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The Guidelines at a Glance  
Geylang Urban Design Guidelines (GUDG)

As at February 2019

## **DEVELOPMENT CONTROL PARAMETERS FOR NON-RESIDENTIAL DEVELOPMENT**

This handbook is subject to revision from time to time. Nothing herein shall be construed to exempt the person submitting an application or any plans from otherwise complying with the provisions of the Planning Act (Cap 232, 1998 Ed) or any rules and/or guidelines made thereunder or any Act or rules and/or guidelines for the time being in force.

While every endeavour is made to ensure that the information provided is correct, the Competent Authority and the Urban Redevelopment Authority disclaim all liability for any damage or loss that may be caused as a result of any error or omission.

Important Note:

You are advised not to print any page from this handbook as it is constantly updated.

### **URBAN REDEVELOPMENT AUTHORITY**

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## PREFACE

The Development Control Group of the Urban Redevelopment Authority (URA) plays an important role in guiding and facilitating the physical development of Singapore.

As part of URA's on-going efforts to provide efficient and pleasant service to the public to facilitate property development, it has produced a series of handbooks on development control to inform and guide the public on the procedures in submitting development applications.

This Handbook on Parameters for Non-Residential Development is the latest in the series. The other handbooks in the series are:

- \* **Conservation Guidelines**
- \* **Parameters for Residential Development**

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## PURPOSE OF THIS HANDBOOK

The Urban Redevelopment Authority (URA) is Singapore's national planning authority. Its task is to plan and facilitate the physical development of Singapore and ensure that Singapore's limited land resource is put to optimal use. Through this role, URA aims to transform Singapore into a great city to live, work and play in.

URA strives to facilitate developments by streamlining policies and making its guidelines and standards as transparent as possible. This handbook explains in detail the various development control parameters for non-residential development in Singapore such as building setbacks, building coverage, intensity, height, etc.

The guidelines set out in this handbook for the various development control parameters will generally be applied by URA in the consideration of a development application. However, if the circumstances of a case or the planning considerations relevant to a case so warrant, URA may in its discretion decide to depart from these general guidelines. Persons intending to carry out a development are advised to take this into consideration in the conduct of their affairs and check with URA through enquiries or development applications to confirm if their proposals can be allowed.

The guidelines, principles and illustrations found in the handbook series are not exhaustive in covering all possible site conditions and building designs. In evaluating the development applications, URA reserves the right to evaluate and impose conditions not covered in the handbook in respond to the specific design of the development proposal on a case-by-case basis.

For further information on this handbook, please call the Development Control Group Enquiry Line at 62234811.

## HOW TO USE THIS HANDBOOK

The different non-residential developments in Singapore and their guidelines are explained in this handbook as follows:

## **Part 1: General Considerations**

This part deals with the common guidelines that affect all types of non-residential developments. It discusses the Master Plan 2008 and the Planning Areas which provide information on macro controls like allowable land use, intensity and building height. In addition, micro development control parameters are also discussed. There is also a chapter on special requirements that may affect some types of developments.

## **Part 2: Types of Development**

This part summarizes the development control parameters for each common type of non-residential development. They are broadly classified in chapters as commercial developments, hotel and other accommodation facilities, industrial / warehouse/business park developments, place of worship and institutional developments; as well as other developments such as petrol station. Within each chapter containing the broad type of uses (e.g. commercial development), an overview of the common parameters are discussed followed by sections detailing the specific development control guidelines for the specific building use (e.g. shophouses).

## **Part 3: The Guidelines at a glance**

This part condenses the development control parameters into tables and charts for quick reference.

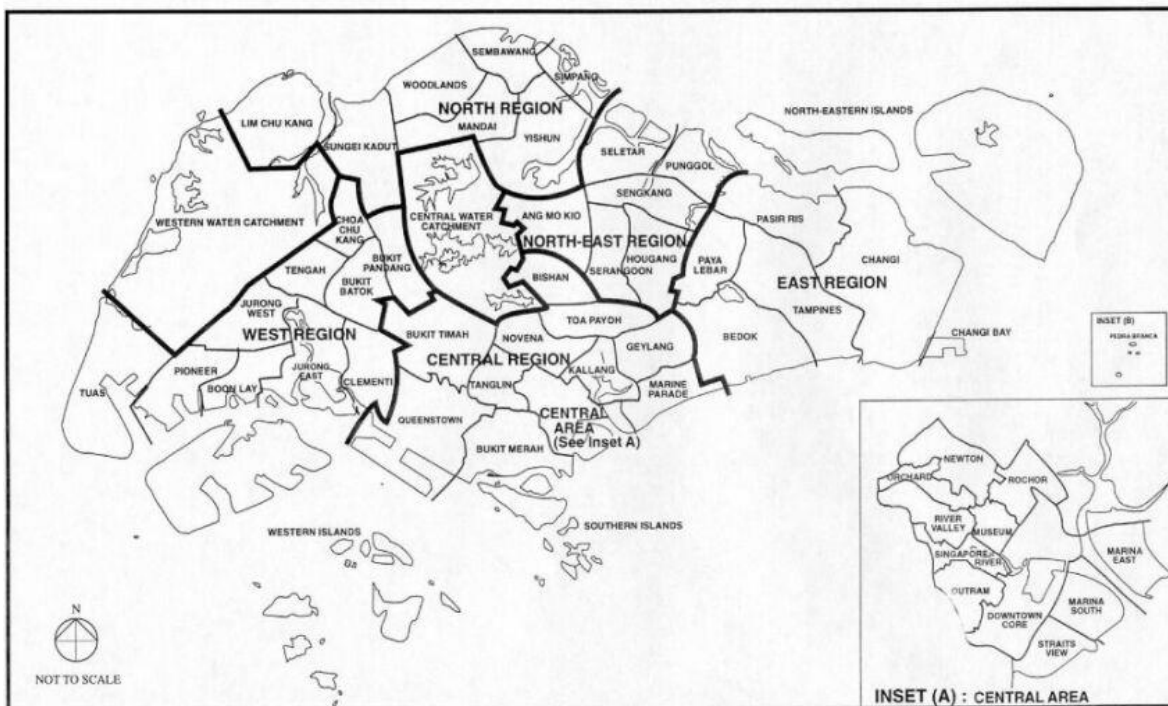
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## PART 1 GENERAL CONSIDERATIONS

### 1 PLANNING AREAS & MASTER PLAN 2008

- 1 As Singapore's national planning authority, the URA is responsible for planning and facilitating the physical development of Singapore. The aim is to create a tropical city of excellence.
- 2 Singapore is currently divided into 55 planning areas. For each of these areas, the broad vision of the Concept Plan is translated into specific local planning proposals called the Planning Areas. See Figure 1.1.
- 3 Each of the 55 Planning Areas Report elaborates on the planning proposal pertaining to land use, intensity and building height. It also identifies areas where there are special and detailed controls.
- 4 All 55 Planning Areas were incorporated as part of the statutory Master Plan 2008 to guide all development of land in Singapore.
- 5 The new Master Plan 2008 provides a clear guide to landowners on what their land can be used for in terms of land use and intensity. The Master Plan will continue to guide developments in terms of building height and identifies areas with special and detailed controls.
- 6 The Master Plan 2008 and the Planning Area Reports are available for browsing as well as for purchase at the URA Customer Service Centre, The URA Centre at 45, Maxwell Road.

Figure 1.1: Demarcation of the Planning Areas



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## 2 MACRO CONSIDERATIONS

### LAND USE

- 1 The allowable land use is reflected in the Master Plan 2008. The zoning indicates the permissible predominant use of land.
- 2 Ancillary uses must be related and compatible with the permissible predominant use. For example, within a “Business 1” zone, ancillary office can be allowed within an industrial / warehouse / utilities / telecommunication development.
- 3 For development proposals that differ from the Master Plan 2008 land use, a developer may submit an Outline Planning Application to URA to find out whether the proposed use can be allowed.

**FOOTNOTE:**

<sup>1</sup> The quantum will be discussed in detail under ‘Micro Considerations’ in the next section of this handbook. The use quantum the different types of development will also be discussed under the various building uses.

### ALLOWABLE INTENSITY

- 4 The intensity of non-residential development is expressed in terms of gross plot ratio (GPR). This is derived from the formula:

$$GPR = \frac{\text{Gross Floor Area (GFA)}}{\text{Gross Site Area}}$$

- 5 The maximum allowable intensity for a development is guided by the GPR control specified in the Master Plan 2008. The full potential of the GPR may not be achievable because of limitations imposed by site configuration, terrain, layout, building setbacks, height, site coverage and the requirements of technical authorities that affect the site.
- 6 For sites which are not assigned with a plot ratio control in the Master Plan 2008, the GPR will be subject to planning evaluation.

### BUILDING HEIGHT

- 7 The allowable building height is expressed in terms of number of storeys specified in the Master Plan. Sites may also be affected by urban design height control plans, envelop control plans, street block plans or other approved special control plans. Some developments may be required to comply with the approved technical height controls of other authorities like aviation height restrictions and telecommunications installations.
- 8 If there is no prescribed building height, the development will be evaluated on its own merit, taking into account the existing height of the surrounding developments and other planning considerations

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### 3 MICRO CONSIDERATIONS

#### USE QUANTUM

1 Generally, a certain amount of floor space for ancillary uses can be allowed within the permissible predominant use in a development. For example, in an industrial development in a Business 1/Business 2 zone, 40% of the total GFA can be allowed for ancillary uses such as offices. The remaining 60% must be dedicated for industrial/warehouse/utilities/telecommunication purposes as the predominant use.

2 This percentage ratio is called the use quantum control. It is to ensure that there is a predominant use in a development, thus adhering to the planning intention of the development site.

3 There are well-established use quantum that are commonly applicable. These may be classified under two categories:

- (a) Land use zoning e.g. hotel, place of worship, Business 1/Business 2, etc.
- (b) Building use type e.g. shophouse, clubhouse, workers' dormitory, etc.

The use quantum control under Category (a) type (i.e. land use zoning) is summarized in Figure 3.1. Category (b) type (i.e. building use type) which has specific use quantum control will be discussed separately under the different building uses in Part II of this handbook.

4 The proposed gross floor area of the ancillary uses shall be added to the gross floor area of the predominant use to derive the overall gross plot ratio.

**Figure 3.1: Use Quantum Control under Different Land Use Zoning**

ZONING	PREDOMINANT		USES ANCILLARY / SECONDARY USES	
Residential with Commercial at 1st storey only	Residential		Commercial <sup>1</sup>	<i>At 1st storey only</i>
Commercial & Residential	Residential		Commercial	<i>Max 40%</i>
Business 1 / Business 2	<ul style="list-style-type: none"> <li>- Manufacturing /assembly</li> <li>- Processing</li> <li>- Servicing/repair/workshop</li> <li>- Product design/development</li> <li>- Industrial training</li> <li>- Type 1 e-business</li> <li>- Core Media activities</li> <li>- Warehouse</li> <li>- Utilities<sup>5</sup></li> <li>- Telecommunication<sup>5</sup></li> </ul>	<p><i>Min 60%</i></p> <p>(For B1 zone, uses cannot impose nuisance buffer greater than 50m on the surrounding site)</p>	<ul style="list-style-type: none"> <li>- Workers' Dormitory and ancillary uses (including ancillary office use)</li> <li>- Type 2 e-business<sup>3</sup></li> <li>- Independent supporting media services<sup>3</sup></li> </ul>	<i>Max 40%</i>

ZONING	PREDOMINANT		USES ANCILLARY / SECONDARY USES	
Business 1 – White /Business 2 –White <sup>6</sup>	All uses permissible under the B1/B2 zone and White zone as a mixed development	Types of ancillary uses are subject to evaluation	<i>Max 40% of total gross floor area for B1/B2 uses</i>	
Business Park/ BP-White <sup>4</sup>	'White' uses – 15%			
	<ul style="list-style-type: none"> <li>- High-tech manufacturing</li> <li>Test Laboratory</li> <li>- Research and Development</li> <li>- Product design/ development</li> <li>- Computer Centre/ data processing</li> <li>- Software development (all types)</li> <li>- Industrial training</li> <li>- Central distribution</li> <li>- Type 1 e-business</li> <li>- Core Media activities</li> </ul>	<i>Min 60% of remaining 85%</i>	<ul style="list-style-type: none"> <li>- Ancillary Office</li> <li>- Leisure facilities</li> <li>- Creche</li> <li>- In-house clinic</li> <li>- Maintenance office/ store</li> <li>- Security facilities</li> <li>- Showroom</li> <li>- Canteen</li> <li>- Storage</li> <li>- Type 2 e-business<sup>3</sup></li> <li>- Independent supporting media services<sup>3</sup></li> </ul>	<i>Max 40% of remaining 85%</i>
Hotel	Hotel room Hotel related uses	<i>Min 60%</i>	Shopping and other commercial uses	<i>Max 40%</i>
Place of Worship	Praying area	<i>Min 50%</i>	- Columbarium	<i>Max 20%</i>
			- Ancillary non-religious uses (Childcare centre not to exceed 500 sqm. Proposals exceeding 300sqm are subject to ECDA's prior endorsement)	<i>Max 10%</i>
			- Ancillary religious uses	<i>Remaining GFA</i>

**NOTES:**

- 1 Commercial uses that cause or are likely to cause disamenity to the residents are not allowed.
- 2 Ancillary use not to exceed 40% of total GFA.
- 3 Secondary use.
- 4 For Business Park-White, the allowable quantum of white uses is dependent on locational criteria.
- 5 Strategic utilities and telecommunication infrastructure cannot be integrated or sited on B1 and B2 zones. Such uses (eg. Water works, sewage disposal works and power station) should be located on sites zoned Utility.
- 6 For B1-W/B2-W zone, the site must achieve a minimum plot ratio for the B1/B2 uses before White uses can be allowed (eg. a site zoned as "4.2[B-2W]", the permissible B1/B2 uses must achieve a minimum plot ratio of 2.5 before White uses can be allowed up to the maximum prescribed for the whole development). For proposals under the Warehouse Retail Scheme, sites will be rezoned from B1 or B2 to B1-W/B2-W zone and the GPR will be based on the actual proposal.



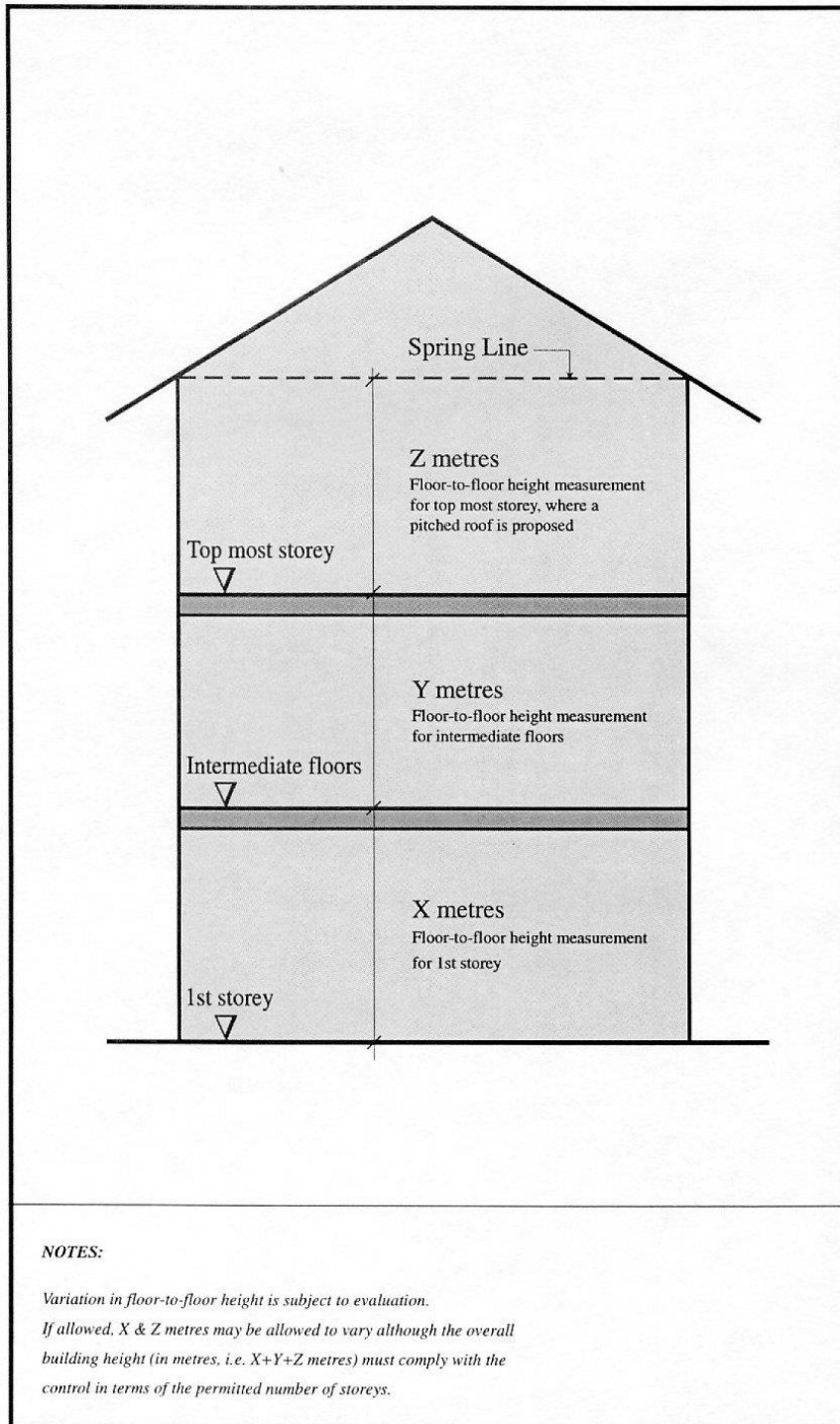
## OVERALL BUILDING HEIGHT AND FLOOR-TO-FLOOR HEIGHT

**5** As the building height is regulated in terms of number of storeys, the absolute floor-to-floor height control (maximum) has to be complied with. This helps to ensure that the overall height of buildings of the same number of storeys is comparable.

**6** A floor height is measured from the floor level of one storey to the floor level of the next storey (i.e. from the top of one floor to the top of another floor). For a building with a pitched roof, the floor-to-floor height of the top most storey is measured from the top floor level to the springing line (i.e. the line joining to the points where the roof rest). See Figure 3.2.

**7** The floor-to-floor height control for the various buildings is summarised in Figure 3.3a.

**8** The floor-to-floor height may sometimes be dictated by urban design guidelines. Other variations in floor-to-floor height are subject to evaluation depending on the use and the location of the floor. If allowed, the overall building height (in metres) must comply with the control in relation to the permitted number of storeys. Relaxation is generally allowed at the 1st storey and at the upper most storey. Additional storeys are not permitted even if the building height does not exceed the overall technical height control (in metres).



**Figure 3.2: Section Showing the Floor-To-Floor Height**

**Figure 3.3a: Floor-to-floor Height Control**

PROPOSED DEVELOPMENT	MAXIMUM HEIGHT
Commercial	5.0m
Hotel	5.0m
Industrial	6.0m (for areas with storey height control ) No control (for area without storey height control)
Warehouse	6.0m (for areas with storey height control ) No control (for area without storey height control)
Institutional	5.0m
Place of Worship	5.0m

**NOTES:**

- 1) Automated warehouse with rack/ stacking system, can be excluded from the control subject to justification by the applicant.
- 2) The floor to floor height control is not to be used for car parking and mechanical floors, circulation areas, corridors, lobbies, atria and foyers.
- 3) Any deviation from the control height shall be justified by the applicant on a case by case basis.
- 4) The figures above are for controlling building height. The roof and the basement are excluded.
- 5) Mezzanine floor, if any, is treated as a floor and regarded as a storey for planning evaluation purposes.

- 9 For the developments with sky terrace floors<sup>1</sup>, the overall height control will be relaxed, based on the proposed storey height of the development. The additional allowable height over and above the overall aggregate height for the development is tabulated below:

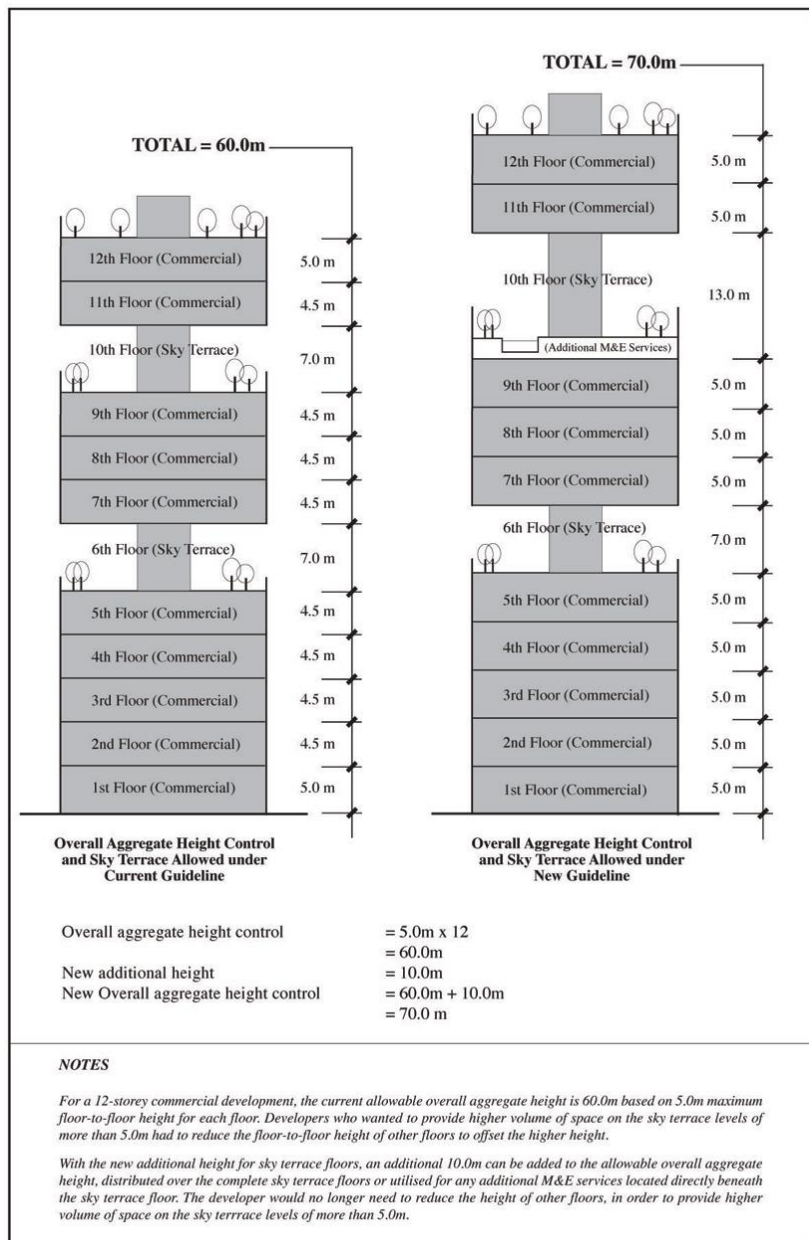
Proposed Storey Height of Development	Additional Height Allowable Over The Overall Aggregate Height For Developments With Sky Terrace Levels
7-20	10.0m
21-30	15.0m
31-40	20.0m
41-50	25.0m
>50	30.0m

**FOOTNOTES:**

<sup>1</sup> A sky terrace floor is a storey where the sky terrace areas within the 45-degree line occupy at least 60% of the floor plate.

