

# 假如高鐵總站成為「香港交匯站」

## 更平

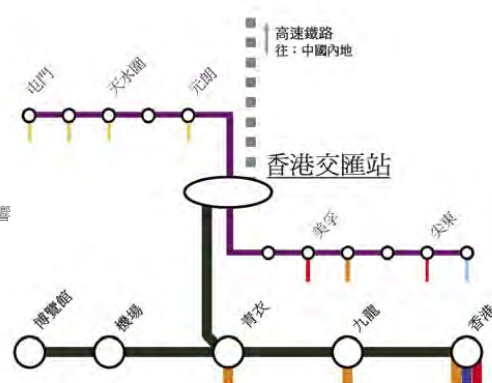
- 減低造價
- 減低營運成本
- 減低票價

## 更快

- 本地轉乘更簡便
- 大多數旅客的「總行程需時」會縮短

## 更好

- 減少交通擠塞和環境影響
- 方便旅客，增加客量
- 市區及新界平衡發展



		新高鐵專家組建議的 「貫通南北方案」	政府建議的 「西九龍站方案」
更平	建造成本	逾250億元	652億元，每公里成本全球最貴
	車資	較低投資成本及營運成本，便車資更平	較高投資成本及高營運成本，導致更高車資
更快	轉車安排	步行2分鐘便可轉乘高鐵與港島快線或西鐵線	從西九站與九龍站須步行12分鐘，上落共20層樓高的路程
	節省旅程時間	達300萬市民更為便捷	僅135萬市民更為便捷
更好	道路交通	施工期間及營運時，均不影響市區交通	在施工期內，佐敦/尖沙咀一帶將受嚴重影響；營運後西九龍交通擠塞的風險大增
	便利遊客	從機場經香港交匯站到邊境: 48分鐘	從機場經西九龍站到邊境: 58分鐘
	發展及就業機會	刺激新界發展，提供就業機會	推高市區樓價，剝奪新界發展

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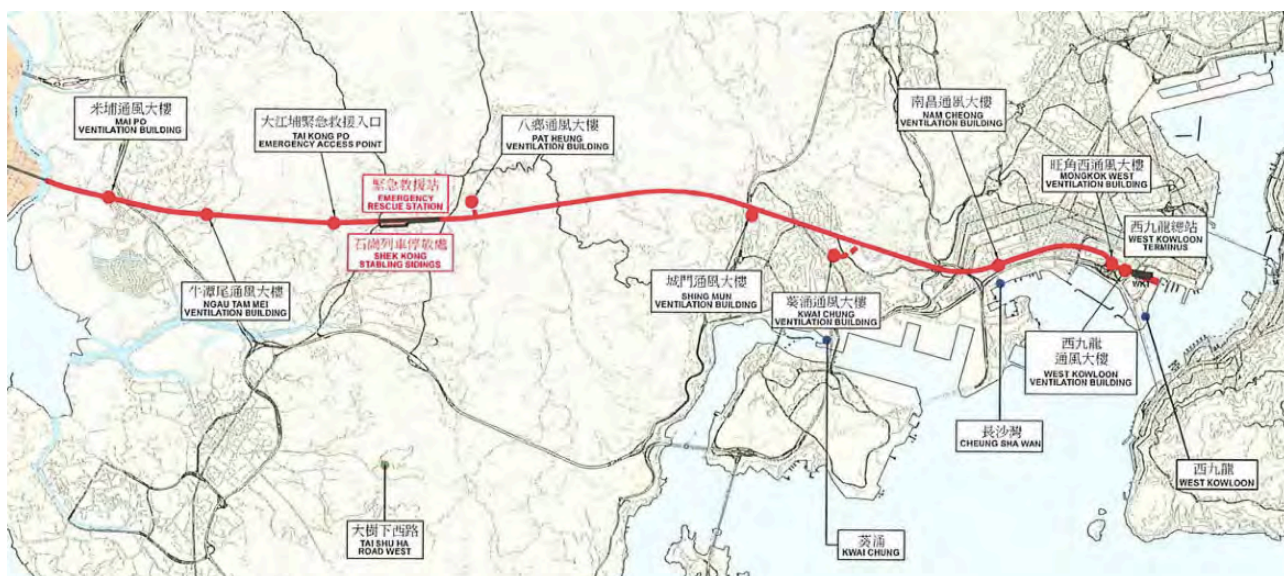
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# 政府方案



缺點：

造價超貴：

- 652億元造價足夠興建兩條青藏鐵路，然而回本卻遙遙無期。

服務低劣：

- 西九龍總站選址使新界320萬市民未能直接受惠。
- 總站港鐵接駁差劣使港島區和九龍區市民同樣難以乘搭。
- 總站效率奇低，列車需停於站內作清潔整理。
- 高鐵隧道效率奇低，列車需從總站空車駛回石崗作基本維護。
- 營運效率低以致營運成本增加，增加達到收支平衡的困難。

製造問題：

- 建造期間西九道路需大改道，製造交通大混亂。
- 通車後每天增加五萬人使用路面交通，進一步加劇九龍交通擠塞。
- 需花巨款處理路面交通問題，興建新路卻會阻礙行人流通。
- 總站佔用西九文化區土地，限制文化區設計和建造。
- 總站建成將遲於西九文化區，阻礙前往表演場地的通道。
- 建造過程複雜，總站挖土量達30個旺角站，容易超支延誤。
- 需要興建緊急救援站，增加建造成本和土地需求。
- 於大角嘴及石崗菜園村帶來嚴重社會影響，破壞社會和諧。
- 建造過程製造大量建築廢料，有違高鐵環保原意。
- 總站鐵路接駁不便以致半數旅客會以路面交通接駁，製造汽車廢氣。

# 政府有否瞞着你？

高鐵撥款即將表決，政府仍未回答下列關鍵問題：

★ **六百億元回本無期？**

政府是否已經放棄全數收回六百五十億元的建造成本？為求壓低票價，政府將難以要求港鐵付足服務經營費。如此安排會否做成港鐵請客，市民找數？投資屬天價，回本卻無期，市民豈能不理？

★ **市民補貼高鐵營運？**

近年多項基建都錯估客量，高鐵亦有可能重蹈覆轍。政府大談理想旅客估算，然而到底高鐵每天最少要有多少旅客才可收支平衡？如果高鐵客量遜於預期，以致無法收回營運成本，虧損是否由市民埋單？

★ **富人享受窮人找數？**

政府的高鐵方案只能直接惠及西九龍總站一帶，居於新界的三百多萬市民轉乘不便。建造高鐵的社會影響，卻又以大角咀的舊樓和石崗菜園村為甚。高鐵理應服務全港市民，為何利益都向富人傾斜，代價卻要窮人承擔？

★ **高鐵如何接駁港鐵？**

西九龍總站與東涌線九龍站之間的轉乘問題，至今仍然不清楚。政府聲稱會改善設計，然而詳細圖則欠奉，公眾難以驗證。即使當局所述八至十分鐘的步行距離屬實，仍然會比在中環站或香港站轉乘困難。

★ **西九文化區變地盤？**

西九龍總站佔用西九文化區大幅土地，拖慢文化區的發展進度。更糟的是，西九龍總站的完工日期將遲於西九文化區的第一期工程，文化區被割裂為東西兩段，東面入口更被地盤堵塞，日後觀眾及遊客前往西九文化區，將需要先繞過或跨過一個超級大地盤。

★ **政府文件不盡不實？**

政府提交立法會的文件中，聲稱共建維港委員會對高鐵工程並無負面意見。事實上，委員會的會議紀錄清楚列明，部份委員對工程安排高度關注。究竟此份政府文件還有多少隱瞞或誤導的地方呢？

★ **何不考慮更佳選擇？**

新高鐵專家組提出更快、更平、更好的方法，把香港高鐵接駁到內地高鐵網絡；政府並未完全掌握建議方案的內容，便斷然否決建議，又不清楚交代理由。政府有何隱衷？政府為何害怕讓市民比較兩個方案的優劣？

**造價貴300億元的工程 絕對不可含混過關**

**聯絡你的立法會議員 表達你的關注**

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# 專家組方案：設計概覽

新方案包括兩部分：

- 首先，我們會擴建現有的錦上路站為高鐵總站，向北接駁內地的高鐵網絡。
- 同時，我們會把機場快綫由青衣分支延至高鐵總站，是之為「港島快綫」。
- 這個車站的特點是：一個車站大堂、三條接駁綫路、接通內地 香港。我們稱這個車站為「香港交匯站」。

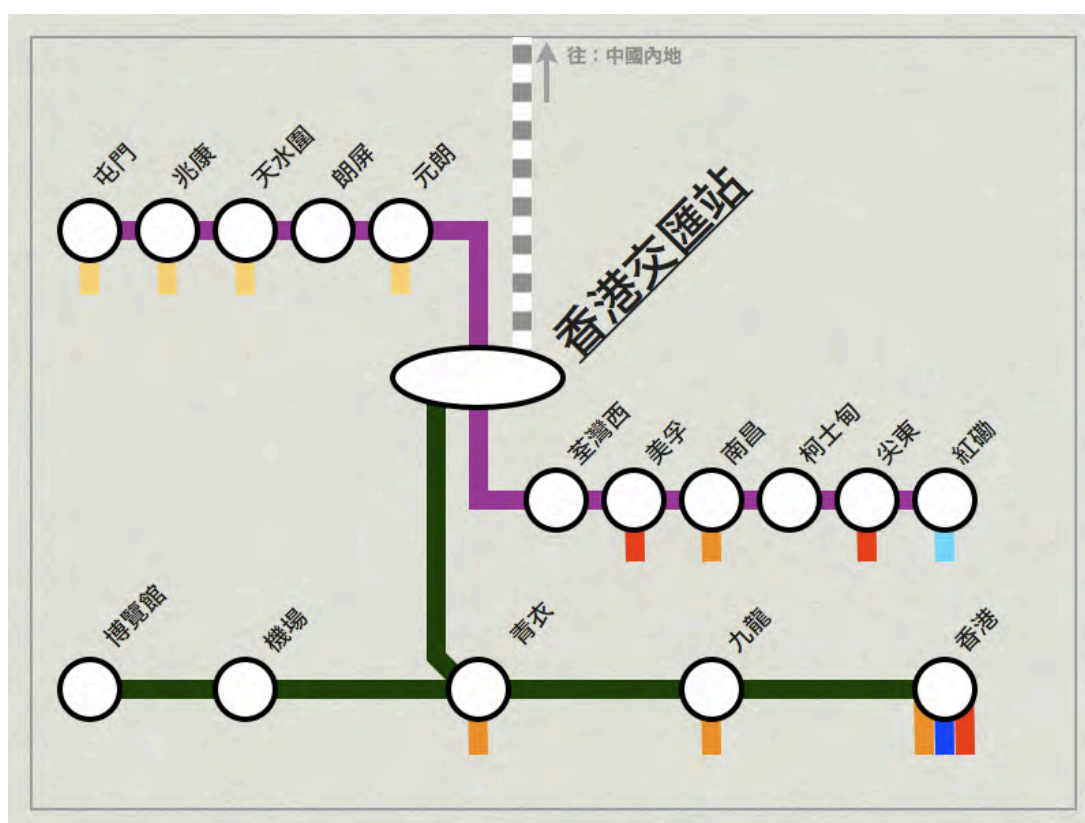


優點：

- 新總站選址使新界 3 2 0 萬市民能直接受惠。
- 港島快綫可讓九龍及港島乘客同樣便捷前往內地。
- 建造成本僅 2 5 0 億，遠遠低於政府方案的 6 5 2 億。
- 建造過程簡單，同樣可於 2 0 1 5 年完工。
- 綜合設計管理減低營運成本，有助減低票價。
- 免除所有因為設站西九所引起的交通、環境和社會問題。
- 免除對西九文化區的影響。
- 免除對大角嘴和石崗菜園村的影響。
- 無需興建緊急救援站，減低建造成本和土地需求。
- 收地影響約五十戶住戶，遠遠低於政府方案。
- 建造過程簡單，營運更有效率，減低環境影響。
- 利用現有機場快綫模式，乘客可於市區預先代辦登車手續。
- 為新界西北帶來大量就業機會。



## 專家組方案：轉乘安排



從本港各區經「香港交匯站」前往內地之方法及需時（以深圳為例）

地區	參照港鐵站	途經路線	往深圳需時	比政府方案
港島區	香港站	港島快綫（無需轉車）	30分	快1分
九龍西	太子站	荃灣綫及西鐵綫	38分	快4分
九龍東	觀塘站	觀塘綫、荃灣綫及西鐵綫	56分	慢4分
新界西	元朗站	西鐵綫	14分	快27分
新界東	上水站	乘搭巴士（未來可選乘北環綫）	35分	快28分

（全港十八區之詳細需時預測，請參看第46頁）

## 專家組方案：從市中心出發



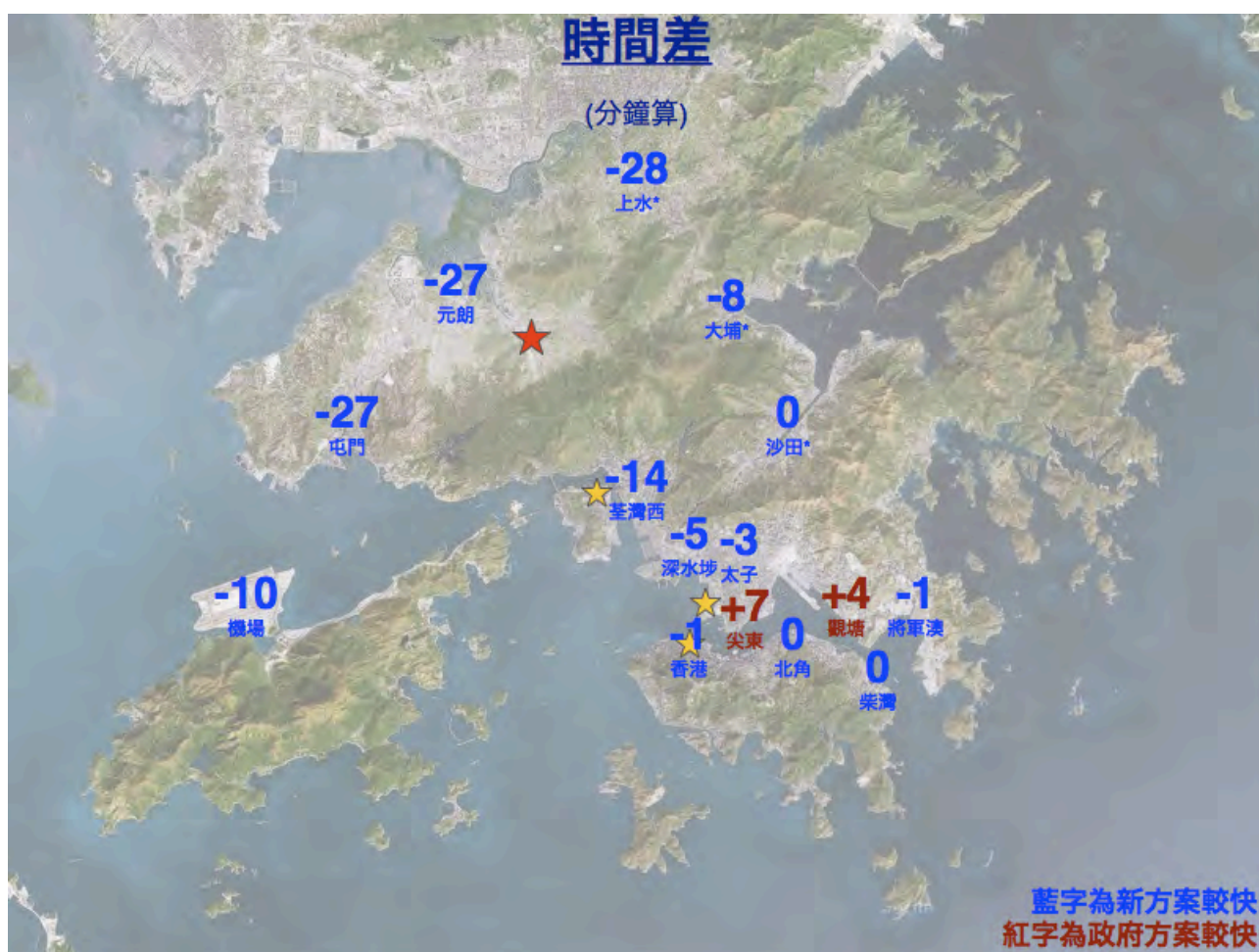
### 從中環到深圳：政府方案

旅客有兩個選擇。第一個選擇，是乘搭東涌綫往九龍站，再步行至西九站，步行需時 12 分鐘。此選擇對於年長或帶同行李的旅客極為不便。第二個選擇，則乘搭的士經西隧前往西九站，需時 11 分鐘，未計算於西九和中環常見之交通擠塞。此選擇需付的士車資連隧道費共 120 元，並非人人可以負擔。

### 從中環到深圳：新方案

旅客從香港站出發，無需轉車直達香港交匯站，再乘搭高鐵往深圳；全程需時 33 分鐘，與政府方案相若。然而於專家組方案當中，旅客既無需作長時間步行，也無需繳付昂貴隧道費。政府當局多番強調高鐵總站必需設於市區，以便市中心之旅客；然而按照上述的模擬旅程，對於來自中環的旅客來說，新方案比政府方案更為便捷。

## 專家組方案：便捷乘搭



### 新方案 勝 政府方案：300萬市民受惠

從全港十八區當中每區選一至兩個港鐵站為參考點，計算使用政府方案或新方案前往深圳所需的時間，結果發現對於約300萬市民來說，新方案較政府方案更為便捷；而對於大多數的其他市民，則兩個方案基本相若：

於新界西，新方案於元朗、屯門、荃灣、葵青均比政府方案明顯較快。

於新界東，新方案於北區和大埔明顯較快，於沙田則相若。

於九龍西，新方案於西九龍一帶較慢，於太子和深水埗一帶則較快。

於九龍東，新方案於黃大仙及觀塘一帶較慢。

於港島區，新方案於中西區、灣仔、東區和南區均與政府方案相若。

政府方案的造價比新方案貴三百多億，對香港的整體便捷程度卻遜於新方案，並非一個明智的公共投資選擇。

(全港十八區之詳細需時預測，請參看第46頁)



# 專家組方案：詳細報告及走線

## 1. SUMMARY

### 1.1 Cost

- 1.1.1 The high cost of the proposed Express Rail Link, representing \$10,000 per head for everyone in Hong Kong, has highlighted the need to consider whether this sum is justified and whether the same or better results could not be obtained by a cheaper solution.

