

IN THIS EDITION

Singapore occasionally sells large chunks of government land to master developers for achieving important national planning and development objectives. This article examines the use of this approach for landmark developments such as Suntec City and the Marina Bay Financial Centre, and what lessons they offer for future master development projects.



The site of Suntec City was sold in 1988 to a master developer to build a 339,000 sqm GFA integrated international exhibition and convention centre with the prime objective of positioning Singapore as an international exhibition and convention hub. Source: Erwin Soo CC BY-SA 2.0 <https://flic.kr/p/1MWVLT>

Master Developer Projects in Singapore: Lessons from Suntec City and Marina Bay Financial Centre

INTRODUCTION

Under the Government Land Sales (GLS) Programme¹ administered by the Urban Redevelopment Authority (URA), state land is sold to private developers for development. When planning sites for sale, URA and the Housing & Development Board (HDB), the two main GLS sale agents, tend to plan around certain parcel sizes that they assess are more digestible to the market. They usually try not to offer land parcels that are too big so that the risk faced by developers in developing them will not be too high. This in turn helps to attract wider participation and keep bidding competitive. Keeping parcels at a reasonable size permits more sites to

be offered, allowing the GLS programme to achieve greater diversity in terms of location and design.

Historically, individual land parcels for “white” site developments – which can be used to build any mix of residential, commercial or hotel properties – have been kept below 160,000 sqm Gross Floor Area (GFA). Those for non-landed private residential developments are for 400 to 500 housing units, while hotel sites usually allow for 400 to 500 rooms (See Annex A).

The government occasionally sells sites much larger than 160,000 sqm GFA. These sites are for large integrated projects

built by master developers, such as Suntec City and the Marina Bay Financial Centre (MBFC), which seek to achieve certain planning and developmental objectives. The 11.7 ha Suntec City site was sold in 1988 to a master developer to build a 339,000 sqm GFA integrated international exhibition and convention centre with the prime objective of positioning Singapore as an international exhibition and convention hub. Similarly, in 2005, URA sold a 3.55 ha site with a total GFA of 438,000 sqm for developing the MBFC. Its main objective was to ensure that Singapore not only remains competitive against other global financial centres, but also enhances its status and edge as a financial hub.



Left: Xin Tian Di, Shanghai. Source: Hombre Tangencial (JOP) CC BY-NC-ND 2.0 <https://flic.kr/p/qDeB6j>
Right: Knowledge and Innovation Community, Shanghai. Source: Shui On Land

Given their scale, planning the sale of sites for master developer projects is more complex than for conventional ones. The issues that need to be considered include:

- a) The sale's objective and whether the master developer approach is necessary to achieve it;
- b) The mix of uses to be housed in the project;
- c) Detailed planning, urban design and architectural issues to ensure the project will enhance the built environment;
- d) Infrastructure needs for servicing the development and surrounding area, and how much of it can be built and managed by the master developer;
- e) The market impact of property supply from the project and its mitigation;
- f) The need to help mitigate the risks faced by the master developer given the project's high cost and long gestation period; and
- g) The mode and conditions of the sale to ensure that planning, urban design, architecture, and infrastructure goals are realised.

While the term "master developer" has been used in different contexts, both locally and globally, this paper uses it to refer to any private entity that undertakes the planning and development of a site sold



Canary Wharf, London. Source: La Citta Vita CC BY-SA 2.0 <https://flic.kr/p/ouyWjp>

through the GLS programme with a total GFA much larger than 160,000 sqm.

THE IMPORTANCE OF PLANNING, ARCHITECTURAL DESIGN AND URBAN DESIGN IN MASTER DEVELOPMENT PROJECTS

Large scale projects built by master developers impact the built environment much more than others and need to be planned and designed well from architectural and urban design perspectives. How such developments fit into the surrounding built environment, in terms of features such as form, connectivity and activity, can either enhance or blight their vicinity.

Canary Wharf in London, Xin Tian Di and Knowledge Innovation Community in Shanghai and Roppongi Hills in Tokyo are

some good examples of well-planned and designed master developer projects.

Canary Wharf in London Docklands boasts comprehensive underground linkages, retail options, landscaped parks, good connectivity for traffic and pedestrians, as well as an upcoming Crossrail station. Street signage and furniture are designed to impart to Canary Wharf a sense of character. According to Michael Koh, Fellow at the Centre for Liveable Cities (CLC), the master developer distributed the uses and plot ratios very well across the site.