- 10 This additional height can only be distributed to sky terrace floors within the development. Spaces for M&E services located directly beneath the sky terrace can also be included under the additional height.

- 11 To illustrate the relaxation of the guideline, a typical 12-storey commercial development that has an overall height of 60.0m under the current guideline based on 5.0m maximum floor-to-floor height for each floor, can enjoy an additional height of 10m, if the development includes at least one sky terrace floor. Refer to example in Figure 3.3b.



**Figure 3.3b: Illustration on the Relaxation of the Overall Aggregate Heights for Developments with Sky Terrace Floors**

- 12** The relaxation will be applicable to all developments, except for the following:
- (a) Developments within Conservation Areas;
  - (b) Developments within the vicinity of height sensitive areas, such as the Singapore Botanical Garden;
  - (c) Developments with height control of 6 storeys or less, to ensure that the planning intention for these low-rise developments is not compromised; and
  - (d) Developments within areas with special detailed control plans, including street block and envelope control.
- 13** Please note that the overall building height of the development is still subject to the various specific technical height controls for the site.
- 14** Additional storeys are not permitted even if the building height does not exceed the overall control height (in metres).

## GREENERY

### 15 LANDSCAPE REPLACEMENT AREA POLICY IN STRATEGIC AREAS

- (a) As more and more of our land is taken up by buildings, we need to ensure that the greenery lost on the ground is replaced within the development. This will enable people to continue to access communal spaces well landscaped with greenery even as our environment becomes more built up. The Landscape Replacement Areas (LRA) guidelines will guide new developments and redevelopments in strategic areas to provide greenery and communal areas, either on the 1<sup>st</sup> storey or upper levels, within the developments.
- (b) The LRA guidelines have the following objectives:
  - i) Enhance the quality of life in our urban areas by providing spaces of relief and greenery which are close to users;
  - ii) Create a distinctive image of the city in the tropical climate through extensive greenery at the ground and sky-rise levels;
  - iii) Bring about environmental benefits such as mitigating the urban island heat effect and improving the air quality through the plants' transpiration and dust particles filtration; and
  - iv) Support sustainability objectives like enhancing local food sources and promoting biodiversity.
- (c) The provision of LRA is required for all new developments as well as redevelopment projects in the following areas (see **Figure 1-1 to 1-25**),
  - i) Within Central Area: Downtown Core (part), Straits View (part), Marina South, and Orchard (part) Planning Areas, as well as 2 mixed-use parcels along Orchard Boulevard in Paterson Hill Subzone.
  - ii) Outside of Central Area: Regional Centres and Growth Areas including the Jurong Lake District, Kallang Riverside, Woodlands Regional Centre, Punggol Creative Cluster, Tampines Regional Centre and Paya Lebar Central as well as commercial and commercial/residential developments within Town Centres
- (d) For developments in Strategic Areas, the total size of the LRA must be at least equivalent in size to the development site area. However, it is recognized that in areas where there is a technical height control, there could be design constraints to the provision of 100% landscape replacement. For developments outside of Central Area that are subjected to a technical height constraint of 80m Above Mean Sea Level (AMSL) and below, the required LRA will be lowered to 70% of the development site area.
- (e) The LRA have to be provided on the first storey or upper levels of the development. These communally-accessible landscape areas could be uncovered and exposed to the sky, or could be covered if they qualify for GFA exemption under the prevailing guidelines for Planter Boxes, Covered Communal Ground Gardens, Sky Terraces, and Communal Landscaped Areas on the 1<sup>st</sup> Storey.
- (f) At least 40% of the development site area, or overall required LRA, whichever is higher, should be for permanent planting (softscape areas), designed with sufficient soil depth to accommodate the proposed types of plants. A combination of trees, palms, shrubs and ground cover is required to make the landscaping more attractive. The remaining

areas could be designed as communal facilities e.g. event plazas, playgrounds and water features (hardscape areas).

- (g) In addition, any greenery and permanent planting provided as LRA (softscape areas) should meet the minimum Green Plot Ratio standard (GnPR) of **GnPR 4.0**. The formula for computing GnPR is:

$$\text{Green Plot Ratio} = \frac{\text{Total leaf area of greenery counted as Landscape Replacement (softscape)}}{\text{Development Site Area}}$$

Total Leaf Area is computed based on the Leaf Area Index for each species, canopy area (for trees and palms) and the quantity planted. The plant species sub-categories and LAI values can be obtained online from NParks' Flora Fauna Web (<http://florafaunaweb.nparks.gov.sg>) by searching the common or scientific names of plants. Table A provides a template for computing the overall development GnPR. This table should be filled in and submitted together with the landscape plans.

- (h) Vertical greenery and/or extensive green roofs<sup>1</sup> can make up to 10% of the overall LRA requirements (as a percentage of site area), either as softscape or hardscape. These should be integrated with the building design, and well-externalised to the building users and general public.
- (i) Rooftop urban farms<sup>2</sup> can contribute an additional 10% (as percentage of site area) towards LRA hardscape requirements. <sup>3</sup> URA will exercise flexibility on the 10% guideline for proposals with merits.
- (j) Development Applications for new erections or redevelopment within the designated areas shown in **Figure 1-1 to 1-25** must include a landscape proposal (**refer to Appendix 2**) and declaration on the Landscape Replacement Areas provided. The Landscape Replacement Areas shall be implemented according to the approved plans, and verified and endorsed by URA.
- (k) URA's clearance of the completed Landscape Replacement Areas for developments in Strategic Areas is required before the Commissioner of Building Control issues the Temporary Occupation Permit (TOP), or Certificate of Statutory Completion (CSC) (when TOP is not required).

PLAN	LOCATION
<i>Central Area</i>	
1-1	<a href="#"><u>Downtown Core (part), Straits View (part), Marina South, and Orchard (part) Planning Areas, as well as 2 mixed-use parcels along Orchard Boulevard in Paterson Hill Subzone</u></a>

<sup>1</sup> Extensive green roofs are generally not designed for accessibility and active recreational use. Such roofs are mainly for ecological and aesthetic benefits and are installed at inaccessible rooftops. They are usually lightweight systems comprising low maintenance plants.  
<sup>2</sup> Rooftop urban farms come in various forms, ranging from smaller scale community-based farming activity and edible gardens, to larger-scale, highly intensive farming activities conducted on a commercial basis.  
<sup>3</sup> For crop protection, covers over such rooftop urban farms can be allowed. The covered urban farm area will be allowed on Temporary Permission and counted as Gross Floor Area. As a temporary use incurring additional area, covered farms will be subject to Temporary Development Levy. URA can consider the additional GFA over and above the maximum permissible GFA under the Master Plan.

## *Growth Areas*

1-1 [Kallang Riverside](#)

1-2 [Jurong East Planning Area](#)

1-3 [Paya Lebar Central \(Geylang Planning Area\)](#)

1-4 [Tampines Planning Area](#)

1-5 [Punggol Planning Area](#)

1-6 [Woodlands Planning Area](#)

## *Town Centres*

1-7 [Ang Mo Kio Planning Area](#)

1-8 [Bedok Planning Area](#)

1-9 [Bishan Planning Area](#)

1-10 [Bukit Batok Planning Area](#)

1-11 [Bukit Merah Planning Area](#)

1-12 [Bukit Timah Planning Area](#)

1-13 [Choa Chu Kang Planning Area](#)

1-14 [Clementi Planning Area](#)

1-15 [Hougang Planning Area](#)

1-16	<a href="#">Jurong West Planning Area</a>
1-17	<a href="#">Marine Parade Planning Area</a>
1-18	<a href="#">Novena Planning Area</a>
1-19	<a href="#">Pasir Ris Planning Area</a>
1-20	<a href="#">Punggol Planning Area</a>
1-21	<a href="#">Sembawang Planning Area</a>
1-22	<a href="#">Sengkang Planning Area</a>
1-23	<a href="#">Serangoon Planning Area</a>
1-24	<a href="#">Toa Payoh Planning Area</a>
1-25	<a href="#">Yishun Planning Area</a>

## 16 NON-RESIDENTIAL LANDSCAPE REPLACEMENT REQUIREMENTS

- (a) All Commercial/Mixed-Use/Hotel developments outside strategic areas<sup>4</sup> have to comply with Landscape Replacement requirements.
- (b) The Landscape Replacement Area requirements (LRA) for Commercial/Mixed-use/Hotel developments specifically target the provision of communal greenery. The levels of greenery provision are tiered according to the development's intensity. Greenery provided to meet LRA requirements should also meet the minimum Green Plot Ratio (GnPR) standards. The requirements and standards are shown in Figure 3.30.

**Figure 3.30**

<b>LRA requirements in Commercial/Mixed-Use/Hotel developments</b>	<b>GPR ≤ 1.4</b>	<b>1.4 &lt; GPR &lt; 2.8</b>	<b>GPR ≥ 2.8</b>
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Overall greenery provision (as % of site area)	30	35	40
Green Plot Ratio (GnPR)	3.0	3.5	4.0

(c) The formula for computing GnPR is:

$$\text{Green Plot Ratio} = \frac{\text{Total leaf area of greenery counted as Landscape Replacement (softscape)}}{\text{Development Site Area}}$$

Total Leaf Area is computed based on the Leaf Area Index for each species, canopy area (for trees and palms) and the quantity planted. The plant species sub-categories and LAI values can be obtained online from NParks' Flora Fauna Web (<http://florafauanaweb.nparks.gov.sg>) by searching the common or scientific names of plants. Table A provides a template for computing the overall development GnPR. This table should be filled in and submitted together with the landscape plans.

- (d) The horizontal landscaped areas should include a suitable variety of plants which are planted in permanent and preferably sunken planting beds to enhance the spatial and visual quality. As these communal landscaped areas are intended to serve the public and/or building users, they should be easily accessible to the public and/or building users during normal opening hours for the development<sup>5</sup>. Vertical greenery and/or extensive green roofs can make up to 10% of the LRA requirements (as a percentage of site area).
- (e) The horizontal landscaped areas should either be open-to-sky, or if covered, to qualify for GFA exemption under the existing LUSH guidelines (e.g. Sky Terraces, Covered Communal Ground Gardens, and Communal Planter Boxes). Only softscape areas will be counted towards meeting the LRA requirements. Vertical greenery should be well-integrated with the overall building design, and well-externalised to building users and the general public.
- (f) A landscape plan (refer to Appendix 2), perspectives and relevant sections showing the proposed landscaping scheme for the ground and upper levels (including the covered garden, the open to sky areas and vertical greenery, if any) are to be submitted as part of the development application.
- (g) URA will exercise flexibility on the above requirements when evaluating individual developments affected by technical constraints (e.g. developments with conserved buildings, party wall developments, developments subject to specific urban design requirements, and developments with storey height constraint of 4-storeys and below as well as developments subjected to severe technical height controls. In addition, conserved buildings in historic conservation areas will be exempted from the above requirements.

**NOTE:**

4. For information on the boundaries of the Strategic Areas, please refer to the Non-Residential handbook, Micro Considerations para 15.
5. For example, the communal landscaped areas in a shopping mall should be open and accessible to the public during the mall's normal operating hours.



## Appendix 2

### EXAMPLE OF LANDSCAPE PLAN AND INFORMATION REQUIRED

(In this simulated example, the development in a Strategic Area provided Landscape Replacement Areas on the 1<sup>st</sup>, 5<sup>th</sup> and 15<sup>th</sup> Storeys. The plans below are the sample landscape plans for the 5<sup>th</sup> storey landscape).

The applicant should amend the information as needed for the various requirements/incentives under LUSH.

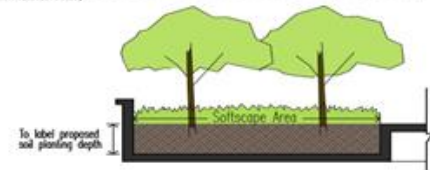


#### SCHEDULE OF PROPOSED PLANTING SPECIES AND PAVING MATERIALS

LEGEND	DESCRIPTION	PHOTOGRAPH	SUB-CATEGORY	LEAF AREA INDEX (LAI)	QUANTITY (based on planted area in m <sup>2</sup> )	PLANTING DISTANCE (m)	HEIGHT (m) (if applicable)
	Tree - (Name of Proposed Tree Species)						
	Tree - (Name of Proposed Tree Species)						
	Shrub - (Name of Proposed Shrub Species)						
	Shrub - (Name of Proposed Shrub Species)						
	Turf Ground Cover - (Name of Proposed turf Ground Cover Species)						
	(Description of paving material)						
	(Description of paving material)						

#### EXAMPLE OF A SECTION THROUGH A PLANTING BED (SECTION A-A)

(To indicate Scale)



#### MAINTENANCE & IRRIGATION PROPOSAL FOR THE PERMANENT PLANTING

(Insert short statement here)

#### DECLARATION OF LANDSCAPE REPLACEMENT AREA AND SOFTSCAPE AREA ON THE 5TH STOREY

CALCULATION OF LANDSCAPE REPLACEMENT & SOFTSCAPE AREA FOR 5TH STOREY		AREA (M <sup>2</sup> )
Landscape Replacement Area	Green for the tree or within 40-degree leaf	
	+ (Shrub area must meet planting as follows guidelines or additional needed (S1 to be completed in landscape replacement))	
Softscape Area		

#### DECLARATION OF OVERALL LANDSCAPE REPLACEMENT AREAS & SOFTSCAPE AREAS (To be shown on site plan)

CALCULATION OF TOTAL LANDSCAPE REPLACEMENT AREA & SOFTSCAPE AREA FOR ENTIRE DEVELOPMENT		Area (m <sup>2</sup> )
Total Landscape Replacement Area (Softscape + Hardscape Area)		≥ Devt. site area
Total Softscape Area		≥ 40% of devt. site area
Total Vertical Greenery and/or Extensive Green Roof Area (% of Total Landscape Replacement Area)		≤ 10% of devt. site area
Total Urban Farm Area (% of Total Landscape Replacement Area) (*delete as appropriate)		≤ 10% of devt. site area
Green Plot Ratio (GnPR)		≥ 4.0

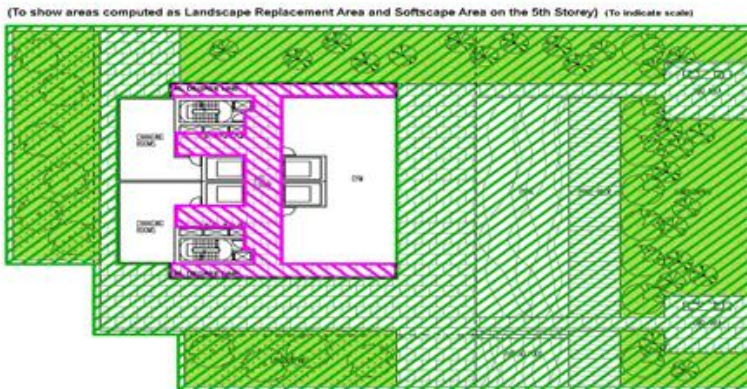


Table A: Green Plot Ratio computation template

DECLARATION OF GREEN PLOT RATIO						
Category	Unit	Sub category	LAI Value	Canopy Area/m <sup>2</sup>	Qty/Planted area	LEAF Area
			(A)	(B)	(C)	(A)x(B)x(C)
Trees	no	Open Canopy	2.5	60	No.	
	no	Intermediate Canopy	3.0	60	No.	
	no	Dense Canopy	4.0	60	No.	
	no	Intermediate columnar canopy	3.0	12	No.	
Trees	m <sup>2</sup>	Planted at ≤ 2.0m trunk to trunk	(as above)	NA	m <sup>2</sup>	
Palms	no	Solitary	2.5	20	No.	
	no	Cluster	4.0	17	No.	
Palms	m <sup>2</sup>	Solitary(trunk to trunk ≤2m)	2.5	NA	m <sup>2</sup>	
Shrubs	m <sup>2</sup>	Monocot	3.5	NA	m <sup>2</sup>	
	m <sup>2</sup>	Dicot	4.5	NA	m <sup>2</sup>	
Turf	m <sup>2</sup>	Turf	2.0	NA	m <sup>2</sup>	
Vertical greenery	m <sup>2</sup>		2.0	NA	m <sup>2</sup>	
<b>(X) Total Leaf Area( m<sup>2</sup>)</b>						
<b>(Y) Site Area</b>						
<b>(X / Y) Green Plot Ratio</b>						

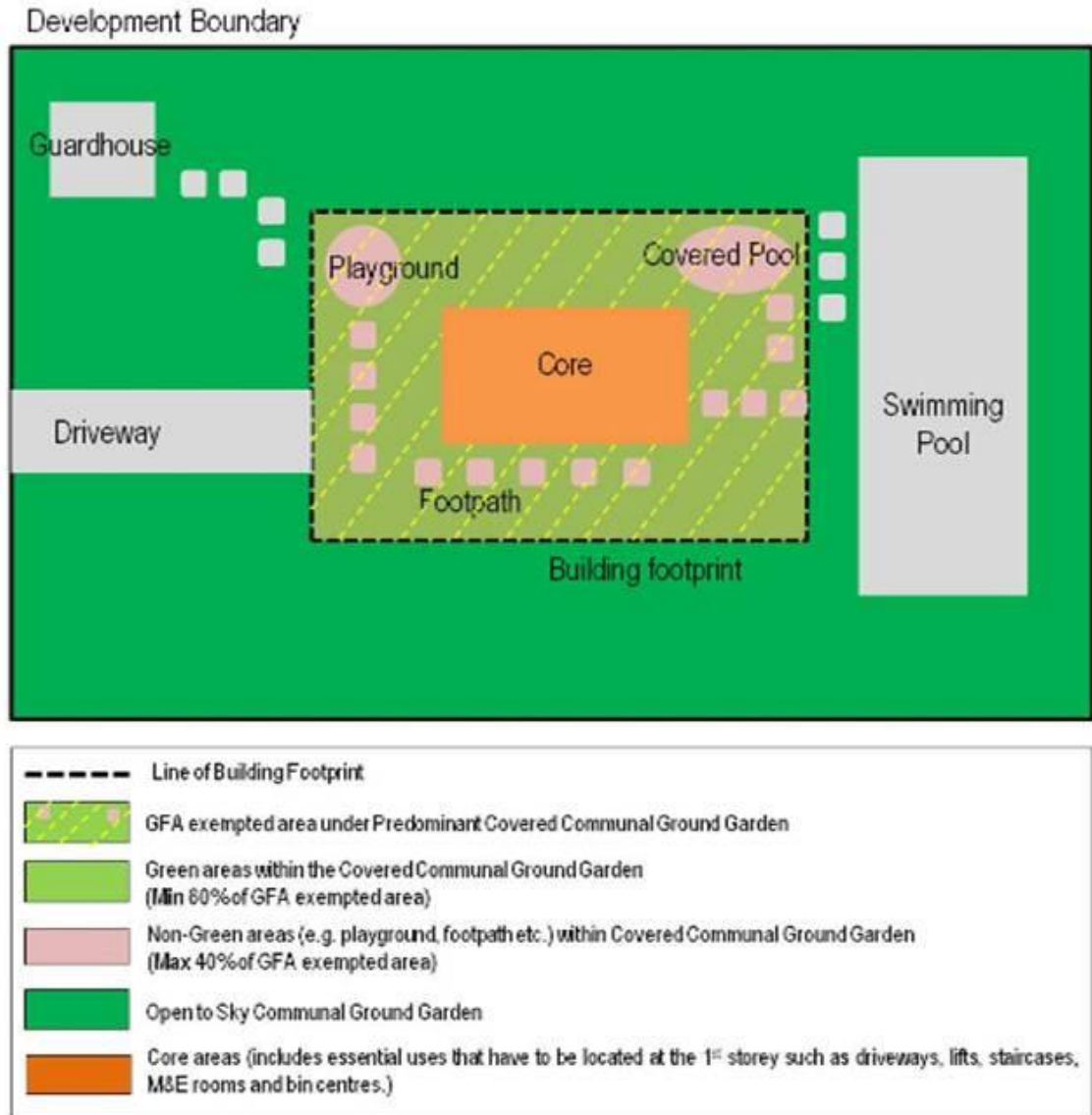
## 17 COVERED COMMUNAL GROUND GARDENS

- a) The Covered Communal Ground Gardens GFA Exemption scheme aims to encourage better design and integration of on-ground greenery spaces at the 1<sup>st</sup> storey.
- (b) The scheme consists of the following:
  - (i) Predominant Covered Communal Ground Garden: Additional covered spaces at the first storey can be considered for GFA exemption if these spaces provide substantial ground greenery with good spatial quality; or
  - (ii) Secondary Covered Communal Ground Garden: The existing GFA exemption for Communal Landscaped Area under the 45 degree line at the first storey will continue to apply. This scheme will now be re-termed as Secondary Covered Communal Ground Garden.