### 1.2 The Terminus

- 1.2.1 A desire has been expressed for the Terminus to be in the Heart of Hong Kong and the Government's solution is to locate the Terminus in West Kowloon. West Kowloon is not, and will never be, the heart of Hong Kong. The majority of travellers will need to take another form of transport, either rail or road, to reach their final destinations.
- 1.2.2 The link to Hong Kong's commercial heart on Hong Kong Island from West Kowloon will be poor and will result in the majority of journeys being by road through the Western Harbour Tunnel rather than by the very much cheaper and environmentally friendly mode of by rail.

### 1.3 Limitations of Government's Studies

- 1.3.1 The Government studies rejected sharing the corridor for the Express Rail Link with the West Rail Line and only considered terminating the Express Rail Link at West Kowloon or on the east side of West Rail at Kam Sheung Road. They did not consider, or study, locating the terminus on the west side of the West Rail station at Kam Sheung Road, nor did they consider the provision of an Express Link from Kam Sheung Road which would serve Hong Kong Island, the heart of the Hong Kong's Commercial District.

### 1.4 Proposed Cheaper and Better Arrangement

- 1.4.1 A cheaper and better arrangement, giving more people a shorter overall journey time, is available and should be adopted in preference for the Government's expensive scheme.
- 1.4.2 The arrangement has two separate but integrated components. The first is the extension of the Mainland's High Speed Network, the Express Rail Link, to a Terminus in Hong Kong (at Kam Sheung Road) where the station would "Integrate" the High Speed Network to the West Rail Station and into the second component.
- 1.4.3 The second component is formed by a spur off the Airport Railway, where it is in tunnel on Tsing Yi Island, and continues to Kam Sheung Road. This extension provides a speedy connection between Kam Sheung Road via West Kowloon and Hong Kong Island, the heart of Hong Kong, and also to Chek Lap Kok.

### 1.5 Cost and Programme

- 1.5.1 The cost of the alternative is estimated to be \$25Bn, less than half that of the scheme to West Kowloon. Construction can take place on several fronts at the same time, with considerably less work required than to West Kowloon. This results in a much shorter construction programme with less risk of programme overruns. Even with a later start of construction, completion will not be delayed.

## **2. INTRODUCTION**

### **2.1 History**

- 2.1.1 The Guangzhou-Shenzhen-Hong Kong Express Rail Link is a new railway line which will link Hong Kong with the National High Speed railway network and will further enhance Hong Kong's strategic position as the southern gateway to China.
- 2.1.2 The Link will provide frequent services from a new terminus in Hong Kong to Shibi in the outer suburbs of Guangzhou, via Futian and Longhua in Shenzhen and Humen in Dongguan. At Shibi the Link will connect to the national express rail network which will provide long haul services to other major cities in the Mainland. From Shibi passengers will be able to travel into the centre of Guangzhou on the domestic network.
- 2.1.3 The construction of the Hong Kong Section, south of the Boundary, hereinafter referred to as Express Rail Link, is the responsibility of the Hong Kong Government, who have entrusted the procurement of the project to the Mass Transit Railway Corporation.
- 2.1.4 Various studies have been undertaken by the Hong Kong Government, the Kowloon Canton Railway Corporation and, since the merger of the two Hong Kong railway corporations, by the Mass Transit Railway Corporation.
- 2.1.5 These studies, which were limited in scope, concluded that the Hong Kong terminus for the Express Rail Link should be located at West Kowloon with a dedicated route from the Boundary, as opposed to sharing the West Rail line to west Kowloon. No consideration was given to using the capacity on the Airport railway which also serves West Kowloon.
- 2.1.6 The piecemeal development of West Kowloon with Kowloon Station, and more recently Austin Station, prevents integration of Government's West Kowloon Station Option for the Express Rail Link into an integrated rail transport hub.

### **2.2 The Alternative Integrated Option**

- 2.2.1 Since the commencement of the studies, the cost of providing the Express Rail Link south of the Boundary have increased over fourfold with the latest estimated cost of \$65.2 Bn. This cost is more than the combined cost of the Hong Kong West Island Line, the Hong Kong South Island Line, the Shatin-Central Line and the Kwun Tong Line Extension.
- 2.2.2 This escalation of cost raises serious doubts on the cost effectiveness of the investment for Government's West Kowloon Station Option, especially as a statement from the Hong Kong Government that the benefit to Hong Kong will only be \$80Bn accrued over a 50 year period.
- 2.2.3 The studies undertaken for the Express Rail Link dismissed with minimal consideration locating the terminus at Kam Sheung Road and also an intermediate station at this location on a line termination at West Kowloon. The station was located on the east side of West rail and the consideration concluded that significant resumption was required. In addition the time taken to travel to Kam Sheung Road negated some of the advantages of a High Speed Rail connection to the Mainland.
- 2.2.4 The studies did not consider the option of a station on the west side of the West Rail nor did they consider providing a terminus at Kam Sheung Road integrated with both the West Rail Line and a direct rail link to Hong Kong Island and to Chek Lap Kok.
- 2.2.5 This alternative, the Integrated Option, locates the terminus for the Express Rail Link adjacent to the West Rail Kam Sheung Road Station forming an integrated station with a terminus on an extension of the Airport Railway thus providing a fast direct link to Hong Kong Island. This integrated interchange station will become an important railway

hub and, for the purpose of this report, it is referred to as HK Interchange and the extension of the Airport Railway as the HK Island Express.

### **3. DISADVANTAGES WITH THE GOVERNMENT WEST KOWLOON OPTION**

#### **3.1 Location**

3.1.1 The Government has stated its desire to locate the terminus in the City Centre, the Heart of Hong Kong. The West Kowloon area selected for the terminus is not Hong Kong's City Centre, nor is it the Heart of Hong Kong. Their own transport studies indicate that 95% of the passengers to and from the terminus will arrive or depart by road or by rail.

3.1.2 The location at West Kowloon is only of benefit to about 5% of the passengers who don't have to take further transport. These will be primarily visitors to the West Kowloon Cultural District, to the "Elements" and the commercial development above the terminus. Other locations are beyond reasonable walking distance.

#### **3.2 Interchange**

3.2.1 The West Kowloon Station is located between Kowloon Station and Austin Station but distant from them both. Lin Cheung Road, between Kowloon Station and the West Kowloon Station, will include both at-grade and depressed roads thus not allowing any subway connection between the two separate stations.

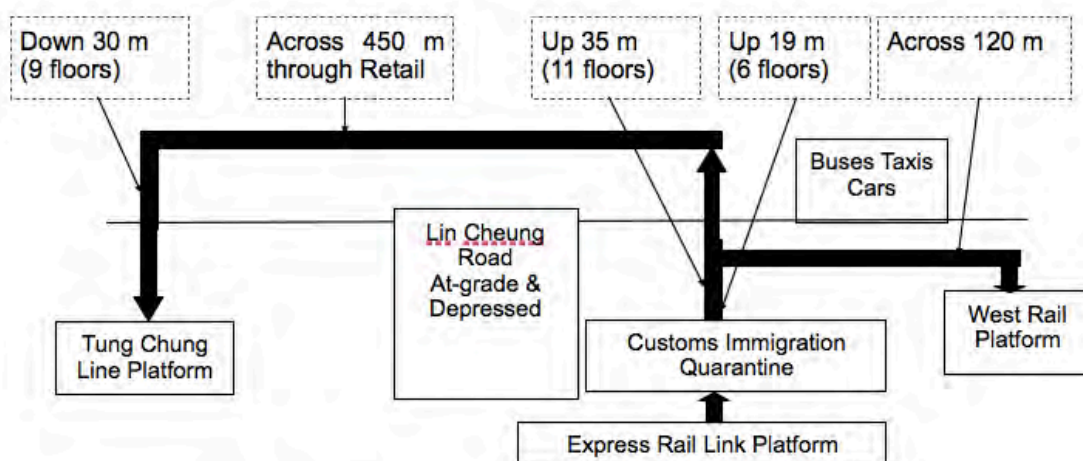
3.2.2 The EIA reports confirms that access between the two stations will be via a footbridge requiring passengers in West Kowloon Station to make use of escalators and lifts to access the footbridge level, about 35 metres above platform level, equivalent to 11 floors in a building. Once passengers are within the Kowloon Station complex, they will be directed through the "Elements" retail area to further lifts and escalators, which will take them down about 30 metres to the Tung Chung Line platform, equivalent to a further 9 floors of a building.

3.2.3 The passenger interchange between these two stations will be difficult and slow, thus giving poor access to and from Hong Kong Island, Lantau and the Airport. Excluding the time for customs and immigration it is anticipated the transfer time between platforms will be around 12 minutes.

3.2.4 The Government studies indicate that only 10% of the passengers will interchange with Kowloon Station, but the percentage of passengers with journey ends on Hong Kong Island, Lantau or at the Airport are considerably higher. This low percentage is the result of a difficult interchange which drives these passengers to make alternative arrangements, such as car or taxi through the Western Harbour Crossing. The tunnel toll will be a significant element in the overall cost of the journey from Hong Kong to the Mainland and the forcing of these traveller to use road transport is contrary to Government policy which is to encourage the use of the more environmentally friendly rail transport.

3.2.5 Access between the West Kowloon Station and Austin Station will be by a subway beneath the new Road D1 which will run parallel and to the west of Austin Station. Passengers will ascend about 19 metres, equivalent to 6 building floors, and then walk through the subway into Austin Station where they descend to the West Rail platform. The subway distance between the centres of the two stations is about 120 metres.

3.2.6 The Government studies give 40% of passengers interchanging with Austin. This relatively high number is a reflection of the use of the West Rail domestic rail network to provide the necessary connection to and from the journey ends. A significant number of these passengers will arrive from or depart to the Mei Foo / Tsuen Wan direction and thus doubling back on their journeys by the terminus being so far south.



**West Kowloon Interchange Arrangement**

### 3.3 Traffic

- 3.3.1 Government's studies predict that 33% of the passengers using the West Kowloon Station will be by car or taxi and 12 % by coach or bus. The combined percentage is significant and will add to other traffic in the area.
- 3.3.2 The West Kowloon area is recognised for traffic congestion, particularly for southbound traffic from the West Kowloon Expressway. This traffic has to make a right turn onto Canton Road which is currently achieved at the Wui Cheung Road T junction. In the future this traffic will be diverted to make a right turn at the four-way junction between Austin Road and Canton Road immediately after merging with traffic from the station and traffic from the western section of Austin Road. There are serious doubts on the adequacy of the space and lengths between junctions to accommodate these traffic movements without significant congestion.
- 3.3.3 Traffic in the area is heavily constrained by the large number of junctions with inadequate length for vehicle queuing between adjacent signal controlled junctions. The provision of Road D1, requiring the introduction of a further four-way junction on Jordan Road immediately to the north of the station, will not be conducive to the free flow of traffic along Jordan Road.
- 3.3.4 Some relief to the existing flows will be given by the Central Kowloon Route, but this will mainly reduce flows along Gascoigne Road rather than further south. Any reduction in traffic flows in this area, resulting from the Central Kowloon Route, will be quickly absorbed by the traffic from the new developments at the Elements and ICC Development and the WKCD.
- 3.3.5 The design of the road system associated with the Government's West Kowloon Station Option has therefore been aimed at providing reasonable free access to the station from the north and the Western Harbour Crossing without being able to achieve similar conditions for traffic from the station to the south. It can therefore be expected that that traffic leaving the station for the south and east will suffer congestion and delays for much of the day.

### 3.4 Operations

- 3.4.1 The twin tracks leading into the West Kowloon Station do not have any spare capacity to enable a train to be moved away from the station for servicing and stabling before its



return journey. This is particularly important for long-haul trains which need to have food and drinks replenished as well as toilets emptied.

3.4.2 Servicing and stabling will have to be undertaken while the train is in the station, thus denying that space for another train. Emptying of toilets will not be possible as there are obvious objection to such an operation within the confines of a station, particularly one which is deep underground.

3.4.3 This results in the need for more platforms than are required for the normal operation of passenger alighting and boarding.

### **3.5 Impact on the WKCD**

3.5.1 The track overruns beyond the end of the platforms, necessary in the event that a train does not stop at the required position alongside the platform, extend south under the site allocated for the WKDC. Any development for the WKDC must therefore take into account the underground structure while the structure must be capable of supporting the proposed development for the WKDC which is currently unknown.

3.5.2 These unknowns provide difficulties for both projects and result will result in additional costs for both projects and the likelihood of compromises which neither project will really want.

3.5.3 Part of the WKDC site will be used to assist the station construction and in particular for the disposal of spoil. A recent Government's paper on the Express Rail Link which stated that the Sub-committee on Harbour Plan Review of the Harbourfront Enhancement Committee had taken note of the proposed works areas along the seafronts and did not raise any adverse comments on the proposal.

3.5.4 This is at variance with the events of 13 May 2009 when the Sub-committee expressed their great concern on the size of the proposed works area along the seafront. They commented that without a comprehensive picture on the future development and implementation programme of the WKCD, including its interface with the surrounding development, the Sub-committee, instead of lending support, could only take note of the proposed works area.

### **3.6 Construction**

3.6.1 The construction of the West Kowloon Station Option will be a massive undertaking in a constrained site. It requires the formation of a large deep excavation with an area approximately the size of 25 to 30 standard MTR stations, such as those in Nathan Road, and also as deep as the deepest stations. The depth is constrained by the need for the approach tunnels to pass beneath the recently opened West Rail extension on the Kowloon Southern Link.

3.6.2 Due to the nature of the site, requiring a deep excavation which must be kept dry, it is not possible to stage the major construction works to allow for a staged construction of the station. If such an arrangement were possible, the initial construction would be for those facilities which are required for the initial and foreseeable rail operations. Those facilities which might be required at a later date would be constructed at a time when their needs have been properly identified. With the station at West Kowloon all of the major construction must be undertaken now, thus some of the platforms and spaces formed may never be required or may be required in a different form from which they have been constructed.

3.6.3 The site is also very constrained as there are very limited areas for use as working space, since excavation and construction is over the whole of the site. The magnitude of the several different contracts for the construction will create many problems on interfacing and there is very high risk that completion by 2015 will not be achieved.

3.6.4 Construction of the tunnels leading into the station will require another diversion and reconstruction of Jordan Road which has only just been reinstated following the construction of the Kowloon Southern Link leading into Austin Station. Traffic in the area will therefore again be subject to disruption for a five year period while the station and approach tunnels are constructed.

3.6.5 The route from the Boundary requires the construction of 26 km of tunnels including a 6 km long tunnel 700 metres beneath the slopes of Tai Mo Shan and a 1.2 km long Emergency Rescue Centre and Depot depressed several metres below the surrounding ground level.

### **3.7 Expensive**

3.7.1 The West Kowloon Station requires the excavation of 4.5 million cubic metres of soil and its disposal by barge to the Mainland. This excavation is the size of 25 to 30 MTR stations.

3.7.2 To put this volume in perspective this is about 6 times the volume of Two IFC and the required volume of concrete in the station construction to be poured is approximately 1.35 times the volume of Two IFC.

3.7.3 These quantities give an indication of the cost of the station, which has been stated to be half of the overall estimate, namely about \$27Bn.

## **4. DETAILS OF THE ALTERNATIVE INTEGRATED OPTION**

### **4.1 The Express Rail Link to HK Interchange**

4.1.1 The route for the Integrated Option to HK Interchange initially follows the route as for the West Kowloon Station Option from Futian Station to where it passes under the San Tin Highway.

4.1.2 South of the San Tin highway, the tunnels for the Express Rail Link to Hong Kong Interchange Station will diverge to the south from the route to West Kowloon. These tunnels will be constructed as bored soft ground tunnels with separate tunnels for the north-bound and for the south-bound tracks. Mixed ground conditions are expected on either side of the Ngau Tam Mei Valley.

4.1.3 The tunnels will pass under the Kam Tin River where the construction is expected to be by cut-and-cover construction in a coffer dam as the ground conditions in this area are not expected to favour bored tunnelling for tunnels at a depth appropriate for the Hong Kong Interchange Station. Within the cut-and-cover construction the two tracks would be adjacent to minimise the extent of construction.

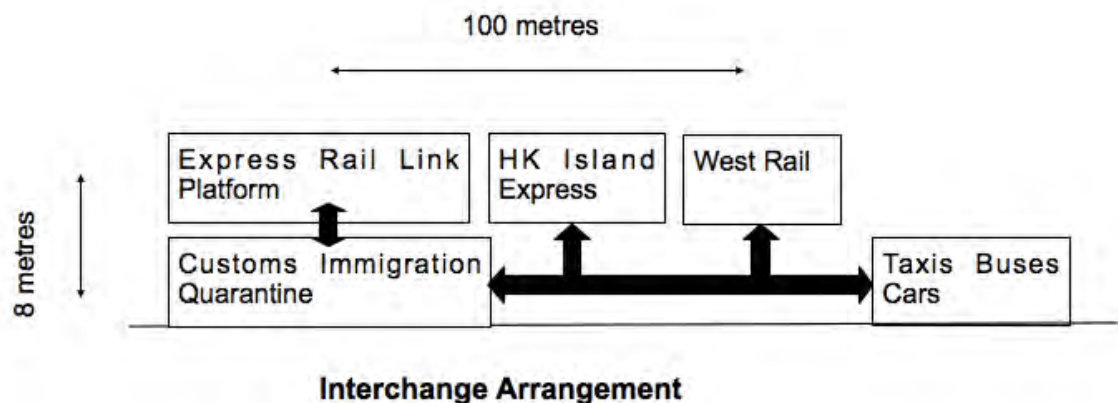
4.1.4 Having crossed under the Tin River the Express Rail Link will ascend and, some 100 metres after the river, the Express Rail Link will pass under the West Rail viaducts at approximately mid way between piers. The Express Rail Link will continue to ascend to pass over Kam Tin Road on structure and then over the exit and entry slip roads to Route 3, the Tsing-Long Highway, with a short length of embankment between the two roads.

