長春社 Since 1968
The Conservancy Association
會址：香港九龍吳松街 191-197 號突破中心 9 樓
Add.: 9/F Breakthrough Centre, 191-197 Woosung Street, Kowloon, Hong Kong.
電話 Tel.: (852) 2728 6781 傳真 Fax: (852) 2728 5538
電子郵箱 E-mail address: cahk@conservancy.org.hk 網址 Website: www.conservancy.org.hk

優化北環線方案

長春社呈交立法局環境事務委員會及交通事務委員會意見書

2002 年 1 月 24 日

摘要

總括來說，長春社建議的優化北環線具備下列優點：

一、 每日分流十五萬人次、減輕東鐵的擠塞：在 2011 年，預計每日經鐵路過境的人數達三十九萬人次。優化北環線可分流十五萬人次，則東鐵只需照顧約廿四萬人次（目前，東鐵每日載客量約為廿五萬人次）。

二、 全港四成人口得益：居住在香港西面的人口，包括屯門、元朗、荃灣、葵青、深水　、油尖旺、中西區等，在 2001 年，這七個區的人口已達二百六十萬，佔香港約四成人口。

三、 交通時間縮短十至三十八分鐘，全年為旅客縮短一千五百萬小時：優化北環線的交通時間，視乎不同區域，每程縮短十至三十八分鐘（表一）。全年可為旅客縮短一千五百萬小時，若以 2001 年入息中位數計算，每年可為本港節省九億港元。

四、 完全避免破壞塱原：不興建落馬洲支線，可完全避免任何工程對塱原可能構成的破壞。

五、 百億港元留為他用：不興建落馬洲支線而省下的百億港元，可用作自然保育及解決其他經濟及民生問題。

六、 優化北環線可及時完成：根據西鐵建設的經驗及政府興建西部通道的計劃，優化北環線可在 2007 年建成，不會晚於塱原支線的預定完成時間。現在最急切需要的是政府的決心。

The Prioritized Northern Link (PNL) Option

Submission by **The Conservancy Association** to
LegCo Panel on Environmental Affairs and LegCo Panel on Transport
24 Jan 2002

1. On 13 December 2001, The Conservancy Association presented to the LegCo Panel on Environmental Affairs and LegCo Panel on Transport its Prioritized Northern Link (PNL) proposal, which connects the West Rail Kam Shung Road Station to Lok Ma Chau Station. The completion of PNL – originally named Northern Link (NOL) – is originally scheduled for 2011-2016 in the Railway Development Study II (RDS-II), to cater for the increasing cross border traffic.
2. This paper is to supplement further justifications for the PNL. We shall compare the benefits and costs of the PNL versus the Sheung Shui to Lok Ma Chau Spur Line. We sincerely urge the policy makers of Hong Kong to seriously revisit the PNL, which we believe is more cost-effective and in line with the principle of sustainable development.

Ease Congestion at Lo Wu

3. In year 2000, the average daily cross boundary passenger figure at Lo Wu Terminal is 240,200[1]. The figure varies from 236,000 on weekdays to 278,000 on weekends. It even reaches 300,000 on certain festive days.
4. The current bottlenecks at Lo Wu mainly occur at the immigration hall, rather than on the trains, and can thus be tackled by increasing immigration manpower resources in the short term.
5. Other relief measures include improvements of Lo Wu station facilities and the Lo Wu Footbridge, expansion of the passageway to the Departure Hall and automated passenger clearance system.
6. In RDS-II, it is projected that daily two-way cross boundary trips by train will reach 424,900 in 2011. In order to cater for the future growth[2], as well as to ensure safety and satisfactory service to customers, it is necessary to provide another railway link across the boundary.
7. Both the proposed spur line and PNL will be able to serve this purpose, that is, to provide another cross boundary railway linkage to Huanggang through Lok Ma Chau.
8. However, for the Lok Ma Chau Spur Line proposal, all rail riders still have to travel on the East Rail to Sheung Shui before changing over to the Lo Ma Chau Spur Line. The

[1] According to 2001 September Monthly Traffic and Transport Digest, Cross Boundary Passengers at Lo Wu Terminal in 2000 is 86,472,363 (Arrival and Departure)

[2] A double digit growth of cross boundary passengers is anticipated. The actual annual througput had 14% to 23% increase in the past two years.

interchange means part of the congestion at Lo Wu is transferred to Sheung Shui, rather than removed. Cross boundary traffic is still inconvenient for Southwest and Northwest New Territories (SWNT) (NENT) residents, who will need to take shuttle bus, a less environmentally friendly mode of transport, to Sheung Shui or other East Rail stations, whether they will be crossing the boundary at Lo Wu or Lok Ma Chau.

