



Tai Kok Tsui, Hong Kong, 2013 (Joe Chen Photography)



A Sustainable Approach to New Development

An Assessment using “ULI Ten Principles and Space Syntax Analysis” Case Study: Tai Kok Tsui

Dr. Sujata S. Govada

Founding and Managing Director // UDP International

Adjunct Associate Professor // Chinese University of Hong Kong

Global Trustee // Urban Land Institute

Introduction to ULI Ten Principles

Case Study of Large Scale Development in Hong Kong

Hong Kong Podium Development



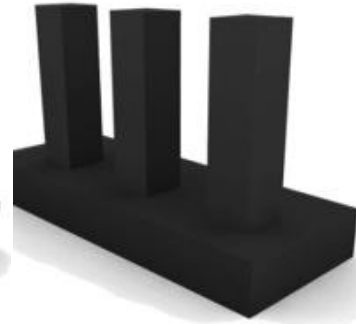
No Podium



Linked Podium



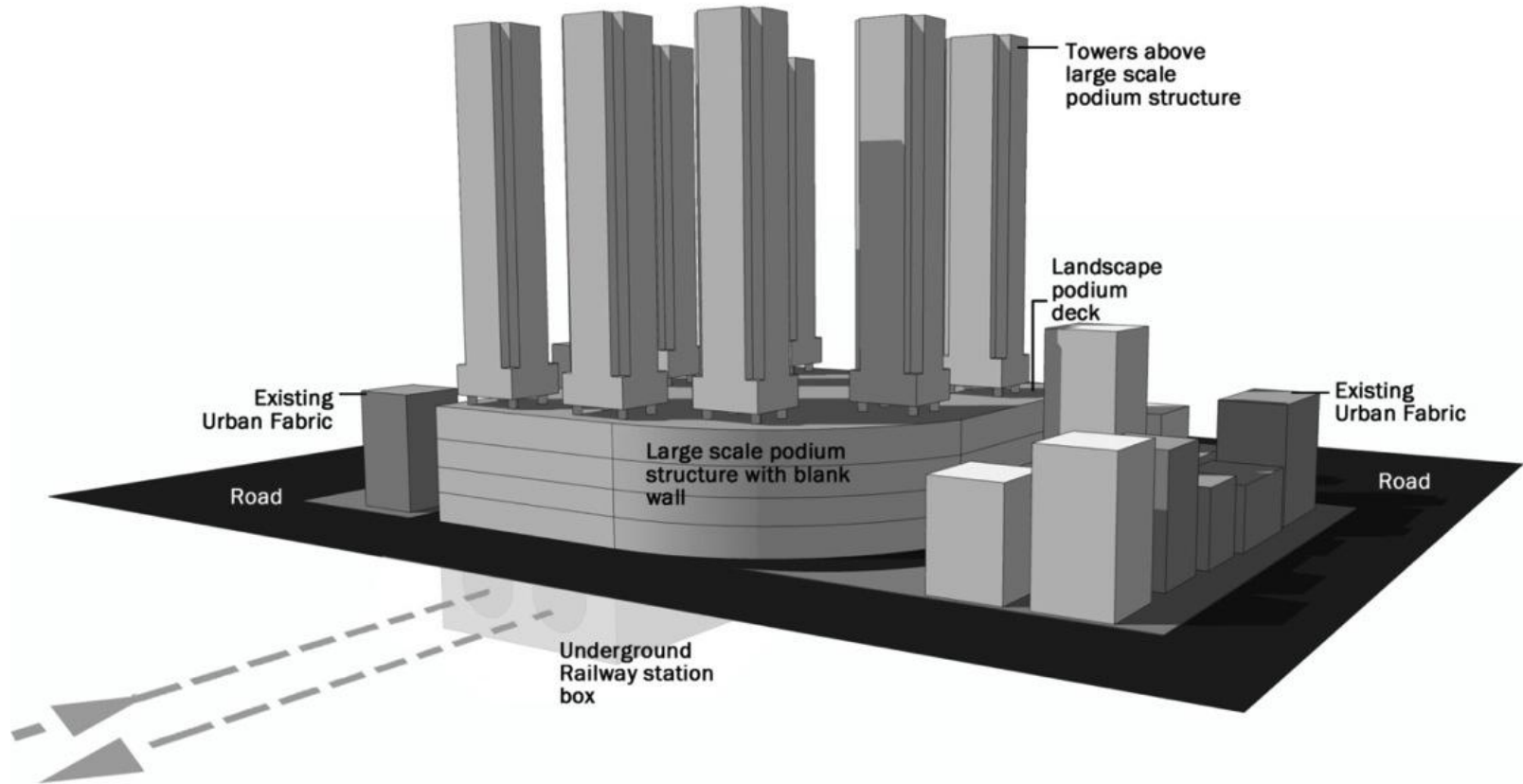
Individual Podium



Bulk Podium

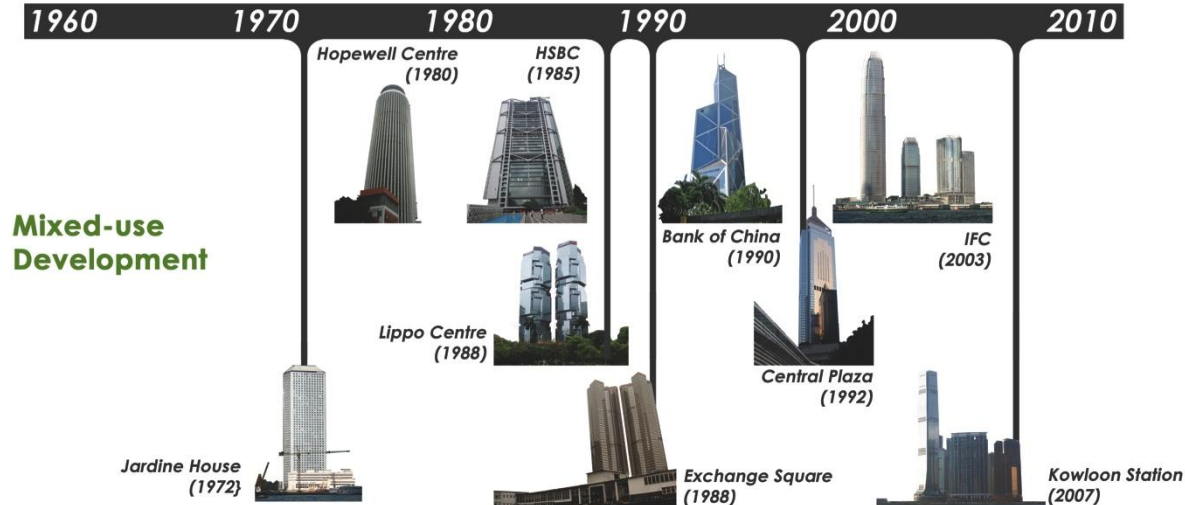
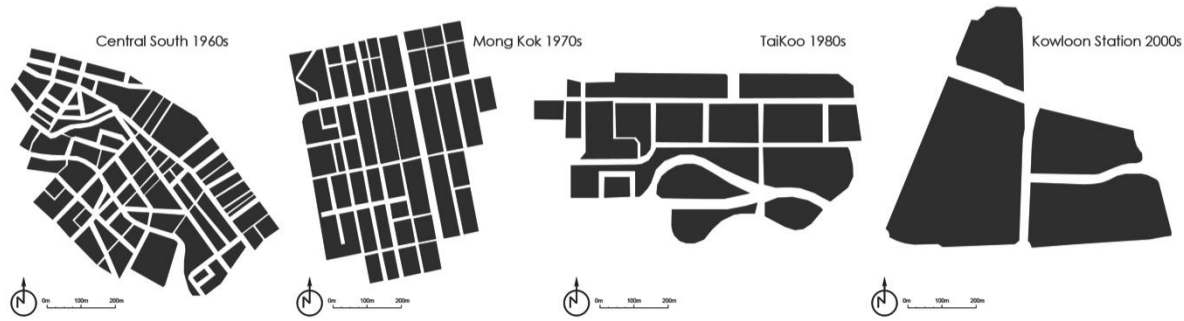


Hong Kong Podium Development



Hong Kong Podium Development

HONGKONG DEVELOPMENT TIMELINE



Objectives

- Identify key challenges of large-scale developments in Hong Kong and benchmark these projects against successful regional and international case studies.
- Identify key opportunities for a sustainable approach to new developments on existing development practices.
- Develop a series of principles which outline an alternate development approach to ensure more sensitive and integrated developments.

Methodology

Stage 1

- Review of Large Scale Developments in Hong Kong
- Benchmark against Regional and International Case Studies
- Set up the Steering Committee
- Organize a ULI workshop with multiple stakeholders
- Produce an interim report

Hong Kong – Peak View.

Methodology

Stage 2

- Review the workshop findings
- Formulate preliminary principles for integrated large-scale developments
- Draft the Ten Principles report highlighting local, regional, and international case studies
- Organize Kai Tak review panel session
- Launch the final report

Workshop

Approximately 50 stakeholders from the public and private sectors attended

Breakout Sessions

- Group 1: Planning, urban design, and regulatory implications
- Group 2: Infrastructure, transport network, and sustainability
- Group 3: Development, implementation, and economic viability



ULI Ten Principles for a Sustainable Approach to New Development – Launched June 2011

Ten Principles for a Sustainable Approach to New Development

Towards Sustainable and Integrated Large-Scale Developments for a More Livable Hong Kong



