Contractor team's professional judgment suggests that the natural vacancy rate should be around 5%, in line with longer-term market averages where R&VD vacancy data is concerned (the average vacancy rate between 1994-2013 is 5.5% - calculations can be found in Annex 8.4 of the Data Report). CBRE, a property consultancy considers that 3-4% vacancy should be observed in a healthy market. These two sets of figures are relatively close – the Contractor therefore suggests using 3-5% as the range for natural vacancy rate for logistics floorspace uses.

高增長及低增長情景的輸入假設

High Growth and Low Growth Scenarios

The Contractor has developed two scenarios – high growth and low growth. The scenarios attempt to capture 'internally consistent' assumptions, making reference to the main input variables to the two models, namely:

For econometric model:

- Hong Kong Real GDP growth
- Guangdong Real GDP growth

For DEB model:

- Labour force
- Unemployment rate
- % of employment requiring employment floorspace
- Floorspace per worker

The **high growth scenario** is characterised by the following:

- High economic growth in Hong Kong, due to strong growth in high value-added services;
- Favourable external environment - specifically, stronger economic growth in Guangdong province;
- Due to strong economic growth, there is larger demand for labour, and the unemployment rate remains low. There is more urgency for policy measures to increase labour supply (e.g. later retirement, talent schemes to attract immigrant workers), which have a moderating effect on the overall decline of labour force in Hong Kong;
- The development of high value-added services shifts the labour force towards office-based occupations, which leads to a higher percentage of workforce demanding employment floorspace covered by the Review;

The **low growth scenario** is characterised by the following:

- Lower economic growth in Hong Kong – there is less development of high value-added services;
- Less favourable external environment - specifically, lower economic growth in Guangdong province;
- Due to weaker economic growth, there is lower demand for labour and the unemployment rate is higher. As a result, there is less urgency for policy measures to increase labour supply. The labour force trend is as per the base case.
- Across the three scenarios in the DEB model, there is a planning aspiration for improved, more spacious employment environments.

A detailed quantitative list of assumptions is provided in Table 6.10 below – this compares high growth, low growth, and base case.

Table 6.10 Comparison of Inputs Across Scenarios

	High Growth	Base Case	Low Growth
Inputs for Econometric Model			
Hong Kong Real GDP growth	■ 2014; 2016-19: same as the base case. 2015 assumes growth of 3%. ■ 2020 and onwards: WGLTFP high case scenario for GDP growth, i.e. in 2020 and beyond, GDP growth is 0.5 percentage points p.a. higher than base case	■ GDP growth of 2.5% for 2014 ■ Government's official forecasts: 1-3% for 2015 (mid-point of 2% taken in base case), 3.5% for 2016-2019 ■ WGLTFP base case assumptions for the remaining years (i.e. real growth rate of 3.5% in 2020-21; 3% in 2022-25; and 2.5% in 2026-41)	■ 2014-19: same as the base case. 2015 assumes growth of 1%. ■ 2020 and onwards: WGLTFP low case scenario for GDP growth, i.e. in 2020 and beyond, GDP growth is 0.5 percentage points p.a. lower than base case
Guangdong Real GDP growth	■ 2013-23: Gradual change from 8.5% to 6.8% ■ 2024-41: GDP growth changes by -0.1 percentage points p.a., to 5% in 2041	■ 2013-23: Gradual change from 8.5% to 6.3% ■ 2024-41: GDP growth changes by -0.1 percentage points p.a., to 4.5% in 2041	■ 2013-23: Gradual change from 8.5% to 5.8% ■ 2024-41: GDP growth changes by -0.1 percentage points p.a., to 4% in 2041