4.1.5 An alternative arrangement would be for the tunnels to end north of the Kam Tin River and for the Express Rail Link to pass over the river. This would still permit sufficient clearance to pass under the West Rail viaducts.

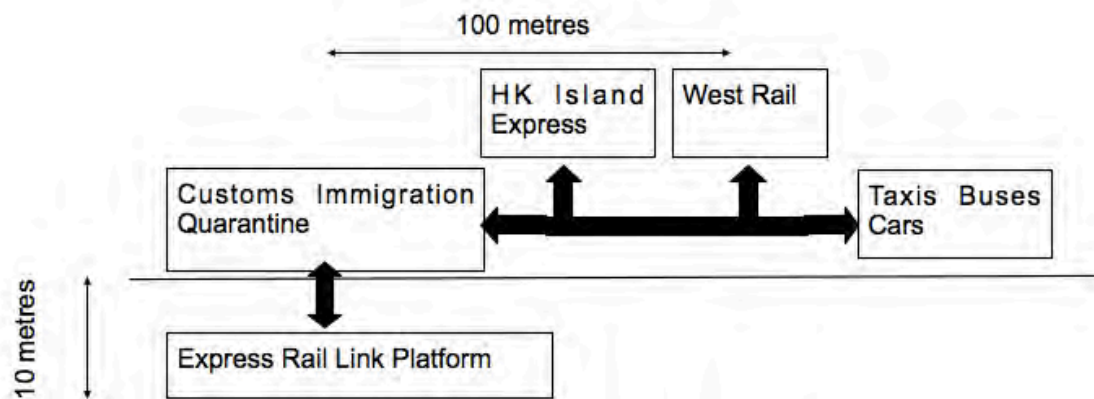
### **4.2 Hong Kong Interchange station**

4.2.1 The approach viaduct over the slip roads leads into the station fan which will be largely on embankment, but with the eastern tracks on structure where they are above the Kam Tin River.

- 4.2.2 The Hong Kong Interchange Station, on the west side of West Rail, will be elevated with customs and immigration below leading onto a ground level concourse.
- 4.2.3 The station will have six 500 metre long tracks for long-haul trains, arranged with three island platforms and four tracks for short-haul trains with platforms on both sides, arranged to segregate arriving and departing passengers. On the east a further two tracks with an island platform will accommodate the Hong Kong Island Express. Alignment considerations favour locating the short-haul tracks on the west of the long-haul tracks but they could be located on the east if favoured by the detailed planning of the station.
- 4.2.4 Unlike the station at West Kowloon where train lay over, short term stabling and servicing of long-haul trains must be undertaken in the station, the HK Interchange station allows for these functions to be undertaken at a more appropriate location in the depot to the south. This enables the station to have the same capacity as the West Kowloon station but with fewer tracks and platforms thus reducing the station's overall size and its costs.
- 4.2.5 The Hong Kong Island Express platform and tracks are on the east of those for the Express Rail Link and, with a nominal platform length of 200 metres, the overrun tracks will terminate within 500 metre long footprint for the station.
- 4.2.6 Escalators, supplemented by lifts for passengers with luggage and mobility impaired passengers, will carry the passengers for the 8 metre change in level between the platforms and the Immigration / Customs areas. For the underground arrangement the rise will be about 10 metres. The centre of the Express Rail Link platforms to the centre of the West Rail platforms is only 100 metres, thus providing for an integrated station.



- 4.2.7 If the detailed planning of the station facilities requires more floor space than can be accommodated within the currently assumed 8 metres between ground and platform, the level of the rail and platforms can be raised. No facilities need be placed below ground level.
- 4.2.8 Road based transport will also be able to directly access the adjacent Route 3 Expressway and also Kam Tin Road for journeys to the north, east and west.
- 4.2.9 The southern end of the station will affect the CLP in substation which feeds West Rail and this facility will need to be relocated; a suggested site for the relocation is on the east of West Rail in a currently undeveloped area.
- 4.2.10 The roof of the station could be used for car parking or for other road based transport uses.



**Below Ground Interchange Arrangement**

- 4.2.11 An alternative would be to construct the station underground, but this would be more expensive, take longer to construct and would not give such good interchange as the above ground arrangement.
- 4.3 Route to the Depot**
- 4.3.1 A fan to the south of the station will connect all of the tracks to the line to the depot which will be located at the south of the Shek Kong valley adjacent to the Tsing-Long Highway, Route 3. A pair of tracks will lead from the terminus southern fan with a pair of tracks for the Hong Kong Island Express alongside to the east.
- 4.3.2 The one and a half kilometres from the station to Pat Heung Road is relatively complex but the cost of construction of the necessary works is small compared to the other lengths of the project.
- 4.3.3 The fan to the south of the station will be on embankment and will enable all the Express Rail Link tracks though the station to connect into the pair of tracks leading to the depot with the two Hong Kong Island Express tracks to the east. Kam Ho Road will be diverted to the west of the fan and the temple to the south of west of the station will be preserved.
- 4.3.4 At the south of the fan the Express Rail Link and Hong Kong Island Express tracks will ascend on a gradual gradient leading onto a structure thus allowing Kam Ho Road to be aligned beneath the tracks for about a 100 metre length. In this way the need to resume land is much reduced and leaves graves unaffected.
- 4.3.5 The elevated tracks continue south crossing to within the boundary of the West Rail Pat Heung Depot. This is an area of the depot which is currently unused, other than for a short length engineering training track. Relocation of this training track will be required. Within this area of the depot, the Express Rail Link depot tracks and the Hong Kong Island Express tracks separate to enable space for an additional track to provide an engineering service connection between the Express Rail Link and West Rail.
- 4.3.6 This engineering service track is serviced from a shunt neck track, on the west of the Pat Heung Depot, and ascends to the south having passed under the Hong Kong Island Express tracks and joins into the eastern of the two depot access tracks at a location where all of the tracks pass over both the road entrance to the Pat Heung Depot and Kam Ho Road.



- 4.3.7 To the south of the road entrance to the Pat Heung Depot, the structure carrying the rail tracks ends and the tracks continue at-grade, or on embankment, to the Express Rail Link depot except for a short length of structure to carry the tracks over Pat Heung Road. Some 150 metres south of Pat Heung Road, the access road to the Express Rail Link depot passes under the tracks.
- 4.3.8 This alignment between the station and the depot minimises land take, inhabited structures and graves while respecting the necessary standards for the design of the two railways. No physical rail connection is proposed between the Express Rail Link and the Hong Kong Island Express tracks, which will be operating on different electrical supply systems. If required, a connection could be provided for engineering trains.

#### **4.4 The Express Rail Link Depot**

- 4.4.1 The depot for the Express Rail Link is at ground level and is located at the south of the Shek Kong Valley immediately to the east of the Route 3, Tsing Long Highway. Much of the land is unallocated Government land although some of the area is currently occupied by pig farms.
- 4.4.2 The depot will have 8 stabling tracks each of 520 metres in length and 4 adjacent covered running maintenance tracks each of 480 metres in length. This will allow for basic servicing such as internal cleaning, replenishment of the restaurant facilities and the emptying of the toilets.
- 4.4.3 These facilities, together with the necessary buildings and plant rooms for the operation of the depot, can be accommodated within a site of about 100 metres in width.
- 4.4.4 The depot does not accommodate facilities and engineering trains for maintaining the railway infrastructure as the engineering service connection to the West Rail Pat Heung Depot enables a sharing of the West Rail equipment. This allows for more efficient use of equipment and reduces the land required for the depot for the Integrated Option as compared to that required for the West Kowloon Station Option.

#### **4.5 The Extension of the Airport Railway**

- 4.5.1 Fundamental to providing fast access to Hong Kong Island and to the Airport is the extension of the Airport Railway to HK Interchange to form the HK Island Express with trains running direct between HK Interchange station and Hong Kong station with intermediate stops at Tsing Yi and Kowloon.
- 4.5.2 A spur off the Airport Railway between Tsing Yi station and the Tsing Ma Bridge leads across the Rambler Channel and then in tunnel to the south of the Shek Kong Valley. From here the spur line continues above ground to the HK Interchange station.

#### *Capacity*

- 4.5.3 The Airport Railway has separate tracks between Tsing Yi and Kowloon for the Airport Line and the Tung Chung Line, but the two services share the same pair of tracks across the Tsing Ma Bridge and on Lantau. As a result the capacity of the Airport Railway is constrained by the Tsing Ma Bridge, which limits the number of trains in either direction to about 27 trains an hour.
- 4.5.4 Between Tsing Yi and Kowloon, the Airport Express and the Tung Chung Line trains run on separate tracks thus providing more capacity than on Lantau. Some of this additional capacity is used for supplementing the basic Hong Kong / Tung Chung service with a Hong Kong / Tsing Yi service, but this still leaves unused capacity of the Airport Line south of Tsing Yi.

- 4.5.5 The Hong Kong Island Express makes use of some of the spare capacity while still allowing for a possible 27 trains an hour across the Tsing Ma Bridge, if required in the future.
- 4.5.6 A line with no stations has a higher capacity than a line with stations, as the capacity of a line through stations is governed by the time a train is stationary at the station platform. Under the Harbour, between Kowloon and Hong Kong, the Airport Express and the Tung Chung Line trains share the same pair of tracks, but trains do not stop over this length of track. There is thus capacity over this section for the services on both lines where the signalling allows for 40 trains an hour, 27 for the Tung Chung Line and 13 for the Airport Line.
- 4.5.7 The current service to the airport is only 5 trains an hour, with 8 rather than 10 car trains for which the system was designed. The current service to Tung Chung is 10 trains an hour with 7 car trains rather than 8 car trains for which it was designed. Current predictions of future capacity requirements for both the Airport Express and Tung Chung lines are below the capacity for which the system was designed, thus these two lines do not need all of the inbuilt design capacity under the harbour.
- 4.5.8 The journey time from HK Interchange to Hong Kong Station, in the commercial heart of Hong Kong, would be 21 minutes with a train leaving every 6 minutes in the peak period and stopping at Tsing Yi (for interchange to trains in the opposite direction to Chek Lap Kok) and at Kowloon.
- 4.5.9 At Tsing Yi Station passengers could change trains for a train from the other platform direct to Chek Lap Kok or to Sunny Bay and Tung Chung and the same procedure in the reverse direction.
- 4.5.10 The direct link to HK Interchange from Hong Kong Island and from Kowloon opens up the possibility of in-town check in for travellers and their luggage heading on long-haul trains from HK Interchange.

*Possible Macau – Zhuhai Bridge Service*

- 4.5.11 In addition to the Hong Kong Island Express, Government has indicated that consideration has also to be given to a rail service to the transport interchange for the proposed Macau – Zhuhai Bridge terminal. This rail connection would be a spur line off the existing Airport Line thus there would be three rail services on Lantau, the Airport Express, the Tung Chung Line and that serving the Macau – Zhuhai Bridge. This latter service would use the Tung Chung Line tracks between Tsing Yi and Kowloon thus serving Lai King, Nam Chung and Olympic Stations in addition to the Tung Chung Line stations at Tsing Yi, Kowloon and Hong Kong.
- 4.5.12 With this additional service it is proposed that in every 10 minutes during the peak time there would be one Airport Express train, one Macau – Zhuhai Bridge train and two trains from Tung Chung. This would result in 24 trains in the hour, which is marginally below the limit of 27 trains per hour that can be carried by the Tsing Ma Bridge.
- 4.5.13 The four tracks between Tsing Yi and Kowloon provide capacity for one Hong Kong Island Express train (Hong Kong / Kam Sheung Road) and for one additional Tung Chung Line train (Hong Kong / Tsing Yi) every ten minutes in addition to the service crossing the Tsing Ma Bridge.
- 4.5.14 At Kowloon and Hong Kong Stations the Airport Express and the Hong Kong Island Express would use the Airport Express platforms, two trains every 10 minutes, equivalent to 12 trains per hour - one less than the design capacity of 13 trains per hour. The Tung Chung Line trains and those serving the Macau – Zhuhai Bridge would use the Tung Chung Line platforms, four trains in 10 minutes, equivalent to 24 trains per hours - less than the design capacity of 27 trains per hour.

### *Route Description – Tai Lam Tunnel*

- 4.5.15 From HK Interchange, the line for the HK Island Express runs south alongside the Express Rail Link tracks to the depot. They continue past the depot and a kilometre and a half south of Pat Heung Road, they enter a tunnel, some 400 metres to the east of the Route 3 tunnel portal, which continues under the Tai Lam Country Park. The tunnel will be through rock for its full length with the possible exception of short sections of soft ground near the portals.
- 4.5.16 This 4.5km long tunnel will have the one bore with a dividing wall and will be shorter than the West Rail Tai Lam Tunnel. As there are already two tunnels under Tai Lam, the West Rail tunnel and the Route 3 tunnel, the geology is well known and no difficulties are anticipated for this new tunnel. Ventilation will be provided from the two portals and there will be no need for any access, either temporary or permanent from within the Country Park.
- 4.5.17 The tunnel will pass under Tuen Mun Road to portal at the head of an access road leading up from Castle Peak Road where a ventilation building will be required. The area is currently undeveloped and overgrown and the access road currently ends without any turnaround facilities. It was presumably constructed with the intention that it would be continued in the future. This area will also accommodate the abutment for a viaduct crossing over Rambler Channel

### *Rambler Channel Viaduct*

- 4.5.18 The viaduct needs to respect the Marine Department's clearances, but the bridge height will be lower than the adjacent Ting Kau Viaduct, which carries Route 3, as the level of that viaduct was determined by the Tsing Ma Bridge Interchange and the need for the northern approaches to the viaduct to pass over the Tuen Mun Highway.
- 4.5.19 The viaduct will require piers in the channel and it can be expected that a Marine Impact Assessment as well as an Environmental Impact Assessment will be required. The main channel is on the south side of the channel and currently there are a number of moorings on the north of the channel which are believed to be part of the dangerous goods anchorage. It is understood that the number of moorings, and hence the size of the anchorage, is greater than now required for operational purposes. It is proposed to locate the last pier on the northern approaches for the viaduct in an area of land between the new and old Castle Peak Roads. The shore line will not be affected as the viaduct will span across the northern shore line near an old pier in an area between bathing sheds.
- 4.5.20 To the south of the Rambler Channel the viaduct will cross the shore line in an unoccupied area. The viaduct structure will continue beneath the Tsing Yi North Coastal Road with the two tracks diverging. Beyond the abutment two separate portals will be formed, one for the tunnel for the south-bound track and one for the tunnel for the north-bound track.

### *Tsing Yi Island*

- 4.5.21 The Airport Railway runs in tunnel between Tsing Yi Station and the Tsing Ma Crossing with the tunnels excavated in rock. Approximately midway between Tsing Yi Station and the Tsing Ma Crossing, there is a 300 metre long third tunnel between the two running tunnels and connected to both running tunnels at either end. This tunnel is available for emergency operational use and is generally unused.
- 4.5.22 On Tsing Yi the northbound and the southbound Hong Kong Island Express tracks will be in separate tunnels. From the portals the south bound tunnel will swing to the left to merge with the Airport Railway southbound tunnel, while the northbound tunnel will

pass under the Airport railway tunnels and then rise, swinging to the left, to merge with the Airport Railway northbound tunnel.

- 4.5.23 The two merges with the Airport Railway running tunnels will be where there is the adjacent third tunnel. The third tunnel will be invaluable in minimising disruption to the Airport Railway during construction in a similar manner to that achieved when the Airport Railway was constructed south of Lai King requiring a diversion of the MTR Tsuen Wan Line. One direction of the Airport Railway can be diverted through this central tunnel enabling construction work for the junction with the new tunnel. When completed the other direction of the Airport Railway can be similarly diverted enabling construction of the junction for the other tunnel.

## **4.6 Shorter Travel Times with the Integrated Option**

- 4.6.1 With the Government's West Kowloon Station Option, travellers from the New Territories and northern Kowloon will have to travel south before boarding a train to travel north. This is both time consuming and inefficient and will result in many of these travellers taking the alternative road transport to the Boundary.
- 4.6.2 With the Integrated Option many of these travellers will travel north to HK Interchange and take the much shorter journey to the Boundary.
- 4.6.3 The constraints on the West Kowloon Station Option, which result in the platforms being in excess of 25 metres below ground makes for a time consuming interchange to Austin Station and in particular to Kowloon Station. The good interchange available at HK Interchange, together with the fast service to Hong Kong Island, results in shorter travel times to both Hong Kong Island and to the Airport.
- 4.6.4 An assumption for the West Kowloon Station is that half the passengers will arrive by road as opposed to by rail. These road journeys will be predominantly to destinations in the southern Kowloon area and, as noted earlier, are likely to be affected by increasingly heavy traffic congestion. Faster overall journeys will be achieved from HK Interchange by adopting the feeder services.
- 4.6.5 Over 42% of the population will have a faster route across the Boundary with the Integrated Option than with the Government's West Kowloon Station Option. Only 19% will have a marginally longer journey.
- 4.6.6 With HK Interchange travellers from Tuen Mun, Tin Shui Wai and Yuen Long will find that a journey to Futian and Longhua is quicker than the alternative by bus to Lok Ma Chau and walking across the Boundary. The Integrated Option will this attract more travellers than Government's West Kowloon Station Option.

## **5. TRAIN OPERATIONS**

### **5.1 General**

- 5.1.1 Published reports indicate that the capacity of the Express Rail Link will be 20 trains per hour with about 80% as shuttle or short-haul trains and the remaining 20% as long-haul trains operating to destinations beyond Guangzhou. This allows for up to four long-haul trains an hour. Train scheduling is such that there would be a lay-over period before a long-haul train starts its return journey.
- 5.1.2 Government's West Kowloon Station is remote from any location where a long-haul train can be stabled and the journey from the station to the stabling area at Shek Kong would occupy valuable train paths on the main line thus reducing the capacity for trains in service. Stabling of long-haul trains must therefore be done at West Kowloon station thereby occupying space which cannot be used for another train. The West Kowloon



station is thus larger than it need be for passenger operations as it must also provide space for stabling trains.