 Urban Land Institute

 Foundation

 Urban Land Institute
North Asia

1. Build on Your Strengths

Rethink the strategic vision and policy framework

2. Create Great Places

Adopt a place-making approach

3. Extend the Urban Grid

Develop to an appropriate scale and density

4. Open Up Public Space

Provide accessible public open space

5. Integrate Infrastructure

Ensure transport and infrastructure integration

6. Activate the Streets

Enhance street level interface and continuity

7. Keep it Flexible

Facilitate good urban design and flexible zoning

8. Promote Sustainability

Go beyond sustainable building design

9. Engage People Early On

Enable upfront public engagement

10. Manage, Control & Coordinate

Implement coordinated management control

Introduction to Space Syntax

Case Study of Large scale Development in Hong Kong – Tai Kok Tsui

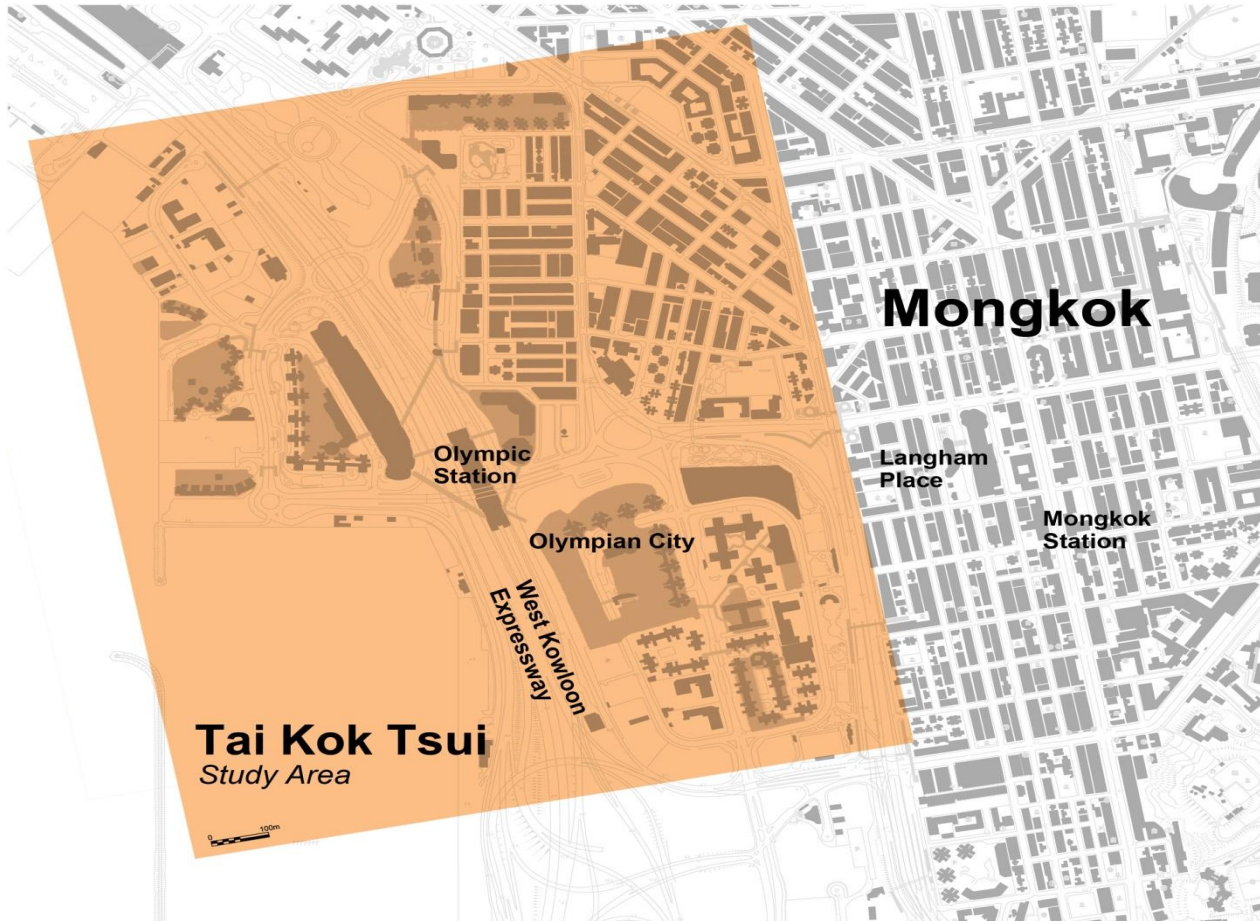
Introduction to Space Syntax

- ✓ Using the Space Syntax method developed at University College of London to conduct a preliminary spatial impact assessment
- ✓ The objective of the assessment is to analyse the spatial structure for the modern district of Tai Kok Tsui and its relation with its surrounding context
- ✓ Methodology:
 - ✧ Assessing the local and global spatial accessibility
 - ✧ Identify the spatial characteristics of the study area through urban grain study and urban geometry study
 - ✧ Apply the walking distance analysis

Tai Kok Tsui Development

Transformation of Tai Kok Tsui—an old urban district

Location and Study Area



- Tai Kok Tsui (TKT) is situated in one of Hong Kong's most densely populated residential areas and popular tourist areas
- TKT is undergoing a major transformation with a large number of urban renewal and new developments mainly along the waterfront

Applying ULI Ten Principles for a Sustainable Approach to New Development at Tai Kok Tsui

1. Build on Your Strengths

Rethink the strategic vision and policy framework

2. Create Great Places

Adopt a place-making approach

3. Extend the Urban Grid

Develop to an appropriate scale and density

4. Open Up Public Space

Provide accessible public open space

5. Integrate Infrastructure

Ensure transport and infrastructure integration

6. Activate the Streets

Enhance street level interface and continuity

7. Keep it Flexible

Facilitate good urban design and flexible zoning

8. Promote Sustainability

Go beyond sustainable building design

9. Engage People Early On

Enable upfront public engagement

10. Manage, Control & Coordinate

Implement coordinated management control

Urban Renewal & New Development

- Undergoing transformation with urban renewal and new developments, reaching heights of almost 60 stories, where the older buildings are low- or mid-rise and often dilapidated
- Hinder **Physical Access** and hamper **Visual Permeability to the harbourfront**



Podium and Walled Development



- New podium development such as Olympian City, MTR station with accompanying private residential towers such as The Hermitage not only forms a wall effect but also restricts ground level access to older urban areas in the vicinity

1. Build on Your Strengths

Rethink the Strategic Vision and Policy Framework

Isolated large-scale commercial and residential developments

The presence of large mixed use podium structure with retail, commercial and residential uses are isolated, although commercially viable, allow minimal social and cultural interaction adding little long term value to the city and its people.

- Block views to the harbourfront and linkage to the hinterland
- Tower over the older and low-rise buildings in TKT
- Poor street level interface and continuity
- Unusable open spaces at ground level