### Guidelines to Qualify for GFA Exemption for Predominant Covered Communal Ground Garden

- (c) The following criteria will serve as a guide on the grant of GFA exemption (refer to illustration shown in **Figure 3.31**):

Figure3.31



- (d) In evaluating the GFA exemption for the covered landscaped areas, URA will take into consideration the design, integration and the spatial quality of the communal garden areas at the ground level (e.g. how the open landscaped area is designed to flow seamlessly into the covered areas) and its contribution towards the overall quality of the development (e.g. the covered ground garden should be bright and airy with quality landscaping).
- (e) The communal ground garden should occupy a significant portion of the ground level space. The covered garden areas should occupy at least half of the first storey building footprint
- (f) A minimum of 60% of the covered garden spaces proposed for GFA exemption should be lushly landscaped. The remaining 40% of the GFA exempted spaces can be set aside for meaningful and effective communal gathering and activity spaces, and unenclosed communal facilities. These spaces could include garden paths, playgrounds, covered pool, and covered drop-off points; and
- (g) Both the covered and uncovered landscaped area should include suitable varieties of plants which are planted in permanent and preferably sunken planting beds to enhance the spatial and visual quality of the space. As these communal landscaped areas are intended to serve the public and/or building users, they should be easily accessible to

the public and/or building users during normal opening hours for the development<sup>6</sup>. They should not be tucked away in dark or obscure corners at the first storey which will not be conducive for landscaping as well as public use. The GFA exemption will not be applicable to such residual spaces at locations where users are unlikely to use meaningfully.

- (h) While uses like ORA can be proposed within the covered communal ground gardens, the ORA areas will be computed as GFA. To prevent downstream abuse of the GFA exempted area, appropriate design interventions should be adopted to minimise easy conversion of the GFA exempted areas to usable commercial spaces subsequently. The communal ground garden also should not be easily enclosed and converted to any other uses in the future.

### **Submission requirements**

- (i) Similar to the other LUSH initiatives, a landscape plan showing the proposed landscaping scheme for the i) entire ground level (both covered and uncovered) is to be submitted as part of the development application for the predominant covered ground garden proposal ii) for the area that the applicant is proposing for GFA exemption. As part of the GFA exempted space in the former scenario could be outside the 45 degree line where sunlight could be limited, the landscape plan should include suitable plant species or a plant palette that can thrive and sustain in the shady environment<sup>7</sup>. See Appendix 2 for more details

#### **NOTE:**

<sup>3</sup> For example, the communal landscaped areas in a shopping mall should be open and accessible to the public during the mall's normal operating hours.

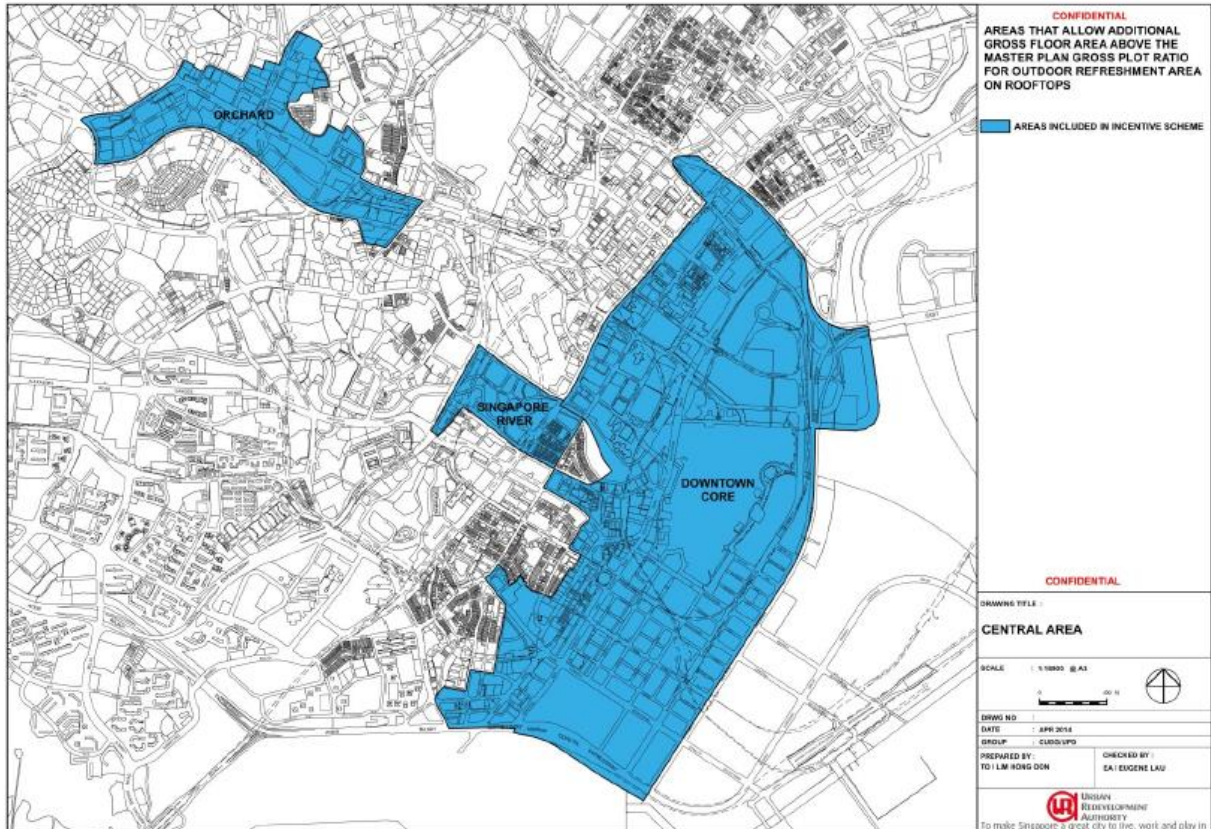
<sup>4</sup> Please refer to the following publications for more detailed planting references:

- a) 1001 Garden plants in Singapore (2<sup>nd</sup> edition)(2006), NParks
- b) CS E09:2012 - Guidelines on planting of trees, palms and tall shrubs on rooftop (2012), NParks
- c) A Selection of Plants for Green Roofs in Singapore 2nd Edition (2008), NParks
- d) Trees of our Garden City, 2nd edition (2009), NParks
- e) Concise Guides to Safe Practices on Rooftop Greenery and Vertical Greenery (2013), NParks

## **18 ENCOURAGING ROOFTOP GREENERY THROUGH ORA ON ROOFTOPS IN ORHCARD, DOWNTOWN CORE AND SINGAPORE RIVER (PART) PLANNING AREAS**

- (a) Under the LUSH programme, URA will grant bonus Gross Floor Area (GFA) over and above the Master Plan Gross Plot Ratio for rooftop outdoor refreshment areas (ORAs) in commercial and mixed-use developments that propose or convert their roof into a green roof. This applies to new and existing buildings within Orchard, Downtown Core and Singapore River (part) planning areas as shown in Figure 3.32. Proposals outside these areas will be assessed individually.

Figure 3.32



- (b) To encourage building owners to incorporate more green roofs (including podium roofs and towers roofs), the bonus GFA incentive now applies on a per roof basis where all the available roof space in a development can now be converted to roof gardens with rooftop ORAs that offer alfresco dining in a lush setting. This incentive is subject to the overall 10 per cent cap on bonus GFA for the development.
- (c) The ORAs should be kept small scale and ancillary to the landscaping on the rooftops. Each ORA should not take up more than 50 per cent of the overall roof space or 200sqm, whichever is lower. URA will assess the landscaping proposal and ensure there is a good provision of greenery before supporting the additional GFA for rooftop ORAs.
- (d) As ORAs typically form part of a restaurant, applicants can use up to 50 per cent of the bonus GFA at each rooftop ORA for enclosed complementary spaces (e.g. kitchen, serving areas) while the remaining bonus GFA areas must be retained for ORA. The enclosed structures should be set back from the edge of the building following the 45-degree line taken from the edge of the roof and kept to a height of no more than 5 metres. If ORAs are proposed on multiple roofs, the extent of enclosed spaces shall be kept to 50 per cent of the bonus GFA for each rooftop ORA.

### Submission requirements

- (e) Similar to the other LUSH initiatives, a landscape plan showing the proposed landscaping scheme is to be submitted as part of the development application for the Bonus Rooftop ORA

## 19 COMMUNAL PLANTER BOXES

- (a) Cantilevered communal planter boxes within all developments can be excluded from gross floor area computation, subject to the following criteria:

- (i) Maximum width of 1m width.
  - (ii) Maximum 500 mm depth (for planting purpose)
  - (iii) They shall be sufficiently externalized
- (b) The objective of granting GFA exemption for such planter boxes is to encourage the provision of skyrise greenery which contributes to improving the quality of life for the city. URA will consider communal planter boxes which are more than 1 metre wide for GFA exemption if the wider planter boxes are part of an overall scheme designed to enhance greenery provision for the development. Applicants applying for the GFA exemption will have to justify the merits of their design and demonstrate how they will maintain the landscaping.
- (c) Therefore, while low-height railings can be provided for safety purposes (as shown in Figure 7-20), internalized planter boxes, or those which are provided behind full-height screening cannot be exempted from GFA computation since they do not meet the intended objective. Figure 7-21 and 7-22 illustrate examples which **cannot** qualify for GFA exemption.
- (d) There will also be no partial GFA exemption granted for planter boxes. For planter boxes that exceed 1m width, or do not satisfy the minimum 500mm depth, the entire area will be computed as GFA (see Figure 7-23). This is to ensure that planter boxes are used solely for planting purposes and not as an extended area, that may be converted later to other usable floor space.

## 20 SKY TERRACES

- (a) Sky terraces play a key role in contributing towards to our vision to make Singapore a City in Garden.

The objectives are:

- i) To serve as quality communal spaces and;
  - ii) To contribute towards the overall greenery and environmental quality of the surrounding area.
- (b) To enjoy the GFA exemption, sky terraces are required to be open to the public or the building occupants to fulfil the communal usage objective. The maximum area for GFA exemption is defined by the area under the 45-degree line taken from the edge of the overhead projection. This 45-degree line guideline is necessary to encourage developers to provide lofty sky terraces so as to enjoy greater GFA exemption.
- (c) Perimeter Opening for sky terraces:
- i) At least 40% of the perimeter of the sky terrace is to remain open and unenclosed.
  - ii) At least 60% of the perimeter of the sky terrace is to remain open and unenclosed, if the applicant were to apply for additional GFA exemption for areas located outside the 45 degree line or for the barrier-free and fire escape corridors.
- (d) Lush Greening on sky terraces:
- i) The sky terrace is to be lushly landscaped\* with a suitable variety of plants;
  - ii) The greenery on the sky terrace should be enjoyed by the building users as well as be visible from the surrounding environment;



- iii) Planting should be incorporated on permanent and sunken planting beds to enhance the spatial and visual quality of the sky terrace. The sunken planting beds should have sufficient soil depth to accommodate plants and landscaping. If it is not possible to provide sunken planting beds due to FSSD's fire safety requirements, low raised planting beds at 300mm high may be provided but they must be well landscaped and planted with trees or shrubs (i.e. no turfing allowed). Otherwise, they will be treated as habitable spaces for determining fire safety requirements.
- (e) Quality Communal usage\* on sky terraces:
- i) The sky terrace should be as meaningful and effective communal gathering and activity spaces.
  - ii) The sky terrace must be accessible to all occupants of the building and there should be at least one set of communal access via a lift or staircase serving the sky terrace. Secondary access to the sky terrace from strata units can be supported.
  - iii) The sky terrace should be of a meaningful size and configuration to facilitate communal usage. As a guide, the proposed depth of the sky terrace should be at least 5m.
  - iv) For sky terraces in residential developments that occupy less than 60% of the floor plates, the sky terraces should serve a minimum of 2 strata units to ensure that they remain as communal space.

\*A Landscape Plan and relevant sections for the sky terrace showing the proposed landscaping scheme and communal facilities is to be submitted as part of the development application. (See Sample in Figure 3.33)

- (f) Completion of sky terrace at strata / land subdivision stage;
- URA will require the submission of as-built photos and/or site inspection of the sky terrace at the strata or land subdivision stage whichever is applicable. The photographs submitted should demonstrate that the landscaping and planting have been implemented in accordance with the approved landscape plan.

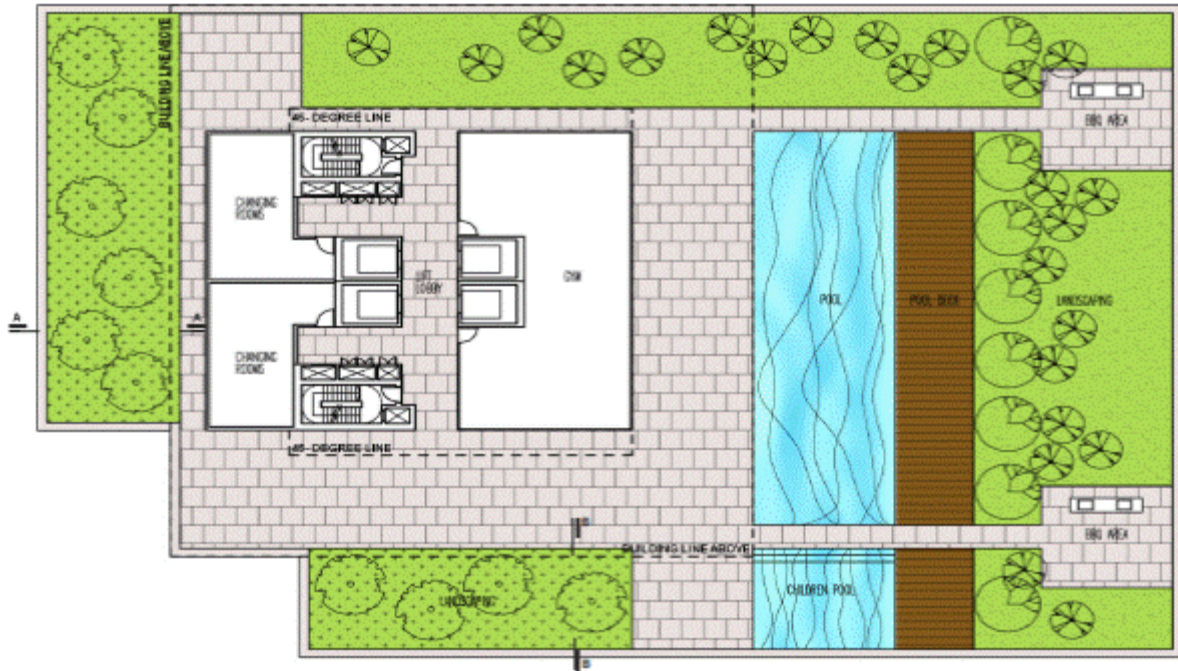


Figure 3.33: Example on submission a landscaping plan

## BUILDING LENGTH

21 Currently, there is no specific guideline on building length. However, SIA, REDAS, SIP and URA have jointly released an Industry Guide of Good Practices to minimize wall-like developments on 4 March 2010. You are advised to refer to this guide and adopt the good practices highlighted in it.

## SPACING BETWEEN BUILDINGS

22 Currently, there is no specific guideline on building spacing. However, SIA, REDAS, SIP and URA have jointly released an Industry Guide of Good Practices to minimize wall-like developments on 4 March 2010. You are advised to refer to this guide and adopt the good practices highlighted in it.

## ROAD BUFFERS AND BUILDING SETBACK

23 All developments are required to provide a buffer between the road reserve line and the building. The exception is when there are urban design requirements allowing the buildings to abut the road reserve line/site boundaries such as for developments in the Central Area.

24 Setback controls of building from public roads are determined by the road buffer only. The minimum buffer width depends on the hierarchy of the category of the road the site fronts, the type and height of development. See Figure 3.4

Figure 3.4: Buffer Requirements Along Roads

PROPOSED USE/DEVELOPMENT <sup>1</sup>		ROAD BUFFER (MINIMUM)	GREEN BUFFER <sup>2</sup> (WITHIN ROAD BUFFER)
Category 1	Residential/Educational (6 storeys or above)	30 m	5 m
	Residential/Educational (up to 5 storeys)	24 m	5 m

PROPOSED USE/DEVELOPMENT <sup>1</sup>		ROAD BUFFER (MINIMUM)	GREEN BUFFER <sup>2</sup> (WITHIN ROAD BUFFER)
	Commercial/Industrial/Institutional/Multi-storey carpark(MSCP)/Place of worship	15 m	5 m
Category 2	Residential/Educational (6 storeys or above)	15 m	5 m
	Residential/Educational (up to 5 storeys)	12 m	5 m
	Commercial/Industrial/Institutional/Multi-storey carpark(MSCP)/Place of worship	7.5 m	3 m
Category 3	Residential/Educational (6 storeys or above)	10 m	3 m
	Residential/Educational (up to 5 storeys)	7.5 m	3 m
	Commercial/Industrial/Institutional/Place of worship	5 m	3 m
	MSCP <sup>3</sup>	-	-
Category 4 – 5 & Slip Roads	Residential <sup>4</sup> / Educational	7.5 m	3 m
	Commercial/Industry/Institution/Place of Worship	5 m	3 m
	MSCP <sup>3</sup>	-	-

## NOTES:

- 1 For the central Area, the buffer standard for residential developments in the River Valley/Orchard/Newton Planning Area is 7.5m (minimum, of which 3m is for the green buffer). The buffer standard for residential developments outside these three DGPs as well as other types of developments within the Central Area will be determined by urban design considerations.
- 2 The following definitions are adopted for the interpretation of buffer zones
  - i) A buffer is defined as a strip or an area of land which falls either between the road reserve and the building line or between the building lines of neighbouring structures.
  - ii) A physical buffer is a buffer within which car park, driveway, cycle tracks, jogging tracks, walkway and small ancillary structures e.g. guardhouses, flag-poles/ lamp posts, sign posts, bin centres, gas pressure regulator kiosks, gas governor houses-types A & B, overground (electricity) boxes, ring main compact units-reinforced concrete structure/ fenced-up area, below-ground-level structures and canopies for pump islands within petrol service stations may be permitted. The new objective-based guidelines have been introduced to allow greater design flexibility to locate ancillary structures within the physical buffer. The new objective-based guidelines replace the prescriptive guidelines on the allowable type of ancillary structures. For details of the guidelines, please see "Figure 3.25 : Objective-based Guidelines On Minor Ancillary Structures Within The Physical Buffer and The Building Setback Area" in Micro Considerations.
  - iii) A green buffer is the segment within the road buffer that is meant for tree planting and turfing only. Where planting strips are to be provided, these should be clearly annotated as tree planting in all submissions plans to Development Control.
  - iv) In cases where the drainage / sewerage reserve forms part of the whole of the buffer zone, no structure / tree is allowed within the reserve.
- 3 The road buffer for MSCPs facing a Category 3-5 road is based on that for the predominant use of the development.
- 4 For landed housing with the sides/rear fronting a Category 5 road, the buffer standard is the same as the minimum boundary clearance requirements. There is no need to provide any green buffer.
- 5 Reserves for drains sewers and minor roads bordering along expressways or major arterials may be considered as part of required buffers for expressways and major arterials.
- 6 For a drainage reserve with a width greater than that of the buffer and bordering along expressways of major arterials, a planting strip is to be provided within the site nearer to the building line. An additional buffer zone will not be required. However; the Drainage Department, ENV may impose such requirements from time to time for technical reasons.

7 The classification of the road category is obtainable from LTA through the purchase of the Road Interpretation Plan (RIP).

25 The new objective-based guideline has been introduced to allow greater design flexibility to locate ancillary structures and to safeguard the intentions of the buffer requirements.

## PLANTING STRIP

26 To preserve the green and garden city image, 2.0m (minimum) wide planting strip is to be provided for all developments along all sides of the development site boundary except where it fronts a public road. In such a situation, the width of the green buffer shall be provided in accordance with the category of the road. The planting strip shall be continuous except where an access road is required.

27 The exception are industrial and warehouse developments and when there are specific guidelines allowing the buildings to abut the site boundaries such as developments in the Central Area guided by urban design guidelines.

28 Where planting strips are to be provided, these should be clearly annotated as the planting strip in all submission plans to Development Control.

29 Although the green buffer is meant for tree planting and turf only, some minor ancillary structures are allowed for functional reasons. Applicant can choose either to apply the prescriptive guidelines or the new objective-based guidelines if the structures proposed are not on the prescriptive list. For details of the objective-based guidelines, please see "Figure 3.20 : Objective-Based Guidelines On Minor Ancillary Structures Within The Green Buffer and 2m Planting Strip Along Common Boundaries" in Micro Considerations. (To be administered by NPARKS with effect from 1 August 2005. Please refer to NPARKS' Circular: [https://www.nparks.gov.sg/~media/nparks-real-content/partners-us/developers-architects-and-engineers/circular190705\\_2m-wide-pheripheral.pdf?la=en](https://www.nparks.gov.sg/~media/nparks-real-content/partners-us/developers-architects-and-engineers/circular190705_2m-wide-pheripheral.pdf?la=en) )

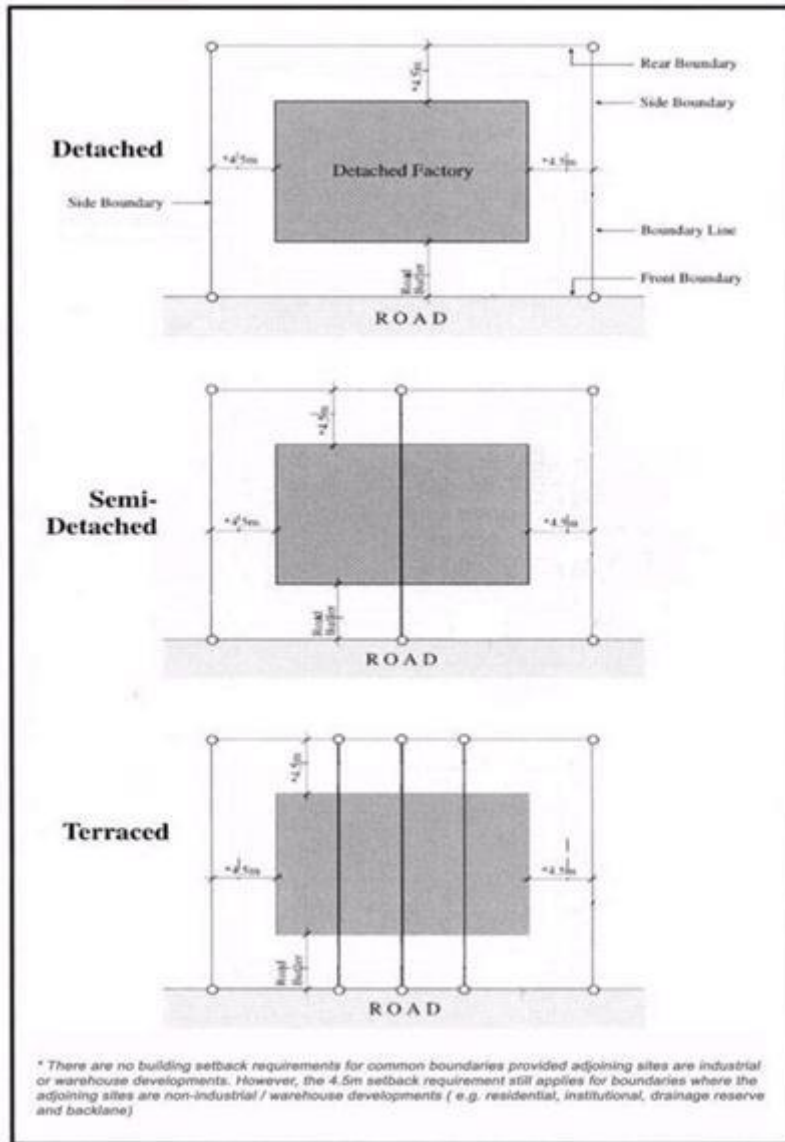


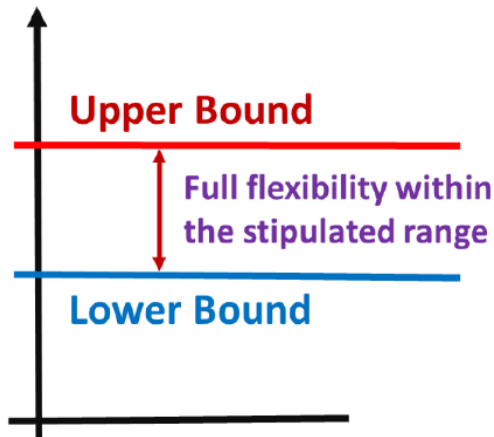
Figure 3.2: Minimum Setback Requirements For Industrial and Warehouse Development

## CAR PARKING REQUIREMENTS

**30** Car parking requirements are currently prescribed by the Land Transport Authority (LTA). Car parks shall be provided in accordance with the standards laid down in The Parking Places (Provision of Parking Places and Parking Lots) Rules and LTA's guidelines.