Xin Tian Di in Shanghai, built by Shui On Land, is a good example of planning and embedding a school within a commercial development. Connections to the main streets, and how the place is curated in terms of use distribution and streetscape, reflect consistent thinking in terms of

The government realised that simply selling a site exclusively for developing Meeting, Incentives, Conferences and Exhibitions (MICE) facilities might be a loss-making venture and could fail to attract developers.

architecture and character. The Knowledge and Innovation Community (KIC), also developed by the same company, houses innovation incubator hubs for start-ups and demonstrates a new way of developing a business park. A new stadium was constructed as a focal point with an axis built around it. KIC is built around a large space where events can take place, and its mixed-use concept includes residences, shops and pubs.

Roppongi Hills in Tokyo has well-designed edges, especially at the side street, which is lined with flagship stores of major fashion brands. The development has a good mix of uses, comprising quality office space, hotels, high-end retail and residences, and the renowned Mori Art Gallery located on one of the highest levels. The Roppongi Mall designed by Jerde Architects was later built to connect the four disparate towers.



Roppongi Hills, Tokyo. Source: s.yume CC BY-NC-ND 2.0 <https://flic.kr/p/8EWLW8>

THE SALE OF SITES FOR SUNTEC CITY AND THE MARINA BAY FINANCIAL CENTRE

This section examines how the issues outlined above were addressed in the sale of the sites for the Suntec City and MBFC projects, and considers lessons for similar developments in the future. (See Annex B for the details of the two projects.)



The Suntec Singapore International Convention and Exhibition Centre. Source: Geoff Whalan CC BY-NC-ND 2.0 <https://flic.kr/p/rdRhTu>

SUNTEC CITY

OBJECTIVE

The 11.7 ha site for the Suntec City development was sold in 1988 with the prime objective of anchoring Singapore's position as an international exhibition and convention hub.

MIX OF USES

The government realised that selling a site exclusively for developing Meeting, Incentives, Conferences and Exhibitions (MICE) facilities might be a loss-making venture and could fail to attract developers. Hence it was deemed necessary to include complementary uses such as office and retail spaces. As a significant amount of MICE space was needed, URA's sale conditions stipulated that a minimum 60,000 sqm out of the total GFA of 339,000 sqm be apportioned for such facilities.

COMPLETION PERIOD

As it was to be the largest commercial development in Singapore at the time, the government agreed to allow a longer completion period provided the MICE facilities were readied earlier. The URA accepted the successful tenderer's proposals to complete the MICE facilities in five years and the development in ten years. The entire development was completed in 1997, less than nine years after the site was sold.

As it was to be the largest commercial development in Singapore at the time, the government agreed to allow a longer completion period provided the MICE facilities were readied earlier."



Suntec City Mall, the retail component of the multi-use development to support establishment of the exhibition and convention centre.
Source: Gordon Wrigley CC BY 2.0 <https://flic.kr/p/5efcpg>

PAYMENT TERMS

The developer had to pay the full land price of \$208 million within 90 days of being awarded the site and no particular arrangements were made to mitigate financial risk. This did not seem to be of concern to the successful bidder, Suntec City Development Pte Ltd (Suntec), a consortium involving five of the biggest tycoons in Hong Kong.²

MODE OF SALE

The URA stipulated that in addition to the bid price, the following be considered in selecting the winner:

- a) Architecture and urban design of the proposed development;
- b) Development concept and strategy for promoting Suntec City as a world class international exhibition and convention centre (this included the experience and expertise of the team in managing and marketing similar developments);

- c) Tenderer's financial capacity and development experience, including the architect's professional experience in undertaking such specialised developments.

Unlike the practice now, URA did not specify extensive urban design guidelines for compliance by the developer. URA mainly relied on the plans and design proposed by the developer to ensure the quality of the development.

MARINA BAY FINANCIAL CENTRE

OBJECTIVE

In 2005, URA sold a 3.55 ha site with a total GFA of 438,000 sqm to a master developer for the Marina Bay Financial Centre (MBFC).³ Its main objective was to ensure and enhance Singapore's competitiveness against other global financial centres. Compared to hallmark developments including Canary Wharf in London, Roppongi Hills in Tokyo and

Battery Park in Manhattan, office buildings in Singapore's existing CBD at Raffles Place and Shenton Way were becoming outdated and were unable to meet the needs of modern financial institutions.