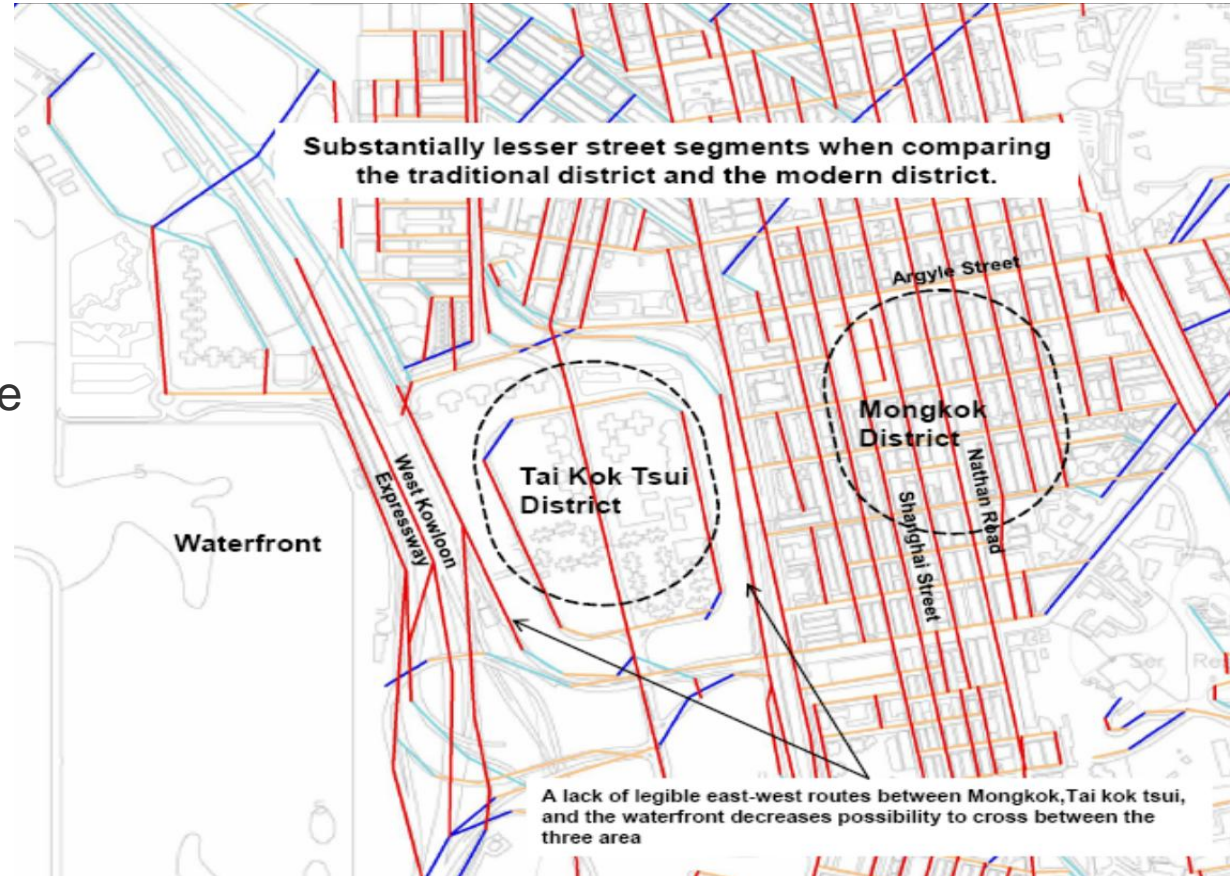
1. Build on Your Strengths

Rethink the Strategic Vision and Policy Framework

Difference in Urban Geometry between Mongkok and TKT

Within a 200m buffer, the total street length and segments are significantly different for Mongkok and TKT

Grid	Street Length (m)	Street Segments
TKT	1700	8
Mongkok	4700	64



2. Create Great Places

Adopt a Place-Making Approach

Olympian City

Although there is a large LED screen as a landmark design, there is a lack of sensitive landscaping, attractive street furniture, shade for pedestrians and public art integrating with public space to attract people to use them – Not a Place-making Approach



3. Extend the Urban Grid

Develop to an Appropriate Scale and Density

Current Dilemma in Hong Kong Modern Development

Urban renewal development area

- Large-scale podium developments with shopping, commercial and residential sectors
- Adopt *coarse-grain planning and more automobile oriented*

