

SELECTED EMPLOYMENT BENEFITS: West Island Line/South Island Line

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in cooperation with

Planarch Consultants Ltd

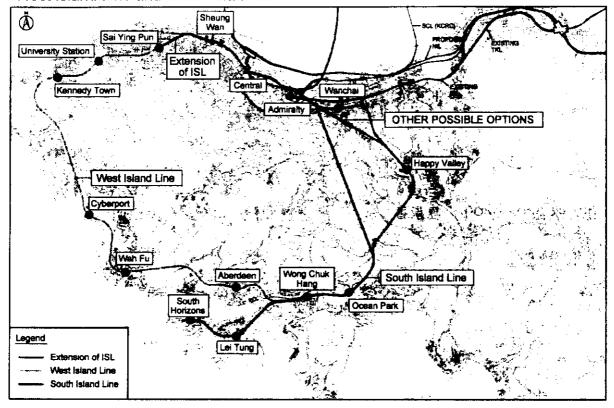
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(Source MTRC, 2004)

CONTENTS

Preface	iv
Executive Summary	v
I. Introduction	1
II. Redundancies: Transport rationalisation and economic	
restructuring in Wong Chuk Hang	3
III. Overview of selected employment benefits with the coming of the WIL/SIL A. Retail sales (and related employment) impacts in WIL/SIL	4
catchments due to property value increases (the 'wealth effect')	4
B. Hotels in Wong Chuk Hang	
C. Note on Ocean Park	
D. Re-development of Wong Chuk Hang	
IV. Conclusion	7
Table 1 Pessimistic estimates of selected new employment benefits	
Table 2 Optimistic estimate of new employment	
References	10



Preface

Quantifying economic impacts and specifically employment benefits of any large infrastructure project is never easy as it depends on the quality of the data available and assumptions inevitably must be made. Perhaps one thing that we can say with certainty is that there is no one perfect way to make such predictions.

It is precisely for this reason that when Civic Exchange was asked to assess what new employment opportunities could reasonably be expected to arise from the MTR Corporation Limited's (MTRCL's) West Island and South Island Lines (WIL/SIL) project that we decided to invite several experts to look at specific aspects of the matter so that we could compare the results and consider the cumulative effects. We stress that what follows is a partial assessment of the employment impacts of the WIL/SIL. In other words, the estimates we present here deal only with selected components.

In producing this report Bill Barron and Simon Ng drew together separate assessments provided by town planner Betty Ho of Planarch, economist Simon Ogus of DSG Asia and Andrew Taylor, a property analyst from Deutsche Bank, who have used their respective modelling methods to provide insights. We wish to especially thank Bill Barron, Simon Ogus and Andrew Taylor who provided their time pro bono on this assessment.

We hope that this study will assist decision-makers in assessing the viability and overall benefits of the WIL/SIL project to Hong Kong.

Christine Loh Chief Executive Officer Civic Exchange

May 2004

Executive Summary

Context

Hong Kong has several features that make rail a truly fundamental economic enabler. First, as a predominately service economy the need is to move *people* efficiently at the lowest costs (considering both direct and external [e.g., environmental] costs of doing so). Passenger travel is highly uneven, with sharp peaks. Hence, rail's high passenger carrying capacity is vital in minimising congestion bottlenecks at peak times.

Second, Hong Kong has the world's highest urban concentrations squeezed onto limited buildable land. As the population and economy expand, low-density sprawl is simply not an option. Urban passenger rail service allows the rapid and reliable movement of people despite extreme densities. Road transport performs far less effectively.

Rail has played a vital role of making much more of our congested urban space sufficiently accessible to allow commercial development. Without rail, Hong Kong arguably would not have so successfully made the transition from light manufacturing to a service economy. If congestion-prone roads were the sole means of transport and our service economy confined to Central and Tsim Sha Tsui, price pressures would have made Hong Kong highly uncompetitive as a service economy.

If we are to progress and expand our service economy, a greater portion of the urban area must be readily accessible and free of the type of road congestion that characterises urban Hong Kong today.¹

¹ This is a macro-economic perspective where rail indirectly expands the supply of feasible sites for commercial or residential uses. Expanding supply keep prices lower. Indeed, in a growing service economy failure to expand the supply of attractive sites leads to pressures for across-the-board prices increases. In contrast, in the WIL/SIL external benefits study (Barron, et al 3/2004), the approach was a micro-economic one looking at factors raising willingness to pay (demand) in a limited number of sites.