### (A) Range-based Car Parking Standard

**31** LTA's Range-based Parking Provision Standards (RPPS) allows developments to provide any level of parking provision within the specified range, defined by a lower bound and an upper bound. LTA also has mandatory motorcycle parking provision requirements in all non-residential developments. LTA's RPPS is explained in the diagram below.



### (B) Request for Provision of Excess Car Parks

**32** Surplus parking spaces in the following new developments are computed as GFA to discourage the overprovision of parking spaces:

- a. All commercial, mixed-use and hotel developments
- b. Business parks developments within 400m of MRT or LRT stations

**33** Developers who wish to provide parking provision above the upper bound in these new developments will be subjected to a process of waiver evaluation by LTA.

**34** If the waiver is approved, each surplus car park lot will be computed as 35m<sup>2</sup> GFA, that being the average area of a car park lot inclusive of circulation space. Each surplus motorcycle lot will be computed as 12m<sup>2</sup> GFA.

**35** Additional GFA arising from the surplus car park lots will be subjected to payment of Development Charge/Differential Premium, where applicable.

### (C) Conversion of Surplus Car Parking

**36** The following existing developments are allowed to permanently convert their surplus car park lots to other uses:

- a. Commercial, mixed-use and hotel developments within the Central Area
- b. Commercial, mixed-use and hotel developments within 400m of MRT or LRT stations
- c. Business park developments within 400m of MRT or LRT

**37** LTA can consider conversion of car parks up to the lower bound as stipulated in the RPPS. Interested building owners are to arrange for a pre-application consultation with LTA before submitting a development application to URA.

**38** The conversion of surplus car park is allowed subject to compliance with all of the following conditions:

**39** The proposed uses must be in line with the Master Plan zoning for the site and the planning intention for the surrounding area.

**40** The existing infrastructure and traffic network must be able to support the increase in GFA and uses, and take into consideration proposed measures to mitigate traffic generation.

**41** The resultant car parking provision must be able to support the additional GFA and proposed uses.

**42** The additional GFA arising from the conversion will be subjected to payment of Development Charge/Differential Premium, where applicable.

**43** The additional GFA arising from the conversion of surplus car parking, detailed uses and any changes to the building form and design will be subject to evaluation by URA and the relevant agencies.

**44** Requests for conversion of surplus car parks may not be supported for sites where there are specific conditions imposed in planning approval or the government land sale that restrict the conversion of the surplus car parking spaces, or sites located within or adjacent to Conservation Areas where additional car parking spaces are needed to support the uses within the conserved buildings.

#### **(D) Car Parks as common property**

**45** With the exception of private car/lorry parking lots in strata-titled industrial and commercial developments proposed to form part of the strata unit, all other car parks are to be treated as common property, and cannot be included as part of a private strata unit.

For details of provision of private car / lorry parking lots within commercial developments, please refer to Part 2, Section 1 on commercial developments. For industrial buildings, please refer to Part 2, Section C on industrial / warehouse / utilities / telecommunication / business park developments.

#### **FOOTNOTES:**

**1** The requirement applies only to the integrated car park lots within a development e.g. multi-storey or basement car park which can be converted to other uses without affecting the building bulk. Additional mechanised and surface parking lots will not be counted as GFA. In other words, in a development where integrated and other car park lots are provided, the other lots will be first counted to meet LTAs minimum requirements.

**2** Examples of commercial developments are office, shopping centres, entertainment complexes, convention / exhibition centres, restaurants, banks, commercial schools and trade missions

**3** For purpose of the surplus carpark policy, recreation use and medical suites will be treated as part of the commercial component. Hence, in developments where such uses together with commercial and hotel components form more than 20% of the total GFA, the surplus car parks serving these uses will be subject to the same requirement.

#### **EARTHWORKS**

**46** Earthworks are defined as any operations or works in, on or over land which result in substantial modification to the existing ground terrain, land form or slope. These include excavation, formation of new slope or embankment, and cut and fill operations.

**47** Planning permission is required when earthworks involve more than 2000m<sup>2</sup> of land or change in the level of the land of more than 1.5m anywhere in the development site or relative to the neighbouring land.

**48** When the proposed earthworks are carried out in conjunction with erection of buildings or structures, a separate earthwork submission is not required.

**49** Earthworks which are confined to the buildable area (see Figure 3.5) need not be restricted to a 1.0m (maximum) limit. This is to allow for the flexibility to adjust the platform level of the floor plate

since the impact of the internal level differences will be buffered by the setback distance and screened off by the boundary wall from outside view.

**50** The earthfill within the buildable area will be counted as part of the overall building height. Where the depth of the internal earthfill is more than 1.0m, it will be treated as a storey for a building height control and setback purpose (see Figure 3.6).

**51** The depth of earthcut within the buildable area will have to comply with the current guidelines on basement protrusion and building height control for the site.

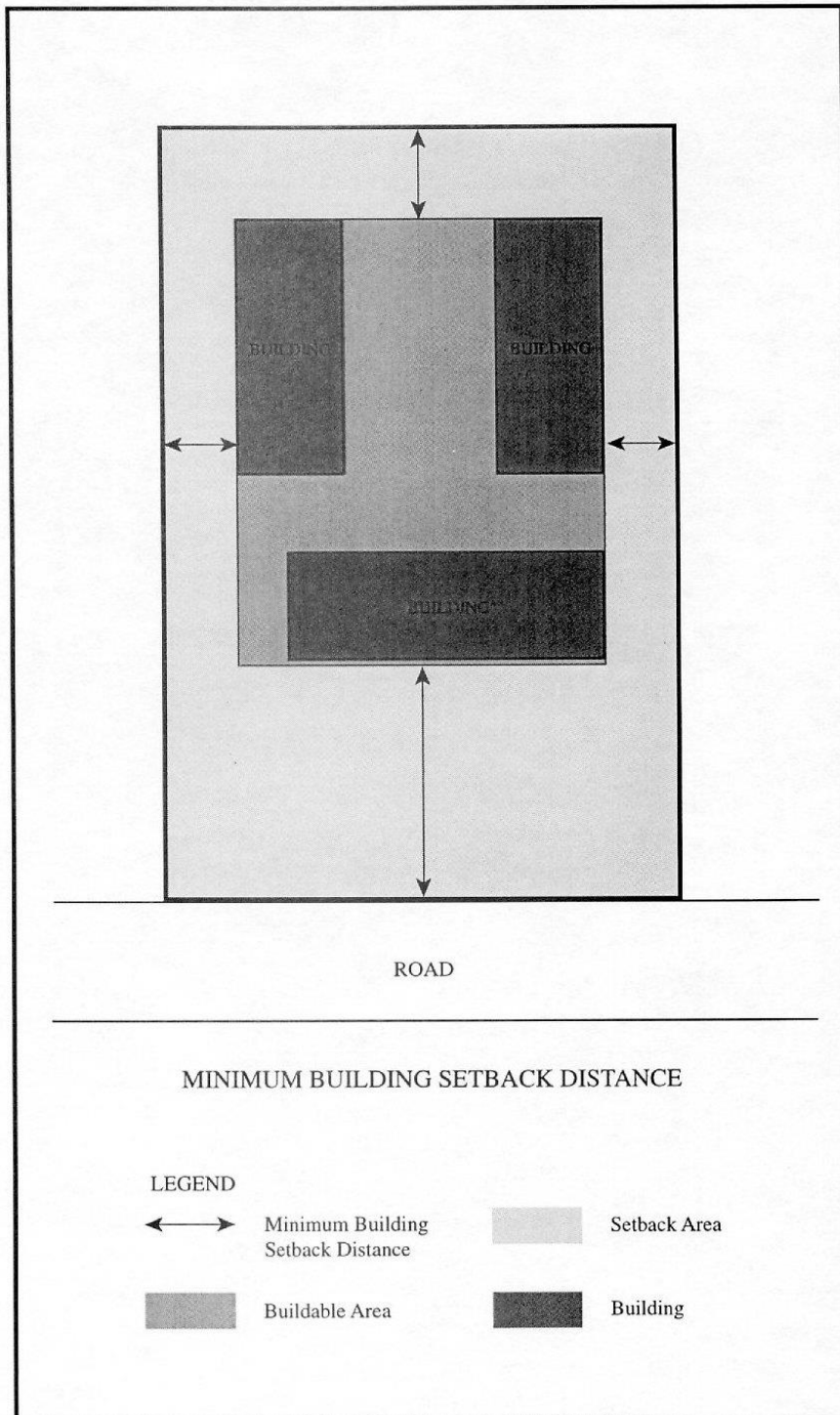
**52** Earthfill / earthcut will not be allowed around the periphery of the site, i.e. within the setback area, except for the following situations:

- (a) when the proposed earthworks is to match the existing platform levels of the adjoining lots or to meet the minimum platform level stipulated by the Drainage Department, ENV;
- (b) when the sites are restricted or on sloping terrain, for which earthfill / earthcut is necessary to create a workable platform level; and/or
- (c) when the earthcut is necessary to build a fully submerged basement to abut the boundary, provided the original platform level is reinstated upon the completion of the basement.

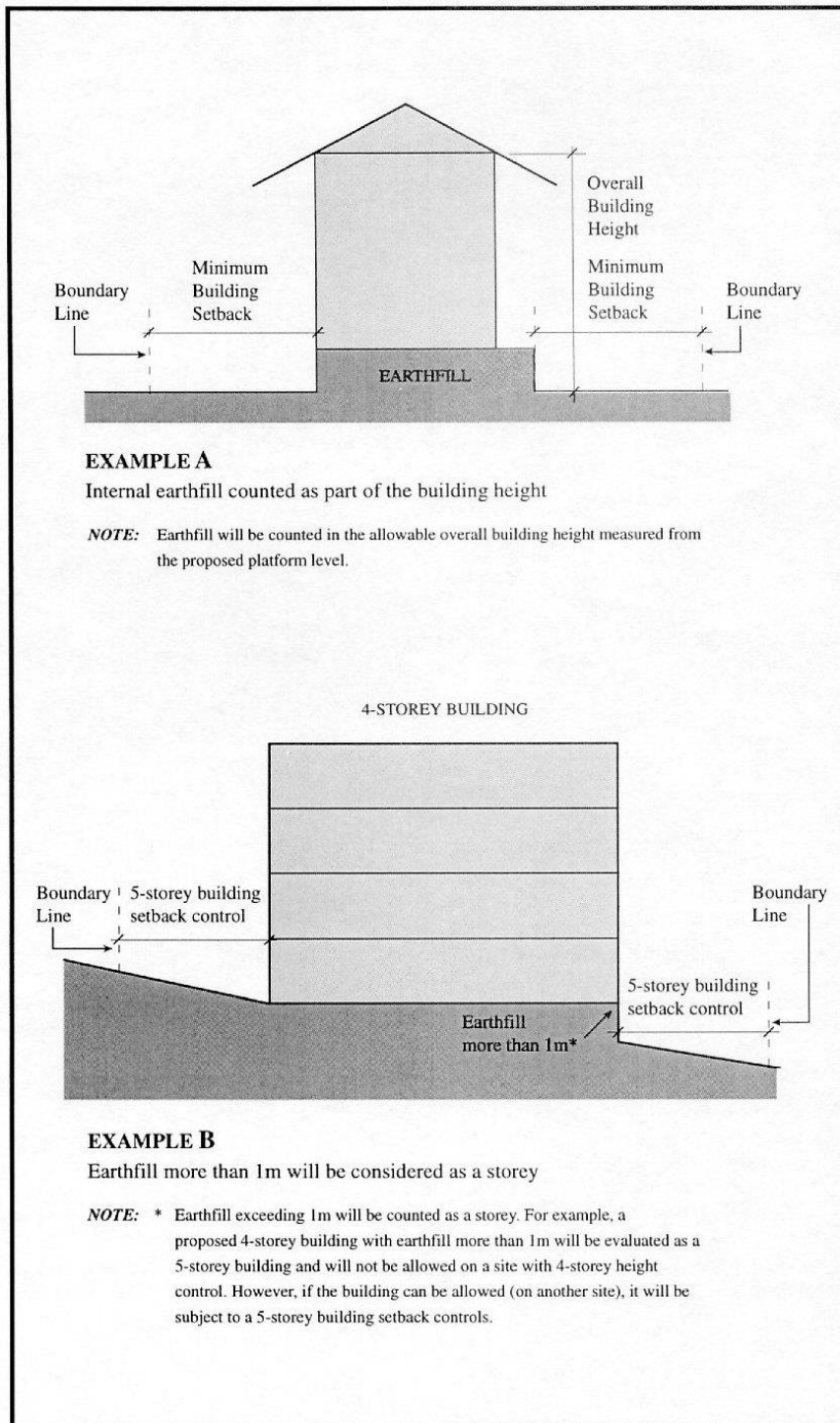
**53** Earthworks within the setback area, where allowed in the situations listed in paragraph 33(b) above, should not exceed 1.0m (maximum), based on the prevailing earthworks guidelines.

**54** In areas where the Drainage Department stipulates a minimum platform level for the development sites, proposed earthfill over the entire site to meet this minimum platform level can be allowed. It will not be counted as a storey for building height control and setback purposes. Earthfill, where allowed as defined previously, not exceeding 1.0m above the minimum platform level will also not be counted as a storey for such purposes.





**Figure 3.5: Buildable Area and Setback Area**



**Figure 3.6: Examples of Earthfills**

## RETAINING WALLS

**55** High retaining walls are unsightly and they mar the landscape. They should be avoided wherever possible, particularly for small in-fill plots. If they must be built and can be allowed, they should observe the following requirements - see Figure 3.7:

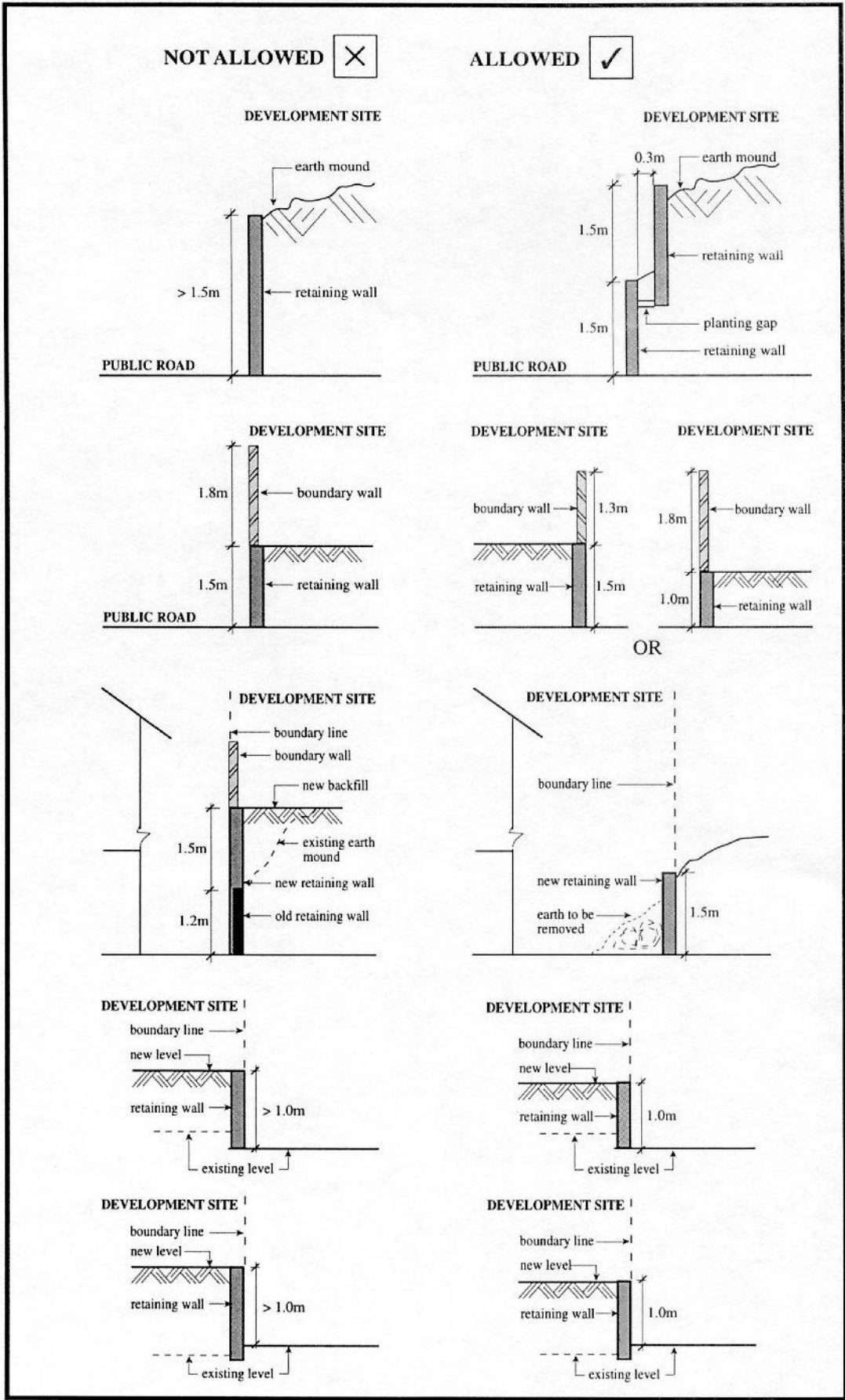
- (a) the height shall be less than 1.5m for large sites;
- (b) retaining walls higher than 1.5m may be considered if alternative measures like terracing are found not practical because of site constraints and the need for extensive excavation; and
- (c) the total visible height of the solid boundary-cum-retaining wall shall not exceed 2.8m, of which the solid boundary wall shall not exceed 1.8m.

**56** Retaining walls, which are the resultant of earthworks, should not exceed 1.5m. Otherwise tiering is required.

**57** In areas where the Drainage Department stipulates a minimum platform level for drainage purpose, the raised platform level can be extended to the edge of the site. Such retaining walls along the boundaries<sup>3</sup> need not be tiered as these are temporary measures, pending the redevelopment of the neighbouring land to the same minimum platform level.

**FOOTNOTE:**

**3** Except along boundaries that abut the foreshore, a road and a waterbody with drainage reserve equal or more than 17.5m wide.



**Figure 3.7: Guidelines for Retaining Walls**

## **BASEMENT & BASEMENT SETBACKS**

**58** A basement is a sunken structure which does not protrude more than 1.0m above the ground level on all sides. If the protrusion is more than 1.0m above the ground level, it is regarded as a storey. For planning evaluation purposes, if one side of the structure is fully exposed and the other three sides are generally submerged into the ground, it will be regarded a storey and not a basement. For floor numbering purpose, it can be called a basement.