The financial industry had transformed radically in the 1990s, with institutions demanding stable round-the-clock trading requirements, and their employees adopting lifestyles that balanced work, leisure and play.⁴ Singapore needed state-of-the-art office developments with integrated lifestyle uses that companies were increasingly becoming attracted to. Specifications for such spaces included large floor plates, generous floor-to-ceiling heights and uninterrupted power supply within an integrated mega-development with a good mix of complementary uses.⁵ Given the MBFC's desired size, it was decided to have it built by a master developer.

The unprecedented scale and complexity of developing a mega financial centre amid a global economic downturn necessitated a fundamental rethink of the approach for the sale of the site.



The Marina Bay Financial Centre.
Source: Lucian CC BY-NC 2.0 <https://flic.kr/p/eEpbxJ>

MIX OF USES

URA required at least 60% of MBFC's maximum GFA of 438,000 sqm to be devoted to office use. The rest was zoned white, which meant it could be used for residential, retail and hotel spaces.

INTERNATIONAL SITE MARKETING

In 2004, when the government was planning to release the site for sale, the prevailing depressed economic and market conditions caused the URA to be concerned that the project might fail to take off should its high cost, estimated at over \$1.2 billion, deter developers.⁶ Hence the site had to be marketed aggressively at home and abroad.

The URA even promoted the business and financial centre (BFC) at one of the largest global real estate fairs, MIPIM,⁷ in Cannes, France.⁸

FLEXIBLE FINANCIAL TERMS TO MITIGATE DEVELOPER'S RISKS

The unprecedented scale and complexity of developing a mega financial centre amid a global economic downturn necessitated a fundamental rethink of the approach for the sale of the site.⁹ Firstly, given its large GFA, the master developer would need flexibility to phase the project completion to match market demand. Therefore, instead of the usual terms requiring payment of the full land price within 90 days of awarding the site, a flexible payment scheme was introduced to reduce risk to the developer.¹⁰ An option scheme allowed the developer to buy the land in phases to match market demand. The payment terms were designed to mitigate development risk, while ensuring that the government was adequately compensated for safeguarding later phases of the land for future development by the successful tenderer (see Annex C for details of the MBFC option scheme).

The fact that part of the GFA could be developed for residential use also served to mitigate the developer's risk, as the units could be sold off-plan, providing additional financing.

REASSURING THE MASTER DEVELOPER ON OFFICE SPACE SUPPLY POLICY

As office space vacancy was 18% when the site was released, and more than 260,000 sqm GFA of office space would be built as part of the BFC, the URA announced that no other office site would be released in

the CBD for two years. This was to give investors confidence to take on the BFC development.

URBAN DESIGN REQUIREMENTS

The URA also issued a comprehensive set of urban design guidelines to ensure the BFC integrated well with other buildings and aspects of the area's built environment. These included critical elements such as good connectivity to nearby developments and transportation nodes, and to the waterfront. The provision of an open space was included in keeping with the "City in a Garden" concept, and to ensure the BFC would complement the waterfront.¹¹

PROVISION OF INFRASTRUCTURAL SERVICES

The Marina Bay area was planned with a number of state-of-the-art infrastructure services, such as common services tunnels (CST) and district cooling. As the government had planned to build these services to serve the whole area, the BFC developer could plug into the grid without participating in building it.

PRICE-ONLY TENDER

Unlike in Suntec City's case, the MBFC site tender was based purely on price. Bidders were not required to submit a proposed design or concept because, given the depressed market conditions, the government did not want to make it too onerous for developers to participate in the tender. It decided to use urban design tender conditions and the supervision of the development process by the Design Advisory Panel (DAP) led by URA to achieve a well-planned and designed development.

Given that Suntec City and MBFC were mega developments with an integrated mix of uses, the master developer approach was necessary to achieve the development objectives.

SUCCESSFUL SALE OF THE MBFC SITE

The URA's intensive marketing campaign and the innovative risk-sharing option scheme proved effective. A total of nine tender submissions were received for the site, which was awarded on 14 July 2005 to a consortium called BFC Development, comprising Hong Kong Land, Cheung Kong and Keppel Land. The MBFC was completed in 2012, fulfilling the objective of building a world-class financial centre at Marina Bay.