9. If PNL is built, it is highly likely that over 40% of the East Rail passengers may switch to the West Rail, which provides 10 stations for the SWNT and NWNT residents. Details are explained in the next section. Passenger traffic will thus be more completely diverted.
10. Therefore, it is highly likely that PNL can better resolve the congestion at Lo Wu Terminal.

Benefits to South-west and North-west New Territories residents

11. PNL is about 12 km long with three stations, Au Tau (AUT), Ngau Tam Mei (NTM) and San Tin (SAT).
12. With less stops and thus shorter travel time along West Rail and PNL (Table 1), passengers, especially those residing along the West Rail stations, will take West Rail to Lok Ma Chau, thus easing the congestion at Lo Wu Terminal.
13. The following seven districts will especially benefit from the early construction of PNL: Sham Shui Po, Kwai Tsing, Tsuen Wan, Yuen Long and Tuen Mun, Yau Tsim Mong and Central & Western districts.
14. Based on the latest 2001 Population Census, these seven districts have a total population of 2,587,974 which already accounts for 39% of Hong Kong's total population.
15. Based on the latest statistics on Cross Boundary Passengers at Lo Wu Terminal from November 2000 to October 2001 (that is 88,639,101 trips), assuming the same proportion of passenger will use rail, there will be nearly 40 and 55 million trips by rail to the Mainland from these seven districts in 2006 and 2011 respectively. All these trips will benefit from West Rail and PNL.
16. We estimate that these trips will have a time saving of 10 to 38 minutes, depending on the originating districts. These time savings will generate a total of savings amounting to HK$661 million in 2006 and HK$907 million in 2011 respectively (Table 2&3).

Additional Benefits

17. The above statistics do not include cross boundary passengers who make use of the Lok Ma Chau, Man Kam To and Sha Tau Kok Control Points and those taking Huanggang Cross Boundary Shuttle Bus Service. They altogether amount for 12.1% of the total cross boundary passengers, that is, about 13,821,225 from November 2000 to October 2001, or an average 38,394 daily throughput. Therefore when the West Rail and PNL comes into operation, a certain proportion of these passengers using other check-outs may also be lured to travel by rail.
18. One further point to note is that the majority of bus passengers, about 83%, are recorded as

using the Lok Ma Chau control point. These bus passengers may well be attracted to the better and faster service of the West Rail and PNL.

Timeliness

19. An easy excuse for not building PNL is that it is not scheduled to be implemented until 2011, possibly because it is to tie in with the development of the towns along PNL. The Spur Line, on the other hand, serves to expedite the development of Kwu Tong new town. However, the development of the Kwu Tung new town is now much slower due to the current property market situation. Even if it were not, a shorter spur line from the PNL to this new town would be possible. From the point of view of timeliness, there is no reason why an East Rail Spur Line is superior to the PNL.
20. Based on our understanding, a railway project usually takes 6 years for completion. Examples show that projects which are given priority can be fast-tracked effectively. The 30.5 km West rail, for instance, started its detailed design in 1998 and construction began in 2000. It will be operational in 2003.
21. It should be noted that the PNL is only 12 km in length which is less than half of the West Rail alignment. In addition, compared with West Rail which is a combination of various alignment types including bored tunnel and viaduct, the PNL is currently planned to be mostly at grade and therefore is less likely to encounter technical difficulties.
22. In addition, the current progress of West Rail would allow the immediate availability of construction work sites and machinery plants. This can surely facilitate the PNL construction.
23. Examples of other major transport projects demonstrate that fast-tracking is indeed possible. The Western Corridor, a complicated infrastructure project involving the Mainland, is scheduled to be completed in 2005 while decision for Western Corridor was made only in 2001, thus giving only 4 years for completion.
24. In our view, the obstacles to PNL are mainly bureaucratic, and the arguments against it can be demolished with common sense. With the policy makers' determination and a rekindling of Hong Kong's "can-do" spirit, Hong Kong can have the PNL completed by 2007 – the completion date of the Lok Ma Chau Spur Line, if not earlier.