**59** The setbacks for basements, as illustrated in Figure 3.8a, are:

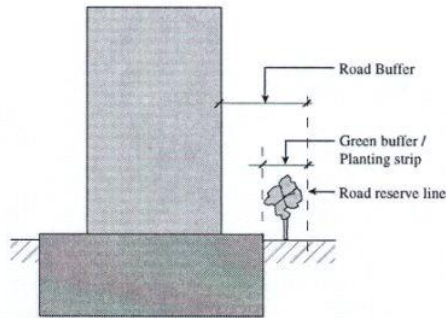
From Road Reserve Line

- (a)** Basement protruding above ground can be built right up to the green buffer/planting strip. - Sketch 1(a)
- (b)** Submerged basement structure can be built up to the road reserve line provided the portion underneath the green buffer/planting strip is submerged at least 2m or more below the ground level. - Sketch 1(b)

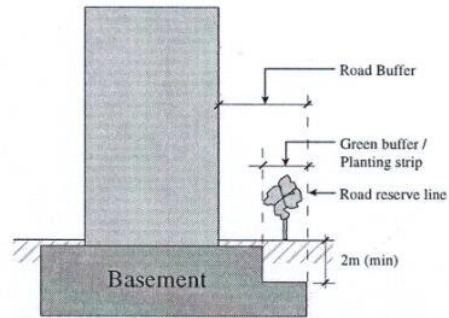
From Side or Rear Boundary

Basement may be built up to the site lot boundary provided there are no technical requirements (e.g. sewerage, drainage) to be complied with and the basement does not cause any adverse impact to the adjoining property. In other words, if a site is higher than the neighbour's land, the basement on the higher site may be required to be set back from the lot boundary. The side of a basement wall abutting any site boundary must not have any openings into the adjoining site. - Sketch 2 and 3

**BASEMENT SETBACK (FROM ROAD RESERVE LINE)  
WITH GREEN BUFFER / PLANTING STRIP**



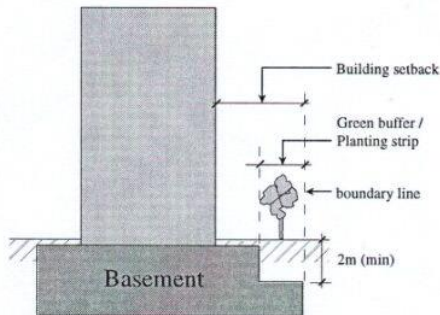
**SKETCH 1(a)**



**SKETCH 1(b)**

Only the portion of the basement structure with a minimum of 2m below the ground level may abut the road reserve

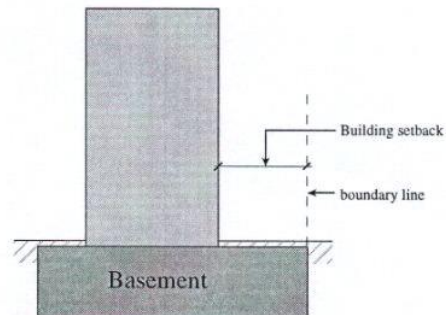
**BASEMENT SETBACK (FROM SIDE / REAR BOUNDARY)**



**SKETCH 2**

**With Planting Strip Requirement**

Only the portion of the basement structure with a minimum of 2m below the ground level may abut the site boundary



**SKETCH 3**

**Without Planting Strip Requirement**

Fully submerged basement may abut site boundary

**Figure 3.8a: Basement Guidelines**

**BASEMENT OPENINGS**

**60** Basement protruding up to 1.0 m with vertical openings on the side walls can be allowed for all types of development. However, to allow greater flexibility to incorporate natural ventilation to basements in the building designs, higher vertical openings and horizontal openings within the setback distance can be allowed for the types of developments as indicated below:

TYPES OF DEVELOPMENTS	VERTICAL OPENINGS *	HORIZONTAL OPENINGS
Non-residential	Allowed	Allowed
Flats & Condominium	Allowed	Allowed
Strata Landed	Not Allowed	Allowed

**NOTE:**

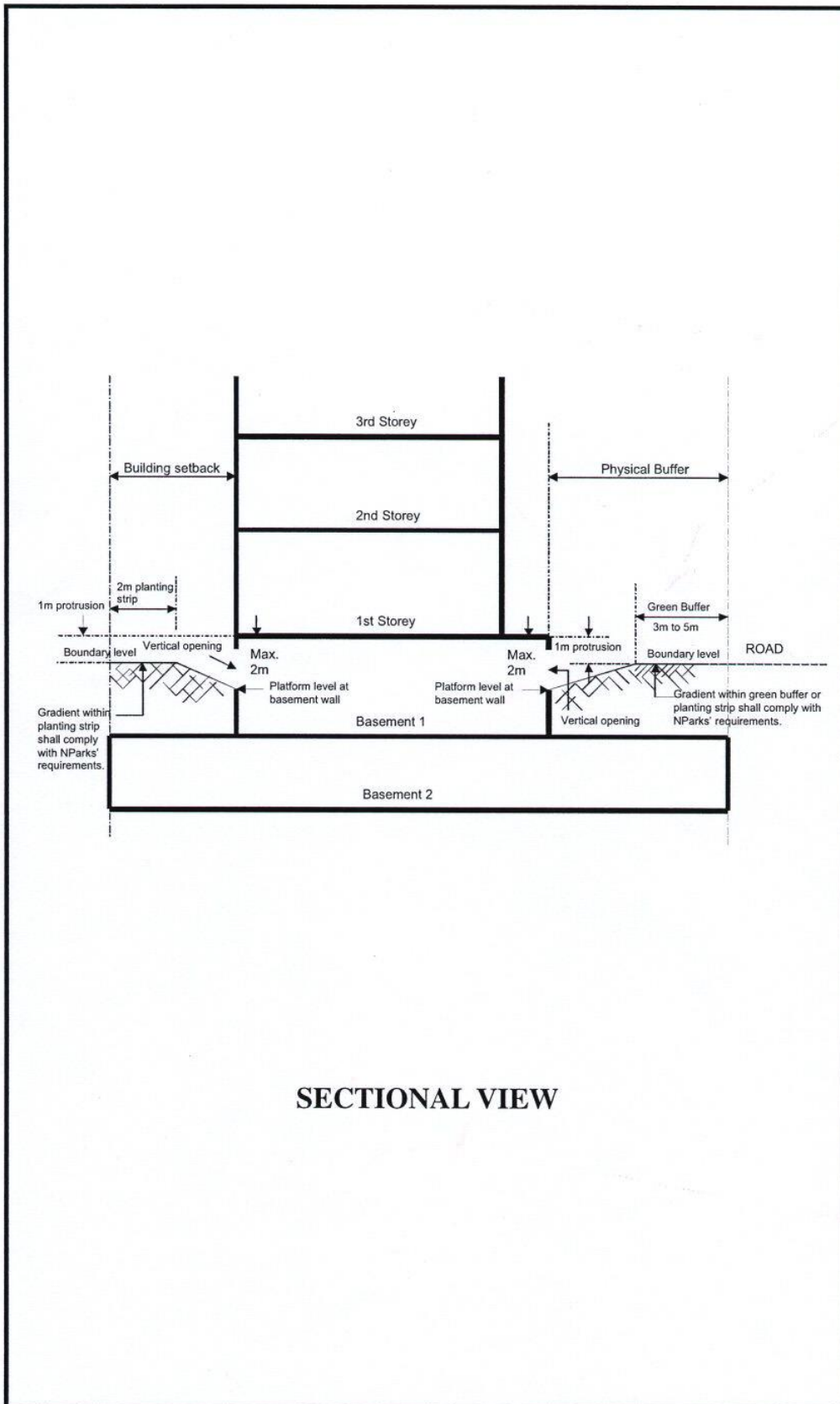
\*The guidelines for higher vertical openings to basements are not applicable to all types of developments within the designated landed housing areas. This is to safeguard the streetscape and amenity of these landed housing areas

**Guidelines for Vertical Openings**

**61** Basements with higher vertical openings on the side walls are only allowed if they are for natural ventilation to meet Building and Construction Authority’s requirements. The guidelines are as follows (see Figure 3.8b):

- (a) Basements can be exposed up to 2.0 m from the point where the platform level meets the basement wall. The protrusion measured from the level at the site boundary shall not exceed 1.0 m. This means that the earth around the basement wall can be cut to slope down to achieve the 2.0 m basement exposure with openings.
- (b) The extent of the slope within the green buffer or planting strip shall comply with NPark’s gradient control of 1:2.5.
- (c) Vertical cutting of the earth resulting in a trench around the basement is not allowed.

**62** There is no control on the extent of the vertical openings or the types of cover over the vertical openings subject to the requirements of the other technical departments. However, basement walls without any openings shall comply with the maximum basement protrusion of 1.0 m.



**Figure 3.8b: Vertical Openings**

**Guidelines for Horizontal Openings (i.e. voids to basement)**

**63** Horizontal openings to the basement are allowed within the setback distance outside the green buffer and planting strip, subject to provision of effective screening to hide the view to the basement (see Figure 3.8c).



64 There is no control on the type and form of screening which can be trellis or other forms of construction. As a reference of what constitutes effective screening, the details in Figure 3.8d can serve as a guide.

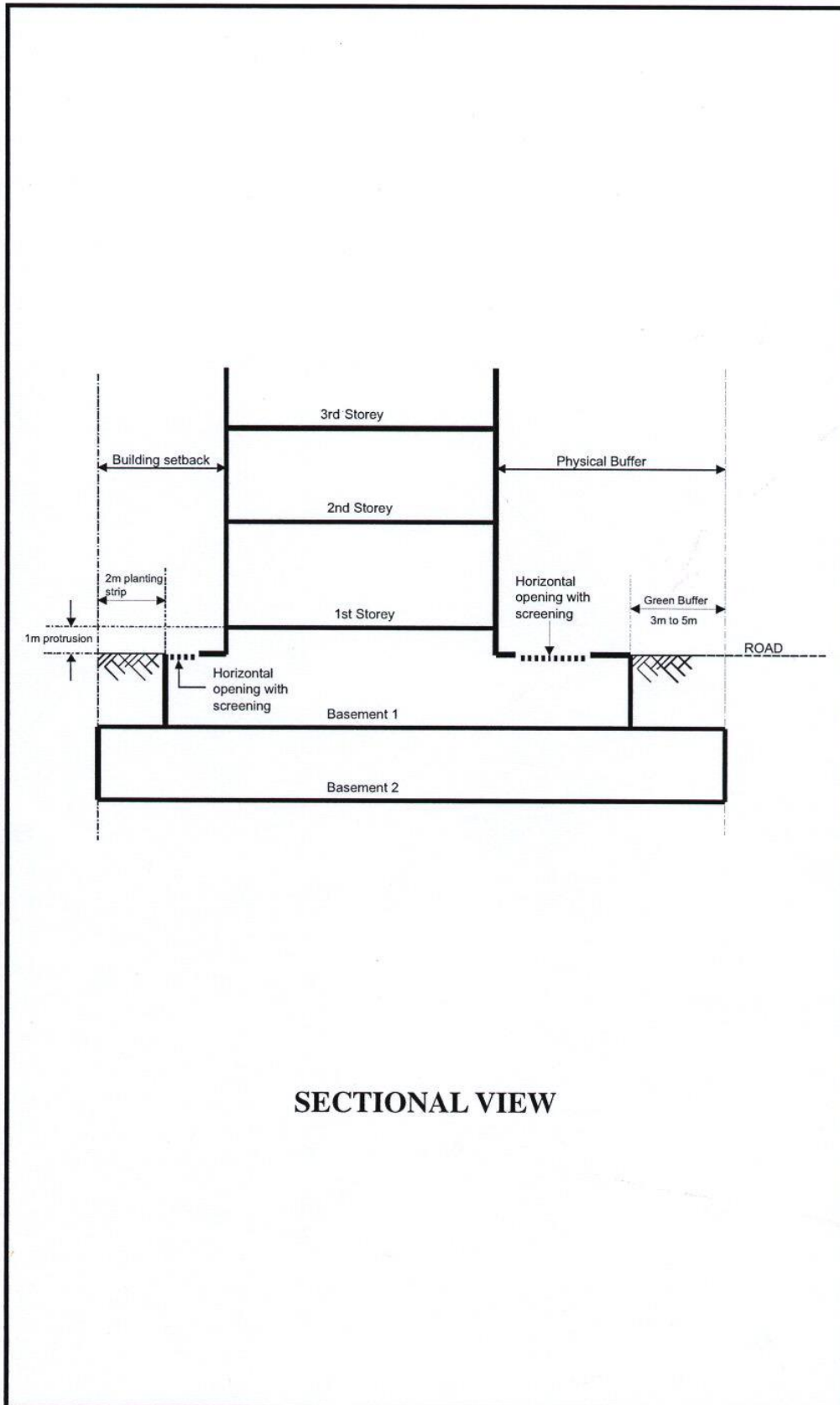
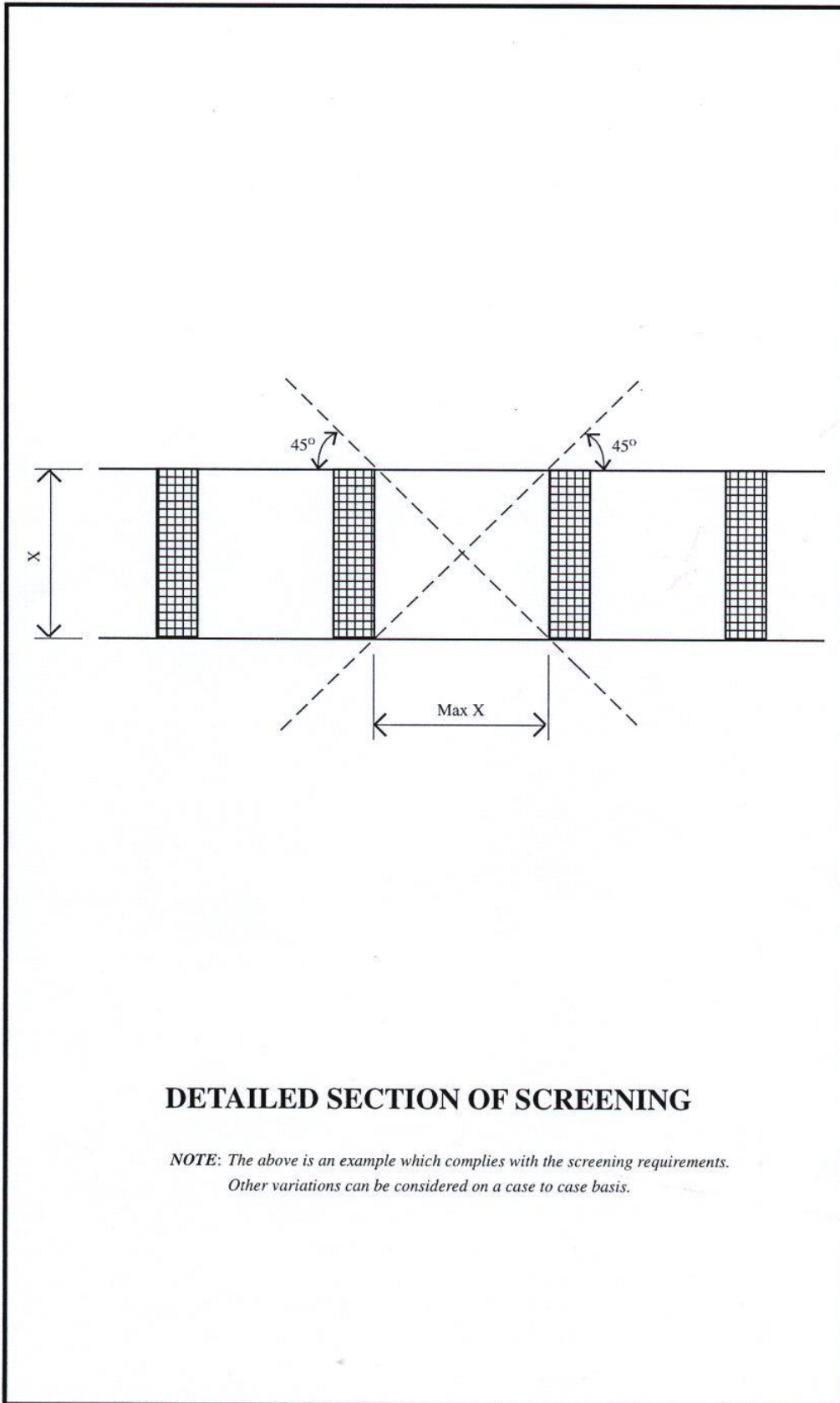


Figure 3.8c: Horizontal Openings



**Figure 3.8d: Screen Details**

### ANCILLARY STRUCTURES

**65** Swimming pool, electric substation, etc. are to be adequately set back as stated in accordance with Figure 3.9.

Other minor ancillary structures like meter compartment, bin point and guardhouse are allowed within the green buffer strip. They can either be designed to stand alone, or combined as one structure to house a guardhouse, a bin point and a meter compartment. In either arrangement, the total width of the structures must not exceed 3.0m or 25% of the available road frontage, whichever is greater. See Figures 3.10 and 3.11 for illustration.

The use of these ancillary structures must be restricted to the intended purpose.

For ancillary structures located within the green buffer, applicant can choose either to apply the prescriptive guidelines or the new objective-based guidelines if the structures proposed are not in the list. For details of the objective-based guidelines, please see "Figure 3.17: Objective-based Guidelines on Minor Ancillary Structures within the Green Buffer and 2m Planting Strip Along Common Boundaries" in Micro Considerations. \*(To be administered by NPARKS with effect from 1 August 2005. Please refer to NPARKS' Circular: [https://www.nparks.gov.sg/~media/nparks-real-content/partners-us/developers-architects-and-engineers/circular190705\\_2m-wide-pheripheral.pdf?la=en](https://www.nparks.gov.sg/~media/nparks-real-content/partners-us/developers-architects-and-engineers/circular190705_2m-wide-pheripheral.pdf?la=en) )

For types of ancillary structures located within the physical buffer or building setback, the new objective-based guidelines would apply. For details of the guidelines, please see "Figure 3.25: Objective-based Guidelines On Minor Ancillary Structures Within The Physical Buffer and The Building Setback Area" in Micro Considerations.

**Figure 3.9: Setback Requirements for Ancillary Structures**

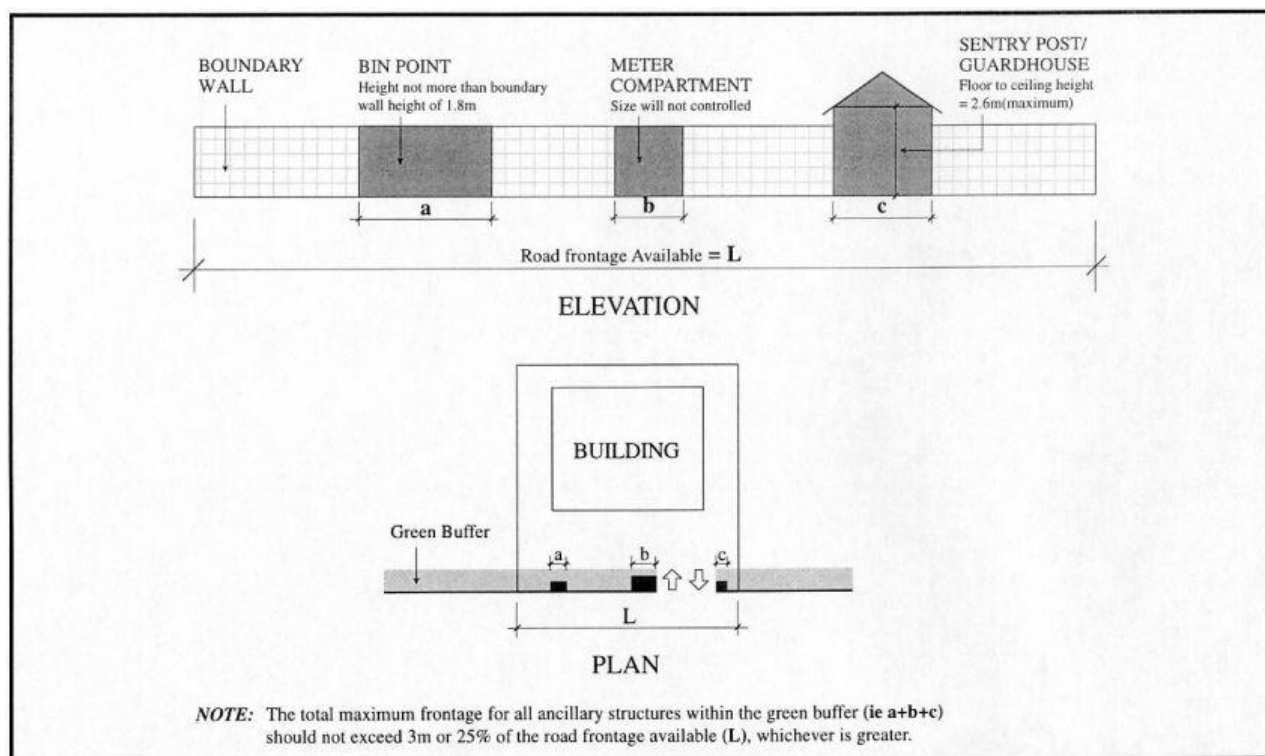
TYPE OF ANCILLARY STRUCTURES	REQUIRED SETBACK FROM THE ROAD	REQUIRED SETBACK FROM THE OTHER BOUNDARY LINE
Electric substation (ESS) <sup>1</sup> – 22KV / 6.6KV (1.5 storey) – 22KV / LV (1.5 storey) – 6.6KV/ LV (1 storey)	5m from Category 1 Road 3-5m from Category 2 Road <sup>2</sup> 3m from Category 3 Road 3m from Category 4 Road 3m from Category 5 Road	2m
Sunken swimming pool	5m from Category 1 Road 3-5m from Category 2 Road <sup>2</sup> 3m from Category 3 Road 3m from Category 4 Road 3m from Category 5 Road	2m
Raised swimming pool	To follow road buffer standards	2m

**NOTES:**

- 1 -Height of electric substation shall not exceed 6m (measured up to springing line).  
-Transformer open to the sky should be properly screen off to reduce any noise nuisance.
- 2 The setback control is the green buffer requirement based on the predominant use of the development.

**Figure 3.10: Guidelines for Minor Ancillary Structures within the Green Buffer**

TYPE OF ANCILLARY	SIZE CONTROL	HEIGHT CONTROL	FRONTAGE CONTROL
Meter Compartment	Not applicable	1.8m	Total frontage of all these structures within the green buffer should not exceed 3m or 25% of the road frontage available, whichever is greater.
Bin Point	Not applicable	1.8 ( IN line with the maximum height for boundary wall )	
Guardhouse	Not applicable	2.6m	



**Figure 3.11: Minor Ancillary Structures Allowed Within the Green Buffer**

## PROVISION OF OPEN AND COVERED PUBLIC WALKWAYS

**66** In Singapore's tropical climate, covered walkways enhance the environment for pedestrian traffic. The list of requirements for the design of walkways should take into account the following:

- (a) Covered walkways are to be provided along the periphery of buildings abutting/facing major and minor roads and all pedestrian routes. The exceptions are independent residential, industrial, religious and institutional buildings which are set back from the boundaries;
- (b) Provision should be made for walkways to be linked to developments on adjacent sites for all cases. For buildings which are setback from common boundaries, an open linkway should be provided to connect the covered walkway to the adjacent development or road. A covered linkway is to be provided between developments along designated routes in the Central Area, regional centres, sub-regional centres and fringe centres. These guidelines are also applicable to HDB commercial premises.