The important point is that by expanding the supply of attractive sites, rail service makes property prices overall more affordable then they would otherwise be. In a high-land-cost place like Hong Kong, this improves the competitiveness of the local economy.

Selected Employment Impacts

This report highlights selected components of new employment opportunities that could reasonably be expected with the coming of the WIL/SIL. Table S-1 shows our most pessimistic estimates. These are in addition to the 10,000 new jobs that the HKSAR Government projects for the Wong Chuk Hang centre. ²

Three types of employment are considered here:

- (1) That stemming from additional retail sales generated by the "wealth effect" of higher property values in the catchments;
- (2) Prospects for the six proposed hotels in Wong Chuk Hang³ actually being built (with and without the WIL/SIL); and
- (3) The speeding up and expansion of Wong Chuk Hang into a major commercial centre.

In addition, there are two further considerations:

- (1) The Government's projection of 10,000 new jobs in the Wong Chuk Hang area by 2016 is quite optimistic, unless there is a strong outside stimulus, such as that provided by rail service. In our high estimates (Table S-2) we credit half of these new jobs there to the coming of rail; and
- (2) Without rail, there are questions about the viability of Ocean Park after Disneyland opens in 2006. If Ocean Park were to run into financial problems, there could be issues of public subsidies or the loss of 1,000 jobs, (a number greater than the potential effects of the WIL/SIL on road transport operators).

² Planning Department, Territorial Population & Employment Data Matrices (TPEDM), 11/2003.

³ As we were preparing this report there were indications of additional applications for hotels or expansion of previous proposed sizes. This process may well continue. Hence, our estimates of hotel employment are those applicable at the time of data collection (mid Spring 2004).

Table S-1

Most pessimistic estimates of selected new employment benefits

	7, 250
Additional employment***	<u>6, 000</u>
Wong Chuk Hang hotels**	750
Retail-sales related*	500

^{*} A result of the "wealth effect" following higher property values in WIL/SIL catchments. ** Assuming three three-star hotels would be built even without the WIL/SIL and crediting the WIL/SIL with three additional three-star hotels actually being built and operated.

Table S-2
Optimistic estimates of selected new employment

Retail-Sales Related [‡]	1, 000
Wong Chuk Hang Hotels [♯]	3, 000
Additional Employment ***	<u>37, 000</u>
	41, 000 ****

[‡] Upper bound of retails sales new employment benefits.

While 40,000 new jobs in Wong Chuk Hang (Table S-2) associated with the coming of the WIL/SIL is optimistic, the minimum estimate of somewhat over 7,000 is almost certainly far too pessimistic. A reasonable, but still quite conservative range, for the above employment prospects attributable to the coming of the WIL/SIL is 14,000 to 22,000 jobs beyond what the Government currently projects.4

^{***} Above Government estimates due to more extensive re-development of Wong Chuk Hang with the stimulus of rail. It *excludes* hotel employment.

^{‡‡} Assumes none of the six hotels would be built without rail service. With rail all six are assumed to be built and some of these are of higher than three-star quality.

Assuming only half of the Government's projected employment increase in Wong Chuk Hang would take place by 2016 in the absence of rail service.

Exclusive of hotels above. Does not consider the possibility that WIL/SIL would make the difference between continued viability of Ocean Park (with roughly 1,000 jobs) and its closure in the face of competition from Disneyland. Nor does it consider rail-led new commercial development in WIL/SIL catchments beyond Wong Chuk Hang.

⁴ Basically we almost doubled the most pessimistic estimate and almost cut in half the optimistic one.

The dominant effect is the faster and more substantial transformation of parts of Wong Chuk Hang to a major commercial centre. A successful commercial area requires convenient and reliable transport. Arguably, this condition is not met by Wong Chuk Hang without rail service.

We have not considered here the employment impacts of more limited commercial redevelopment in other WIL/SIL catchments (e.g., Aberdeen, Kennedy Town, Sai Ying Pun).

Finally, we note that employment projections (redundancies and new job creation) are as least as much an art as a science. We recognise others could have alternative projections. We welcome the opportunity for further discussion and a comparison of methodology.

I. Introduction

Employment — both new opportunities and losses — is an important issue with respect to the proposed West Island and South Island Lines (WIL/SIL). The controversy began with concerns about job losses among bus and minibus drivers. The question raised was: *How large will this effect be?* But any such losses must be balanced against newly-created jobs. This paper brings together results of recent assessments of particular aspects of the likely employment *gains and losses* with the coming of rail to Southern and Western Hong Kong Island.