LESSONS FROM THE SALE OF THE SUNTEC CITY AND MBFC SITES

MASTER DEVELOPER APPROACH TO ACHIEVING DEVELOPMENT OBJECTIVES

Given that Suntec City and MBFC were mega developments with an integrated mix of uses, the master developer approach was necessary to achieve the government's objectives. The projects also helped kick off development of their respective locations at Marina Centre and Marina Bay.

MIX OF USES

While both Suntec City and MBFC have a good mix of supporting uses, it would have been ideal if hotels had been integrated within the developments. The tender conditions for Suntec City site did not stipulate hotels, and since hotels were of less value than office and retail space, the developer did not build any. When the Suntec Singapore International Convention and Exhibition Centre began operations in 1993, the nearest hotels were The Pan Pacific¹² and Mandarin Oriental.¹³ Though located nearby, they were not integrated into the development. It was only in 1996, when The Conrad Centennial Singapore¹⁴ and The Ritz-Carlton Millenia¹⁵ were built, that

demand for hotel accommodation in the area was adequately met.

Similarly, the MBFC's developer chose not to incorporate hotels within the site's 40% white component, resulting in international visitors staying at hotels elsewhere and commuting to the development for business meetings, until a hotel was later built on a sale site released in the vicinity. With hindsight, it might have been better if the tender conditions for both developments had stipulated some hotel accommodation.

Master developer projects provide an opportunity to widen Singapore's cultural and public attraction offerings. While this was not considered for Suntec City, in MBFC's case the government had offered an adjoining site as an option to build a public attraction facility, but the developer did not take it up. According to Fun Siew Leng, Chief Urban Designer, URA, the public attraction facility should have been made mandatory, as a big project like MBFC could have subsidised it.

METHOD OF SALE; ARCHITECTURE AND URBAN DESIGN

For the Suntec City site, the sale process was not as rigorous as the current practice of evaluating the proposed design and concept along with the tendered price. The fact that the price was transparent meant that it could have influenced the evaluation of the design and concept. The process could have been made more rigorous by adopting the two-envelope Concept and Price (C&P) tender system¹⁶ where the envelopes containing the tendered prices would only be opened after the evaluation of the designs and concepts had been completed.

While Suntec City was built according to the scheme submitted at the tender stage, with subsequent modifications, there were some deficiencies in its urban design. Despite admirable features such as the Fountain of Wealth, designed as a central roundabout linking the five towers, the development lacked ground floor public spaces, resulting in a dearth of street life. Street level connectivity with other buildings in the area is also poor, including the link to Millenia Walk. According to Fun Siew Leng, the concept for Suntec City was very much focused on creating internal spaces rather than creating pedestrian-friendly active streets and public spaces at the street level. A network of streets would have allowed buildings to "talk to each other".

As noted, the MBFC site sale was based only on the price, with the URA relying on stipulated design guidelines and the DAP ensuring the development was in keeping with the vision for Marina Bay. However, the quality of the development could have been even better if a two-envelope concept and price tender evaluation method had been used to select the winning bid.

According to CLC Fellow Michael Koh, the MBFC site's high plot ratio and tightness left little scope for the developer to vary the height of the buildings. In contrast, the Canary Wharf site was large enough to allow more flexibility in distributing the floor area and varying the height and intensity of buildings.

However, URA's urban design guidelines did produce some favourable outcomes. These included substantial open space, active public spaces populated by outdoor refreshment areas, clear building edges, porosity of building slabs to allow adequate

When planning the sale of master developer sites, it is necessary to carefully consider the planning, urban design and infrastructural requirements to ensure that the developments are well-executed and fulfill their objectives.

views of the bay from buildings in the background, night lighting, and extensive underground and second storey linkages between buildings and the waterfront, and to transport nodes.

Some observers have commented that there are aspects of the urban design of the MBFC that could have been better. For example, there is a dearth of activity generating uses on the ground floor, resulting in a lack of street-level vibrancy. The location of the office and residential carpark access points side by side made it unpleasant for pedestrians.