- 5.1.3 The HK Interchange Station does not suffer from this problem in that trains can continue through the station to the south to the short term stabling sidings and the depot where trains serviced away from the station. If extended layovers are required for short-haul trains this can be achieved in the stabling areas to the south of the station rather than occupying platform space within the station. HK Interchange Station can thus be smaller, and with less tracks and platforms, than the West Kowloon Station while still having equivalent capacity.
- 5.1.4 The servicing a long-haul train outside of the station reduces the need for tracks and platforms in the station and six tracks would be adequate within the station. This arrangement of servicing the trains outside of the station will also enable the emptying of toilets, an operation not favoured while the train is in a station.
- 5.1.5 With 16 short-haul or shuttle trains an hour, four platform tracks would be sufficient given that alighting and boarding will take place on opposite sides of the trains. Even so each track would only be used on average for four trains in an hour which represents a low usage rate for a rail terminus. Additional capacity, if required, is available by short term stabling to the south of the station.

## **6. DEPOT AND EMERGENCY RESCUE CENTRE**

### **6.1 Purpose**

- 6.1.1 For the Government's West Kowloon Station Option the length of the tunnel between Futian and West Kowloon is such that an intermediate Emergency Rescue Centre is required and this has been located at Choi Yuen Tsuen requiring the resumption of the entire village.
- 6.1.2 For the Integrated Option there is such is no need for an intermediate Emergency Rescue Centre as the distance from Futian to HK Interchange is about one third of that to West Kowloon.
- 6.1.3 The Integrated Option, like the West Kowloon Station Option, requires a depot to service the Express Rail Link south of the Boundary and to provide inspection and basic maintenance for trains serving HK Interchange.
- 6.1.4 The depot at Shek Kong for the West Kowloon Station Option includes facilities to maintain the permanent way, overhead line and other fixed infrastructure as there is no link from that line to any of the other Hong Kong rail lines. For the Integrated Option a simple connection into the West Rail Pat Heung Depot allows for equipment sharing. This more efficient use of equipment reduces the land required for the depot for the Integrated Option as compared to that required for the West Kowloon Station Option.

## **7. RESUMPTION**

### **7.1 West Kowloon Station Option**

- 7.1.1 The major resumption for the Government's West Kowloon Station Option is at Choi Yuen Tsuen which requires the resumption of an entire village with active farming activities. Other resumption is required for ventilation buildings at a few strategic locations along the route.
- 7.1.2 The villagers at Choi Yuen Tsuen have likened the resumption of their properties as a waste of their land.

## **7.2 Integrated Option**

- 7.2.1 With the Integrated Option, Choi Yuen Tsuen is not affected and can remain.
- 7.2.2 The site for the HK Interchange Station is already Government land and minimal resumption is envisaged for the Express Rail Link from the north.
- 7.2.3 There will be some resumption of private land to the south for the Depot and the connecting line and for the parallel HK Island Express but all indigenous villages will be avoided.
- 7.2.4 A site survey indicates that less than 50 occupied buildings will be affected, thus significantly reducing the resumption costs for the Integrated Option as compared to the scheme for the terminus at West Kowloon.

## **8. PROGRAMME**

### **8.1 West Kowloon Station Option**

- 8.1.1 Planning, design and administrative procedures are already well advanced for the West Kowloon Station Option.
- 8.1.2 However there is still a high risk that the magnitude of the construction work will not enable the scheduled completion by 2015.

### **8.2 Integrated Option**

- 8.2.1 The work to construct the Express Rail Link for the Integrated Option is substantially less than that for the West Kowloon Station Option and the work for the HK Island Express can be undertaken in parallel as they are completely separate geographically.
- 8.2.2 For the Integrated Option an Environmental Impact Assessment will have to be undertaken and the route gazetted, thus giving a later date for the start of construction than for the West Kowloon Station Option.
- 8.2.3 Due to the reduced extent of work for the Express Rail Link with the Integrated Option, compared with that for the West Kowloon Station Option, completion by 2015 would be achievable provided that there is a "Will to Succeed" by both Government and the MTRC with a commensurate shortening of the time they normally take for their administrative procedures.
- 8.2.4 The approximate times required are:
- Design, EIA and gazetting 1.5 Years
  - Civil Construction 3 Years
  - Systems / Architectural 1 Year
  - Contingency 0.5 Years
- This would give completion in 2015/16 with a low risk of the construction taking longer than scheduled.

## **9. COSTS**

### **9.1 West Kowloon Station Option**

- 9.1.1 The costs for Government's West Kowloon Station Option have been given as \$53.7Bn for Railworks and a further \$11.5Bn for road improvements to provide accessibility to the terminus and the neighbouring districts.

- 9.1.2 This is a significant increase of the sum of \$39.5Bn reported in August, some two months ago.

## **9.2 Integrated Option**

- 9.2.1 The estimate of the full cost for the Integrated Option is \$25Bn, made up of \$14Bn for the Express Rail Link, \$7Bn for the HK Island Express and with an allowance of \$1.5Bn for land resumption and a contingency of \$2.5Bn.
- 9.2.2 The land at West Kowloon earmarked for the West Kowloon Station, can be sold for development for a much higher price than with the restriction imposed by being above a major station. The enhanced revenue from the sale of this site could be used to offset the cost of the Integrated Option. The value of the site is already enhanced by the proximity of Kowloon and Austin Stations and would not be further enhanced by the Express Rail Link.
- 9.2.3 The length of tunnels and the Rambler Channel Bridge for the Alternative Integrated Option has been measured to be 13.5km in length, just over half of the 26km of tunnel for the West Kowloon Option. The Integrated Option station is above ground and as its cost will be less than a quarter of that for the West Kowloon Station which it is reported accounts for half of the cost of Government's scheme.
- 9.2.4 The depot for the Integrated Option is much simpler than the combined rescue centre and depot required for the West Kowloon Option thus reflecting a cost of less than half for this element. The resumption is a fraction of that required for Choi Yuen Tsuen.
- 9.2.5 Overall the work for the Integrated Option is less half that for the West Kowloon Option giving a comparable cost for the Integrated Option of about \$20Bn. The estimated cost obtained by measuring the major items with generous allowances for the minor items gives the estimate of \$25Bn for which a further \$2Bn should be allowed for road improvements remote from the station location.
- 9.2.6 The cost of \$25Bn is therefore a reasonable estimate and is consistent with the estimated costs for other current and for recently completed rail projects.

## **10. ADVANTAGES OF THE ALTERNATIVE INTEGRATED OPTION**

### **10.1 Cheaper**

- 10.1.1 The cost of Government's West Kowloon Station Option, which includes the cost of the West Kowloon Station and the Shek Kong Emergency Rescue and Depot facilities is currently \$65.2Bn. A major portion of this cost is the West Kowloon Station attributed to its depth and location with its deep cut-and-cover approach tunnels.
- 10.1.2 These high cost items are avoided by the Integrated Option, giving an estimated cost for the Integrated Option as \$25Bn, less than half.
- 10.1.3 The above ground station, the deletion of the Emergency Rescue Centre, the shorter tunnels and the more efficient maintenance by virtue of the service connection into the West Rail Pat Heung Depot will all contribute to cheaper operating costs. There are no aspects of the Integrated Option which would lead to higher operating costs than with the terminus at West Kowloon.

### **10.2 Faster**

- 10.2.1 Three million people will have a faster route across the Boundary with the Integrated Option than with the Government's West Kowloon Station Option.

### **10.3 Quicker**

- 10.3.1 There is a high risk that the construction of the tunnels to West Kowloon and the station at West Kowloon cannot be achieved by the due date.
- 10.3.2 The construction works for the Integrated Option is significantly less than that for Government's West Kowloon Station Option and the risk of programme overruns is significantly less, thus giving a better assurance that the overall completion date can be met.

### **10.4 Social Advantages**

- 10.4.1 With the terminus for the Express Rail Link in the central New Territories new jobs would be created in an area where they are needed. With the terminus at West Kowloon the creation of new jobs would be associated with the need to commute from the New Territories where the current pool of under employed labour resides.

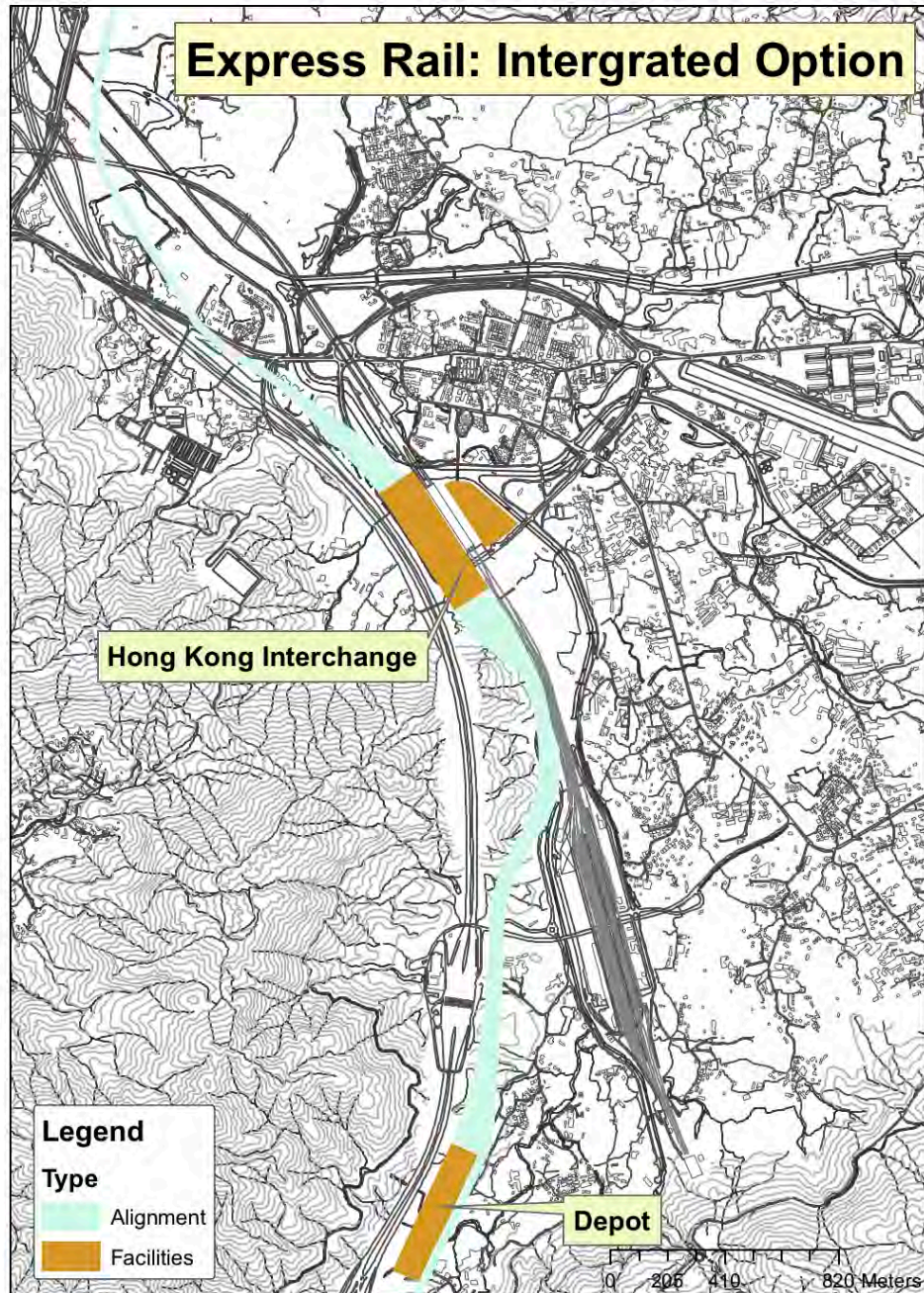
### **10.5 Better**

- 10.5.1 The Integrated Option is Cheaper, provides Faster travel for the majority of the Hong Kong population and visitors, is Quicker to construct thus making it Better than Government's West Kowloon Station Option.

## **11. CONCLUSION**

- 11.1.1 Government desires a terminus for the Express Rail Link in the Heart of Hong Kong. West Kowloon is not the Heart of Hong Kong, nor is it the City Centre. Their own studies confirm that only 5% of the passengers will not have to use further transport to reach their final destinations.
- 11.1.2 Legco has responsibility for voting the funds for construction of the Express Rail Link. In place of agreeing to fund over \$65Bn, equivalent to \$10,000 per head of all the population in Hong Kong, Legco should consider the advantages of the very much cheaper, about half the cost, of the Alternative Integrated Option presented in this short report.
- 11.1.3 This Alternative Integrated Option gives shorter overall journey times to the majority of travellers, has a much lower risk of construction programme overruns, will be substantially cheaper to operate and has the potential to offer cheaper fares to all travellers.

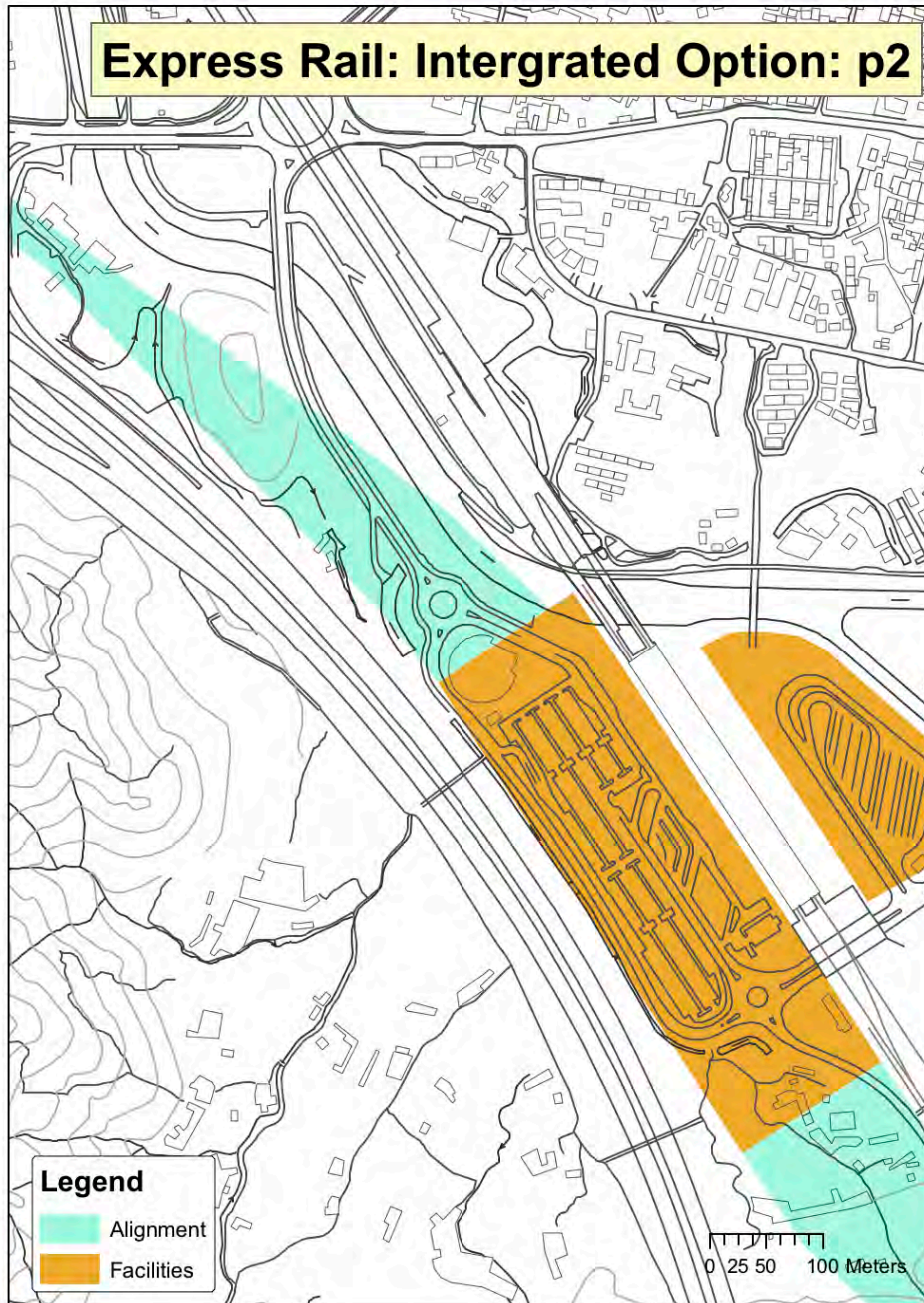
	West Kowloon Option	Integrated Option
Construction Cost	\$ 53.7 Bn plus 11.2Bn for Roadworks	\$25 Bn plus 2Bn for Roadworks
Journey Time	Faster for 1.35 million HK residents	Faster for 3 million HK residents
Construction Time	Target Completion 2015; High risk of delay	Target Completion 2015; Early completion possible
Service Mode	Boarding at West Kowloon Station only	Airport-style service: check-in at HK Station and Kowloon Station, then boarding at Kam Sheung Road
Train Fare	Higher due to higher capital cost and expensive running costs requiring remote stabling	Potentially lower due to lower capital cost and lower running costs with nearby stabling
Road Traffic	5-year construction disruption at Jordan/TST area; High Risk of road congestion at West Kowloon during operation	No disruption at urban area; No risk of road congestion during operation
Land Resumption	Resumption of Choi Yuen Village at Shek Kong	Resumption of Choi Yuen Village not required; land resumption for depot needs not cover any major village
Tourist benefits	From airport to boundary via West Kowloon Station: 58 minutes	From airport to boundary via HK Interchange Station: 48 minutes
Station Interchange	12 minute walk between WK Station and Kowloon Station	2 minute walk within integrated HK Interchange station between platforms
Land utilisation	Occupies 14 hectares of land at West Kowloon, including that within the WKCD site; land sale delayed for at least 5 years	Land sale at West Kowloon can proceed at any time; full utilisation of government land next to KSR station
Patronage	Little attraction for NT residents and airport passengers	Higher patronage expected for NT and HK Island residents, HK and airport passengers