The role of rail in Hong Kong in employment goes far beyond its direct benefits. Major transport infrastructure is an enabler, though not a guarantor, of development. Given the special features of Hong Kong, rail has been and continues to be a truly fundamental economic enabler. First, Hong Kong is predominately a service economy. Hence, the primary transport task is to move people who provide services. Moreover, the time distribution of passenger travel is more uneven than for materials movements. Hence, rail's higher carrying capacity becomes a particularly valuable asset when it comes to keeping transport moving at the peaks. ⁵

Second, Hong Kong's coastal and mountainous setting has led to the world's highest urban concentrations squeezed onto the limited buildable land area. As the population and economy expand, the type of sprawl that characterises so many of the world's cities simply cannot happen in Hong Kong. Whereas low-density sprawl favours roads (at least in the short term), high-density development lends itself to rail, with its much greater carrying capacity and absence of cross traffic at the same level.

As a consequence of these points, rail has played an essential role in making Hong Kong's congested urban areas sufficiently accessible to allow commercial development (offices, retail shopping) to be financially viable. A suggestive list of such places readily comes to mind (e.g., North Point and Quarry Bay on Hong Kong Island, Sha Tin in the New Territories). Indeed, without rail, Hong Kong arguably could not have made the transition from light manufacturing to service economy as effectively as it did. If the new service economy had been limited to the older areas adjacent to Central and Tsim Sha Tsui, price pressures on the limited commercial space would have made Hong Kong uncompetitive as a service economy with world linkages.⁶

⁵ The same applies to the greater Pearl River Delta if it moves over time toward heavier reliance on the service sector and so less on manufacturing and ocean shipping.

⁶ This is a macro economic perspective in which rail indirectly expands the supply of feasible sites for commercial or residential activity. Expansion of supply (e.g., by making additional sites readily accessible) tends to keep prices more affordable they would otherwise be. In a growing service economy, failure to expand the number of attractive business locations in pace with rising demand will led to higher costs.

In contrast, the WIL/SIL external benefits study (Barron, et al 3/2004), was a micro economic assessment considering factors likely to raise willingness to pay (demand) in a limited number of specific places.

Hong Kong's economic future lies in services and competition is global. In this we have several advantages, including world-class infrastructure. Yet, if the sites for the expanding service economy within the city are restricted, then Hong Kong will inevitably lose out. Competition for the limited number of commercial sites with good accessibility would drive up property costs, making Hong Kong less competitive internationally.

With an expanded rail network, space in new areas (such as Wong Chuk Hang) can open up to keep the number of convenient office sites in pace with demand. In the process, some jobs will be lost but these will be replaced by better jobs in the expanding economy.

A truly comprehensive assessment of the full range of new employment and redundancies accompanying the types of structural changes likely to occur in Southern and Western (or even one particular area such as Wong Chuk Hang), would be a major analytic undertaking, and one beyond the resources available to the project team. Nonetheless, we feel that the balance of job losses to job creation can be put forward rather simply through an overview of several selected components.

Taking Wong Chuk Hang as an example, rail will tend to increase the willingness to pay on the part of commercial firms (and hence raise process locally). But in a growing economy, such an expansion in the number of attractive commercial sites helps to dampen pressure for commercial property price increases in the territory as a whole.

II. Redundancies: Transport rationalisation and economic restructuring in Wong Chuk Hang

Transport rationalisation (coordination of a portion of road transport as feeder to rail systems) and economic restructuring (e.g. the transformation of an industrial area into commercial one) clearly will involve the loss of some existing jobs. This is the way of markets and technological advancement. We accept such losses in the belief that, on balance, more (and often better) jobs will be created in the process.

With the coming of the WIL/SIL, there will, no doubt, be the need for fewer bus and minibus drivers in Southern and Western, probably several hundred jobs in all.

Reduction of existing road transport is necessary in order to avoid wasteful duplication of services. Indeed, without a reduction in road transport in the area, Hong Kong would lose the significant congestion and air quality improvement benefits associated with the coming of the WIL/SIL⁷.

Some have suggested that a considerably higher number of driving jobs will be lost (several thousand). However, a figure in this range suggests a failure to account for new employment for drivers for *feeder services* to the WIL/SIL stations, as well as failure to consider new MTRCL transport jobs.

With respect to economy restructuring, the most likely place for this within the WIL/SIL service area is Wong Chuk Hang, with its underutilised relics of a bygone light-industrial economy.