CUSTOMISING OFFICE SPACES FOR INDIVIDUAL TENANTS

It was originally envisaged that MBFC would customise office spaces to the specifications of individual tenants, much like in Canary Wharf, where pre-committed tenants such as Citibank and Standard Chartered Bank dictated their requirements. Many even had their own customised buildings. However, Marina Bay's high plot ratio meant that few financial institutions could take up an entire building.¹⁷ Also, with the real estate market still in the doldrums, the master developer was unable to get companies to commit to tenancies early enough to allow customisation.

ALLOWING PROPERTY SUPPLY TO BE ABSORBED OVER TIME

Suntec City's 123,763 sqm GFA of office space and 88,641 sqm GFA of retail space was substantial when the site was released in the late 1980s.¹⁸ The average annual supply of office space in Singapore was 150,000 sqm GFA in 1987 and 1988, and the annual retail space supply was 30,000 sqm GFA. As Suntec City took nine years

to build, there was sufficient time for the market to adjust to the huge supply and for the government to take it into consideration in its GLS programme.

The MBFC has 270,000 sqm GFA of office space, which is more than two years of office space supply in Singapore based on the average supply of 116,000 sqm GFA between 2001 to 2004. The developer made use of the flexibility to develop the project in phases so that the supply of office space could be phased to match demand. The developer completed Phase 1 with 150,000 sqm GFA of office space in 2010 and Phase 2 with 120,000 sqm GFA in 2012.

RISK MANAGEMENT

For the Suntec City site, there was no particular risk management provision. The \$208 million land price was not too prohibitive. As the MBFC site was estimated to cost more than \$1.2 billion and the property market was depressed then, the option payment scheme was adopted to allow the developer to take up and pay for the site in phases.

REASSURING INVESTORS ABOUT GOVERNMENT'S SUPPLY POLICY

At times it may be necessary to reassure investors that the government will not oversupply the property market as the supply from a master developer project is huge.

CONCLUSION

The Singapore government uses the master developer approach selectively to sell large sites when important planning and development objectives need to be met. The method was used successfully in the

sale of sites for the Suntec City and MBFC developments, which have become globally renowned as an exhibition and convention centre and a financial centre, respectively.

As master developer projects have significant impact on the built environment as well as the supply of properties, the master developer approach should only be used when there are compelling reasons for doing so. When planning the sale of master developer sites, it is necessary to carefully consider the planning, urban design and infrastructural requirements to ensure that the developments are well-executed and fulfill their objectives. Based on lessons from the sale of the Suntec City and MBFC sites, the two-envelope C&P tender system or other methods where design and concept are factors in selecting the winning bid, in addition to the price tendered, should be used in the sale of master developer sites.

Contributors



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Mr Choy Chan Pong was the Group Director in URA who was responsible for the planning and implementation of the Government Land Sales programme for more than 20 years, up to 2010. He introduced the auction method and the Reserve List System, oversaw the sale of the Business and Financial Centre site and was involved in the sale of the Integrated Resort site at Marina Bay.



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ANNEX A

Analysis of historical data of sites sold under the Government Land Sales (GLS) programme for Hotel, White Site and Residential (Non-landed) developments

HOTEL

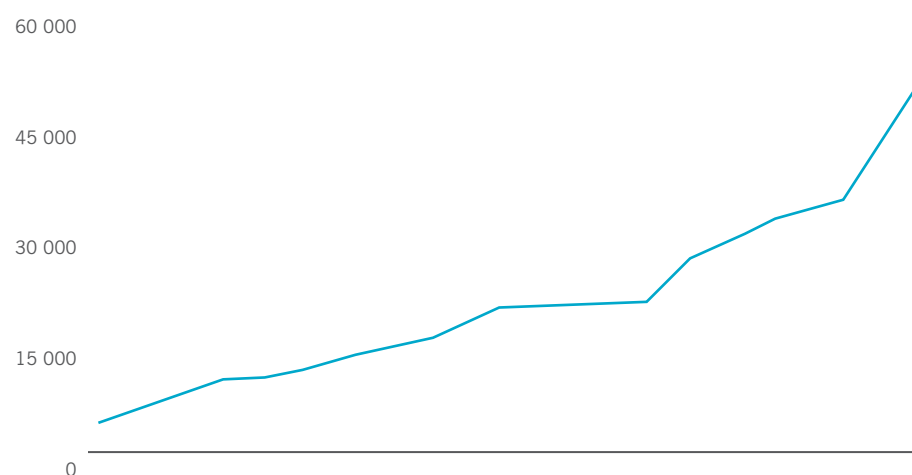
Average hotel room size in Singapore: 30 m² ²³