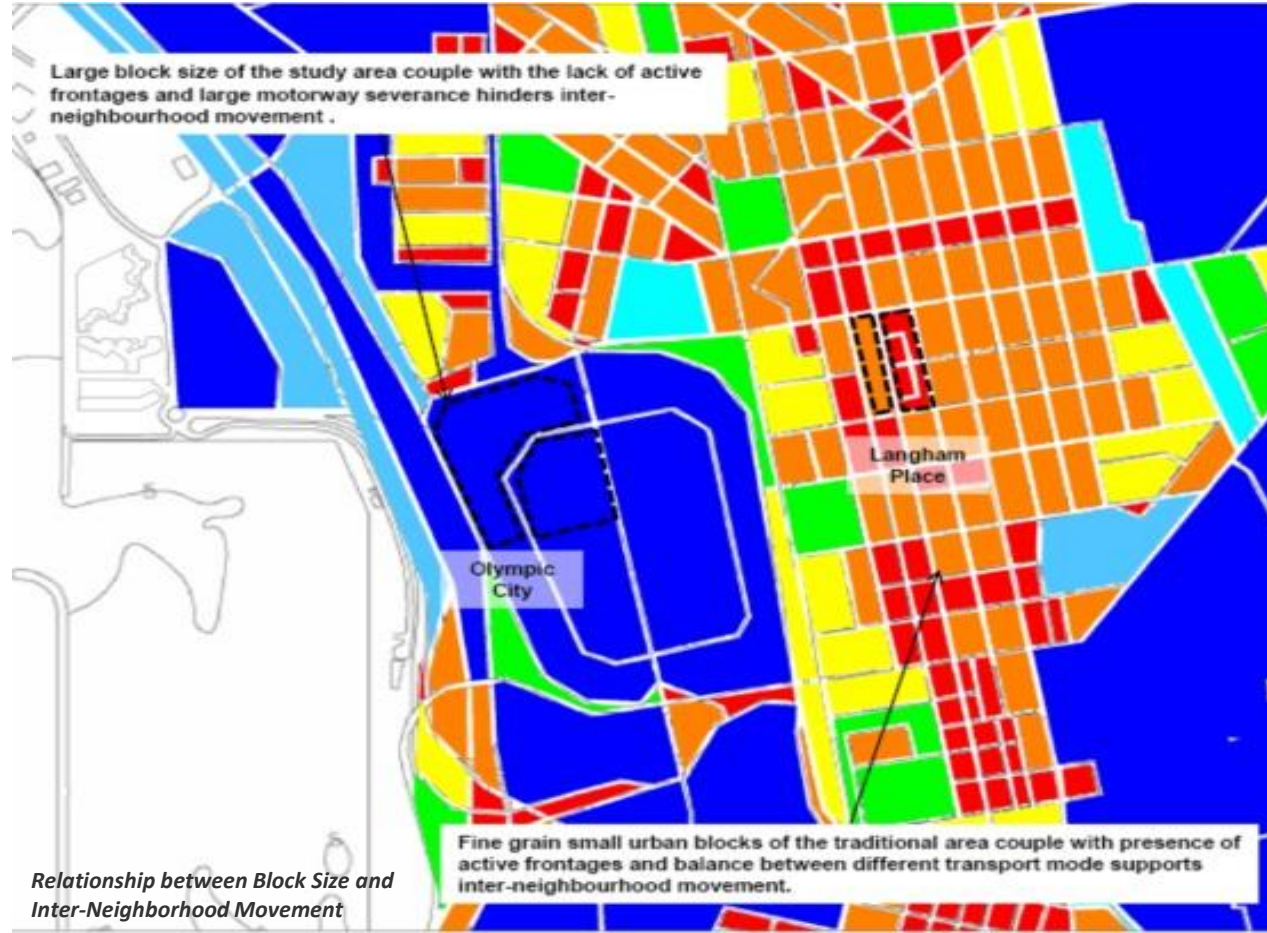
Existing old urban area

- Old and low-rise buildings, mixed use including factories and warehouses
- Adopt *fine-grain planning more pedestrian oriented*



3. Extend the Urban Grid

Develop to an Appropriate Scale and Density



Urban grain analysis describes urban block size distribution where the size has an important effect on pedestrian flow, activity patterns, i.e. inter-neighborhood movement.

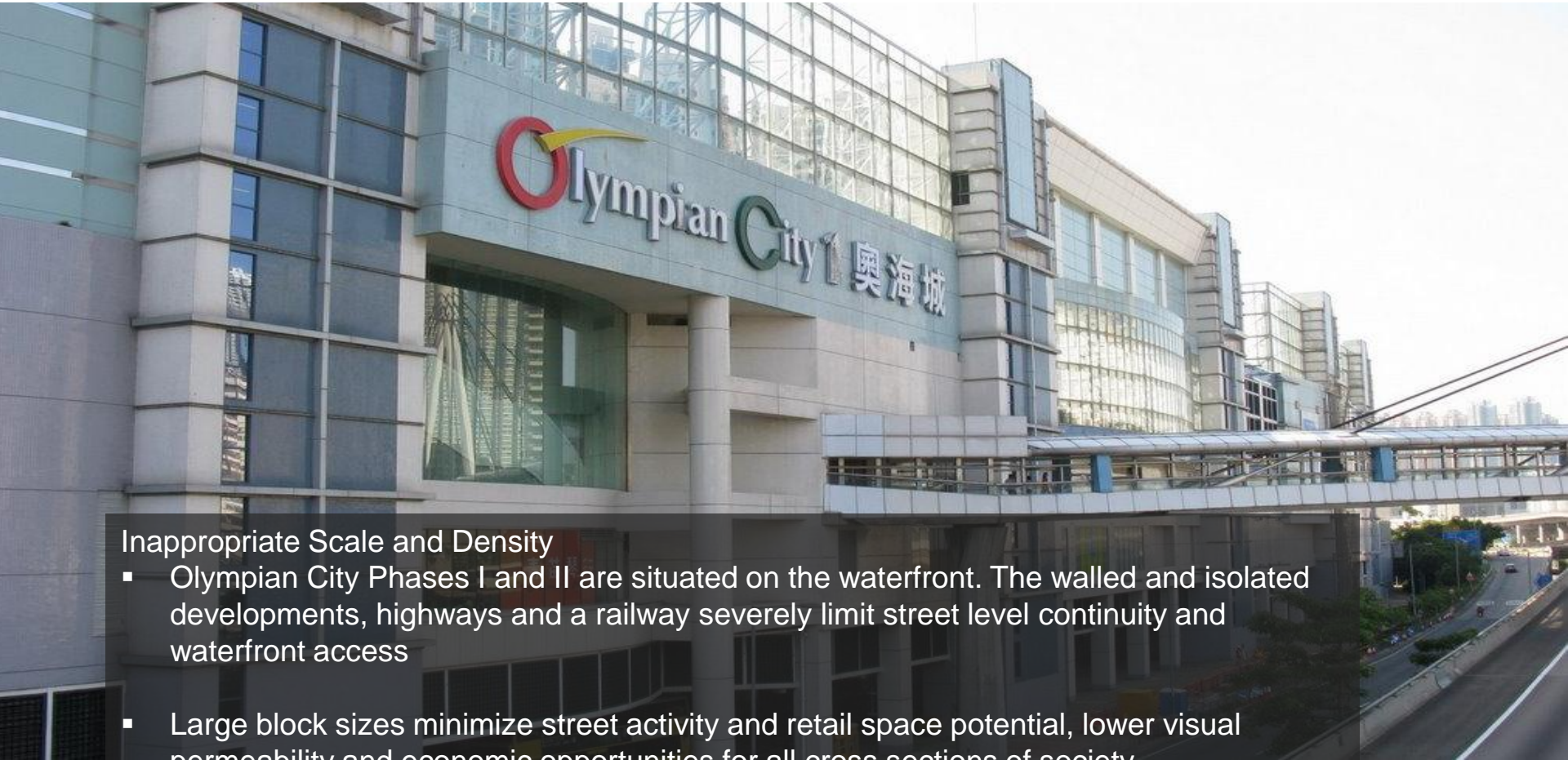
Block size area m2

Dark Blue	36,000	to	2,000,000
Light Blue	24,000	to	36,000
Cyan	18,000	to	60,000
Light Green	12,000	to	18,000
Yellow	8,000	to	12,000
Orange	4,000	to	8,000
Red	100	to	4,000