Current employment in Wong Chuk Hang and Sham Wan is about 20,000. With Government encouragement, this area is already undergoing economic restructuring away from polluting and hazardous industrial activities toward "OU (Business)" [Other Specified Uses annotated Business]. In its projection to 2016, the HKSAR Government sees overall employment rising to about 30,000.8 While a net increase of about 10,000 jobs is projected, there inevitably will be job losses in the fading industrial sector.

While there will be job losses in transport and industry when older systems are replaced with more efficient and cleaner ones, this tends to be more than offset by the creation of new jobs.

This is particularly likely when the new systems make a neglected area such as Wong Chuk Hang attractive as a site for *new* activity. And, in the bargain, workers and residents benefit from a much cleaner environment and better jobs.

⁷ Barron, Ng, Ho, and Chan, 2004.

⁸ TPEDM, 11/2003

III. Overview of selected employment benefits with the coming of the WIL/SIL

A. Retail sales (and related employment) impacts in WIL/SIL catchments due to property value increases (the 'wealth effect').

Simon Ogus of DSG Asia carried out a broad-brush econometric assessment of the impact of the WIL/SIL property value increases (as projected in *Barron*, et al, 3/2004) on retail sales. He then examined the relationship in Hong Kong between retail sales and employment. The logic here is that people's perception of their wealth is based to an important extent on the value of the property they own. If their sense of wealth goes up (e.g., higher property values with the coming of rail service to their neighbourhood), they tend to spend more.

Part of this increased tendency to spend is reflected in higher retail sales, and with it, added employment. The driving factor here is the projected increase in property values in the WIL/SIL catchments of about \$1.4 billion per year (or \$16 billion in present value terms over the life of the project), *net* of taxes. It is important to note that since we are considering *net* increases in wealth, 10 we are looking at net increases in retail consumption and not at shifts in sales from elsewhere in Hong Kong.

With this increase in private property values in the WIL/SIL catchments as the starting point, Ogus projected an increase in retail sales and related employment, drawing on Hong Kong-based regressions. On this basis, he projected creation of roughly 500-1,000 new jobs in the retail sector. ¹¹

B. Hotels in Wong Chuk Hang

Following the announcement in the Summer of 2002 of the intention of the MTRCL to do detailed studies of rail service for the area, applications for six hotel developments under OU (Business) were submitted to the Town Planning Board and have been approved. We argue that the willingness of the proposers to follow through on such interest is, to a significant degree, dependent on the approval of the WIL/SIL. Hence, we use — as our lower bound on employment attributable to the WIL/SIL — a presumption that in the absence of the WIL/SIL to serve the area, only three of the proposed six hotels would actually be built and each of these would be of three-star quality.

⁹ Simon Ogus, personal communication to Planarch Consultants Ltd., email 12 April 2004.

Through higher willingness to pay (demand) on the part of buyers and renters when local transport is improved. Ogus, also notes (Ogus, 12/4/2004) that the range is quite similar, if one uses private consumption expenditure instead of retail sales.

¹² Betty Ho, Land Use Changes in Wong Chuk Hang, Planarch Consultants Ltd, Hong Kong, April 2004.

As our upper bound on new hotel employment attributable to the WIL/SIL, we presume that in the absence of rail service, none of the six proposed hotels would be built. Further, with rail, not only would all six would be built but several of these would of higher than three-star quality.¹³

With the WIL/SIL, Wong Chuk Hang is a predicable 6-8 minute trip to Admiralty (and 8-10 minutes from Central). Without it, hotel guests are isolated morning and evening by far longer [and unpredictable] travel times via the Aberdeen Tunnel or the roundabout route via Pokfulam Road.

In addition, the WIL/SIL makes the transformation of Wong Chuk Hang from an industrial into a commercial business centre far more practical. Hence, rail service also would create a more attractive environment for hotel guests (one of new commercial development, rather decaying industrial buildings). Indeed, given the potential for pleasant sea views, greenery and short, reliable times to Central, it is not far-fetched to imagine one or more five-star hotels in a revitalised Wong Chuk Hang.

The six hotel development applications involve a total of about 3,000 rooms. Applying standard worker to guest ratios, inclusive of food services, and assuming three-star hotels, Andrew Taylor ¹⁴ estimates new hotel employment in Wong Chuk Hang at 1,500 jobs, at a minimum.

In a separate assessment, Ho¹⁵, using a somewhat different set of assumptions¹⁶, estimated new hotel employment in Wong Chuk Hang at 2,500 to 3,000.