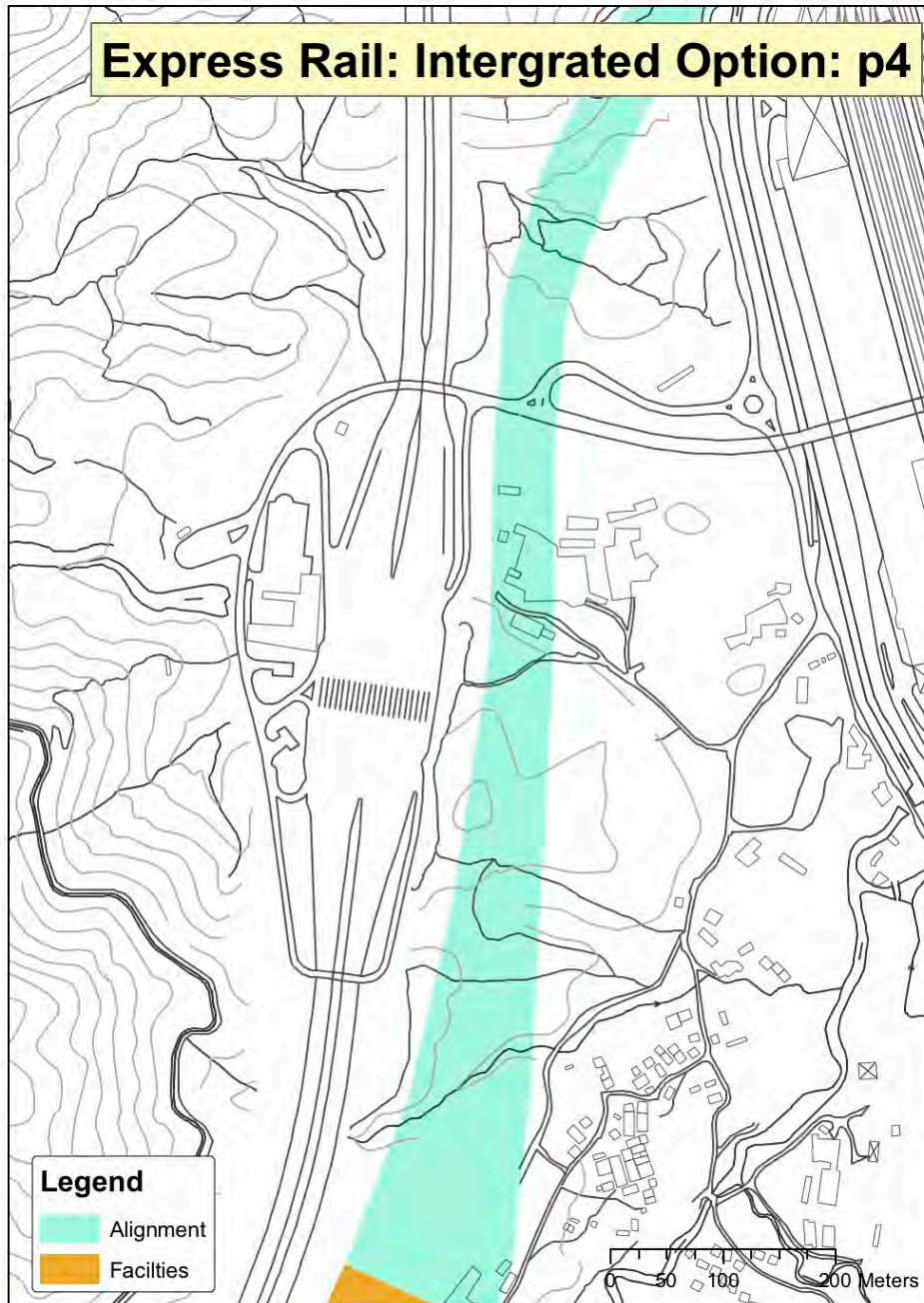
## Express Rail: Intergrated Option: p2





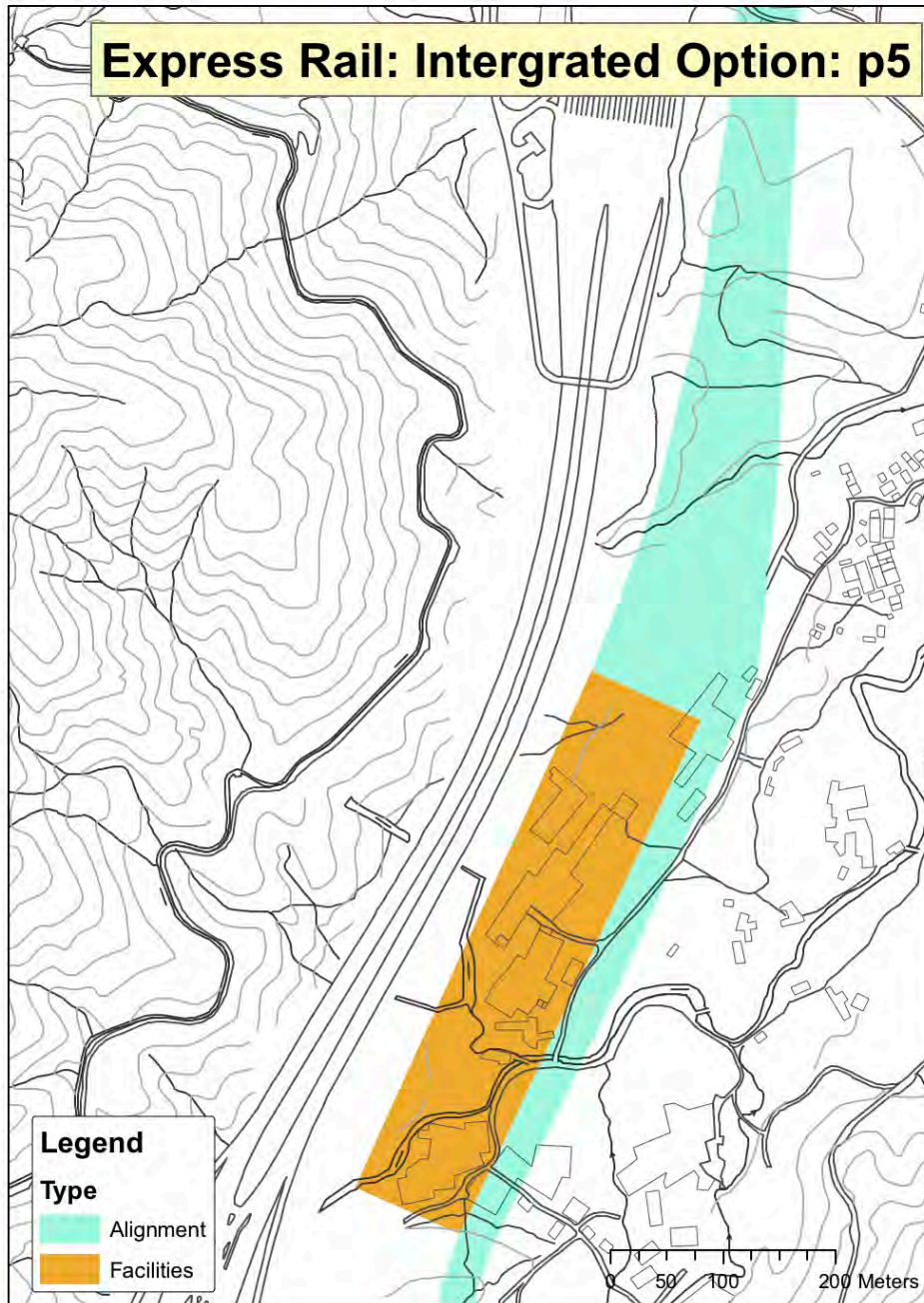


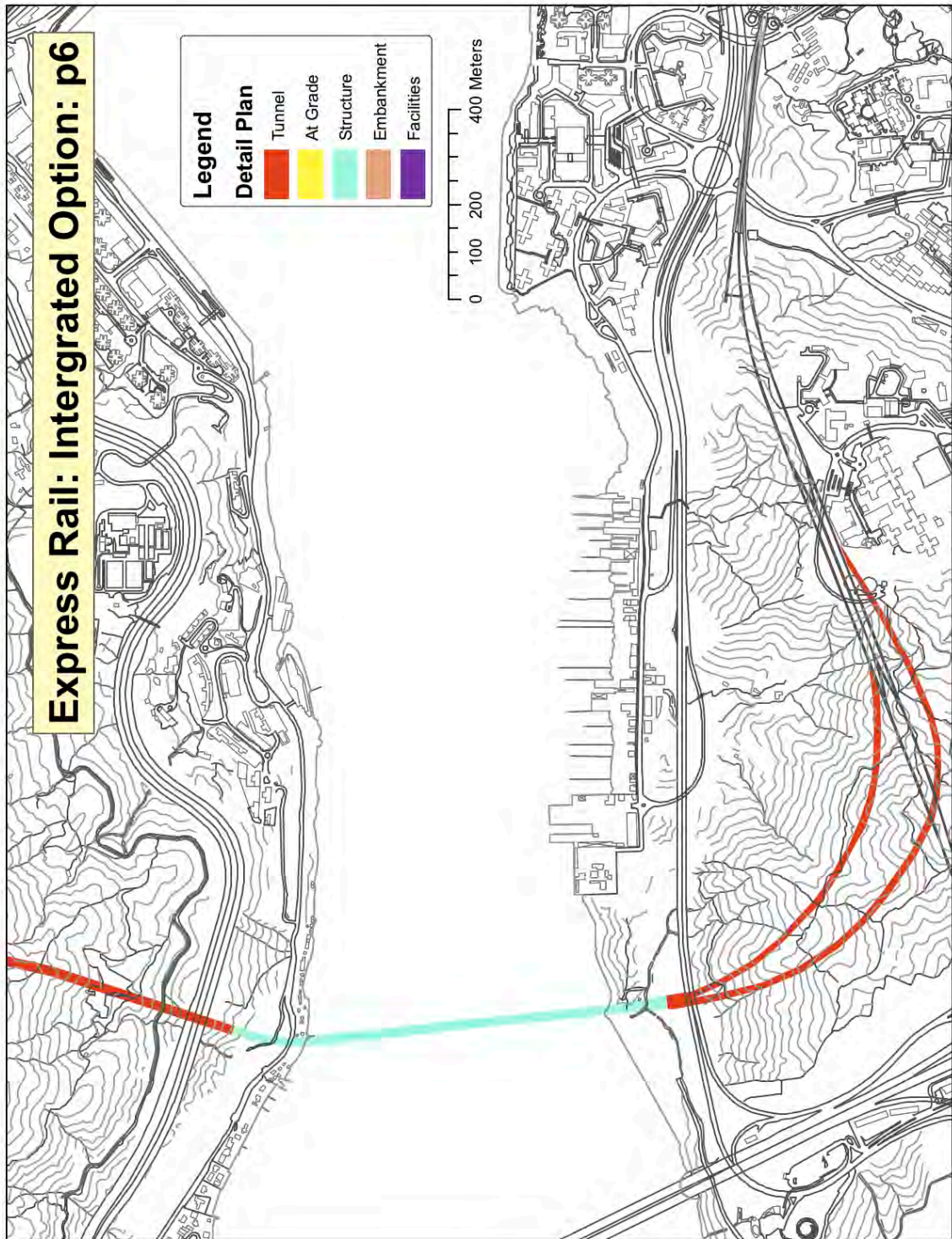
## Express Rail: Intergrated Option: p4





## Express Rail: Intergrated Option: p5







# 新高鐵專家組

## 答客問

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- 問01：你們支持還是反對興建高鐵？
- 問02：什麼是「貫通南北方案」？
- 問03：不把高鐵總站設於市區，會否感到市區搭客不便？
- 問04：西九總站不是有隧道連接九龍站的嗎？
- 問05：除了商務旅客和長途旅客之外，還會有誰會用得上高鐵？
- 問06：新方案建成後的票價如何？
- 問07：西九站方案已經完成了規劃、刊憲和環境評估，如果現在才重新開始，會否推遲高鐵的完工日期？
- 問08：新方案的高鐵總站有多少個月台？
- 問09：新方案的高鐵總站會如何與高速鐵路連接？
- 問10：新方案的高鐵總站有否預留位置興建附帶設施？
- 問11：新方案有否預留位置興建北環綫？
- 問12：新方案高鐵總站的選址會否刺激錦田一帶的城市發展？
- 問13：新方案會否破壞吉慶圍？
- 問14：從香港站乘坐「港島快綫」前往高鐵總站，是否需要在青衣轉車？
- 問15：來往高鐵總站和香港站的列車會否影響機場快綫的班次？
- 問16：港島快綫的估計造價是如何計算出來的？
- 問17：港島快綫會否需要自設車廠？
- 問18：港島快綫會否影響青衣北岸的船廠和青山公路一帶的房屋？
- 問19：新方案的高鐵車廠選址將會在哪兒？面積是如何計算出來的？
- 問20：新方案的高鐵車廠運作會如何和現有的八鄉車廠協調？
- 問21：相對於西九站方案，新方案會否涉及更多收地？
- 問22：菜園村在新方案中會否受到影響？
- 問23：誰是「新高鐵專家組」？
- 問24：為什麼你們選擇現在站出來？
- 問25：怎樣可以知道更多新方案的信息？

## 甲、總綱

問 0 1：你們支持還是反對興建高鐵嗎？

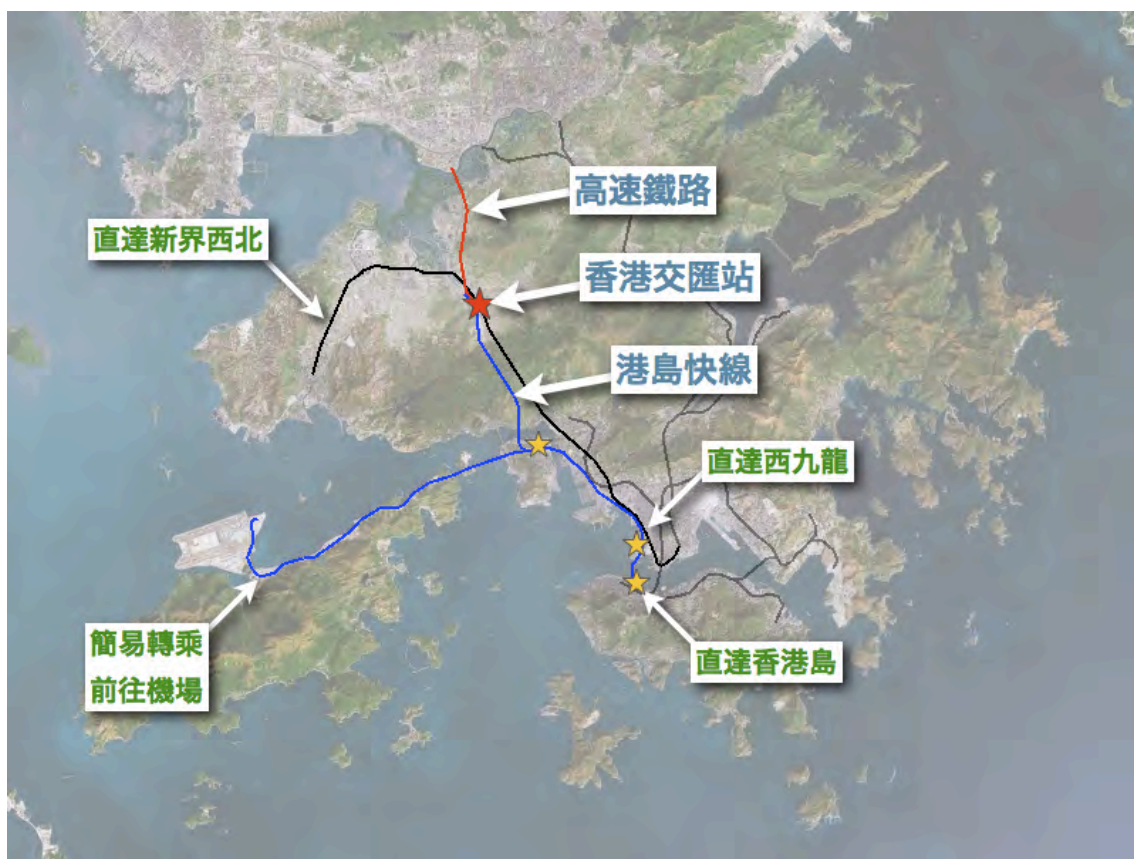
答 0 1：我們支持興建高鐵。我們認同香港連接全國高鐵網絡的策略需要。

我們所反對的，是設總站於西九龍的設計。政府現有的高鐵方案問題眾多：高鐵香港段的造價為 6 5 2 億，超過沙中綫、南港島綫和西港島綫的總和，也足夠興建兩條青藏鐵路。每公里的造價也達 3. 2 億美元，是全世界最貴的英法跨海隧道的 4 倍，更是正在興建的京滬高鐵的 1 3 倍。

然而因為西九龍總站的選址錯誤和接駁差劣，不利多數香港人前往，西九龍總站建成後，更會為該區帶來嚴重的交通問題。而從社會和環境去看，整個項目都不符合可持續發展。眼見西九站方案成本高昂卻效用成疑，我們認為寶貴公共資源應可更用得其所。

問 0 2：什麼是「貫通南北方案」？

答 0 2：「貫通南北方案」的提出，是要為香港市民和政府提供另一個選擇，以更平的造價提供更快和更好的高鐵服務。新方案包括兩部分：首先，我們會擴建現有的錦上路站為高鐵總站，向北接駁內地的高鐵網絡。同時，我們會把機場快綫由青衣分支延至高鐵總站，是之為「港島快線」。這個車站的特點是：一個車站大堂、三條接駁綫路、接通內地 香港。我們稱這個車站為「香港交匯站」。