	High Growth	Base Case	Low Growth
Inputs for DEB Model			
Labour force	■ 2013-17: Follow C&SD Labour Force Projections ■ 2018: +0.1% to annual growth rate, on top of growth rates in C&SD projections ■ 2019-41: +0.2% to annual growth rate	■ Follow C&SD Labour Force Projections	■ 2013-17: Follow C&SD Labour Force Projections ■ 2018: - 0.1% to annual growth rate, on top of growth rates in C&SD projections ■ 2019-41: -0.2% to annual growth rate
Unemployment rate	■ 2013-23: Gradual change from 3.4% to 3.6% ■ 2024-41: 3.6%	■ 2013-23: Gradual change from 3.4% to 4.6% ■ 2024-41: 4.6%	■ 2013-23: Gradual change from 3.4% to 5.6% ■ 2024-41: 5.6%
% of employment requiring employment floorspace	■ 2013-23: Gradual change from 48% to 49% ■ 2024-41: +0.04 percentage points p.a.	■ 2013-41: Stays constant at 48%	■ 2013-23: Gradual change from 48% to 47% ■ 2024-41: -0.04 percentage points p.a.
Floorspace per worker	■ 2013: 20.07 sqm/worker ■ 2014-41: +0.25% p.a.	■ 2013: 20.07 sqm/worker ■ 2014-41: +0.25% p.a.	■ 2013: 20.07 sqm/worker ■ 2014-41: + 0.25% p.a.

就計量經濟模型而進行的敏感度試驗

The purpose of sensitivity testing is to illustrate how the different components in the model contribute to the results – this facilitates understanding how uncertainty on different input variables may affect the results.

All the input variables are tested by the means of a *ceteris paribus* comparison – i.e. with the exception of the variable that is tested, all other variables are kept at the base case level. The main difference between scenario testing and sensitivity testing is:

- **Scenarios** show alternative states of the world where **multiple** input variables are changed in a mutually consistent manner;
- In **sensitivity tests,** only **one** input variable is changed at a time.

Table 6.12 shows the variations on inputs tested for the econometric model. All variations are those associated with the High case, but by varying one factor at a time. Different backlog of latent demand adjustments have also been included as sensitivities.

Table 6.12 Variations on input assumptions tested for Econometric Model

Input	Description
Hong Kong Real GDP growth	■ GDP growth of 2.5% for 2014 ■ Government's official forecasts: 1-3% for 2015 (mid-point of 2% taken in base case), 3.5% for 2016-2019 ■ 2020 and onwards: WGLTFP high case scenario for GDP growth, i.e. in 2020 and beyond, GDP growth is 0.5 percentage points p.a. higher than base case
Guangdong Real GDP growth	■ 2013-23: Gradual change from 8.5% to 6.8% ■ 2024-41: -0.1 percentage points p.a.

Key Insights

Aggregate results

- Demand for Hong Kong's employment floorspace increases over time, though the growth rate decreases in later years due to the reduction in growth rate of Hong Kong's real GDP.
- After adjusting for the upper bound natural vacancy rate, in the base case, the cumulative additional floorspace demand is about 9.6 million sqm GFA in 2041 compared to 2013, which represents almost one-fifth of the current stock (about 47.7 million sqm GFA (adjusted with vacancy)).

Sensitivity checks

- Variations in Hong Kong's GDP have a greater effect on floorspace required than comparable variations in Guangdong's GDP. The variation made to Guangdong's GDP under the sensitivity test has a negligible effect on floorspace over the base case in 2041. In contrast, the variation to Hong Kong's GDP increases the floorspace projection by 3.4%.
- Depending on what assumptions are adopted for latent demand adjustment, the results are going to vary somewhat – compared with the base case scenario adjustment (i.e. 3%) in 2041, if zero latent demand adjustment is adopted, the floorspace demand is going to be around 0.9 million sqm IFA (or about 1.2 million sqm GFA) lower; if a higher latent demand adjustment of 5% is adopted, the floorspace demand is going to be around 0.7 million sqm IFA (or about 0.93 million sqm GFA) higher.

細分整體預測結果

Table 6.8 shows the proposed splits for distributing aggregate forecasting results. When feeding inputs into the forecasting models, non-market driven uses were included – they are removed from the forecasts before applying the splits.