Relationship between Block Size and Inter-Neighborhood Movement

3. Extend the Urban Grid

Develop to an Appropriate Scale and Density



Inappropriate Scale and Density

- Olympic City Phases I and II are situated on the waterfront. The walled and isolated developments, highways and a railway severely limit street level continuity and waterfront access
- Large block sizes minimize street activity and retail space potential, lower visual permeability and economic opportunities for all cross sections of society

4. Open Up Public Spaces

Provide Accessible Public Open Space



- With large scale developments, major open spaces are on podium and tend to be privatized which are physically and visually inaccessible, for example the Hermitage
- The usage for the privatized spaces are often low which leads to social segregation, with less public space and a waste of resources and planning distortion – Inaccessible Public Space

4. Open Up Public Spaces

Provide Accessible Public Open Space

Staircase access to the privatized spaces in Olympian City



The access from the shopping mall to the privatized playground is inconspicuous and there is no universal design features such as sideway for people with baby trolley, the disabled and the elderly. It is visually and pedestrian unfriendly – Inaccessible Public Space

4. Open Up Public Spaces

Provide Accessible Public Open Space

The connection of the open spaces to form a network of green spaces is not possible as it is blocked by the large road footprints and large-scale developments, especially closer to the harbourfront



Lack of High Quality Open Public Space that is accessible at ground level

5. Integrate Infrastructure

Ensure Transport and Infrastructure Integration

The Airport Express Tracks and western expressway between the old urban fabric and Olympian City
1

The Olympian City area and TKT's hinterland with lower class developments are divided by numerous highways and the airport express railway tracks, rendering the two places inaccessible to each other, demonstrating the most stark example of physical, social and cultural separation between the two sides of TKT – Lack of Proper Infrastructure Integration

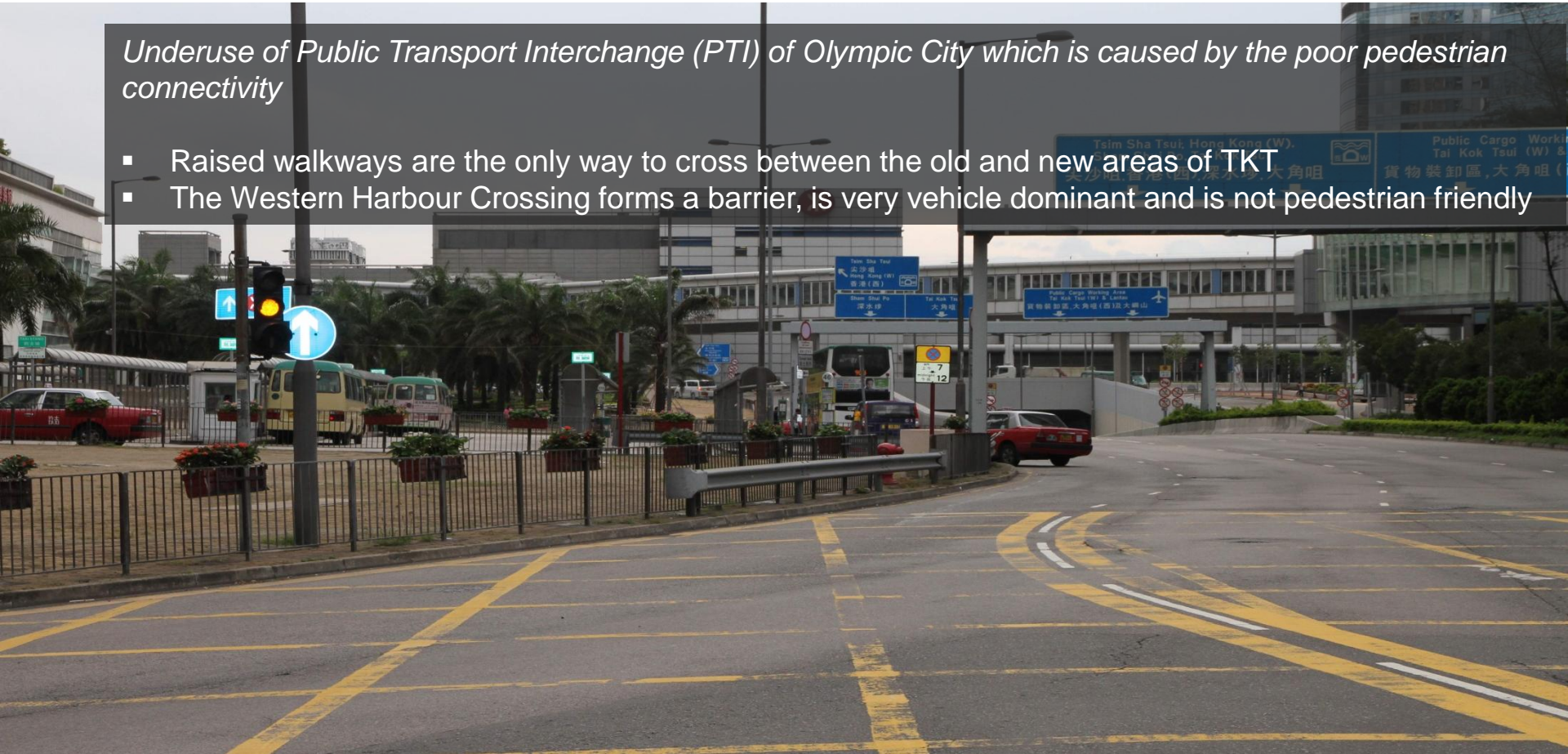


5. Integrate Infrastructure

Ensure Transport and Infrastructure Integration

Underuse of Public Transport Interchange (PTI) of Olympic City which is caused by the poor pedestrian connectivity