- (c) Covered walkways should be continuous, leading into the interior of a building, an open space or open walkway.
- (d) Width of covered walkways should be provided in accordance with Figure 3.12.
- (e) Building services should be located within buildings and not in the open and covered walkways. These building services include dry risers, wet risers, bulk water meters, electrical boxes, gas pressure regulator kiosks and other services that may cause obstruction or require diversion when maintenance works are being carried out.

**Figure 3.12: Guidelines For Width of Covered Public Walkway**

<b>TABLE 1: REQUIREMENT IN CENTRAL AREA<sup>1</sup></b>				
<b>LOCATION OF THE SITE</b>	<b>ALONG MAIN STREET</b>		<b>ALONG SIDE STREET</b>	
	<b>Minimum overall width</b>	<b>Minimum clear width</b>	<b>Minimum overall width</b>	<b>Minimum clear width</b>
Within Central Area	3.6m	3.0m	3.0m	2.4m

<b>TABLE 2: REQUIREMENT OUTSIDE CENTRAL AREA</b>				
<b>LOCATION OF THE SITE</b>	<b>ALONG ROAD CATEGORIES<sup>2</sup> 2 &amp; 3</b>		<b>ALONG ROAD CATEGORIES<sup>2</sup> 4 &amp; 5</b>	
	<b>Minimum overall width</b>	<b>Minimum clear width</b>	<b>Minimum overall width</b>	<b>Minimum clear width</b>
Within 200m of all MRT stations outside the central area (to the nearest street block)	3.6m	3.0m	2.4m	2.0m
Within Regional Centre, Sub-regional Centres, Fringe Centres, Neighbour and Town Centres	3.0m	2.4m	2.4m	2.0m
All other areas not covered above	3.0m	2.4m	2.4m	2.0m

**NOTES:**

Both overall and clear width requirements shall be satisfied.

<sup>1</sup> Refer to the Central Area Boundary at Figure 1.1 in Part 1

<sup>2</sup> For roads with heavy vehicular and pedestrian traffic a wider walkway width may be required by the Competent Authority subject to evaluation

- (f) Soffit height for covered walkway should be 3.6m. Where higher ceiling height is desired, glass or other cladding can be provided at the edge of the covered walkway to achieve the 3.6m height measured from the covered walkway to the base of the cladding. Variations to the 3.6m soffit height can be allowed in the following circumstances:
  - (i) the soffit height can be increased in independent developments provided the walkway width is increased correspondingly to match the proposed soffit height to maintain the 45 degree angle;
  - (ii) the soffit height can be increased at main entrances for articulation purposes;

- (iii) where it is considered desirable to have higher soffit height from the urban design point of view.
- (g) Walkways should be accessible to the disabled, i.e. there should be no steps along the covered and open walkways.
- (h) Walkway linkage to adjacent buildings should not have any steps. It should be on the same level or linked by ramp. Steps are only allowed for steep gradient where ramping is not possible.
- (i) All ramps to car parks shall begin after the line of the covered walkway.

**67** In addition to the above, the level of covered walkway should match the level of the open walkway. If technically not possible, provision should be made to link them at different convenient points.

**68** To achieve a consistent walkway level, the 3 possible situations with its accompanying treatments are as follows:

- (a) Roads to be raised to minimum platform level or other level:

Where a road has been identified by Drainage Department to be raised, the covered walkway should be built to the minimum platform level or other level stipulated by Drainage Department so that the covered walkway level matches the level of the open walkway when the road is raised.

- (b) Roads below minimum platform level and not to be raised:

Where there is no intention to raise the level of a road, the covered walkway level should match the level of the open walkway. However the first storey of the building should be raised to the minimum platform level, as required by Drainage Department, to prevent flooding to the building. Steps or ramps are to be provided within the building for access.

However, if more than 60% of the developments in a street block have covered walkway levels higher than the open walkway level and it is unlikely to be changed, then the covered walkway can be allowed to match the level of the covered walkway of the adjacent buildings.

- (c) Roads at minimum platform level:

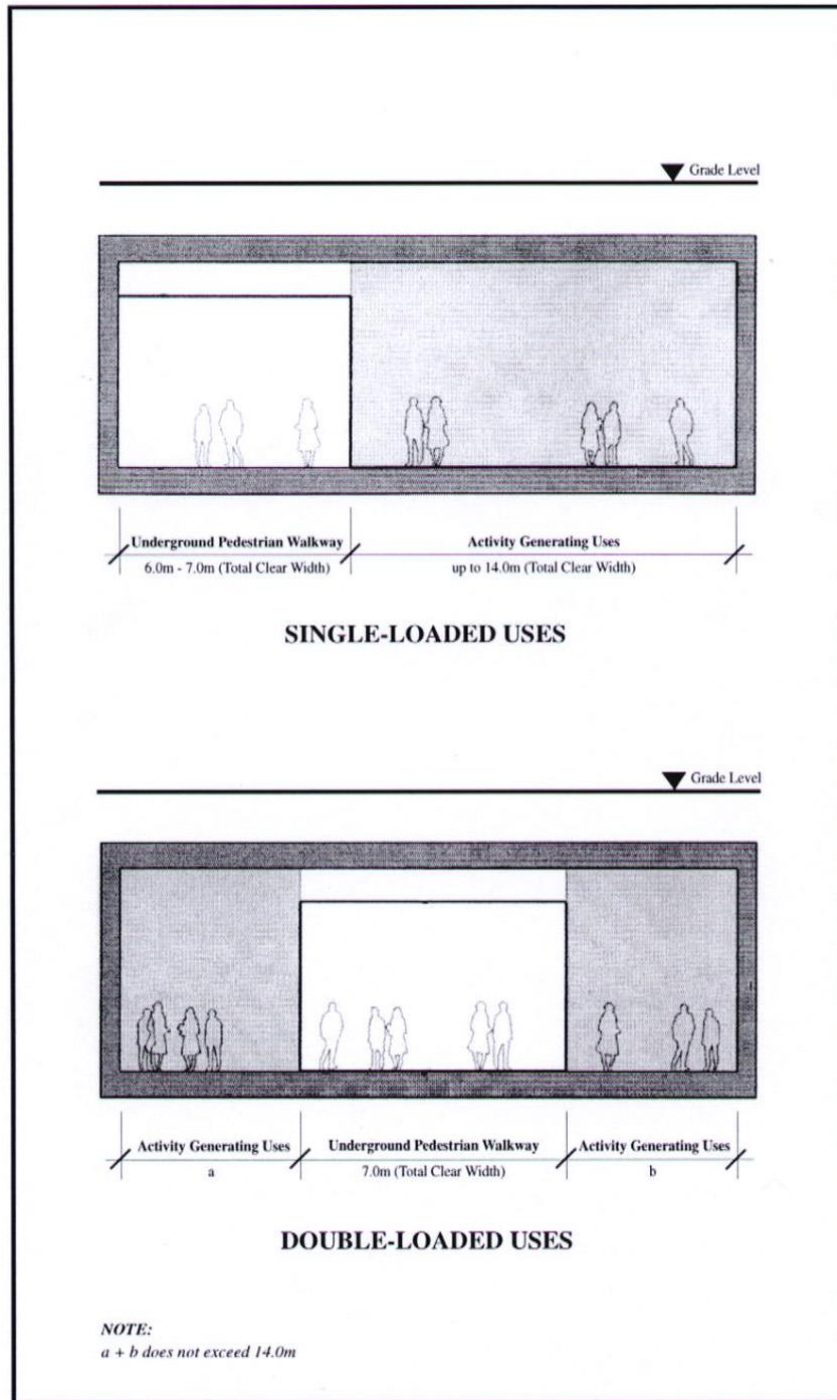
For roads which have been raised to the minimum platform level, the covered walkway of a redeveloped building is to match the level of the open walkway. Steps or ramps are to be provided to link to existing covered walkways in adjacent buildings which are not raised yet.

The developer will be required to level up the steps or ramps to the new covered walkway level when the adjacent lot is redeveloped.

## **UNDERGROUND PEDESTRIAN LINKS TO RAPID TRANSIT SYSTEM (RTS) STATIONS**

**69** To facilitate the development of more direct subterranean connections to the RTS stations, building owners/developers are encouraged to construct underground pedestrian links between existing or future RTS stations and nearby private developments.

**70** These connections are to incorporate activity-generating uses, like shops and eating establishments, along one or both sides of the underground pedestrian walkway linking to the RTS station. The activity-generating uses can be allowed up to a maximum total depth of 14m (see Figure 3.13).



**Figure 3.13: Schematic sections of Underground Pedestrian Links to Rapid Transit System (RTS) Stations**

**71** Detail guidelines for underground pedestrian links to RTS stations are shown in Figure 3.14.

**Figure 3.14: Guidelines for Underground Pedestrian Links to Rapid Transit System (RTS) Stations**

NO.	PARAMETER	UNDERGROUND PEDESTRIAN LINK
1	Definition	An underground pedestrian link is a subterranean connection that links directly between all existing or future RTS stations, and nearby private developments.  The underground pedestrian link should form part of the public circulation network, be disabled-friendly and directly accessible from common public areas during the operating hours of the RTS.
2	Locations	Potential locations for the construction of underground pedestrian links include basement level connections between existing or future RTS stations and adjacent developments.
3	Use	In addition to serving as linkages, underground pedestrian links are to incorporate activity-generating uses, e.g. retail and eating outlets, along one or both sides of the walkways.
4	Size	The underground pedestrian link will have a clear pedestrian walkway width of: - Between 6m – 7m for walkway with single-loaded uses; or - 7m for walkway with double-loaded uses.  In addition, the walkway will have a clear minimum ceiling height of 4m.  Activity-generating uses can be allowed up to a maximum total depth of 14m.
5	Gross Floor Area (GFA)	Owing to its function as public thoroughfare, the floor area of the underground pedestrian walkway can be exempted from the GFA computation subject to compliance with the criteria set out above.  The floor area for activity-generating uses will still be computed as GFA, and can be computed over and above the Master Plan allowable or permissible GFA for the development. This incentive will allow developments which have already been built to their full permissible floor area to have additional commercial floor space.  The GFA for this additional commercial space is not transferable and should not form the future development potential of the site on redevelopment. The additional GFA will be subject to payment of Development Charge (DC) or Differential Premium (DP) where applicable..
6	Submission Requirements	Properly annotated plans and sections showing the proposed underground pedestrian link in relation to the adjoining developments and nearby RTS station should be submitted.  Since a proposed underground pedestrian link will occupy State land, the developer/owner must obtain Land Office's endorsement for the submitted plans.

## ROOF GARDEN OR FLAT ROOF

**72** Roof garden, if any, should be left uncovered at all times unless otherwise approved by the planning authority. This is to ensure that no structure is added as it is tantamount to an additional storey in areas where there is storey height restriction; or the allowable development intensity may be exceeded. This treatment is similar for flat roofs.

**73** Rooftop pavilions are generally not allowed in Place of worship developments or developments that can cause disamenity to the neighbours. Thus, pavilions and other structures or other uses are only allowed on the rooftops if planning approval has been given by the planning authority. Tennis courts on flat roofs must observe the setbacks stated in Figure 3.15.

[Updated as at Apr 2009]



**Figure 3.15: Setbacks For Tennis Courts On Flat Roof**

SETBACKS	MINIMUM SETBACK REQUIREMENT
Setback from public road	Road buffer requirement
Setback from property boundary	6m
Setback from property boundary fronting open areas (i.e. open space, drainage reserve of width > 6m wide).	4.5m

## SITE COVERAGE

**74** Site coverage refers to the areas of all buildings/structures measured along the outermost external walls, columns or roof projections where the projection<sup>4</sup> is greater than 2.0m, expressed as a percentage of the nett site area (excluding land used for road and drainage reserves, if any).

### FOOTNOTE:

<sup>4</sup> See Section on 'Roof Eaves and Sun Shading Devices' for details on computing of site coverage.

## ROOF EAVES and SUN-SHADING DEVICES

**75** For roof eaves and sun-shading devices located below the 6th storey of all types of developments, if their width does not exceed 2.0m, the area below will not be computed as GFA and site coverage if the features comply with the following conditions:

- (a) The features shall be column-free and shall not be accessible except for maintenance purposes only (the QP is to declare this on the proposal plans).
- (b) The features shall comply with the setback guidelines from the common boundaries of the development, i.e., 1.0m for landed housing in non-GCBAs, 1.6m for landed housing within GCBAs, and 2.0m for non-landed residential developments and non-residential developments.
- (c) For all developments, roof eaves and sun-shading devices facing public roads shall be allowed within the physical buffer but **not** within the green buffer. This is to allow sunlight and rain to reach the plants grown in the green buffer.
- (d) The owner of the development shall comply with the Written Permission condition to take appropriate measures to prevent spillage of rainwater to the neighbouring sites arising from the roof eaves and sun-shading devices.

For roof eaves and sun-shading devices wider than 2.0m, only the area within the 2.0m control will not be computed as GFA while the area beyond the 2.0m control will be computed as GFA. Likewise, a 2.0m-width from the roof eaves line will be excluded from site coverage computation. For such cases, the QP is to indicate the site coverage line on the Calculations Plans.

For roof eaves and sun-shading devices located at the 6th storey and above of all types of developments, there is no control on their width if these comply with conditions (a) - (d) stated above. The area below these features will not be computed as GFA and site coverage, regardless of their width.

## AUTOMATED TELLER MACHINES (ATMs)

**76** No planning permission is required for:

- (a) Free-standing ATMs to be installed inside a building.
- (b) ATMs recessed into the external wall of a building.

Thus, only free-standing ATMs outside a building require planning permission.

**77** Free-standing ATMs can be allowed within the physical road buffer<sup>5</sup> so long as they do not cause obstruction to the flow of pedestrians. However, consent from the Management Corporation must be obtained for ATMs located in common areas held under common property. The proposal plans must be endorsed by the Management Corporation.

**FOOTNOTE:**

**5** See the earlier section on 'Road Buffers & Building Setbacks' for the different physical road buffer for the various categories of roads.

**MULTI-STOREY CAR PARKS**

**78** Multi-storey car parks (MSCP) should be setback as follows:

Setback from public road :	Road buffer requirement
Setback from property boundary (for MSCP with openings at the facade) :	6.0m (minimum)
Setback from property boundary(for MSCP with no openings at the facade) :	4.5m (minimum)
Setback from property boundary fronting open areas (i.e. open space, drainage reserve of width more than 6m) :	4.5m (minimum)

**HEIGHT OF PARAPET WALL**

**79** There is no control on the height of parapet walls for high-rise developments. This is to facilitate the screening off of unsightly rooftop services. Excessively high parapet walls will be evaluated on a case by case basis.

**80** For landed housing developments, the maximum allowable height for the parapet wall is 500mm.

**WINDOWS**

**81** Windows are generally understood to mean raised openings that are at least 0.9m above the floor slab. They are intended to provide ventilation and lighting, and not for access. Full height windows and windows that are lower than 0.9m that can potentially be used as access points will need to be highlighted in the submission plans for URA's evaluation and approval.

**DRAINAGE RESERVE**

**82** If a drainage reserve within a site has not been vested to the State, it can be included in the calculation of the allowable gross floor area for the development.

**83** So long as the drainage reserve is to be vested to the State, each plot has to be developed in accordance with the allowable Master Plan landuse and intensity. The plot ratio of one plot cannot be transferred to the other plot, which is separated by the drainage reserve and building setback is to be measured from the drainage reserve. The width of the drainage reserve should not be part of the required building setback.

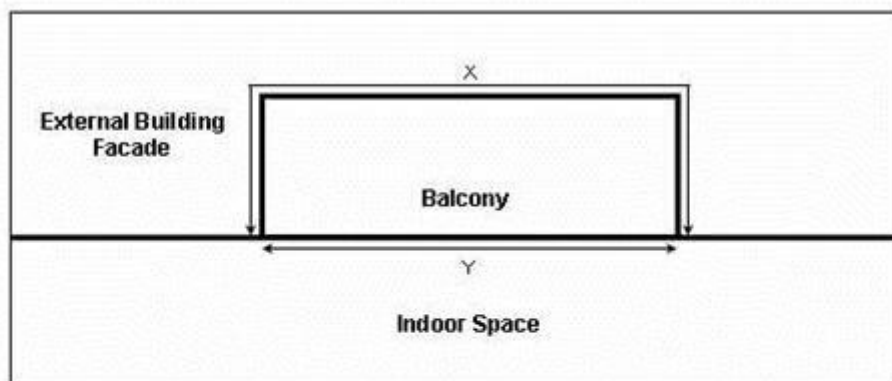
## GUIDELINES TO ENCOURAGE THE PROVISION OF BALCONIES IN MIXED-USE AND HOTEL DEVELOPMENTS

**84** Balconies are important features of tropical architecture. Not only do they allow for natural ventilation and lighting, they promote healthier living and facilitates more greenery in our high-rises.

**85** Balconies are covered semi-outdoor spaces. The gross floor area (GFA) of balconies in the residential component of mixed-use developments and hotel developments can be computed over and above the Master Plan (MP) allowable gross plot ratio (GPR), subject to a cap of 7% for the residential component of mixed-use developments and 10% for hotel development. This is inclusive of planter boxes, if any. However, this additional GPR can only be used for balcony GFA and will not form the future development potential of the site upon redevelopment. The additional balcony GFA is subject to payment of development charge or differential premium, where applicable.

**86** Balconies must have a continuous perimeter opening of at least 40% (see Figure 3.17). This is to safeguard a reasonable degree of openness in balconies to distinguish them from indoor spaces. It also reinforces the planning objective of giving GFA incentive for balconies to facilitate planting and high-rise greenery. The guideline will allow more flexibility in designing balconies where a variety of balcony forms can be considered in addition to the usual rectilinear forms (see Figure 3.18). Service balconies, which are commonly provided at the utility areas for the purpose of drying clothes in residential developments, would not qualify for the additional GFA.

**87** Existing developments whose GPR have exceeded the Master Plan intensity would also qualify for the additional balcony GFA, subject to a cap of 7% of the existing and approved GPR inclusive of planter boxes, if any (10% for hotel developments). However, this would not apply to existing developments whose building form, height or use are not in accordance with the planning intention as indicated in the Master Plan, Building Height Plan or Special and Detailed Control Plan. For instance, an hotel or flat development within a designated landed housing area or good class bungalow area would not qualify for the 7% additional GFA.

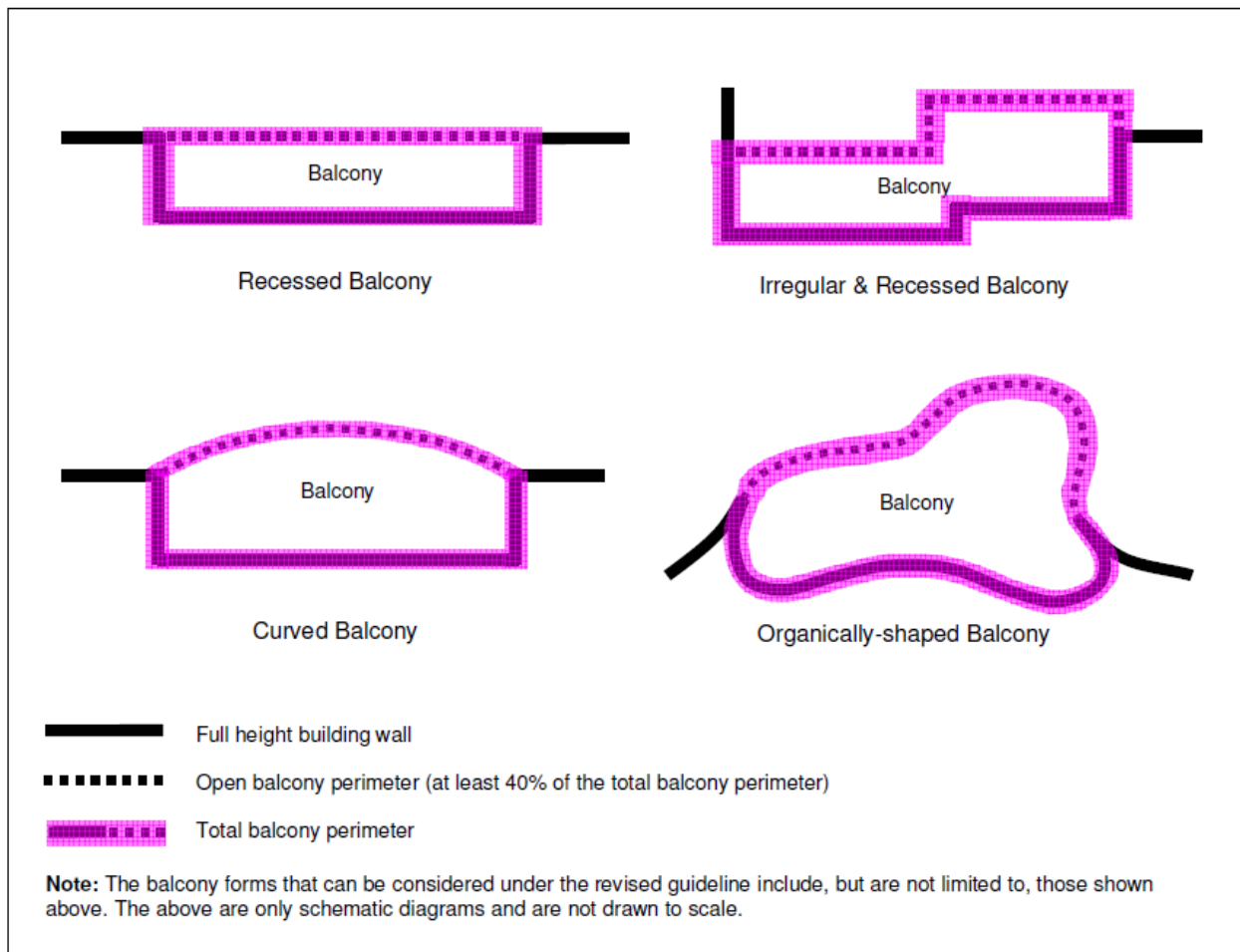


$$\text{Total Balcony Perimeter} = X+Y$$

$$\text{Open Balcony Perimeter} = X$$

$$\text{Percentage of Balcony Perimeter Opening} = X / (X+Y) \times 100\% \geq 40\%$$

**Figure 3.17 Computation of Balcony Perimeter Opening**



**Figure 3.18 Balcony Forms that can be considered as long as they meet the min 40% perimeter opening control**

**88** Balconies are intended to be semi-outdoor spaces. Therefore, balconies are not allowed to be enclosed with walls or glass panels into rooms. However, balcony screens to provide shade can be allowed provided that they comply with the following performance criteria:

- a) The proposed balcony screens are porous enough to allow for natural ventilation within the balcony at all times even when the screens are fully drawn closed; and
- b) The proposed balcony screen is capable of being drawn open or retracted fully.