問 0 3：不把高鐵總站設於市區，會否感到不便於市區的搭客登車？

答 0 3：不會。新方案對市區搭客同樣便利。

高鐵是否方便，並非全取決於總站的位置，更在於總站的設計是否便於旅客到達其最終目的地。西九站方案的問題，在於西九龍總站的交通接駁差劣，旅客難以轉乘其他交通工具。

按環境影響評估的圖則，在西九站方案當中，旅客於高鐵總站完成入境程序後，要先向上爬十一層到車站大堂，再穿過九龍站上蓋商場的通道，之後向地底走九層，才能轉乘東涌綫往中環；整段路程需要步行 1 2 分鐘，也即是現時中環和香港站之間轉線需時的兩倍。就算我們相信政府最新提出的改善接駁措施，也需要 8 至 1 0 分鐘。無論對「時間就是金錢」的商務旅客，或是帶同大型行李的長途旅客，政府的方案均是極不吸引。

新方案當中，由於整個「香港交匯站」是以三合一方式設計和建造，大大減低了轉線所需的時間。旅客於高鐵總站完成入境程序後，步行 2 分鐘便可前往乘搭「港島快綫」，無需轉車便能直接從到達香港站。相對於政府的方案，新方案能更快把旅客帶到香港的商業金融中心：香港站。下列的數據顯示，如果選用西九站方案，從到香港站到深圳需時 3 1 分鐘；新方案的需時 3 0 分鐘，與政府的方案相若。

當然，旅客隨了乘搭港鐵接駁外，也可以從西九龍乘搭的士到中環。經實地考察，由香港站乘搭的士經西隧前往未來西九龍總站的位置，不計算於西九龍和中環的交通擠塞，約需時 1 1 分鐘（車資連同隧道費為一百二十元），再假設日後從站內步行至的士站需時 2 分鐘，即總計需時為 2 7 分鐘，仍然和經「香港交匯站」乘「港島快綫」相若。再者，這種依賴路面運輸的安排既違反高鐵作為環保交通的原則，也會加劇西九龍和中環的交通擠塞。

從深圳前往香港站	政府的方案	新方案
高鐵行程	1 4 分鐘	7 分鐘
步行至接駁線路	1 2 分鐘	2 分鐘
乘搭本地列車至香港站	5 分鐘	2 1 分鐘
總計需時	3 1 分鐘	3 0 分鐘

西九龍總站和香港市區的空間距離雖近，時間距離卻相當遙遠。[高鐵的理念，正如政府的發言人所說，是要更快地把兩個城市的中心連結起來。然而按照這個政府自己提出的標準，新方案卻比政府的方案更為優勝。](#)

問 0 4：西九總站不是有隧道連接九龍站的嗎？

答 0 5：按照政府提交油尖旺區議會的文件，橫跨連翔道之行人隧道將不會接通九龍站，旅客需先返回地面才可進入九龍站的範圍。對於該隧道能否直接接通九龍站大堂，政府表示尚在研究當中。

問 0 5：除了商務旅客和長途旅客之外，誰會使用高鐵？

答 0 5：高鐵是香港社會的一項重大投資，理應能直接惠及越多的香港居民越好。

按照上述的計算方法為全港 1 8 區高鐵乘客估計所需時間逐一推算，結果顯示全港 6 9 8 萬居民當中，新方案有 2 9 4 萬人使用新方案比西九站方案便捷；使用西九站方案比新方案便捷的，則只有 1 3 5 萬（見附表一及附圖一）。

在此，有兩個案例是值得一提的。首先，現時不少來往內地和香港的跨境直通巴士均由旺角鴉蘭街和運動場道出發。由這兩個地方前往西九龍總站，並不如想像般的方便。搭客要先乘荃灣綫前往尖沙咀站，步行 1 1 分鐘轉往尖東站後，然後轉乘西鐵綫至柯士甸站，再步行 5 分鐘至西九龍總站。加上過關和高鐵的行程，全程需時 5 6 分鐘，對於原來於乘搭跨境直通巴士的旅客明顯缺乏吸引力。然而如果選用新方案，全程需時則可減至 5 3 分鐘。

另一個例子，則是居住元朗一帶的居民。設於西九龍的總站對他們來說，毫不吸引。然而新方案中從元朗到邊境，連同過關也只需要 2 9 分鐘，與乘坐小巴到皇崗口岸不相上下。也就是說，新方案即使對於新界西北的居民來說，也同樣具競爭力。

新方案的造價只是 2 5 0 億，比西九總站方案便宜超過一半。相對於新方案，政府堅持要全港市民一齊多花數百億建站西九龍，卻換來一個九龍中的旅客僅僅快五分鐘，港島區的旅客沒有好處，新界區的旅客卻被完全排除在外的結果。

問 0 6：新方案建成後的票價如何？

問 0 6：新方案的票價會低於西九站方案的票價。

票價的釐定取決於三個因素：建造成本、營運成本和旅客數目。

建造成本方面，新方案的預計造價為 2 5 0 億，遠遠低於西九站方案的 6 5 2 億。新方案的造價是基於香港政府最新公開的工程造價，按工程所需逐項計算出來。新方案造價低的主要原因，是無需如西九站方案般興建一個深入地底，有如三十個旺角站的大型總站，而新開掘隧道的長度也遠遠來短得多。此外，由於無需興建二十多公里長的隧道，所以也無需要興建緊急救援站，再節省一筆費用。

此外，新方案的設計有利減低營運成本。西九站方案當中，列車落客後的空車要佔用高鐵隧道駛回設於車站以北十多公里的列車停放處，不利營運效率。新方案的列車停放處則會設於車站以南約四公里處，連結路線不和高鐵重疊，提高了營運效率。新方案的整體工程規模比西九站方案細，建成後的維修費用也較低。新方案中的「香港交匯站」以三合一方式運作，也會減低管理營運的成本。

如上文所述，新方案比西九站方案更有利於大多數香港居民乘搭，也即是潛在乘客更多。乘客數目增加，更多乘客攤分建造和營運開支的固定成本，有助降低每位乘客所需付出的票價。

新方案的另一優點，是乘客可以選用不同服務前往市區。如果乘客選擇「港島快綫」，則可享用等同機場快綫的舒適服務，到達香港站的旅程比西九站方案更為便捷舒適；如果乘客較重視票價，則可選擇使用既有的港鐵網絡。現時港鐵連接錦上路和香港站之成人八達通收費為二十元八角。

問 0 7：西九站方案已經完成了規劃、刊憲和環境評估，如果現在才重新開始，會否推遲高鐵的完工日期？

答 0 7：不會。相反，新方案有可能早於西九站方案完工。新方案的啟動雖然會比西九站方案遲，卻同樣可於 2 0 1 5 年建成，甚至有可能比西九



站方案更早完工，這是因為新方案的工程規模和難度遠遠比西九站方案要來得低。

新方案並不需要任何新的工程技術，香港的工程業界能勝任有餘。以穿越大欖的隧道為例，穿越同一地段的隧道已有兩條（西鐵綫及三號幹線），業界對該區的地質結構經已相當了解。高鐵總站的設計也遠遠比政府設於西九龍的方案來得簡單，可以大大縮短施工所需的年期。

以下為新方案的預計施工時程：

項目	需時
設計、刊憲與環評	1 年半
土木工程	3 年
系統建築	1 年
應急安排	半年
總計	6 年

## 乙、香港交匯站

問 0 8：新的高鐵總站有多少個月台？

答 0 8：「香港交匯站」當中的高鐵總站將會設有六個長途線月台和四個短途線月台，合共十個高鐵月台。

新方案的月台數目比西九站方案中的西九龍總站為少，是因為新方案的高鐵總站運作比西九站方案更有效率。於新方案當中，列車從高鐵總站的北面進站，落客後便立即可以從南面駛離，所有清潔車廂廁所和補充餐點的工作都無需在站內進行。列車停留在站內的時間越短，每個月台就便能處理更多的列車班次。

問 09：新方案的高鐵總站會如何與高速鐵路連接？

答 09：高铁總站以北將會有一段扇形路軌，把高铁列車引領到各個月台。此路段將大約設於現時西鐵錦田大樓的位置，不會影響民居。離開扇形路段後，高速鐵路將於錦田河附近穿過現有的西鐵高架橋。就此，專家組已設計了數個工程上可能的選擇。

問 10：新方案的高鐵總站有否預留位置興建附帶設施？

答 10：現錦上路站以東已有路面交通交匯處，供公共巴士、的士和旅遊巴士停泊。我們可在高铁總站或路面交通交匯處興建上蓋，提供餐飲購物和多層停車場。如有需要，也可動用錦上路站東南面的土地。

問 11：新方案有否預留位置興建北環綫？

答 11：「香港交匯站」的設計保留了現時的西鐵錦上路站東面的北環綫預留位置。北環綫通車後，「香港交匯站」將會成為四綫轉乘的綜合車站。屆時由上水、粉嶺一帶經「香港交匯站」乘坐高铁長途列車，將會比經羅湖口岸和深圳地鐵到深圳福田站乘坐更為方便。

問 12：新方案高铁總站的選址會否刺激錦田一帶的城市發展？

答 12：高铁總站設於錦上路，提升錦田一帶城市發展的潛力。如果市民支持，可在車站附近作適度發展，減輕市區的土地壓力。如果市民認為錦田應該保留農村風貌，只要政府當局有效規劃和管理，則可以有序開發。

新方案的另一優點，是無論在建造過程或日後的營運都可為新界西北帶來大量的就業機會，順帶刺激當區的本土經濟。

問 13：新方案會否破壞吉慶圍？

答 13：不會。「香港交匯站」與吉慶圍的直線距離約四百米，鐵路走線和吉慶圍也沒有任何重疊之處，不會為該處帶來任何直接影響。至於私人發展的影響，由於吉慶圍屬一級歷史建築，政府有責任盡一切努力予以保存。

## 丙、港島快線

問 14：從香港站乘坐「港島快綫」前往高鐵總站，是否需要在青衣轉車？

答 14：不需要。「港島快綫」的運作模式，類似東鐵綫的落馬州支綫。屆時由香港站開出的列車，會由同一月台出發，分別開往機場和「香港交匯站」。

「港島快綫」與機場快綫共用設施的一大好處，是可把市區登機的模式引進高鐵長途列車。舉例說，如果旅客要乘坐晚上的通宵列車前往北京，可以下班後先把行李拿到香港站或九龍站辦理托運手續，然後在市區吃晚飯和消遣，再乘「港島快綫」到「香港交匯站」登車。

問 15：來往高鐵總站和香港站的列車會否影響機場快綫的班次？

答 15：不會。現時機場快綫的班次，受制於青馬大橋的設計限制。基於安全規定，青馬大橋同一時間只容許一班列車通過。至於青衣和香港站之間的路段，一方面有四組路軌、又沒有類似青馬大橋的限制，所以列車班次的容量也較多。因此，就算日後因為機場的發展和港珠澳大橋通車，以致機場快綫的班次增加至青馬大橋可接受的最高水平，青衣和香港站之間的路段仍然會有剩餘容量供來往香港站和「香港交匯站」之間的列車使用。

問 16：港島快綫的預計造價是如何計算出來的？

答 16：港島快綫的預計造價是 70 億元，此造價是按照現時政府工程造價計算出來的。相對來說，和「港島快綫」隧道段地理位置相若的西鐵綫大欖隧道，其造價為 17.9 億，該數字包括與開掘隧道無關的其他工程。而在新方案當中，我們已預留了 22 億開掘隧道。因此，我們有信心 70 億是一個合理的預計造價。

問 17：港島快綫會否需要自設車廠？

答 17：不需要。機場快綫的小蠔灣車廠有足夠的容量給予新增的機場快綫和「港島快綫」列車。

項目	造價 (元)
隧道	22 億
跨海橋	8 億
連接路段	5 億
架空車站	15 億
系統	20 億
總計	70 億

問 18：港島快綫會否影響青衣北岸的船廠和青山公路一帶的房屋？

答 18：不會。港島快綫的走線將不會經過青衣北岸的船廠和青山公路一帶的房屋。

## 丁、高鐵車廠選址

問 19：新方案的高鐵車廠選址在哪兒？該選址的面積是如何計算出來的？

答 19：新方案的車廠選址將會設於「香港交匯站」以南，三號幹線大欖隧道北面入口的東側。車廠將會包括 8 條 520 米長的路軌供列車停放，和 4 條 480 米長的有蓋路軌供列車維修。這些路軌連同所需的機電和控制設施，約需闊 100 米的空間。

問 20：新方案的高鐵車廠怎樣和現有的八鄉車廠協調運作？

答 20：連接高鐵總站和高鐵車廠之間的路段，將會興建一條分支接駁現有的八鄉車廠。接駁兩條線路的目的，是要方便停放在八鄉車廠的工程車輛有需要時可以駛進高鐵路段協助維修工作。

高鐵的客運列車將不會駛進八鄉車廠，也不會影響八鄉車廠於沙中線通車後的服務容量。

## 戊、收地安排

問 21：相對於西九站方案，新方案會否徵收更多土地？

答 21：收地問題之所以重要，在於其社會影響。因此，問題的重點該是涉及土地的質量而非數量，和方案中空間利用的效益。

「香港交匯站」的大部分範圍建於現西鐵錦上路站以西的露天停車場之內。在露天停車場以南，有少量位處農業地段的農地和村屋。「香港交匯站」的範圍內現時並無類似菜園村的大型居民聚落。

建議車廠選址的現有主要土地用途為豬場、廢置房屋和回收物料儲存場，並無類似菜園村的大型居民聚落。

按照初步點算，我們預計新方案影響約 50 戶民居，遠低於菜園村的 150 戶。新方案的造價已包括收地所需的預算。

問 2 2：菜園村在新方案中會否受到影響？

答 2 2：新方案的走線、車站和車廠的位置都不會經過菜園村。相對於西九站方案，菜園村一帶的民居和農地於新方案中可全數保留。

## 己、新高鐵專家組

問 2 3：誰是「新高鐵專家組」？

問 2 3：專家組由一群關心香港社會發展的學者和專業人士組成，成員有：熊永達博士、黎廣德工程師、梁啟智博士、吳永輝先生、龐婉儀小姐、泰萊工程師和司馬文先生。他們來自不同的專業背景，但都對香港的城市發展議題有深入的認識。以資深鐵路工程師泰萊為例，他在香港過去二十年的鐵路規劃中扮演關鍵角色，曾直接參與鐵路發展策略的編制規劃工作。公共專業聯盟為專家組提供了研究支援。

問 2 4：為什麼你們選擇現在站出來？

答 2 4：其實專家組的成員一直都十分關注高鐵。公共專業聯盟於一年前就撰寫報告提出新高鐵總站設於錦上路可改善新界西北的經濟和就業；司馬文先生在年初就在立法會提出了西九總站轉線困難；梁啟智博士和熊永達博士則於年初開始參與幫助菜園村的村民。很不幸，我們的努力未有得到政府的正面回應。今次來自不同專業的學者和專業人士走在一起，希望能把高鐵的討論帶回擺事實、講道理的基礎之上。

問 2 5：怎樣可以知道更多新方案的信息？

答 2 5：如果想知道更多新方案的信息，或是希望支持我們的工作，歡迎登入我們的網址：

<http://betterrail4hk.org/>

註釋



答 1：沙中綫的造價為 3 7 4 億、西港島綫的造價為 1 5 4 億、南港島綫的造價為 7 0 億；  
青藏鐵路於 2 0 0 1 年的總投資額為 3 3 1 億人民幣，按當時匯價折為 3 1 2 億港元。

附表一：西九站方案和新方案的時間距離參照（往深圳、分鐘算）

地區	參照港鐵站	西九站方案	新方案	時間差	新方案更佳
屯門	屯門	52	25	-27	是
元朗	元朗	41	14	-27	是
北區	上水*	63	35	-28	是
大埔	大埔墟*	53	40	-13	是
沙田	沙田*	40	40	0	接近
西貢	將軍澳	63	62	-1	接近
荃灣	荃灣西	31	17	-14	是
葵青	葵芳 / 青衣	35; 35	19; 29	-16; -6	是
觀塘	觀塘	52	56	4	否
黃大仙	黃大仙	42	47	5	否
九龍城	九龍塘	33	40	7	否
油尖旺	太子 / 尖東	41; 23	38; 30	-3; 7	接近
深水埗	深水埗	41	36	-5	是
離島	東涌	48	40	-8	是
中西區	香港	31	30	-1	接近
灣仔	灣仔	41	41	0	接近
東區	柴灣	61	61	0	接近
南區	海怡半島	47	48	1	接近
機場	機場	43	33	-10	是

基本設定：

西九總站轉綫至九龍：12分鐘

西九總站轉綫至柯士甸：5分鐘

香港交匯站內轉綫：2分鐘

青衣站內轉綫：1分鐘

香港交匯站至青衣：10分鐘

西九總站巴士轉乘：5分鐘

沙田乘巴士至西九龍（八號幹線轉三號幹線）：20分鐘

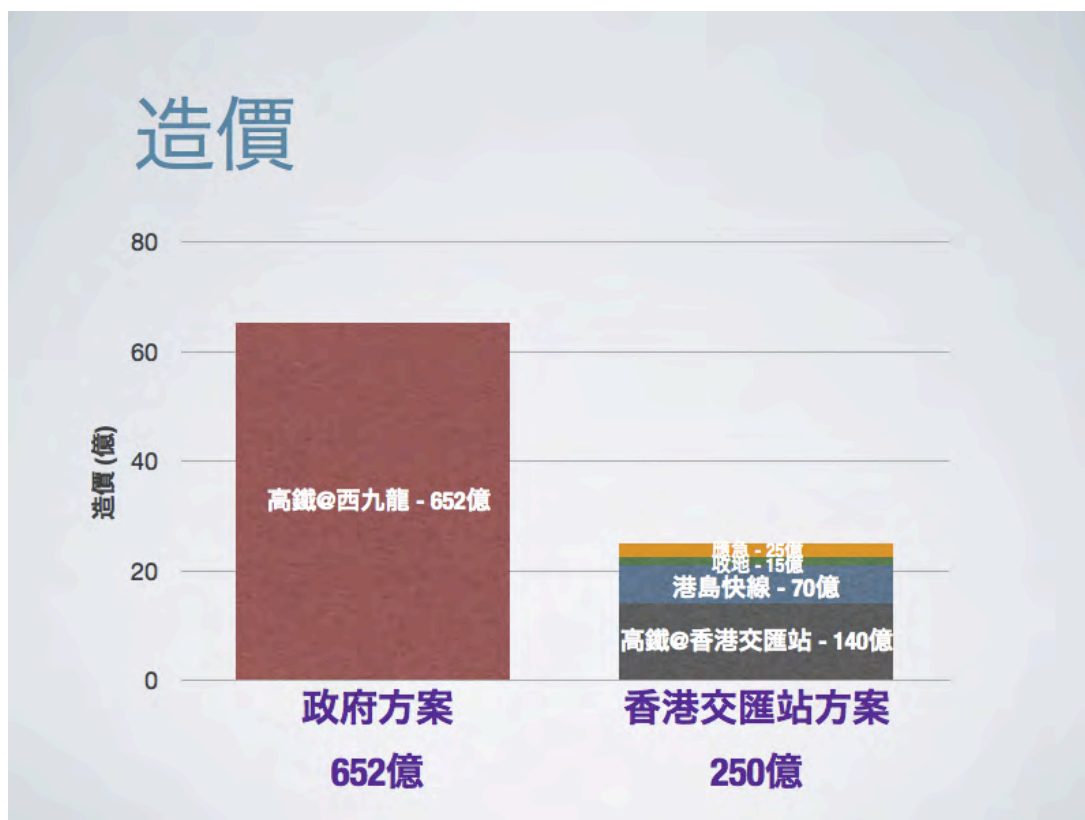
沙田乘巴士至香港交匯站（九號幹線轉三號幹線）：30分鐘

大埔乘巴士至香港交匯站（林錦公路）：30分鐘

上水乘巴士至香港交匯站（九號幹線）：25分鐘

海怡半島至金鐘：9分鐘

# 附件一：詳細造價預算



## Estimated Costs

The costs for the Alternative Integrated Option have been estimated by measuring the key components and using current unit rates. Generous allowances have then been made for the minor items which cannot be measured in detail.