Environmental Benefits

25. The environmental impact assessment report of the Sheung Shui to Lok Ma Chau Spur Line Tunnel/Viaduct Option's is currently available for public inspection. It is claimed that with the use of an Earth Pressure Balance Tunnel Boring Machine (EPB TBM), potential impacts on the hydrological regime of Long Valley will be minimized.
26. Nonetheless, conservationists and green groups' concerns about the possible underground water loss and contamination are still not fully addressed.
27. More importantly, the fundamental problem as raised by the previous Spur Line dispute has

not yet been addressed, namely, the absence of a comprehensive conservation policy in general and a conservation policy for Long Valley in particular. With such a policy, any alternative option will at best be stop-gap and at worse lead to a lose-lose situation for transport and for the environment. Such conservation policy was promised for the end of last year but it has not been delivered yet.

28. To ensure sustainable growth, the comprehensive conservation policy should include an identification of conservation no-go areas. Long Valley, one of the largest piece of freshwater wetland, with over 200 bird species recorded, should no doubt be included as an absolute constraints in Hong Kong, that is, a no-go area.
29. In most developed countries, Total Avoidance Principle should be applied in absolute constraint areas.
30. Thus we believe that, given a very practicable PNL option, total avoidance principle is not so hard to achieve.
31. It should be noted that the PNL's alignment lies on the fringe of Lam Tsuen Country Park and although it cuts across mostly built-up areas, it is not totally out of environmental concerns. As it is currently planned to be an above-ground alignment, there is potential environmental impact which has to be addressed through the proper EIA process.
32. Some concerns include the direct loss and fragmentation of the remaining Sha Po Marsh and the impacts to the fishponds in San Tin. Some loss of natural woodlands, including those at Wai Tsai, San Tin and San Wai Tsuen will also be encountered.
33. However, compared with the ecological impacts to Long Valley by the Lok Ma Chau Spur Line, the impacts of building PNL appear, prima facie, to be much less significant.
34. Provided that principles of the Environmental Impact Assessment are maintained, those environmental impacts can be mitigated and compensated. Proper EIA report should be conducted to address those impacts.
35. To strike a balance between transport need and conservation, the best option would be the PNL. This option will enable the Total Avoidance Principle to be complied with, which should be applied to no-go areas, such as Long Valley.

Cost Comparison

36. The PNL will cost HK$9 billion (at 1998 prices) compared with the $10 billion of Lok Ma Chau Spur Line tunnel/viaduct option.
37. However, we should not simply compare these two figures. The NOL (i.e. PNL) is a committed project and its implementation is only a matter of timing. Therefore the $9 billion is committed spending. If the PNL is implemented now, the Spur Line will become redundant and $10 billion can be saved. The savings can be more productively used for conservation and other economic and social purposes.
38. Given the current economic downturn and government's responsibility to spend money wisely, the policy makers should be very cautious in allocating the public resources and

should never waste taxpayers' money.

Slowdown of Kwu Tung as a SGA (Strategic Growth Area)