Figure 3.19 shows some possible designs of balcony screens that can be considered. Figure 3.20 shows a balcony screen that is not allowed. Safety grilles are independent from balcony screens and are precluded from complying with the above performance criteria for balcony screens.

**89** Balcony screens are to be designed upfront and approved as part of the development application process for all new residential component of mixed-use and hotel developments with proposed balconies. Developers can propose a single screen design or a few designs for the end-users to choose from.

**90** For the residential component of mixed-use projects, developers will be required to install the approved balcony screen in its actual scale in the show unit of the development, if sales gallery and/or show unit(s) is/are erected for the development. Developers are to provide a Letter of Undertaking to be submitted at the Development Application Stage.

- a) In instances where the balcony screens are not erected within the show unit itself because of physical constraints of space or the show unit is one without a balcony, the developer will still be required to erect a mock-up of the approved balcony screen in its actual scale somewhere within the sales gallery premises.

- b) Mock-ups showing scaled down versions of the balcony screens installed at the balcony are not allowed.
- c) For developments with multiple approved balcony screen designs, mock-ups of all the designs should be installed at the show unit(s) or sales gallery of the development.
- d) A detailed drawing of the approved balcony screen showing the overall specifications is to be displayed next to the mock-up balcony screen.

**91** For the residential component of mixed-use projects, clear and conspicuous notices are to be put up and displayed at all the balcony/balconies in the show unit of the development. The written notice is to include the following:

- a) Explicitly state that “The balcony shall not be enclosed unless with the approved balcony screen”.
- b) For balcony where the screen is not installed within the balcony of the show unit itself, the notice should refer to the mock up balcony screen installed in the other show unit or sales gallery.
- c) State that the purchasers will have the option to have the balcony screen pre-installed in the units and make clear if the purchasers have to bear separate costs for its installation.

**92** For the residential component of mixed-use projects, the developer is to explicitly state in the unit floor plan in the Form 3 that “Balconies are not to be enclosed except with a balcony screen which has been approved and complies with the Competent Authority’s guidelines”. The Form 3 is required under rule 10(4) of Housing Developer Rules, and comprises the particulars, documents and information which are to be provided to purchasers prior to the Option to Purchase.

**93** For the residential component of mixed-use projects, the developer is to provide homebuyers the option to have the approved screening pre-installed at their balconies. This option is to be offered via a side letter at the point of issuance of the Option to Purchase. This is not applicable for developers who choose to pre-install approved screens for all balconies in the development.

**94** When submitting development proposals with balconies for the residential component of mixed-use projects and hotel developments, the qualified person (QP) is required to demarcate the balcony area clearly on the Calculation Plan and declare the total balcony area that exceeds the MP allowable GPR on the application form to take advantage of these guidelines. The QP is also required to show the computation of perimeter opening for the proposed balconies and ensure that they comply with the 40% (minimum) perimeter opening. The plans should show the balcony screens in elevation view, fully retracted and fully closed, and in plan view fully retracted. The porosity of the balcony screen should be annotated, and if the screening is louvred, the individual slats should be fixed rather than adjustable. Section cuts of the louvres should also be provided to determine if the screening is naturally ventilated at all times, even when closed.



**Example 1**



**Example 2**

**Figure 3.19 Possible designs of Balcony Screens**



**Figure 3.20 Balcony screen that is not allowed**

## **OBJECTIVE-BASED GUIDELINES**

**95** A new objective-based guideline has been introduced to give architects and developers greater design flexibility to suit their needs and requirements.

**96** There are three parts to the objective-based guidelines. They are the main intention, objectives and performance criteria. All parts are to be used as a whole and are to be considered when designing the development proposal. Whenever possible, the development proposal should satisfy the main intention, objectives and performance criteria of the design element.

**97** There could be several variations in the layout that are able to meet the objectives. The complementary technical requirements will provide a guide for such situations, particularly, as to how the performance criteria can be addressed and how the evaluation of the proposal can be done.

**(a)** Main Intention

This set out the purpose of the design element.

**(b)** Objective

This elaborates the main intention and indicates the desire outcomes to be achieved in completed developments.

**(c) Performance Criteria**

This provides a basis for judging whether the objectives have been met. Each development must be considered against all criteria but depending on particular circumstances, it may not necessary satisfy all of them.

## **OBJECTIVE-BASED GUIDELINES FOR ANCILLARY STRUCTURES**

**98** The new guidelines aim to achieve greater design and better utilisation of space within the propose development. Ancillary structures in general refer auxiliary, supplementary structures erected to support the main use. They are structurally independent and not physically attached to the main building.

- (a)** Ancillary Structures within the Green Buffer and 2m Planting Strip along Common Boundaries (To be administered by NPARKS with effect from 1 August 2005. Please refer to NPARKS' Circular: [https://www.nparks.gov.sg/~media/nparks-real-content/partner-us/developers-architects-and-engineers/circular190705\\_2m-wide-pheripheral.pdf?la=en](https://www.nparks.gov.sg/~media/nparks-real-content/partner-us/developers-architects-and-engineers/circular190705_2m-wide-pheripheral.pdf?la=en) )

The new objective-based guidelines will safeguard the intentions of the green buffer and 2m planting strip along common boundaries. The new objective-based guidelines will serve to complement the current prescriptive guidelines. The detail guidelines are shown in Figure 3.20.

- (b)** Ancillary Structures within the Physical Buffer and Building Setback Area

The new objective-based guidelines safeguard the intentions of the physical buffer and building. The new objective-based guidelines replace the current prescriptive guidelines. The detail guidelines are shown in Figure 3.28.

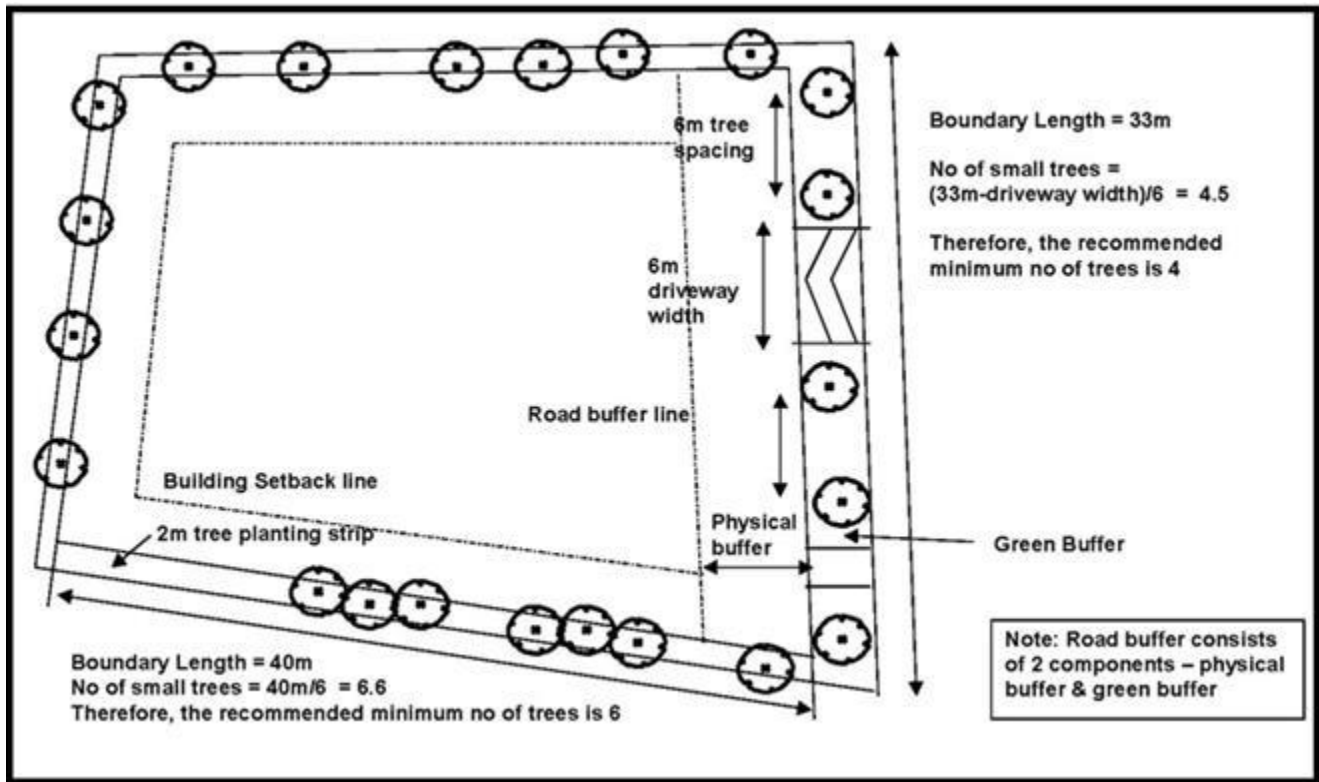
**Figure 3.20: Objective-based Guidelines on Minor Ancillary Structures within the Green Buffer and 2m Planting Strip along Common Boundaries**



No	Parameter	Details
1	<b>Main intention</b>	<p><i>To better reflect the intention of the green buffer, peripheral tree planting strips and yet provides design flexibility to allow for minor ancillary structures.</i></p> <p><b>Green Buffer</b></p> <p>Both the public and the private sector have a role to play to help achieve streetscape greenery in Singapore. While lush road side, open space tree planting and greenery are maintained by Nparks, the green buffer within a private development creates the opportunity for the private developers and residents to actively contribute. The guideline serves to safeguard the area provision for tree planting purposes.</p> <p><b>2m Planting Strip</b></p> <p>The peripheral planting strips are to provide a quality green and pleasant space between neighbouring developments, to be enjoyed by both developments as well as contributing to the overall greenery in Singapore. The guideline serves to safeguard the area provision for tree planting purposes.</p>
2	<b>Objectives</b>	<p><i>This elaborates the main intention and indicates the desired outcomes to be achieved in completed developments.</i></p> <p>a) To reinforce the purpose of the green buffer and to preserve the green and garden city image.</p> <p>b) To provide adequate spacing (both above ground and under ground) for healthy growth of trees.</p> <p>c) To allow flexibility of structures that contribute to the landscaping efforts, or with limited hard surface impact within the green and peripheral tree planting strips.</p>
3	<b>Performance Criteria</b>	<p><i>This provides a basis for judging whether the objectives have been met. Each development must be considered against all criteria but depending on particular circumstances, it may not necessary satisfy all of them.</i></p> <p>a) There should be a sufficient amount of <b>shade tree</b>-planting and landscaping to enhance the built environment to serve as screening while reducing glare and heat. The planting pattern can be singular in regular planting distance or cluster planting.</p> <p>b) There shall be adequate space for trees to grow to their full spread hence no structures should be close to the tree. There should also not be any "tree under tree" situation<sup>1</sup>. The tree planting strips (green buffer and the peripheral 2m planting strips) should preferably through ground or with soil area large enough to accomodate the particular rooting habits and they must be free from underground services.</p> <p>c) Ancillary structures proposed within the tree planting strips (green buffer and the peripheral 2m tree planting strips) should be minor, contribute to the landscape efforts or screened by soft landscape. Height of structures should be suitable for the intended use and not hinder the growth of trees.</p> <p><b>Note:</b></p> <p><b>1</b> "tree under tree" situation refers to planting new trees within the shade of any existing tree.</p>
4	<b>Additional Notes &amp; Clarifications</b>	<p>Ancillary structures in general refer to minor structures erected to support the main use of the site. Exceptions are minor structures that are commercially operated such as Outdoor Refreshment Areas (ORAs) and Automated Teller Machines (ATMs). These are not classified as ancillary structures but considered independent minor structures, and are subjected to the prevailing planning controls for such structures.</p>

5	<b>Technical Recommendations</b>	<p><i>This provides on how the criteria, or certain aspects of them, might be addressed. It does not preclude other measures that could be proposed to meet the stated objectives.</i></p> <p>a) In general, we recommend that the small or medium tree to be planted at every 5-6m interval, dependent on the choice of trees. The number of trees (small to medium) to be planted could follow the guideline as illustrated in Figure 3.18.</p> <p><u>Formulae:</u></p> <p>No of small/medium trees = (length of boundary - width of boundary) / 6 (Such trees generally grow up to 15m high)</p> <p>Or</p> <p>No. of small/medium trees = (nett length of boundary) / 6</p> <p>A list of recommended species considered shade tree is shown in Figure 3.22a.</p> <p>b) For every proposed tree, a minimum area of 4m x requisite width (if green buffer or planting strip requirement less than 4m), or 16m<sup>2</sup> (for all other planting width of 4m or more) with a minimum 2m soil depth to be safeguarded for healthy tree growth and aeration. See Figures 3.23 &amp; 3.24.</p> <p>i) All planting areas should preferable be flat of gradient 1:40. Where trees are to be planted, the gradient of the planting area should not be steeper than 1:2.5.</p> <p>ii) Minimum recommended distance from any proposed element to the centre of the tree/palm is 2m. This applies to any underground services that are required to transverse through the tree planting area.</p> <p>iii) Aeration trough may be provided to ensure sufficient aeration if structures are proposed to encroach within the 4m x 2m (for 2m tree planting strip), 4 x 3 (for 3m tree planting strip) or 16m<sup>2</sup> area (for wider planting buffer). However the minimum 2 x 2 x 2m planting soil volume must not have any encroachment.</p> <p>c) Type of structures proposed.</p> <p>We encourage landscaping structures like trellis, water features, and also provide flexibility to minor structures due to technical requirements like meter compartments, inspection chambers, etc.</p> <p>i) Landscaping structures should generally be open and contribute toward the landscaping efforts.</p> <p>ii) Minor technical structures should generally be screened by soft landscaping.</p> <p>Generally, it is recommended that the total road frontage coverage of the minor structures along the green buffer is not more than 25% and the minor structures should not be more than 5m in height. (Refer to Figures 3.22, 3.23 &amp; 3.24 for illustration on the flexibility provided).</p> <p>For minor technical structures, these should generally be kept at 1.8m maximum height, not exceeding the height of the boundary wall as these do not contribute to the landscaping efforts.</p> <p>For enclosed structures such as guardhouses or sentry post, these should generally be proposed beyond the green buffer. If these are proposed within the green buffer, the height of these minor operational structures should not be more than 2.6m (to the roof springing line).</p>
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6	<b>Applications of Guidelines</b>	<p>a) Can be applied to all developments that have green buffer or 2m planting strip provision.</p> <p>b) Applicant can choose to either apply</p> <ul style="list-style-type: none"> <li>- current prescriptive guidelines</li> </ul> <p>or</p> <ul style="list-style-type: none"> <li>- the objective-based guidelines if the structures proposed are not on the prescriptive list.</li> </ul>
7	<b>Submission Requirements</b>	<p>Proper annotated Landscape Plan and justification in line with the objectives should be submitted for considerations and evaluation.</p> <p><u>Landscape Plan Requirement</u></p> <ul style="list-style-type: none"> <li>a) Location and species of proposed small to medium size shade trees are shown;</li> <li>b) A legend for the proposed trees is to be provided;</li> <li>c) Computation of no. of trees are to be clearly shown;</li> <li>d) Types of ancillary structures with justifications (in separate document, if necessary), the height and width are to be clearly shown;</li> <li>e) All proposed green buffer / planting verges are indicated as tree-planting strip only;</li> <li>f) Widths of all proposed planting provision provided are indicated;</li> <li>g) All slopes are shown on plan with standard symbols. The gradients of all proposed slopes are shown.</li> </ul> <p>The Landscape Plan will form part of an attached document with the Written Permission.</p> <p><b>Note:</b></p> <p><i>Amendment approval is required if after the issuance of Written Permission, there any any changes to</i></p> <ul style="list-style-type: none"> <li>a) <i>the proposed number of trees, and</i></li> <li>b) <i>the type of ancillary structures and its height and width.</i></li> </ul> <p><i>QP is required to forward the revised Landscaping Plan together with the previous approved plan to DCD prior to Temporary Occupational Permit.</i></p> <p><i>For all other amendments, an amendment application would still be applicable.</i></p>



**Figure 3.21 Illustration (Site Plan View) Of Green Buffer, Tree-Planting Strips and The Required Tree Planting**

**Figure 3.22a: A List of Recommended Tree Species**

Species	Approximate Height When Mature (m)	Recommended Spacing (m)
<b>MEDIUM SIZED TREES</b>		
Acacia mangium	12	8
Amherstia nomilis (Pride of Burma)	12	16
Arfeuillea arborescens (Hop Tree)	12	10
Bauhinia blakeana (Hong Kong Bauhinia)	8	12
Cananga odorata (Kenanga)	15	10
Cassia fistula (Golden Showers)	18	12
Cinnamomum iners (Wild Cinnamomum)	12	10
Citharexylum quadrangulare (Fiddle-wood)	12	8
Cochlospermum religiosum (Buttercup Tree)	10	10

Species	Approximate Height When Mature (m)	Recommended Spacing (m)
<b>MEDIUM SIZED TREES</b>		
Eucalyptus botryoides (Gum Tree)	15	12
Eucalyptus viminalis (Gum Tree)	15	8
Eugenia cumini (Jambolan)	15	12
Eugenia jambos (Rose Apple)	8	12
Eugenia polyantha (Buah Salam)	15	12
Gnetum gnemom (Meninjau)	15	8
Gustavia sp	5	8
Lagerstroemia speciosa (Rose of India)	12	12
Maniltoa browneoides (Handkerchief Tree)	15	12
Melaleuca leucadendron (Gelam)	12	10
Melia indica (Nim Tree)	15	12
Mimusops elengi (Bunga Tanjung)	12	18
Plumeria spp (Frangipani)	8	10
Podocarpus rumphii	15	12
Pongamia pinnata (Mempari)	15	12
Podocarpus polystacyus (Sea Teak)	15	8
Saraca indica (Sorrowless Tree)	8	12
Saraca thaipingensis (Yellow Saraca)	12	12
Tamarindus indica (Tamarind Tree / Asam)	12	12
Xanthostemom chrysanthus	12	12
Eugenia oleina	10	12
Eugenia spicata	12	12
Eugenia longifolia	12	12

Species	Approximate Height When Mature (m)	Recommended Spacing (m)
<b>MEDIUM SIZED TREES</b>		
<b>SMALL TREES</b>		
Brassaia actinophylla (Australian Ivy Palm)	10	6
Callistemon citrinus (Bottle Brush Tree)	6	8
Callistemon viminalis	8	8
Carallia brachiata	8	6
Cratoxylum formosum (Pink Mempat)	10	8
Cratoxylum cochinchinense	12	8
Erythrina glauca (Coral Tree)	8	10
Kopsia flavida (Penang Sloe)	8	8
Kopsia singaporensis	8	8
Melaleuca genistifolia cv Golden Gem	6	8

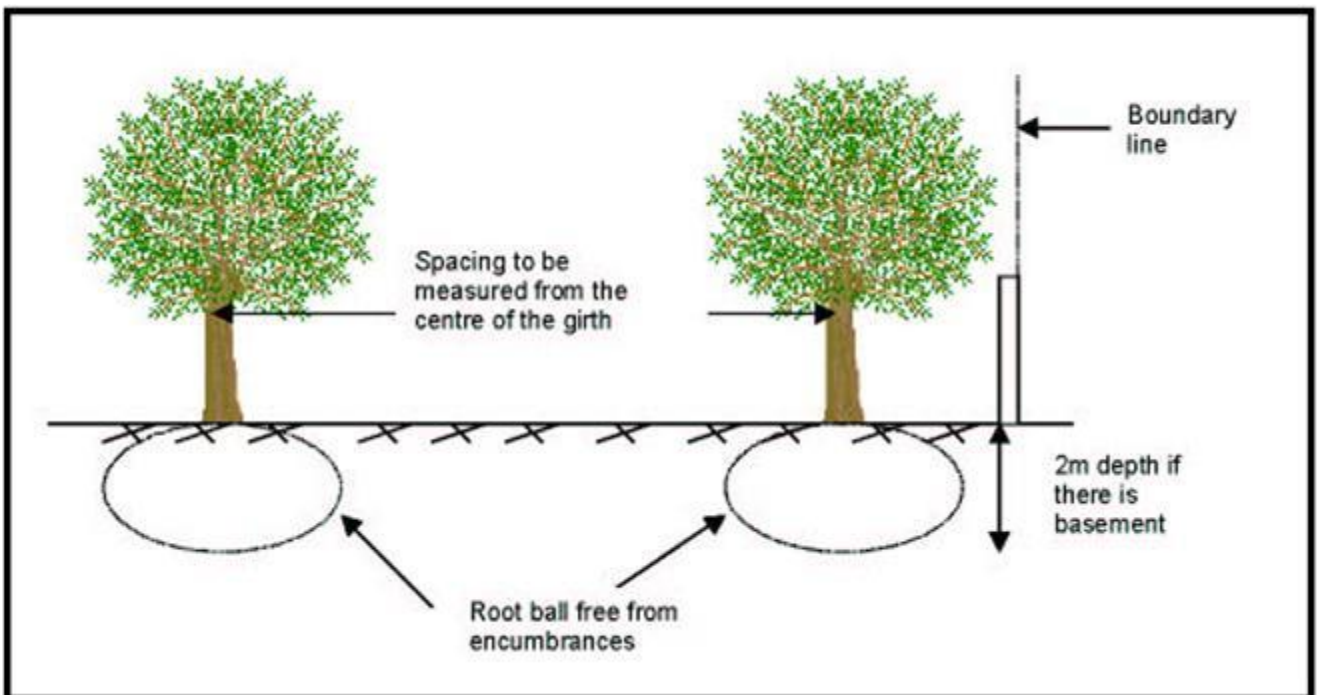


Figure 3.22b Illustration Of Tree Spacing

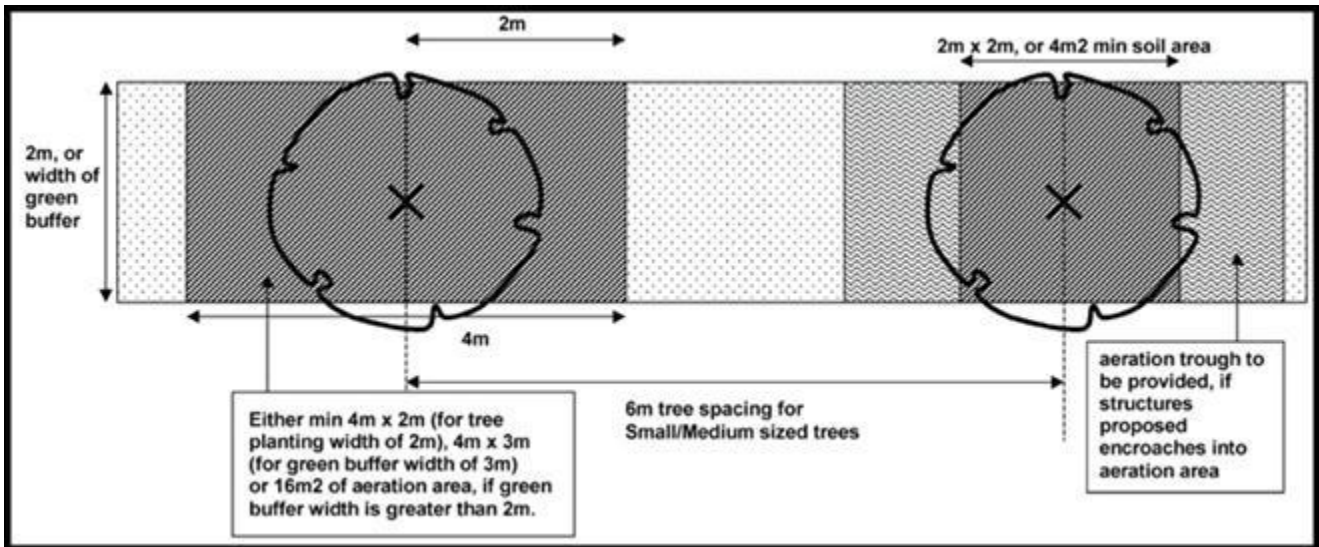


Figure 3.23 Illustration (Plan View) Of Green Buffer / Tree-Planting Strip and The Safeguarded Aeration Area