Assuming 85% efficiency ²⁴

Range	GFA (m ²)	No. of hotel rooms
Within 40th and 60th percentiles	Range of 15 421 to 19 538	437 to 554

Mean	Median
18 799	18 090

GFA (m²) for Hotels



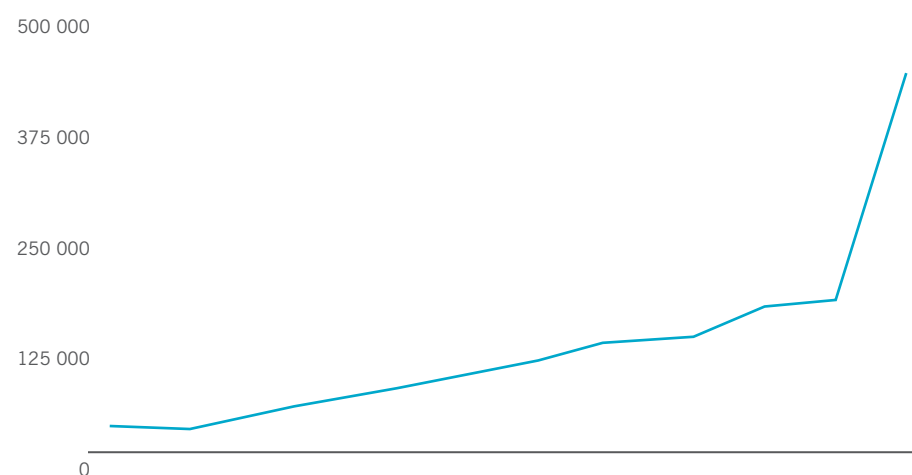
Percentile	GFA (m ²)
10th	7 321.70
20th	10 807.20
30th	12 539.10
40th	15 421.40
50th	18 089.50
60th	19 537.60
70th	21 321.50
80th	25 618.20
90th	31 131.50

WHITE SITES

Range	GFA (m ²)
Within 40th and 60th percentiles	Range of 50 285 to 103 474

Mean	Median
100 336	77 577

GFA (m²) for White Sites



Percentile	GFA (m ²)
10th	19 914.20
20th	30 930.20
30th	41 242.00
40th	50 285.00
50th	77 577.36
60th	103 474.40
70th	116 341.20
80th	136 389.60
90th	149 763.60

ANNEX A

RESIDENTIAL (NON-LANDED)²⁵

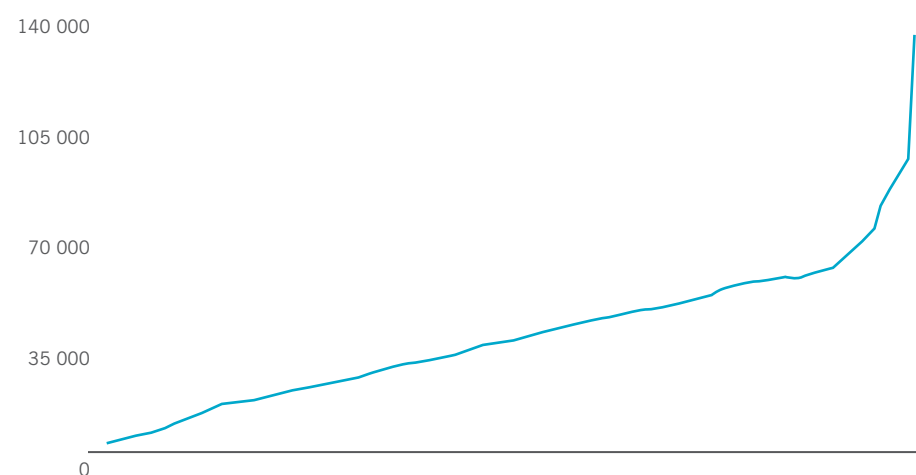
Average housing unit size: 90 sqm ²⁶

Assuming 100% efficiency

Range	GFA (m ²)	No. of Dwelling Units
Within 40th and 60th percentiles	Range of 33 056 to 44 824	367 to 498