This is a common approach for arriving at an overall estimate but does not necessarily give an accurate estimate of the individual quoted items without detailed explanations of what is included in that item.

The resulting estimates, expressed in HK\$Bn, are:

	Express Rail Link	Hong Kong Island Express	Totals
Tunnels	4	2.2	6.2
Bridge		0.8	0.8
At Grade	1	0.5	1.5
Station	4	1.5	5.5
Depot	2		2
Systems	3	2	5
Resumption and Compensation			1.5
Contingencies			2.5
Total			25

This estimate does not include for road improvements remote from the terminus which may be deemed to be necessary and a further \$2Bn should be allowed for these possible works.

These resulting estimates have then been compared with the total project costs for other recent railway projects including the published estimates for the Express Rail Link to West Kowloon.

These projects include:

- Lok Ma Chau Spur
- Kowloon Southern Link
- West Island Line
- South Island Line
- Shatin Central Line

All of these projects differ in the number and type of stations as well as the other items of non-railway work included in the projects. For example, the West Island Line includes a new swimming pool complex for Kennedy Town. As a result a direct comparison of costs based on the length of the project is not possible. However making adjustments for the scope of the various projects confirm that the overall estimate of HK\$25 for the Alternative Integrated Option is reasonable.

The best comparison is with the published estimates for the Express Rail Link to West Kowloon which is \$53.7Bn for the “railworks” and a further \$11.5Bn for “accessibility of terminus and neighbouring districts”.

The length of tunnels and the Rambler Channel Bridge for the Alternative Integrated Option are 13.5km in length, just over half of the 26km of tunnel for the West Kowloon Option. The station for the Integrated Option is above ground and its cost will be less than a quarter of that for the West Kowloon Station which it is reported accounts for half of the cost of Government’s scheme.

The depot for the Integrated Option is much simpler than the combined rescue centre and depot required for the West Kowloon Option thus reflecting a cost of less than half for this element. The resumption is a fraction of that required for Choi Yuen Tsuen and other locations.

Overall the work for the Integrated Option is less half that for the West Kowloon Option giving a comparable cost for the Integrated Option of about \$20Bn. The estimated cost, obtained by measuring the major items with generous allowances for the minor items, gives the estimate of \$25Bn for which a further \$2Bn should be allowed for road improvements remote from the station location. This estimate is therefore considered to be reasonable.

## 附件三：預期收地安排



## 預期影響

預計受直接影響民居總數約為 50 戶。預計馬鞍崗村、旭日花苑、高埔村和下高埔村之居住地將不受直接影響。

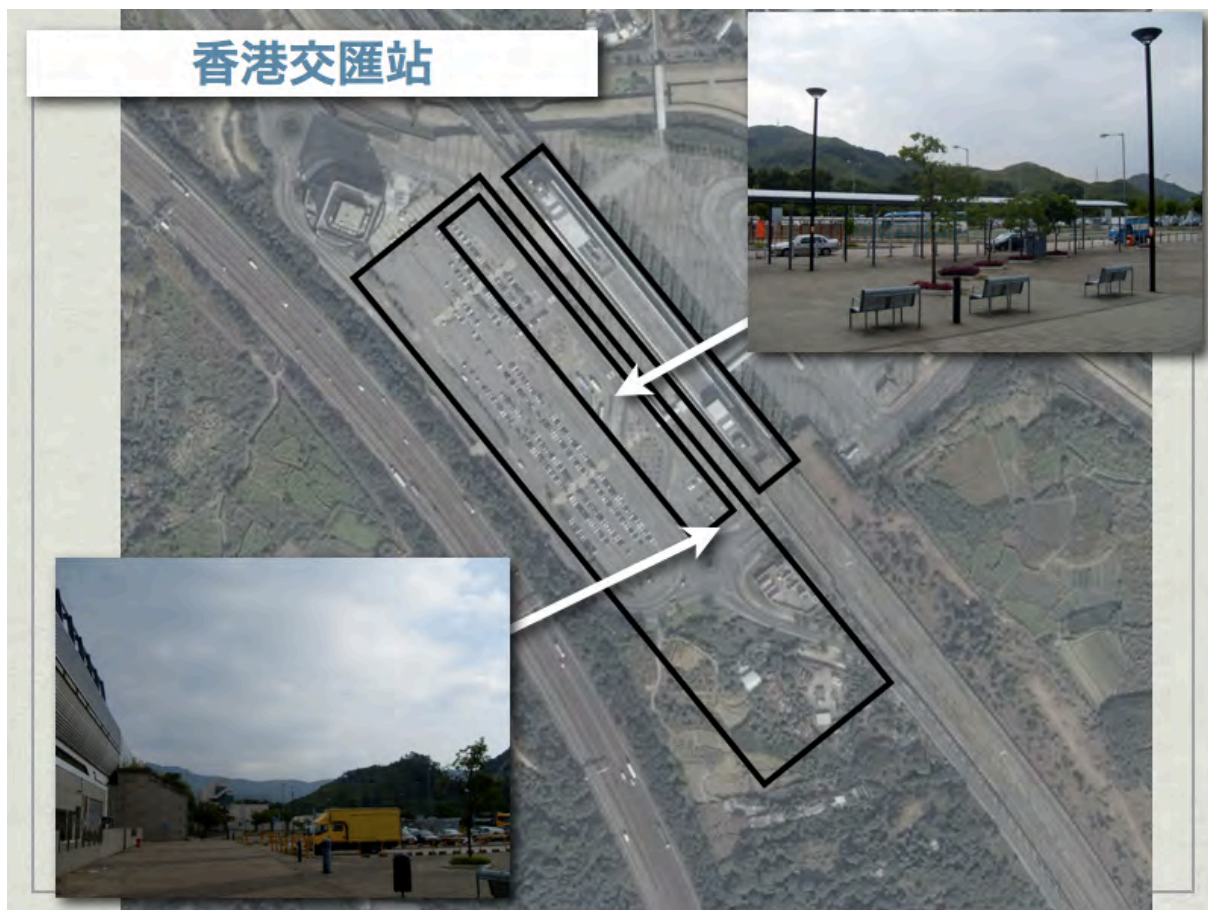
政府當局早前對新方案之收地估計完全脫離事實。

專家組於十月十二日與政府及港鐵代表會晤，提出初步走線概念，並未談及詳細走線設計。及後，政府及港鐵代表拒絕再與專家組會面，專家組無從直接提供詳細走線設計。政府代表一方面基於對新方案的理解不足，同時又受到政治上的壓力，對新方案作出甚為粗疏的假設，包括認為錦田河需於建造期間大規模改道。基於此等粗疏假設，政府大幅提高了收地範圍、社區影響、建造成本和建造時程的估計。專家組已於十一月一日於民主黨的會面中當場指出該等假設全數出於對新方案的誤解，錦田河無需因為興建新方案而改道，然而政府及港鐵代表拒絕聆聽。

專家組重申其詳細走線設計於工程上可行。政府當局對新方案的收地範圍、社區影響、建造成本和建造時程的估計全數不乎實際情況。



香港交匯站



建議車廠





# 附件四：機場快線班次評估

## Description of the Capacity

Across the Tsing Ma Bridge, the Airport Express and the Tung Chung Line trains use the same pair of tracks. The design of the bridge limits the frequency of trains crossing the bridge to about one train in each direction every 135 seconds.

Between Tsing Yi and Kowloon, the Airport Express and the Tung Chung Line trains run on separate tracks thus providing more capacity than on Lantau.

On the Tung Chung Line, some of this additional capacity is used for supplementing the basic Hong Kong / Tung Chung service with a Hong Kong / Tsing Yi service.

Currently the additional capacity on the Airport Express line is not used and hence there is spare capacity on that line for the proposed Hong Kong / Kam Sheung Road service.

A line with no stations has a higher capacity than a line with stations as the capacity of a line is governed by the time a train is stationary at a station platform. Between Kowloon and Hong Kong the Airport Express and the Tung Chung Line trains share the same pair of tracks, but trains do not stop over this length of track. There is thus capacity over this section for the services on both lines.

## Services

The Hong Kong Island Express runs between Hong Kong and the Hong Kong Interchange at Kam Sheung Road making use of the Airport Express tracks between Hong Kong and Tsing Yi and a dedicated pair of tracks between Tsing Yi and Kam Sheung Road.

In addition to the Hong Kong Island Express, Government has indicated that consideration has also to be given to a rail service to the transport interchange for the proposed Macau – Zhuhai Bridge terminal. This rail connection would be a spur line off the existing Airport Line thus there would be three rail services on Lantau, the Airport Express, the Tung Chung Line and that serving the Macau – Zhuhai Bridge. This latter service would use the Tung Chung Line tracks between Tsing Yi and Kowloon thus serving Lai King, Nam Chung and Olympic Stations in addition to the Tung Chung Line stations at Tsing Yi, Kowloon and Hong Kong.

It is proposed that every 10 minutes there would be one Airport Express train, one Macau – Zhuhai Bridge train and two trains from Tung Chung. This would result in 24 trains in the hour which is almost the limit that can be carried by the Tsing Ma Bridge.

The four tracks between Tsing Yi and Kowloon provide capacity for one Hong Kong Island Express train (Hong Kong / Kam Sheung Road) and for one additional Tung Chung Line train (Hong Kong / Tsing Yi) every ten minutes in addition to the service crossing the Tsing Ma Bridge.

At Kowloon and Hong Kong Stations the Airport Express and the Hong Kong Island Express would use the Airport Express platforms, two trains every 10 minutes, equivalent to 12 trains per hour - one less than the design capacity of 13 trains per hour. The Tung Chung Line trains and those serving the Macau – Zhuhai Bridge would use the Tung Chung Line platforms, four trains in 10 minutes, equivalent to 24 trains per hours - less than the design capacity of 27 trains per hour.

## 現時繁忙時間班次 (每小時)

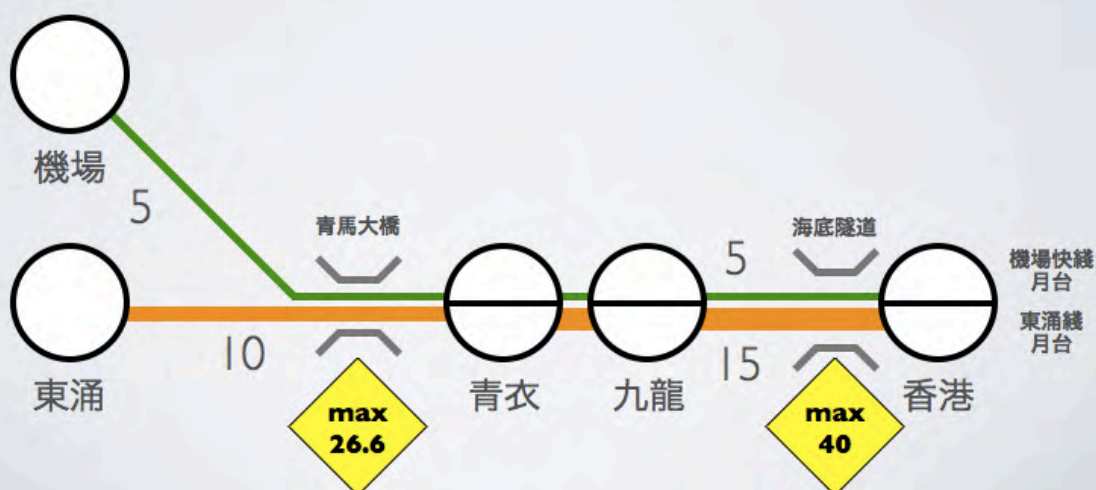
每 12 分鐘重覆

東涌線往東涌

機場線

東涌線往東涌

東涌線往青衣



## 我們的建議班次 (每小時)

每 10 分鐘重覆

港島快線

東涌線往東涌

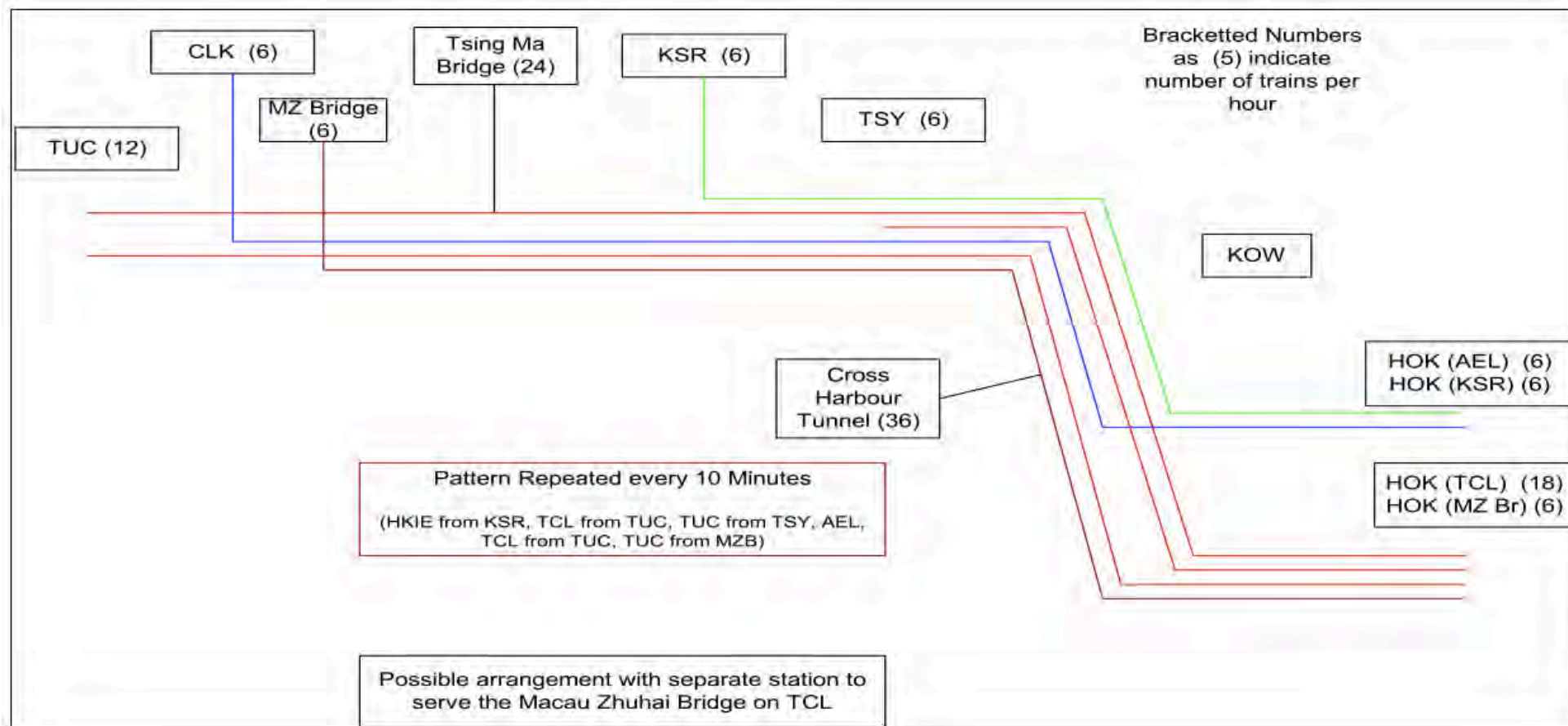
東涌線往青衣

機場線

東涌線往東涌

東涌線往港珠澳





# 附件四：回應政府對專家組方案之質疑

## Responses to Government's Assessment of the Integrated Option

### Government Studies

Government considered and rejected at terminus for the Express Rail Link at Kam Sheung Road. Did they ever consider a station on the west side of West Rail or was their investigation confined to a station on the east side of West Rail?

Did Government ever consider providing a spur from the Airport Line to Kam Sheng Road thus enabling an express service to Hong Kong Island and to Chek Lap Kok?

The answer given informally is No to both questions, hence does Government not consider that their studies were too limited and they did not investigate all of the viable options?