The baseline splits have been initialised using a combination of R&VD and Area Assessments survey data. The baseline splits are initialised with R&VD Property Review data from end-2013, as well as the 2014 Area Assessments survey data. Note that the proposed splits are based on the *actual uses*, rather than the *stated uses* of the facilities (for instance, in 2013 there is only 34.7% allocated for Industries, while in 2013, 48.5% of the total R&VD floorspace are in flatted factory buildings – this is due to the various uses that take place within flatted factory buildings).

Table 6.8 Proposed splits for distributing aggregate forecast results

	2013 (base-line)	Short term (2023)	Medium term (2033)	Long term (2041)	Floorspace types included
CBD Grade A Offices	10.5%	11.7%	12.9%	14.1%	Grade A offices
Non-CBD Grade A Offices	9.9%	9.9%	10.4%	10.9%	Grade A offices
General Business	32.8%	28.5%	26.4%	24.3%	Grade B and C offices, and office floorspace under 2014 Area Assessments. Also includes some industrial floorspace that could not be classified under other categories
Industries	34.7%	34.7%	34.9%	35.1%	Flatted factories, private industrial offices and private storage
Special Industries	12.1%	15.2%	15.4%	15.6%	Specialised factories, and private storage (which are built as modern logistics buildings)

Note: The figures may not be added up to 100% due to rounding.

The following points may be noted:

- **There is significant uncertainty regarding the future splits, which are likely to be influenced by a range of market and policy factors. Moreover, as the forecasting horizon increases it becomes more difficult to make accurate forecasts about the future –** there is an increasing degree of uncertainty on floorspace demand at the aggregate level, and even more so at disaggregated levels. This is especially the case for Hong Kong, which is a small open economy heavily influenced by external factors. Any views on the medium and long term are speculative.
- **In the absence of strong evidence to support a different view, the Contractor has assumed splits stay broadly similar over time. Thus, the baseline split is used as a starting point for developing assumptions about future splits (short term, medium term, long term).** It is recommended that splits be reviewed regularly in future to take into account the impact of evolving market and policy factors.
- **Gradually rising share of CBD Grade A Offices demand over time (short, medium and long term) by 1.2 percentage point per decade, displacing General Business**: Section A1.1.6, which discusses potential property trends of Grade A offices, state growth factors such as "increased demand for Grade A and 'Super Grade A' office space due to expansion of Chinese financial services firms and increase in RMB related financial services within Hong Kong", and "increased demand for both core and non-core commercial office space (all grades) for the expected increase in size and scale of Chinese and non-Chinese Multi-national companies (MNCs) in Hong Kong". Hong Kong is a gateway both for foreign companies entering into China, and Chinese companies wanting to enter into global markets, due to its status as a global financial centre, its strong institutions, and its proximity to the Mainland. This is expected to drive up demand for Hong Kong's financial, business and professional services sectors, which in turn will require more Grade A offices in CBD areas. The demand would further increase if Hong Kong could participate and benefit from the "Belt and Road" initiative as well as the Asian Infrastructure Investment Bank (AIIB) in capital markets financing, asset management and dispute resolution.

- **Gradually rising non-CBD Grade A Offices demand over medium and long terms by 0.5 percentage points per decade, also displacing General Business**: similar to reasons as in CBD Grade A Offices. However, CBD areas have considerable agglomeration and clustering effects; as such it may take some time for non-CBD Grade A offices to develop before demand grows more significantly. The percentage demand for Grade A offices is mainly expected to take place for CBD areas, though some of the non-CBD area will experience an increase in demand as well.
- **Over the short term, significant growth in Special Industries due to growth of modern logistics demand**: the percentage of Special Industries increases from 12.1% to 15.2% by 2023,. This is largely driven by growth in modern logistics demand. Hong Kong's logistics floorspace market is expected to be driven by the growth of its domestic economy and that of Guangdong. The development of regional distribution centres (RDCs) with value-added logistics services may also drive demand for modern logistics floorspace.
- **Over the short term, General Business has decreasing share in the split:** the decrease in General Business reflects competing demand for floorspace, especially in industrial buildings. In working out the splits, the Contractor has assumed General Business to be a flexible category which expands or contracts depending on the relative demand coming from other land uses. In the short-term splits, some of the decrease has been taken up by Industries (due to growing general logistics/warehousing demand), Special Industries (specifically modern logistics) and CBD Grade A offices. Demand for logistics floorspace (both for general logistics/warehousing and modern logistics) is expected to increase due to Hong Kong's trade activities. The growth in CBD Grade A office is explained in a previous bullet point above.
- **Industries share is flat over the short term:** on one hand, there is growing demand for general logistics/warehousing facilities; on the other hand there is a factor pushing the share downward, due to the decline in Hong Kong's manufacturing activities. Although the decline in manufacturing is only marginal, this combined with the stronger growth in other land uses such as Grade A Offices and Special Industries, crowds out the growth in Industries in percentage terms so the share of Industry land use stays constant even though the absolute value increases.