39. Since the Second Railway Development Study, circumstances have changed a lot and many assumptions are no longer true. For instance, there is no longer the 85,000 housing target.
40. One of the reasons to build the Lok Ma Chau Spur Line is to provide a rail link to the Kwu Tung New Town. The Kwu Tung North is planned to have a population of 100,000 by 2011 while Kwu Tung South development is scheduled to take place beyond 2011. Nonetheless, given the change in the assumptions, the immediacy of such a rail-link is far less prominent, when compared with the need for rail links for the existing towns, such as Yuen Long, Tuen Mun, Tsuen Mun, Sham Shui Po and Kwai Tsing.
41. These residents will be even adversely affected if the Spur Line construction goes ahead as the Spur Line project could deter the start of the PNL further.
42. Meanwhile, it should be noted that the Kwu Tung SGA requires only about 15 minutes travel to Sheung Shui. It seems a very expensive $10 billion link for Kwu Tung and alternatives ought to be explored.
43. Public policies should always respond to changed circumstances and the development of Kwu Tung as an SGA should likewise be rationalised in view of current needs of the community.
44. This is not to oppose the development of Kwu Tung, merely to ensure that it is properly developed and caters to the needs of Hong Kong. Even at its full development (which should be a long time away from 2007), government can still pursue a short rail line to branch out from PNL to serve Kwu Tung.
45. In view of the above, we urge policy makers to reassess the priorities of the railway option to truly benefit the community and the greatest pool of people.

Conclusion

46. In line with the principle of sustainable development, policy makers should constantly examine new circumstances and to avoid reckless planning, which will result in higher cost for society.
47. It is ironic that while railway is a more environmentally friendly mode of transport which should be supported, it is being planned and implemented in a most environmentally unfriendly way, just as reflected in the Lok Ma Chau Spur Line case.
48. Once again we urge the officials to break down bureaucratic barriers and stay firm in its commitment to conservation and sustainable development.

Table 1 Comparison of Travel Time from Selected Districts to Lok Ma Chau by PNL and Spurline

表一 部份地區使用優化北環線及落馬洲支線的交通時間比較

Start At 起點	Travel time using West Rail and PNL 使用優化北環線的交通時間				Travel time using East Rail and Spurline 使用落馬洲支線的交通時間					Time Saved By Using PNL (min) 使用優化北環線可節省的交通時間 (分鐘)
	Travelling Time to Mei Foo Station (min) 往美孚的交通時間(分鐘)	Travelling Time to Kam Sheung Road (min) 往錦上路的交通時間(分鐘)	Travelling Time to Lok Ma Chau (min) 往落馬洲的交通時間(分鐘)	Total Travel Time (min) 總交通時間(分鐘)	Travelling time to Kowloon Tong (min) 往九龍塘的交通時間	Travelling Time to Kwu Tung (min) 往古洞的交通時間(分鐘)	Travelling Time from Kowloon Tong to Sheung Shui (min) 從九龍塘往上水的交通	Travelling Time from Sheung Shui/Kwu Tung to Lok Ma Chau (min)從上水/古洞往落馬洲的交通時間(分鐘)	Total Travel Time (min) 總交通時間(分鐘)	
Sham Shui Po 深水土步		13	13	26	10		30	7	47	21
Kwai Tsing葵青	12	10	13	35	16		30	7	53	18
Tsuen Wan 荃灣		6	13	19	20		30	7	57	38
Tuen Mun屯門		17	13	30		35		5	40	10
Yuen Long元朗		4	13	17		22		5	27	10
Yau Tsim Mong油尖旺	15	10	13	38	12		30	7	49	11
Central &Western 中西	20	10	13	43	18		30	7	55	12
Footnotes	(1)	(2)	(3)		(4)	(5)	(6)	(7)		

Footnotes

(1) Estimation based on travelling time from MTR stations in these districts to Mei Foo

(2) Estimation based on travelling time on p. 6 of The Way Ahead published by KCRC in 2001

(3) Estimated based on the travel distance on the PNL (12.8 km) and the travel speed (60 km/hour)

(4) Estimation based on travelling time from MTR stations in these districts to Kowloon Tong

(5) It is assumed that it takes 20 minutes by bus from Yuen Long to Kwu Tung. Travel time of 13 minutes from Tuen Mun to Yuen Long by West Rail.

(6) It is assumed that it takes 30 minutes by KCRC from Kowloon Tong to Sheung Shui.

(7) Estimated based on the travel distance on the Spurline (total length of 7.4 km) and the travel speed (60 km/hour).