- Raised walkways are the only way to cross between the old and new areas of TKT
- The Western Harbour Crossing forms a barrier, is very vehicle dominant and is not pedestrian friendly



6. Activate the Streets

Enhance Street Level Interface and Continuity

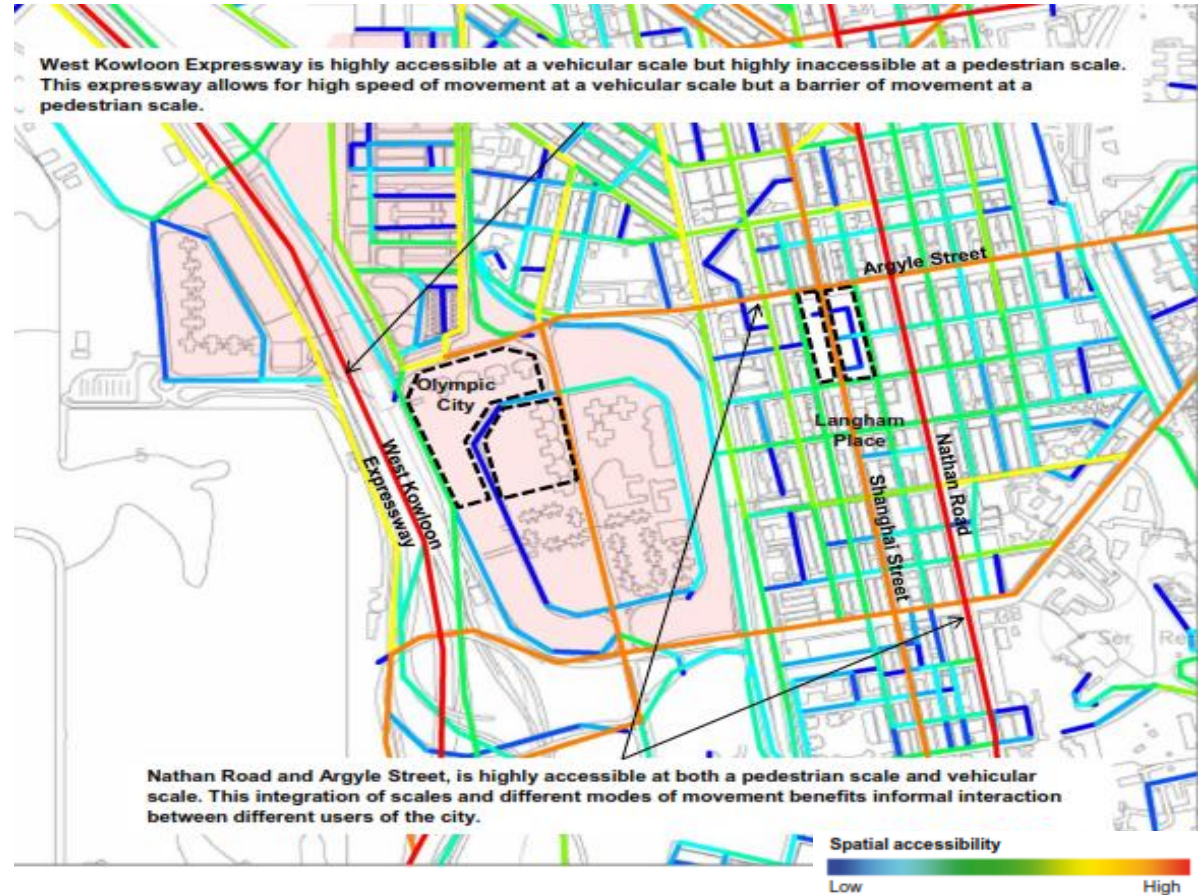


- A Space Syntax accessibility model has been constructed for the study area to help in the analysis.
- Local accessibility potential in the study area results in low walkability, poor legibility and isolated movement near transport nodes
- The highly accessible Argyle Street represents an opportunity to improve accessibility and connectivity towards TKT and the waterfront

6. Activate the Streets

Enhance Street Level Interface and Continuity

- Nathan Road and Argyle Street are highly accessible at both a pedestrian scale and a vehicular scale. This integration of scales benefits informal social interaction and economic transactions between the different users of the city
- The West Kowloon Expressway acts as a barrier for pedestrian movement and as a severance between the urban area and the waterfront



6. Activate the Streets

Enhance Street Level Interface and Continuity


The walking distance between Olympic City 2 and Langham Place is 7-10mins. However, the lack of active frontages, large motorway pedestrian severance and the lack of legible routes, hinders access between the two district.