Have Government undertaken any simulation to assess the Express Rail Link terminating at Kam Sheung Road WITH the Hong Kong Island Express Link?

### Location of the Terminus

Government has stated that they wanted a City Centre location for the terminus for the Express rail Link and they have selected West Kowloon. Do Government consider West Kowloon to be "City Centre" and the "Heart of Hong Kong"?

If so why do their studies show that 95% of all travellers need to take a further means of transport to reach their final destination? Does not this confirm that West Kowloon is not at the City Centre, nor is the Heart of Hong Kong?

Is not the overall journey time to the final destination much more important than a quick journey to the station and then a slow final journey to the final destination?

Has Government considered the overall journey time in their assessments or have they been only concentrating on the train journey time to arrival at the station platform?

### Capacity on the Airport Railway Line

Government has suggested that there is a lack of capacity on the Airport Railway to carry the Hong Kong Island Express service.

Have they appreciated that on Lantau there are only two tracks to carry both the Airport Express Line and the Tung Chung Line, whereas between Tsing Yi and Kowloon the Airport Express Line and the Tung Chung Line have their own tracks, thus providing more capacity? While some of that spare capacity on the Tung Chung Line is used by the service between Hong Kong and Tsing Yi, there are no such additional trains on the Airport

Express Line and it is that spare capacity which enables the Hong Kong Island Express service to operate within the overall capacity of the system.

### Perceived Technical Problems

Government have stated that there are “several obvious technical problems” with the alternative scheme. What are these as the only technical problem raised by Government is a perceived lack of capacity on the Airport Railway? We have clarified that there is adequate capacity on the Airport Railway and the Government Engineers were not aware of how the capacity on this line was determined.

### Costs

Government stated that the estimated cost for the Alternative Scheme at \$25Bn was a “Grave Under Estimate”. Meanwhile their own estimates have risen first to \$39.5Bn and now to \$53.7Bn with an extra \$11.5Bn for roadworks.

Given that the Alternative scheme only has half the length of tunnel, and that the above ground terminus is significantly cheaper than the deep underground West Kowloon Station, does not the Government concede that an estimated cost of about half that of the Government’s scheme seems reasonable?

[Other matters to appreciate are the reduced resumption and hence costs, the deletion of the underground rescue centre and a simpler depot – these offset the cost of the Rambler Channel Crossing].

### Programme for Construction

Government has stated that the start of construction on the project would be delayed by three years by the implementation of the alternative scheme. While such a delay is not agreed, has Government appreciated that the time for construction for the alternative scheme is significantly less than for their scheme and with a far lower risk of programme overrun? Has Government appreciated that, as a result, there would be no delay in the opening date, and the cost would be significantly less.

Government has accused the Alternative Scheme adopting a shared corridor, a scheme which was rejected by Government.

Has Government appreciated that the Alternative Scheme does not adopt a shared corridor for the Express Rail Link? It runs in its own corridor to a Terminus at Kam Sheung Road with a depot to the south.

Has Government appreciated that the Crossing of the Rambler Channel need not be as high as that of the Ting Kau Bridge as the level of that bridge was determined by the level of the Tsing Ma Bridge, Tuen Mun Road and the approaches to the Tai lam Tunnel?

The level of the Rambler Channel Bridge will be governed by the height of shipping required to pass under, which is a lesser height than for the Tsing Ma Bridge.

Has Government appreciated that no shipyards on Tsing Yi will be affected and that the Yau Kom Tsai Water Treatment Plant will not be affected either as the crossing about one kilometre to the west?

Does Government appreciate that, with the crossing to the west of Approach Beach, the gradient between Tsing Yi station and the Rambler Channel Crossing will be less than 2%.

## Operations

Can Government clarify why the Terminus at West Kowloon has 9 tracks for Long-haul trains and 6 for Short-haul services?

Are Long-haul trains to be stabled and serviced within the station as opposed to being moved to a separate depot / area as is the standard practice for operating Long-haul trains?

How many additional platforms does this require and what is the incremental cost of their provision in this deep underground station?

Would Government agree that these inefficient operations are a result of locating the station at West Kowloon as oppose to another location where the trains can be serviced away from the station?

## **Response to Government's so called 6 Deadly Sins**

"The group's idea is very preliminary without any supporting feasibility study. It is based on connecting a small section of the cross-boundary express rail to the domestic rail network. This fails to meet the fundamental concept and standard of the express rail," he said.

The scheme gives the majority of passengers a faster overall journey time than by locating the Terminus at West Kowloon thus it enhances the fundamental concept and standards of express rail. The scheme has supporting data but Government seems unwilling to consider it.

Some fundamental problems of the counter-proposal include the following:



*1) Locating the terminus at the northwestern part of the New Territories means that commuters have to switch for the domestic rail link before they can reach the city centre. The failure to provide the convenience of direct connection between city centres will greatly reduce the attractiveness of the project.*

Passengers arriving at West Kowloon will have to switch to other means of transport to reach their final destinations. Government's own estimates give 50% using the domestic rail service to continue. Those to Hong Kong Island and the Airport will have an inconvenient interchange. Many continuing by road will be subject to road congestion

By locating the terminus at Kam Sheung Road AND providing a direct link to Hong Kong Island via a spur line off the Airport Railway will give many more people better access to and from the Express Rail Link and thus enhance its attractiveness.

*2) Shared use of existing rail tracks of the Tung Chung Line and Airport Express Rail to provide transfer for cross-boundary passengers will seriously undermine the capacity of these two links to meet future growth in passenger demand resulting from the development of the airport and the opening of the Hong Kong-Zhuhai-Macao Bridge, to the detriment of the overall development of the rail network.*

This comment by Government continues their lack of understanding of the capacity issues of the Tung Chung Line and the Airport Express Rail as demonstrated at the one meeting held to discuss the proposals for the Alternative. As explained at the meeting, the proposal still allows the full use of the capacity to serve the Airport and the Kong-Zhuhai-Macao Bridge as that capacity is limited by the capacity restraints imposed by the two tracks across the Tsing Ma Bridge. The proposal makes use of some of the spare capacity between Tsing Yi and Kowloon, where there are four tracks for the Tung Chung Line and the Airport Express Rail. The scheduling of all the services has also been addressed to confirm the feasibility of the proposals.

*3) About 500 households will be affected by resumption or clearance if the terminus and related facilities are to be located at Kam Sheung Road, more than three times the existing number of Choi Yuen Tsuen households affected by the Government's proposal.*

It would appear that the 500 households are the estimate for the earlier Government schemes for a station at Kam Sheung Road. As explained to Government the scheme is very different and locates the terminus on the west side of West Rail and, as a result, the number of households affected by the scheme is about 50.

*4) There is a grave under-estimation of the construction cost in the absence of concrete data to*

*back up the counter-proposal's estimate and design.*

Government cost for the railway related works is now \$53.7Bn for a railway with 25 km of tunnels and a large deep underground station in West Kowloon. The alternative scheme has about half the length of tunnel and only one, very much simpler and cheaper, above ground station and hence our costs are consistent and reasonable.

*5) There is a lack of feasibility studies of the most basic type in the face of several obvious technical problems.*

Government has not enabled the necessary dialogue for them to appreciate that the feasibility of the scheme has been proved. Nor have Government been able to identify any technical problems which would affect the scheme's feasibility.

*6) The project will be delayed for at least three years, the time of resolving the technical problems not included, since all planning procedures have to start afresh.*

Construction of our scheme will be much quicker than that for Government's scheme since the scope of works is less and construction can commence on several work fronts at the same time. Delay to the start of construction will be compensated by the shorter construction time.

The spokesman said that the Government's proposal for the Hong Kong section of the XRL project was the result of years of discussion and study by the Administration in conjunction with the Legislative Council and professionals, adding that it had obtained the general support of the community and was already at the final planning stage.

Government's study only considered one location for a station at Kam Sheung Road which is different from that now proposed. Government did not consider a spur off the Airport Railway to provide a fast service to the "heart" of Hong Kong Island. Government's studies were thus deficient. As there has not been any public consultation on the project it is not possible for Government to claim general support for their scheme. The escalating cost has undermined support for the scheme and thus it is only appropriate that cheaper alternatives are considered. The scheme proposed performs better than Government's scheme for about half the cost.

# 附件五：報章評論

## 黎廣德：高鐵西九總站的七宗罪

2009-10-20

2016年，一位北京國企的總裁來港參加公司上市酒會，預訂了中環五星級酒店。他聽說專為高檔商務旅客而設的香港高鐵站新落成，於是在深夜從北京站上車，10個小時車程，剛好在清早上班時間抵達西九龍總站。他過關後，拿着行李，從8層樓深的地底月台到達地面，用了5分鐘跑到接車處，司機早已恭候。他滿心歡喜地乘車離開，怎料原本預計10分鐘便可到中環的車程，在離開西九站，轉上西隧前已經堵塞了5分鐘，抵達干諾道中時又再碰上中環繁忙時段，堵了5分鐘。他到酒店後質問下屬，為什麼不乾脆從西九站轉乘東涌線列車到中環站？他的下屬只好說出實情：從西九站往九龍站轉車需要步行12分鐘，一上一落共有20層樓深，實在不適合他飽受飲宴折磨的身形，恐怕他屆時更會一肚子氣。

如果你是這位北京總裁，會否發誓日後來港，只乘飛機、不坐高鐵？

或者你會說，高鐵不是為高檔商務客而設，理應服務普羅大眾。果真如此，我們便應仔細思考，西九總站是否方便分佈全港的市民和旅客的最佳選址。

政府辯稱全球大城市的高鐵均直達市中心，所以西九總站是最佳選擇。這說法本身不符事實，內地16個大城市的高鐵站，其中有10個建於市郊，包括上海、廣州、廈門等，又例如每天載客10萬人、接駁法國第一條高鐵的全國第二大城市里昂，選址均遠離市中心區，證明了選址決策必須顧及當地實際條件。

### 「直達市區」得不償失

由於過去市區規劃造成的局限，西九總站有「七宗罪」，使「直達市區」變成得不償失。

### 第一宗罪：造價高昂

正由於西九站位於市區，必須從港深邊界興建26公里長的隧道直穿而入，為車站挖出450萬立方米的泥土，又由於須在地底施工，不能分期興建，車站容積相當於建造30個旺角地鐵站；其造價之高，足以令香港取得「全球最貴鐵路」的健力士紀錄。即使運輸局放風，準備用「創意會計」手法把部分工程款項剔除，聲稱造價「只」上升至500億元，但即使真的如此，也已經是目前全球每公里造價最貴的英法海底隧道高鐵的3倍。

### 第二宗罪：接駁困難

目前西九已經有兩個車站：服務東涌線和機場快線的九龍站，及西鐵線的柯士甸站。由於過去地鐵和九鐵兩家公司互不咬弦，兩個車站相距大半公里，西九站夾在兩者之間，猶如孤島，無法興建相連的大堂。所以由西九站往九龍站轉車，須往上行達11層樓之深，再走約半公里之遙，穿過「圓方」商場，再往下9層樓才抵達月台，常人須用

上12分鐘。這是從中環站到香港站的兩倍時間，對拿着沉重行李和年長的旅客來說，便是活受罪，究竟這種設計是「吸客」還是「趕客」？

### **第三宗罪：路面擠塞**

目前西九區內柯士甸道至廣東道的路口，在繁忙時間已經非常擠塞。這個死結早在交通模型中預計，但因為當年停止在海運大廈對開填海，梳士巴利道無法接通到西九，所以九龍站一帶道路變成死角。即使將來多加一些沉降式路段，仍難免有經常大塞車的風險。政府預計使用西九站的人流中有一半利用路面交通，即是額外增加每天5萬人出入，再加上西九文化區的車流，使西九站的惡劣影響，數倍於時代廣場在銅鑼灣造成的交通死結：一次錯誤規劃，便足以使油尖區的交通萬劫不復，而在6年施工期內的交通改道，也足以令全區商、住戶叫苦連天。

### **第四宗罪：受惠人少**

政府估計，使用西九站的旅客只有5%會步行至目的地，等於宣布每天9萬多旅客都要大費周章，轉乘其他列車或汽車，才能抵達目的地。公共專業聯盟提出的「貫通南北方案」（註），指出西九站只能使約40萬港人受惠，但如將高鐵總站設於錦上路，再新建一條港島快線從錦上路接駁青衣站出市區，卻可以讓全港400多萬人更快抵達目的地，包括前往赤鱗角機場、新界、中環和港島的所有旅客和市民。

### **第五宗罪：浪費土地**

由於從邊界到市區均須全線使用隧道，為安全起見，政府必須在中途設置露天救援站，因此需要徵用石崗菜園村20多公頃的土地。菜園村村民為此失去家園和耕地，卻連一個方便新界居民使用的車站也沒有着落。這等於用兩倍土地，只換來一個市區車站。對寸金尺土的香港來說，極度浪費資源。

### **第六宗罪：效率奇低**

長途列車到站後必須清潔整理，但由於西九站面積狹小，列車須空車駛往石崗的停放處，清理後再空車跑16公里回到西九站載客。這種安排既霸佔了車軌容量，更浪費能源。效率降低的結果是營運成本增加，要不提高票價，要不由政府補貼，對乘客和納稅人都沒有好處。按照北京交通大學趙堅教授的分析，政府須向京津線高鐵的每程乘客補貼20至30元，才能維持營運。即使香港高鐵情況不比京津線更差，政府仍須每年補貼10億元。

### **第七宗罪：妨礙西九**

西九站地底的路軌須往南延伸，佔用了西九文化區內4公頃的土地。由於這片土地是西九文化區從尖沙嘴的入口，車站施工時不但使文化區的「大門」位置在6年內無法建設，更使建築設計受到極大的掣肘。市民希望西九文化區早日落成的願望又再落空。

### **政府面子成最大障礙**

西九總站直達市區的優點顯然得不償失，政府考慮替代方案，自是責無旁貸。本着專業智慧、全民共享的精神，公共專業聯盟成立高鐵專家組，成員包括過去20年來指導政府規劃鐵路網的資深顧問。專家組推出新方案，估計能節省公帑250至300億元，既避開菜園村，又使400多萬市民受惠，更因工程簡單、施工期短兩年，只要政府決心推動，便可以如期於2015年落成，毋須延誤。但政府與專家組只召開了一次會議，一方面拒絕提供技術數據，另一方面表示新方案不可行。

專家組邀請政府成立聯合小組，聘請獨立顧問深化方案。只須用一個月的時間，便可換來為市民節省300億元的機會。虛心聆聽、客觀求證，是市民對政府官員的起碼要求。但願曾蔭權政府這次不要以「數夠票」的心態硬闖，特首的面子重要，還是社會的長治久安更重要？

註：「貫通南北方案」詳情可參閱公共專業聯盟網址：[www.procommons.org.hk](http://www.procommons.org.hk)

作者是公共專業聯盟主席

## 梁啟智：讓事實說話 西九才是「吊腳站」

30-oct-2009

【明報專訊】新高鐵專家組早前提出新的高鐵方案，設香港交匯站於錦上路，並以機鐵延線接駁九龍和香港島。運輸及房屋局副局長邱誠武早前於本報撰文，批評專家組的替代走線，並為政府的西九總站方案辯護。然而細看局方所羅列的理據，卻恰恰證實了西九總站選址之劣。如果局方所說的是事實，我們應該齊來反對西九總站才對。

專家組同意興建高鐵，不同意的是總站選址。西九總站的選址問題，包括工程技術、交通接駁，以及社會和環境影響。篇幅所限，這兒只集中討論西九總站的選址如何既排除了新界數以百萬計的潛在旅客，同時也不便於市區出發的旅客接駁轉乘。

筆者早前和一眾媒體按照環境影響評估的圖則實地考察，發現從西九總站步行至九龍站需時12分鐘，兩線轉乘極為不便。據局方的回應所述，設計人員提出了改善接駁兩站的方法，可把轉乘需時減至8至10分鐘。局方正視轉乘困難的問題，筆者甚感欣慰。然而此一新增數據，並無助改變西九總站選址錯誤的事實。

讓我們打開一張香港地圖，18區中每區找出一至兩個港鐵站為代表，推算從該處經西九總站和香港交匯站前往深圳的需時。推算方法相當簡單，只要把高鐵行程加上總站轉乘的需時，再加上港鐵網站所述的本地乘車需時即可，讀者也可以在家中算一次。基於疑點利益歸於對方的原則，我們姑且暫時相信經設計改善之後，從西九總站往九龍站需時8分鐘，往柯士甸站則需時2分鐘。

新方案仍比西九總站方案優勝

筆者把兩組結果放在一起，發現就算我們引用局方最樂觀的數據作參數，新方案仍然比西九總站方案優勝。於全港18區當中，有8區使用新方案較佳，7區兩者相若，只有3區是西九總站方案優勝（不過也只比新方案快約5分鐘）。從人口分佈出發，有300萬市民選用新方案較為便捷，而西九總站方案較為便捷的則只有100萬。

本地鐵路轉乘不便，轉用路面交通又如何？從西九總站乘搭的士經西隧前往中環國際金融中心，單程需時11分鐘，收費120元。加上從深圳起算的高鐵行程和總站轉乘的時間，則全程需時27分鐘。相對說，新方案使用機鐵延線直達中環，全程需時同樣是27分鐘。不過，這搭的士的安排既沒有考慮中環和西九龍的塞車問題，也沒有考慮西隧高昂的隧道費是否人人負擔得起。



筆者相信局方還會尋找各種理由，設法嘗試質疑專家組的總行程需時推算。然而無論局方如何在上述的推算中加一分鐘減一分鐘，都不會改變一個基本事實：對於市區的旅客來說，兩個方案並無明顯分別；對於新界的旅客來說，新方案卻明顯更為便捷。

局方為求過關，向媒體列出各式各樣憑空猜想的數字來抹黑專家組的新方案，本是意料中事。然而這次筆者動用局方自己提出的數據，仍能證明新方案勝過西九總站方案；也就是說，局方這次是自己證實了自己的選址錯誤。事實已經擺在眼前，請市民和議員好好選擇。

(註：詳細的推算數據可於網址 <http://betterrail4hk.org/> 取得。)