Mean	Median
39 573	37 545

GFA (m²) for Residential (Non-landed)



Percentile	GFA (m ²)
10th	10 148.80
20th	17 925.80
30th	25 746.00
40th	33 055.82
50th	37 545.00
60th	44 824.20
70th	57 713.47
80th	51 372.00
90th	64 525.00

ANNEX B

Fact Sheet of Case Studies

	Suntec City	Marina Bay Financial Centre
Site area (ha)	11.7	3.55
GFA (sqm)	339 000	438 000
Year of sale	1988	2005
Land use	Office, shopping, exhibition & convention facilities	A good mix of office and complementary uses including quality housing, hotels, retail outlets and entertainment and dining establishments ('City within a City' concept)
Guidelines	Min 60,000 sqm for MICE facilities	Min. 60% of GFA for office use (applies to every development phase)
Evaluation criteria	Architectural & urban design, development strategy to promote the convention facilities, track record of development teams, proposed construction period tendered land price	–
Other requirements	Whole of proposed development to be completed within 10 years, exhibition and convention facilities to be completed within first 5 years	Option-based tender system Whole of the development to be completed in 18 years
Successful tenderer	Suntec, a consortium formed by several Hong Kong developers such as Li Ka-Shing, Cheng Yu-Tung and Chou Wen Hsien	Consortium of Keppel Land Ltd, Cheung Kong and Hong Kong Land Holdings Ltd
Land price	\$208 M	\$1 908 315 094.77 (approx. \$2 billion) (highest for any site sold through GLS at that time)

ANNEX C

Details of the Option Scheme adopted for MBFC

DEVISING AN ATTRACTIVE, FAIR AND FEASIBLE OPTION SCHEME FOR THE SALE OF THE MBFC SITE

Having received government approval for the Option Scheme, URA proceeded to devise a viable formula for the Scheme that would mitigate risks for the developer but ensure that the government was adequately compensated for sharing the risks with the developer.

First on URA's agenda was to set the key parameters for the Option Scheme, as follows:

- the minimum size of the first phase of development that the developer must take up;
- the duration of the option period within which the developer must take up and pay for the remaining phase(s);
- the strike price, i.e. the price at which the developer would pay for subsequent phase(s); and
- the appropriate option fee.

To determine these parameters, URA engaged the services of an academic expert on options theory, Dr Sin Tien Foo of the National University of Singapore, and also embarked on an exercise to gather inputs from various segments of the real estate sector in Singapore.

a) Minimum size of the first phase

The minimum size of the first tranche, which the developer was required to pay for in full upon a successful bid, had to be sufficiently large to ensure the construction of a meaningful and high quality office development on its own, even if the developer chose not to take up subsequent phases. At the same time, it could not be so huge that it negated the objective of reducing the developer's risks. It was therefore decided that the minimum size of the first phase should be 100,000 square metres GFA, which amounted to almost one quarter of the total GPA of 438,000 square metres for the entire BFC site. To ensure a reasonable rate of progress in the development of the site, the developer had to purchase at least 50% of the maximum GFA of 438,000 square metres halfway through the option period, including the initial 100,000 square metres.

b) Option period

The Option period was the period within which the developer was required to buy the rest of the site not taken up in the first phase. It needed to be sufficiently long to allow the developer to lower his risks, but not so long as to delay the completion of the BFC. URA decided to offer a range of periods: 6 years, 8 years and 10 years, with the option fee correspondingly increased according to the option period. Developers were given the flexibility to choose the option period because it was felt that each developer would have his own assessment of risks and market potential of the site.

c) Strike price

The strike price was what the developer would pay for subsequent phases. A decision had to be made as to whether it should be fixed at the tender price (on a per sqm basis) or varied in accordance with future price movements. It was ultimately decided that the strike price should vary with market price movements, to allow the government to share the proceeds if land values increased. However, to also allow the developer to gain from an increase in value, the strike price would vary by 50% of the change in value. The average commercial development charge (DC) rate for the Downtown Core Planning Area was chosen as the indicator of the value of the BFC land for this purpose.