C. Note on Ocean Park

While we did not explicitly examine Ocean Park, it is clear that with the coming of Hong Kong Disneyland on Lantau Island the existing facility will face intense pressure. If Ocean Park were to close, about 1,000 jobs would be at lost. Ocean Park is working hard to develop an identity that will differentiate it from Hong Kong Disneyland. However the Aberdeen Tunnel and the congested traffic in Wan Chai limits accessibility for large numbers of visitors. On the other hand, with rail, Ocean Park becomes an easy-to-reach destination, making it more attractive to locals and visitors as part of the greater Hong Kong experience.

To be on the conservative side, we have not credited the saving of any jobs at Ocean Park as part of WIL/SIL employment benefits, even though we believe there is a case to be made for such a credit.

¹⁶ For example hotels of higher quality and hence more employees per room.

¹³ Employment per hotel room goes up as the quality of service improves.

¹⁴ Andrew Taylor, Head Asian Property Research, Deutsche Bank, personal communication (email) to Simon Ng, 28/04/2004.

¹³ Ho, April 2004

D. Re-development of Wong Chuk Hang

As noted above, the HKSAR Government has great expectations for the redevelopment of Wong Chuk Hang. Without considering the WIL/SIL project, which has not yet been formally accepted by the HKSAR Government, the Territorial Population and Employment Data Matrices (TPEDM) November 2003 gave a rather optimistic assessment that employment in Wong Chuk Hang and Sham Wan will increase by about 10,000 (from roughly 20,000 in 2002 to about 30,000) by 2016.

Ho took a fresh look at this forecast, first in terms of the reasonableness of the TPEDM's assumptions, and then with respect to the prospect of the WIL/SIL project. She points out that the TPEDM assumes that half of the conversion of the old industrial spaces to OU (Business) will take place by 2006 and the remainder completed by 2011. Optimistic indeed without rail service!

Further, the TPEDM report fails to consider, as Ho notes, that "it is unlikely that the change of use for Wong Chuk Hang from industry to business will take place on a piecemeal basis within buildings mainly used for manufacturing." This concern is backed up by the point made in the *Metroplan Review*, that redevelopment will only take place when it is financially viable for an entire site.

Overall, Ho finds the projection of a 10,000 person employment increase by 2016 to be optimistic without a major outside stimulus. One such stimulus would be confirmation of the WIL/SIL project, and with it, the expectation of fast and predictable rail-based transport services. In addition, with the reduction in road traffic, environmental quality in Southern District (already relatively good by urban Hong Kong levels) would be improved. Given the location advantages of Wong Chuk Hang (with the WIL/SIL) it would likely become an attractive place for offices, commercial establishments, hotels, etc. Hence, it seems reasonable to assume that the process of economic restructuring that the HKSAR Government foresees would be accelerated, and quite possibly expanded, to cover more of the old industrial area.

Ho estimates that with the full conversion of the old industrial base to OU (Business), total employment would be at least 36,000 compared to the 30,000 projected by the Government. As her upper bound she estimates total employment as high as 62,000. In other words, additional employment attributable to the WIL/SIL would range from 6,000 to perhaps as high as 32,000.

There is also the matter of whether the HKSAR Government's projection of 10,000 new jobs in Wong Chuk Hang will prove true in the absence of improved transport services and environmental quality. In our lower-bound estimate of the credit for new jobs due to the coming of the WIL/SIL, we assume that the HKSAR Government's projection would be fulfilled even without the coming of rail. However, as noted above, in our upper bound we credit 5,000 of the jobs projected by TPEDM to the

¹⁷ Ho, 4/2004 pg. 3

WIL/SIL on the assumption that only half of the HKSAR Government's projection would be realised without rail service to the area.

IV. Conclusion

Given the different geographic coverage and type of employment assessments considered above, there would appear to be relatively little overlap (double counting) in the estimates. ¹⁸ We have made conservative assumptions about such things as conditions in the absence of rail (e.g., are official employment projections for Wong Chuk Hang valid, and Ocean Park remaining viable without rail service). We stress the partial nature of this employment impact review. It is incomplete and quite selective, and hence only a portion of what we actually expect. Most importantly, we have focused on Wong Chuk Hang (the area most likely to undergo extensive redevelopment) and have not considered the potential for more modest re-development in other WIL/SIL catchments. ¹⁹ Our summary estimates are shown in Tables 1 and 2 below.

We argue that the scale of new employment opportunities attributable to the coming of the WIL/SIL is many times higher than the expected job losses in transport and the old industry in Wong Chuk Hang, and that employment impacts of the WIL/SIL provide a strong argument in favour of rail.