從總樓面面積推算土地面積需求所採用的參考地積比率假設

Based on the above review, the Contractor proposes a set of planning parameter assumptions to be adopted in the Review. Preliminary assumptions on plot ratio and site coverage are made to give a broad indication of the land requirement subject to adjustment when formulating the broad development strategy to meet the projected floorspace requirement having regard to the appropriate development intensity of the solution spaces.

Plot Ratios

Land Use Type	HK2030 PR	Proposed PR	Rationale
CBD Grade A Offices	14	12-15	■ Grade A offices are assumed to have high development densities than other types of floorspace. ■ There is an array of Plot Ratios for commercial zone in various OZPs, e.g. PR 15 (under B(P)R) generally on HK Island, PR 12 generally in Kowloon, PR 9.5 in new towns like Tsuen Wan. On the other hand, the current permissible PR in "C" and "OU(B)" areas is 12. New sites that have been released to the market also have PR of 12. As such, a range of PR 12-15 is thus proposed.

Land Use Type	HK2030 PR	Proposed PR	Rationale
Non-CBD Grade A Offices	-	12	■ The Contractor considers that most of the non-CBD Grade A offices are located in Kowloon, where the PR tends to be 12. A PR of 12 has therefore been adopted for non-CBD Grade A offices.
General Business	11	11	■ Large proportion of General Business buildings are assumed to be in urban areas ■ In urban areas the PR is 15; in Kowloon it is 12; there may also be other General Business buildings in the NT, with a PR of 9.5 or less. Therefore, with a consideration to overall General Business buildings, the Contractor proposed a PR of 11, the same as that used in HK2030. ■ For "R(E)" zones, in metro areas the PR ranges from 5 to 9.5 (with more areas having PR above 9); in the NT the PR ranges from 1-5. The effect of these is assumed to be relatively minor
Industries	-	9.5	■ Industrial buildings in urban areas typically have a PR of 9.5, while those in the NT have a PR of 5. ■ Most of existing flatted factory buildings are in the urban areas – this is not expected to change significantly (as future supply of new flatted industrial building is likely to be limited). Therefore PR of 9 is assumed.
General Warehousing	-	9.5	■ Assume similar PR as industries– lot of general warehousing takes place in flatted industrial buildings.
Special Industries	2	3-5	■ The definition of Special Industries today is significantly different from that in HK2030 ■ HK2030 included Industrial Estates & Science Parks – the Review does not cover these uses. ■ Making reference to OZP of Kwu Tung North, the PR of Business & Technology Park is around 3. The PR of proposed Logistics and Technology Quarter of Hung Shui Kiu NDA is 5.[190]
Data Centres	-	4-4.5	■ Data centres are assumed to be consistent with special industries PR. ■ According to some proposed developments of Data Centre in Tseung Kwan O, the PR is about 4-4.5 ■ The low PR of developments in Industrial Estates (2.5) reflects policy-driven land

Land Use Type	HK2030 PR	Proposed PR	Rationale
Modern Logistics	-	4-5	■ Observed PRs for modern logistics centres are between 4 and 5. ■ Most of the new supply is expected to be in Lantau/Tuen Mun West/Hung Shui Kiu and NT north ■ The PR of proposed Logistics and Technology Quarter of Hung Shui Kiu NDA is 5.[191]

Source:ICF assumptions