d) Option fee

The Option Fee accorded the developer the right to take up remaining phases of land at the agreed price formula. The consultant, Dr Sin Tien Foo, helped to work out the option fees for different option periods using the Binomial Tree method (see details at Appendix 1). The key variables in this methodology were the option period, volatility of land prices and risk-free interest rates. Depending on the assumptions, the option fee could vary from 3% to 24% of the price of the remaining land. It was important to arrive at an option fee that would be fair to the government for taking on the risk that the developer might not take up the subsequent phases and just forfeit the option fee. On the other hand, if the option fee was exorbitant, e.g. at 24%

ANNEX C

of land price, developers might find it too prohibitive and the scheme would not work. The choice of the strike price formula that allowed the government to share in any gain in land value helped moderate the option fee. With this, the computed option fees for the 3 different option periods of 6 years, 8 years and 10 years were 6%, 8%, and 10% of the price of the remaining land, respectively. Developers and property consultants were consulted on their views as to whether these option fees would be feasible. Most of those consulted agreed that the option fees were fair and reasonable. However, there were a few detractors. For example, Mr Kwek Leng Beng of City Development Ltd's suggested an option fee of \$1 because he felt that the office market would remain depressed.

While it was important to set reasonable and fair option fees, the government also understood that it was not necessary, or important, to get the values spot on. At the end of the day, bidders for the BFC site would make adjustments to their bids depending on their views about the option fees. For example those who felt the option fees were too high would adjust their bids downwards. Conversely, those who thought the option fees were too low would bid higher for the site.

As an additional incentive for the developer to take up the whole site, even if prices were to fall, it was determined that a portion of the option fee, i.e. 3% of the price of the remaining land, could be offset against the land price when the developer took up subsequent phases. This was a departure from the usual option scheme, where no part of the option fee might be used to offset the land price to be paid upon exercising an option.

Notes

- 1 Land is sold in Singapore through the Government Land Sales (GLS) Programme for development by private developers. GLS is an important source of supply of land for development as most of the land for development in Singapore is under state ownership. Besides meeting the demand for land, the programme has been instrumental in shaping the physical development of Singapore into an attractive global city and is an important mechanism for achieving key planning objectives in the long term development of Singapore.
- 2 These were Sir Run Run Shaw, Dr Li Ka-Shing, Dr Cheng Yu-Tung, Tan Sri Frank Tsao and Dr Lee Shau Kee.
- 3 The site of Marina Bay Financial Centre was awarded to a consortium of companies comprising Keppel Land Ltd, Cheung Kong and Hong Kong Land Holdings Ltd.
- 4 Jean Chia, under the guidance of Donald Low, Lee Kuan Yew School of Public Policy at the National University of Singapore and Institute of Real Estate Studies (IRES) at National University of Singapore, Developing the Business and Financial District in Marina Bay, 2016
- 5 URA documentation narrative on 'Sale of Site for the Business and Financial Centre at Marina Bay'
- 6 The period from 2001 to 2003 was when events like the dot.com bust, 9/11 attacks and the SARS outbreak occurred, severely affecting global economies.
- 7 Marche International des Professionnels de L'Immobilier
- 8 URA Media Room, 3 March 2005, URA to promote the Business and Financial Centre and Orchard Road Sites at One of the Largest Real Estate Fairs in the World
- 9 URA Skyline, August 2002, Government Land Sales Through the Years – Remaking Singapore's Landscape
- 10 URA Media Room, 1 March 2005, URA Launches Tender for the Business and Financial Centre (BFC) at Downtown at Marina Bay
- 11 Ibid [4]
- 12 Pan Pacific located in Marina Centre was completed in 1986 <https://en.wikipedia.org/wiki/The_Pan_Pacific_Singapore>
- 13 Mandarin Oriental Singapore was completed in 1987 <https://en.wikipedia.org/wiki/Mandarin_Oriental,_Singapore>
- 14 Conrad Centennial Singapore was completed in 1996 <<http://www.travelweekly.com/Hotels/Singapore-Singapore/Conrad-Centennial-Singapore-p3713301>>
- 15 The Ritz-Carlton Millenia Singapore was completed in 1996 <https://en.wikipedia.org/wiki/The_Ritz-Carlton_Millenia_Singapore>
- 16 URA documentation narrative on 'The Concept and Price Tender System for Land Sales'
- 17 Ibid [5]
- 18 <http://www.suntecreit.com/investment_suntec.php>