Table 2 Comparison of Savings Using Prioritised NOL and Spurline in 2006 (Reference Case)

District	Population in 2001 (1)	% of Total Population in 2001 (2)	Estimated Daily Trips to Mainland (3)	Estimated Daily Trips to Mainland By Rail (4)	Travel Time using PNL (min) (see attached sheet)	Travel Time using East Rail & Spurline (min) (see attached sheet)	Time Saved per trip (min)	Total Travel Time Saved per day (hours)	Medium Monthly Income (HK$) (5)	Medium Income (HK$/hour)	Total Savings Million $/day
Sham Shui Po	353,550	5.3%	23,231	15,100	26	47	21	5,285	10000	57.69	0.30
Kwai Tsing	477,092	7.1%	31,349	20,377	35	53	18	6,113	10000	57.69	0.35
Tsuen Wan	275,527	4.1%	18,105	11,768	19	57	38	7,453	11000	63.46	0.47
Tuen Mun	488,831	7.3%	32,120	20,878	30	40	10	3,480	10000	57.69	0.20
Yuen Long	449,070	6.7%	29,508	19,180	17	27	10	3,197	10000	57.69	0.18
YauTsimMong	282,020	4.2%	18,531	12,045	38	49	11	2,208	10000	57.69	0.13
Central & Western	261,884	3.9%	17,208	11,185	43	55	12	2,237	13000	75.00	0.17
Total	2,587,974	39%	170,053	110,534				182,336			1.81
Annual Total			62,069,196	40,344,978				10,940,144			661

Footnotes

(1) From 2001 Population Census - Basic Tables for District Council Districts published by C&SD

(2) Total Population was 6,708,389 (from 2001 Population Census - Basic Tables for District Council Districts published by C&SD)

(3) The total cross boundary trips is based the reference case in Table 6.2, which is 440,800 Final Report of the Second Railway Development Study by MVA/Maunsell for Highways Department (2000)
It assumes that the projected daily trips is proportional to the population.

(4) Based on the year 2000 information in Table 10.1, Monthly Traffic and Transport Digest published by the Transport Department, 80% of the cross border trips are by rail.
It is further assumed the split of rail and non-rail cross border travel is the same in all districts.

(5) From 2001 Population Census - Basic Tables for District Council Districts published by C&SD

Table 3 Comparison of Savings Using Prioritised PNL and Spurline in 2011 (Reference Case)

District	Population in 2001 (1)	% of Total Population in 2001 (2)	Estimated Daily Trips to Mainland By Rail (3)	Travel Time using PNL (min) (see attached sheet)	Travel Time using East Rail & Spurline (min) (see attached sheet)	Time Saved per trip (min)	Total Travel Time Saved per day (hours)	Medium Monthly Income (HK$) (4)	Medium Income (HK$/hour)	Total Savings Million $/day
Sham Shui Po	353,550	5.3%	20,728	26	47	21	7,255	10000	57.69	0.42
Kwai Tsing	477,092	7.1%	27,971	35	53	18	8,391	10000	57.69	0.48
Tsuen Wan	275,527	4.1%	16,154	19	57	38	10,231	11000	63.46	0.65
Tuen Mun	488,831	7.3%	28,659	30	40	10	4,777	10000	57.69	0.28
Yuen Long	449,070	6.7%	26,328	17	27	10	4,388	10000	57.69	0.25
YauTsimMong	282,020	4.2%	16,534	38	49	11	3,031	10000	57.69	0.17
Central & Western	261,884	3.9%	15,354	43	55	12	3,071	13000	75.00	0.23
Total	2,587,974	39%	151,728				41,143			2.49
Annual Total			55,380,705				15,017,306			907

Footnotes

(1) From 2001 Population Census - Basic Tables for District Council Districts published by C&SD

(2) Total Population was 6,708,389 (from 2001 Population Census - Basic Tables for District Council Districts published by C&SD)

(3) The total cross boundary trips is based on the projection in Table 6.5, Final Report of the Second Railway Development Study by MVA/Maunsell for Highways Department (2000) i.e. 393,300
It is assumed that the projected daily trips is proportional to the population.

(4) From 2001 Population Census - Basic Tables for District Council Districts published by C&SD