- The lack of active street frontages, large motorways, pedestrian severance and legible routes hinders access and interactions between the two districts
- The waterfront is physically and visually inaccessible illustrated through the network distance resulting in no physical interactions to the waterfront for residents or visitors

7. Keep it Flexible

Facilitate Good Urban Design and Flexible Zoning



Rigid Regulations that result in Poor Urban Design

- Poor street level integration
- “blank wall” design
- No vibrancy both at street level and city life

The success of new developments should be measured not only by their commercial viability but also the social and environmental sustainability and long term value they add to the neighborhood,

7. Keep it Flexible

Facilitate Good Urban Design and Flexible Zoning

Need to Promote Urban Design Excellence

- Regulations such as 100% site coverage resulting in open space limited to the podium level should be avoided as far as possible and need to be carefully assessed
- By allowing larger road footprints and streets to become wider more like barriers rather than paths will also dictate the type of developments that occur within the residential, commercial and CDA zones



8. Promote Sustainability

Go Beyond Sustainable Urban Design

No integration of The Hermitage to the Cherry Street Park nearby



No public space to facilitate social sustainability



Criteria for a sustainable urban design at an urban scale

- Certified buildings following HKBEAM and LEED certifications
- Incorporate sustainability at a neighborhood and district level or urban scale

9. Engage People Early On

Enable Upfront Public Engagement

Need for true and meaningful public engagement to ensure better results

- Public engagement happens in Hong Kong but the process needs to be further improved and continued to ensure that newer developments add long term value to the district and the city, improving the quality of life for all
- By adopting a district-based community planning approach to engage different stakeholders and the community at an early stage, issues related to newer developments can be resolved



10. Manage, Control and Coordinate

Implement Coordinated Management Control



10. Manage, Control and Coordinate

Implement Coordinated Management Control



Need for Good Planning and Development Control and Overall Management Program

- Ensure creation of pedestrian friendly, transit oriented, environmentally sustainable development that are better integrated with the surrounding areas
- Create memorable places and be better linked with existing developments to create urban districts that offer a better quality of community and city life

Key Findings

1. Low local spatial accessibility potential

Low walkability within the districts and to its surrounding areas, as well as isolated movement near transport nodes

2. Barrier to pedestrian at ground level

West Kowloon Expressway is highly accessible by vehicles, but it forms a large barrier to the waterfront from the developments serving the district

3. High potential for inter-neighborhood movement

New developments in Tai Kok Tsui (E.g.: the Olympian City) is within 10 minutes walking distance to Langham Place in Mong Kok, suggesting the high potential for inter neighborhood movement. However, the current situation is not suitable pedestrian movement as it is very unfriendly to people

4. Lack of legible routes at street level

The large block sizes of the newer developments coupled with the lack of active frontages at street level and large motorways, pedestrian severance and the lack of legible routes hinders urban mobility.

5. Inaccessible waterfront

Though the waterfront is in close proximity to new developments, it is physically inaccessible making it impossible to access the harbourfront for the most part

Key Findings

6. Few street segments

The most substantial urban geometrical differences between the traditional older urban district and the newer developments is the lower number of street segments and a lack of east-west routes between Mong Kok, Tai Kok Tsui and the waterfront.

7. Argyle Street as an opportunity

The highly accessible Argyle Street represents an opportunity to improve accessibility between Mong Kok, Tai Kok Tsui and the waterfront.

8. Scope for detailed study and assessment

There is scope for more detailed study and spatial impact assessment in identifying improvement areas for the district, forecasting movement from the hinterland to and along the waterfront

9. Opportunity for better connection to waterfront

There is an opportunity to better connect the hinterland with the waterfront and improve the accessibility and ensure a pleasant pedestrian experience and improve the quality of life of the people, residents, workers and visitors

10. Connection to West Kowloon

There is also an opportunity to better connect Tai Kok Tsui to the future West Kowloon District and beyond by providing some innovative linkages and pedestrian connections as proposed in our award winning HBF's Harbourfront Connectivity Study.

Regional and International Case Studies



Vancouver's Urban Design Emphasis

- Encourage development blocks of smaller size (only 1 or a few towers per podium)
- Mixed use with town houses and/ or retail space within the podiums, rather than creating a wall at street level
- Unique public approval system with Urban Design Panels

Regional and International Case Studies

Singapore's Urban Development

- Ensure creation of pedestrian friendly, transit oriented, environmentally sustainable development that are better integrated with the surrounding areas
- Blank walls at street level prohibited with urban design guidelines and ensured under strict regulation
- Require setback and landscaping at street level to enhance pedestrian experience
- Stringent height limit on each storey to maintain street level continuity

Lessons for Hong Kong

Sensitive Planning / Urban Design with Proper Development Control / Management

- Smaller scale and more sensitive development will retain the desired fine-grain urban fabric in Hong Kong, allowing a mix of land uses and better integration with surrounding area
- Retrofit the existing podium development to include shops at ground level with covered spaces and landscaped areas at grade. Weekends market is also a possible choice
- Incentives for public good built into regulations so that developers will be required to provide green buildings with open space and other public spaces at grade to be bundled with new developments
- Avoid 100% site coverage, by allowing slender towers and smaller development footprints with sensitively designed podium structures for better physical accessibility and visual permeability
- Unique policy, planning and regulatory framework with more urban design emphasis to ensure social acceptability, environmental sustainability, commercial viability and also enhance quality of life with high quality public realm for all

Acknowledgements

- **Urban Design and Planning Consultants Limited (UDP International)**
 - Dr. Sujata S. Govada, *Founding and Managing Director*, Ravi K. Govada and other staff of UDP International

- **Urban Land Institute (North Asia)**
 - Ten Principles for a Sustainable Approach to New Development Towards Sustainable and Integrated Large-Scale Developments for a More Livable Hong Kong

- **Space Syntax Analysis by Mr. Stephen Law**
 - *Associate*, Space Syntax Limited, UK
 - *Research Assistant*, University College London (UCL)

- **Joe Chen Photography**
 - Photo Link: <http://www.flickr.com/photos/joechenhappy/8878289187/>

Urban Density & Sustainability

Sustainable Building 2013 HK Regional Conference

12-13 September 2013, Hong Kong



A sustainable approach to ensure more integrated developments in the future...
Thank You!