For those workers who might have difficulty in making the transition to new jobs, some form of assistance could be carried out at a quite modest cost.

¹⁸ One exception (though a modest one in the overall scale of things) is some double counting in Simon Ogus' retail sales-related employment and Ho's non-hotel economic activity-related employment. In Ho's estimates for Wong Chuk Hang's transformation from industrial to commercial she subtracted the hotel developments and reported those separately.

reported those separately.

19 One of our major concerns (and the subject of on-going assessment by Civic Exchange – Summer of 2004) is how long-established communities in places such as Aberdeen, Ap Lei Chau, Kennedy Town and Sai Ying Pun could benefit from limited and desirable redevelopment, while protecting existing communities.

Table 1

Pessimistic estimate of selected new employment benefits

Retail-sales related*	500
Wong Chuk Hang hotels**	750
Additional employment***	<u>6,000</u>
	7 250

^{*} This type of employment represents only a fraction of what could reasonably be expected through the wealth effect following higher property values in WIL/SIL catchments

Table 2

Optimistic estimate of no	<u>ew employment</u>
Retail-Sales Related [‡]	1, 000
Wong Chuk Hang Hotels ^{‡‡}	3, 000
WCH Additional Employment ****	<u>37,000</u>
	41, 000

[‡] Upper bound of the retail sales new employment; as noted above, this is likely to be only a fraction of the new employment due to the wealth effect.

Clearly, the above range (roughly 7,000 to 41,000 new jobs attributable to the WIL/SIL) is a wide one. For policy discussion purposes, we would propose a narrower range of 14,000 to 22,000 for the three specific aspects of new employment potential considered here.²⁰

^{**} Assuming three three-star hotels would be built even without the WIL/SIL.

^{***} Over and above Government estimates due to a speeded-up and more extensive re-development of Wong Chuk Hang due to stimulus of rail. Further, it excludes the hotel employment in Wong Chuk Hang.

^{‡‡} Assuming none of the six hotels would be built in Wong Chuk Hang without rail service, and that some would be more than three star.

Assuming that only half of the Government's projected employment increase in Wong Chuk Hang would take place by 2016 in the absence of the rail service. That is, crediting to the WIL/SIL 5,000 of the jobs Government projects for Wong Chuk Hang. However, this estimate excludes the hotel Wong Chuk Hang employment benefits.

²⁰ Basically we almost doubled the most pessimistic estimate and almost cut in half the optimistic one.

The dominant effect is the likelihood of an accelerated and more substantial transformation of parts of Wong Chuk Hang from industrial to mixed commercial.

A key point is that each of the three figures above can be argued and assessed independently. The retail sales employment projection is based on statistical analysis of past relationships in Hong Kong and like any econometric model reflects relationships that might arguably have changed. While such changes in relationships do occur, it seems unlikely that they would have changed so fundamentally as to substantially invalidate the model.

The basic uncertainty with the hotel employment figures is how sensitive the number and type of hotels actually constructed in the area is to the coming of the WIL/SIL. In the view of the authors, it is highly unlikely that all six would be built and quite possible that none would be if the WIL/SIL is not approved.

The pace and extent of economic restructuring in an area such as Wong Chuk Hang is influenced by a variety of factors. Hence, it is difficult to assert with confidence that a single exogenous development such as the WIL/SIL will have the type and level of effects outlined above. Nonetheless, it seems unarguable that rail service will considerably improve prospects for a speedy and more extensive transformation of Wong Chuk Hang's partly-derelict industrial area into a new commercial area.

The added employment associated with the WIL/SIL project through increased retail sales, the coming of new hotels, as well as the accelerated and expanded redevelopment of Wong Chuk Hang, is, in sum, clearly in the thousands and more likely in the *tens* of thousands. As already noted, we predict 14,000 to 22,000 new jobs in these areas.

Further, we have not even explored in any detail, the prospects for continuation of the 1,000 or so jobs that would be saved at Ocean Park, if the WIL/SIL were to be the difference between its survival or closure. If the WIL/SIL were to make that difference, then the saved jobs at Ocean Park alone would be greater than the lost ones for bus and minibus drivers.

Finally, we have not considered here the employment impacts of due to limited commercial re-development in the other WIL/SIL catchments.

Employment projections (for redundancies and new job creation) are as least as much an art as a science. Hence, we recognise that others could come up with alternative projections. If so, we welcome the opportunity for further discussion and a comparison of methodology.

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