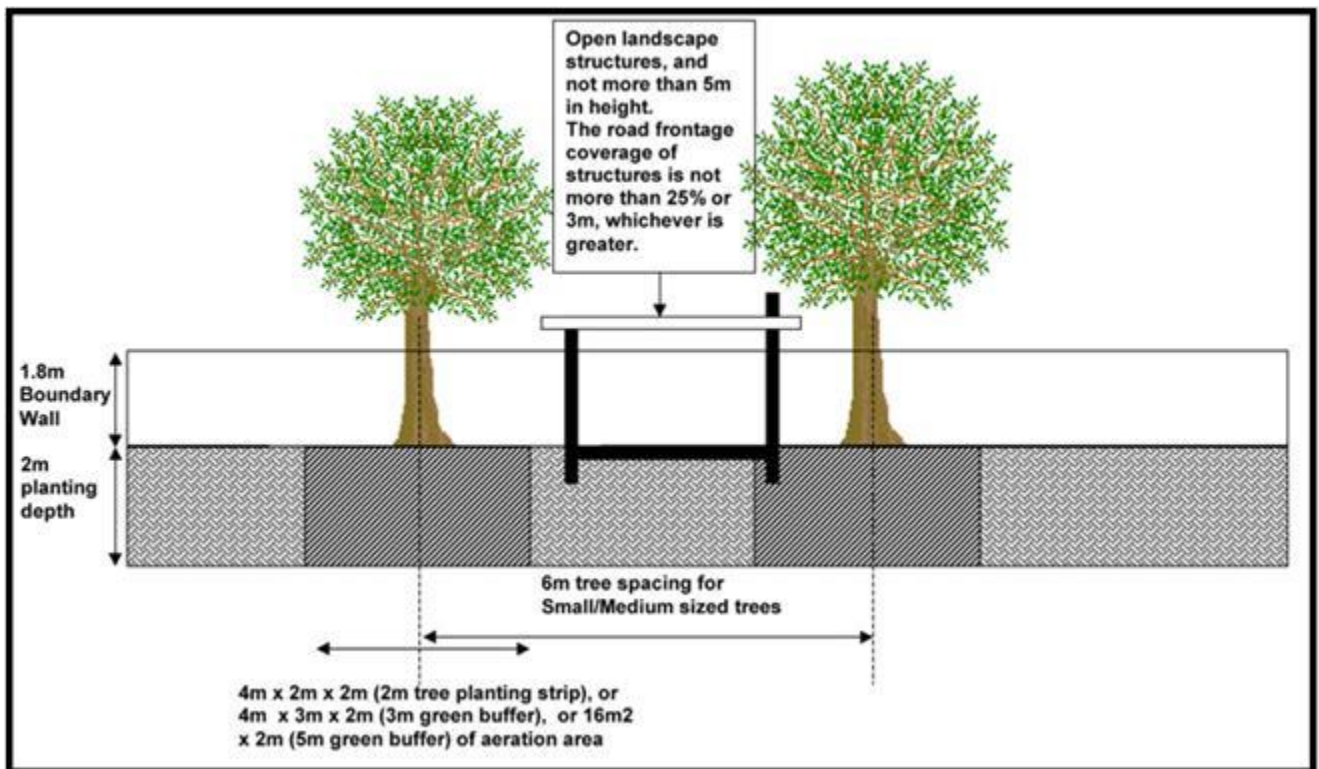
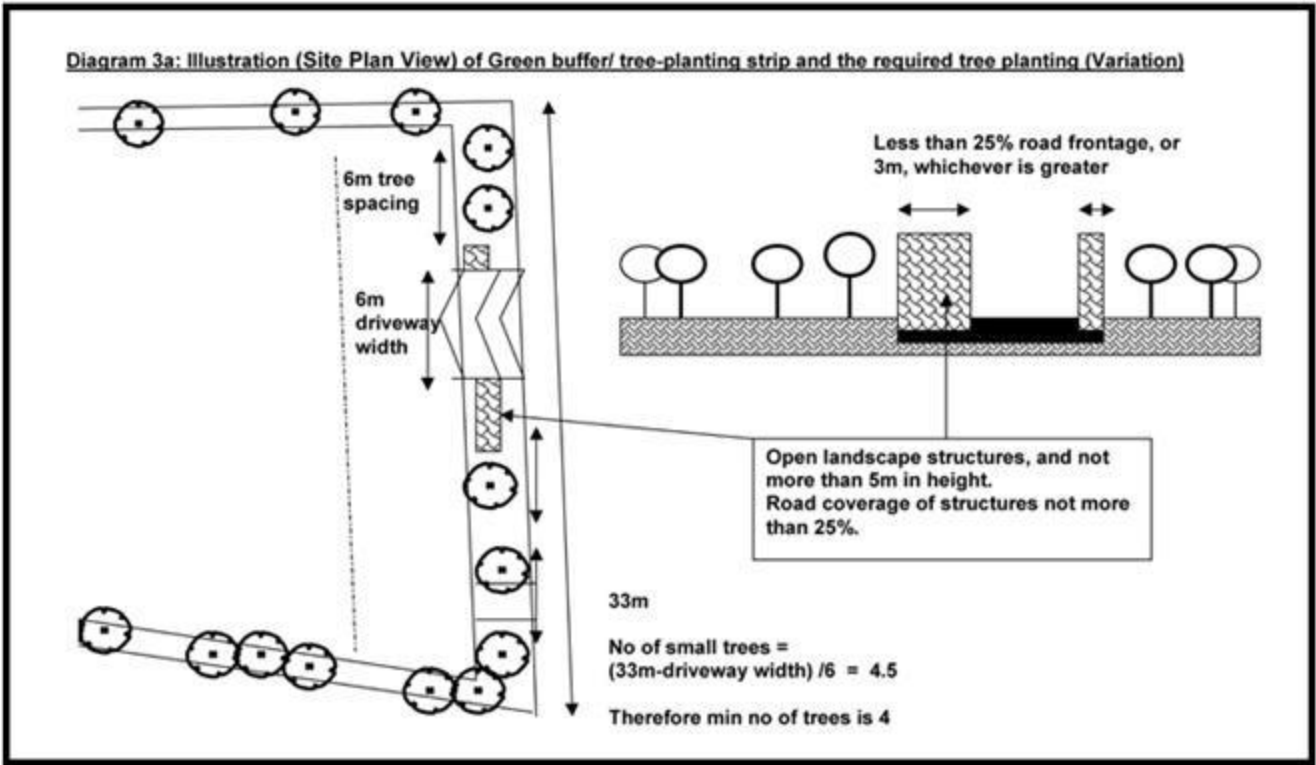
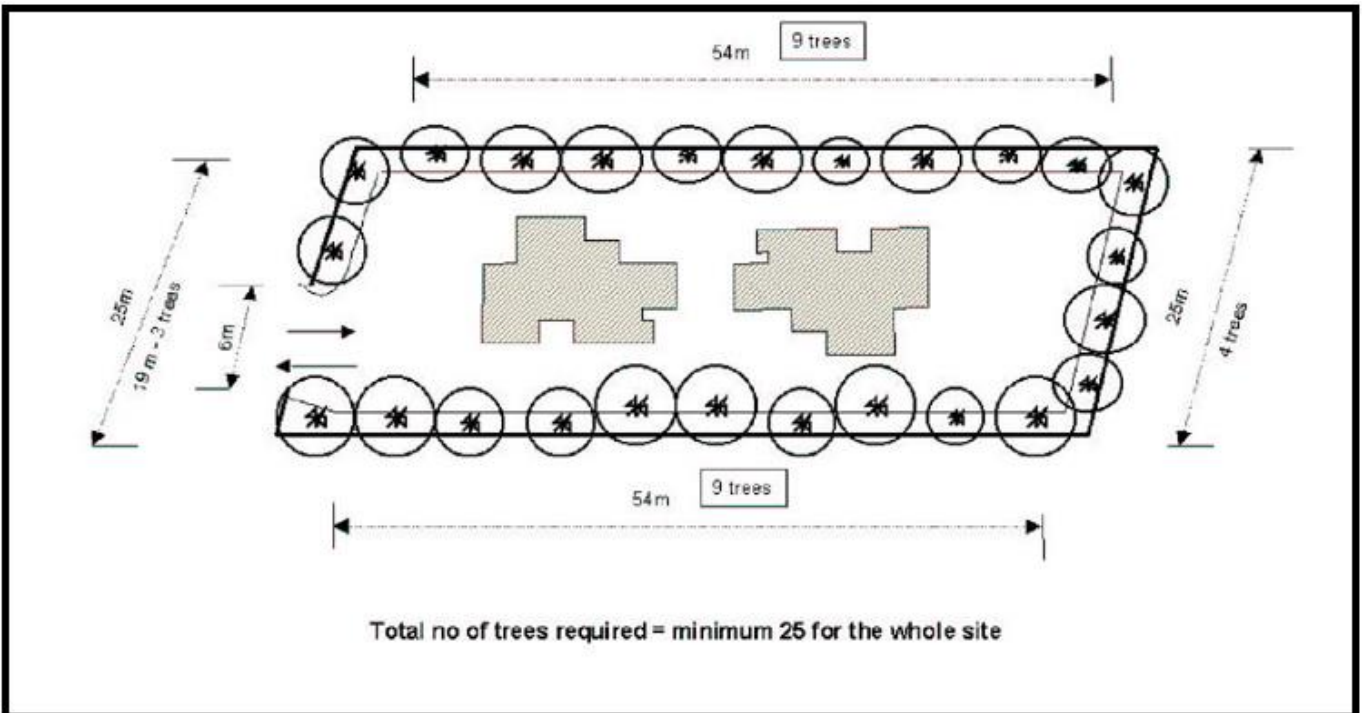


Figure 3.24 Illustration (Elevation View) Of Green / Tree-Planting Strip and The Safeguarded Aeration Area

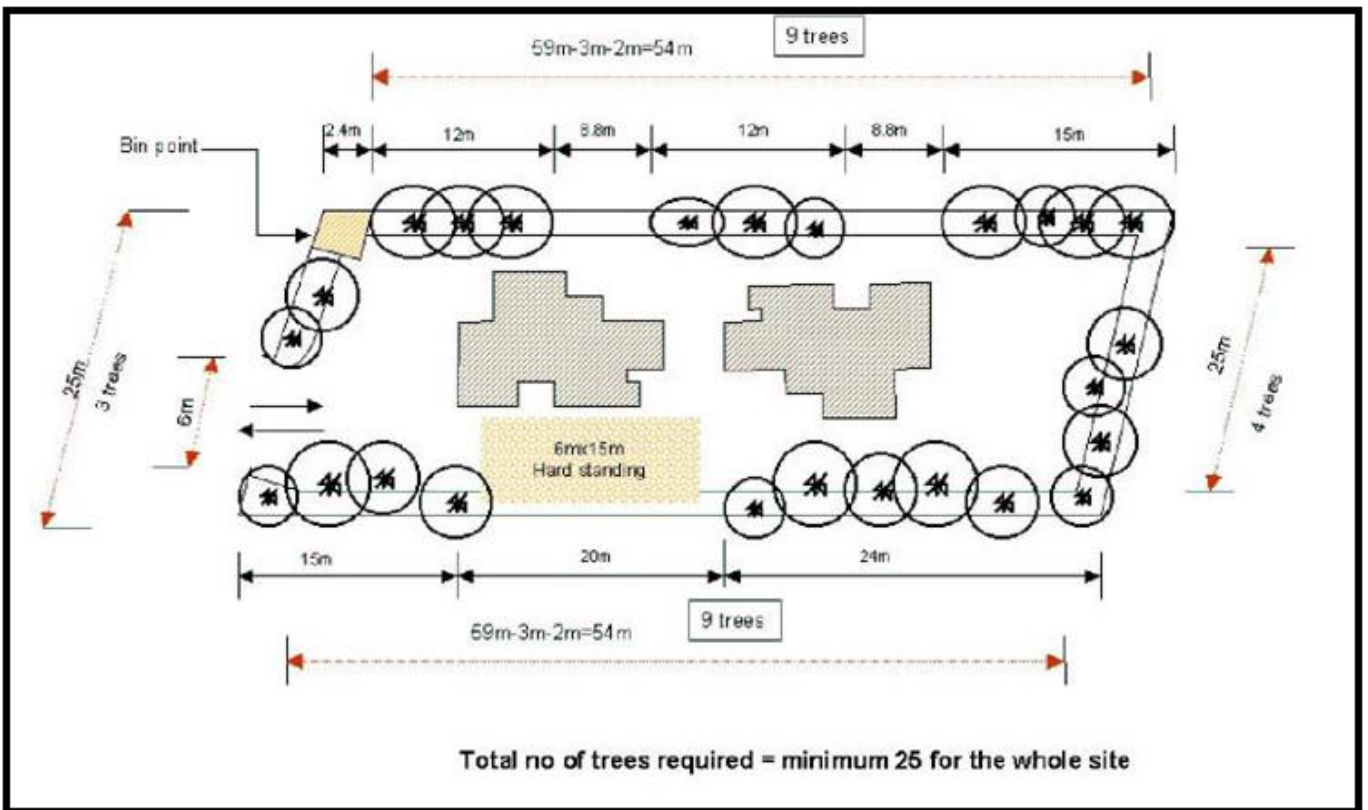


**Figure 3.25 Illustration (Site Plan View) Of Green Buffer / Tree-Planting Strip and The Required Tree Planting (Variation)**



**Figure 3.26 Illustration (Site Plan View) Of Green Buffer / Tree-Planting Strip and The Required Tree Planting**





**Figure 3.27 Illustration (Site Plan View) Of Green Buffer / Tree-Planting Strip and The Required Tree Planting**

**Figure 3.28: Objective-based Guidelines on Minor Ancillary Structure within the Physical Buffer and the Building Setback Area**

No	Parameter	Details
1	<b>Main Intention</b>	<p><i>To better reflect the intentions of the physical buffer, building setback and yet to provide design flexibility to allow for minor ancillary structures.</i></p> <p><b>Physical Buffer</b></p> <p>This is a component of the road buffer that aims to protect the occupiers of the building from visual intrusion, noise and other pollutants from the road, thereby directly enhancing the environmental quality of the area in relation to streetscape, building size, and building density. The road buffer serves to safeguard a physical separation space between the building and the road, thus segregating the two different main uses.</p> <p><b>The side and rear building setback</b></p> <p>This is to protect the occupiers of the building and adjacent buildings by minimizing overshadowing and visual intrusion, thereby directly enhancing the environmental quality of the area in relation to the physical landscape, character and building density. The setback requirement serves to safeguard a physical separation space between the building and the boundary in relation to the height of the proposed building.</p>
2	<b>Objectives</b>	<p><i>This elaborates the main intention and indicates the desired outcomes to be achieved in completed developments.</i></p> <p>a) To achieve the purpose of using the physical buffer and building setback as a strip or an area of open space to segregate the main uses.</p> <p>b) To allow the flexibility of erecting ancillary structures that contribute to the convenience or the needs of occupants in the main buildings, thereby supporting or providing support to the main use.</p> <p>c) To ensure that the size and the visual bulk of the ancillary structures are acceptable within the development and to the surrounding built environment.</p> <p>d) To ensure that the environmental quality in relation to streetscape, is protected.</p>
3	<b>Performance Criteria</b>	<p><i>This provides a basis for judging whether the objectives have been met. Each development must be considered against all criteria but depending on particular circumstances, it may not necessary satisfy all of them.</i></p> <p>a) Structures proposed within the physical buffer should be ancillary to the main use. All proposed uses should be compatible and complimentary to the main use and does not compromise the health, safety and welfare of the neighbourhood and community. Structures should generally be located in the communal area and form part of the common property.</p> <p>b) Ancillary structures are to be structurally independent, not physically attached to the main building. Any projected structures encroaching into the physical buffer and/or building setback are to be fully cantilevered from the main buildings.</p> <p>c) These structures should be of reasonable height (not exceeding 6m) and size and located such that it would not significantly add to the building bulk, mar the streetscape or cause obstruction.</p> <p>d) There are 5 categories of ancillary structures and the specific standards for each category are as follows (See Figure 3.29 for the examples for each category).</p> <p>i) <b>Utility</b> structures support the main use of the site. These structures should not clutter the physical buffer thereby marring the visual appearance of the public streetscape. The height, length and location of the structures should be appropriate and not excessively massive for the intended purpose. Attempts should be made to ensure nuisance and dis-amenity to the public and</p>

No	Parameter	Details
		<p>neighbours are minimised. Equipment and structures should be properly screened off to reduce any noise and unsightly appearance.</p> <p>ii) <b>Functional</b> structures contribute to the convenience and needs of the users of the main building. These should generally be open-sided structures e.g. car porch cover, covered linkways etc.</p> <p>iii) Ancillary structures that <b>aesthetically</b> enhance the development should be of appropriate size, strategically located and tastefully designed to blend with the overall layout of the development. Height of ancillary structures should be appropriate to the development setting and the surrounding built environment.</p> <p>iv) <b>Communal</b> structures for recreational use should be designed to minimise nuisance and dis-amenity to the public and neighbours, creating a pleasant environment for the users of the main building.</p> <p>v) <b>Operational</b> structures in <b>industrial and warehouse developments</b>, that do not significantly add to the building bulk and are required to be located in the open, should be designed to limit the adverse effects and minimise nuisance. Equipment and unsightly structures should be screened from view of public street and neighbouring plots to reduce any noise or other nuisance.</p>
4	<b>Additional Notes &amp; Clarifications</b>	<p>a) Due to religious sensitivity, the above performance criteria is not applicable to religious icon or religious symbolic structures located in planning zones other than <b>Place of Worship</b>. These structures would be subject to planner's evaluation on a case-by-case basis.</p> <p>b) Ancillary structures in general refer to minor structures erected to support the main use of the site. Exceptions are minor structures that are commercially operated such as Outdoor Refreshment Areas (ORAs) and Automated Teller Machines (ATMs). These are not classified as ancillary structures but considered independent minor structures, and are subjected to the prevailing planning controls for such structures.</p> <p>c) For all lighting installations, especially those for tennis and basketball courts, adequate measures are to be taken to reduce the glare on the adjoining development</p>
5	<b>Application of Guidelines</b>	<p>This new set of objective-based guidelines will <u>replace</u> the prescriptive guidelines. The positive examples as shown in Figure 3.29 are deemed to have satisfied the performance criteria.</p>

**Figure 3.29: Positive Examples of Various Type of Ancillary Structures**

Utility	Functional	Aesthetic	Communal
Electrical substation	Open sided carpark sheds	Entrance archway	Unenclosed tennis court
Bin Centre	Entrance gate/post	Landscaping features	Unenclosed basketball court
OG Boxes	Car porch		Pavilions
Water bulk meter	Driveways / ramps		BBQ pits
Lamp post	Flag pole		Swimming pools
Inspection chamber & minor sewer lines	Guardhouse		
Gas pressure regulator kiosk	Vehicular impact guard rails		
Gas governor house, type A&B	Covered link ways		

Metering compartment Fire engine hardstanding areas Above ground electrical boxes			
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**Negative examples - Type of ancillary structures that are NOT allowed**

<b>Utility</b>	<b>Functional</b>	<b>Aesthetic</b>	<b>Communal</b>	<b>Operational (for industrial and warehouse development only)</b>
Any structures more than <b>6m</b> in height (for substation this height is measured to the roof springing line)  Exposed Water tank structures	Any structures more than <b>6m</b> in height  Raised RC platform more than 1m in height	Any structures more than <b>6m</b> in height	Any structures more than <b>6m</b> in height  Raised swimming pool more than 1m in height	Any structures more than <b>6m</b> in height

## 4 SPECIAL REQUIREMENTS

### CONSERVATION GUIDELINES

1 Where buildings are gazetted for conservation, the conservation guidelines will take precedent over the 'standard' development control parameters. These guidelines are encapsulated in our series on conservation guidelines which are available for browsing and can be purchased at the Customer Service Centre, The URA Centre at 45, Maxwell Road.

2 The conservation areas can be classified in 4 areas generally:

- (a) Historic Districts of Boat Quay, Chinatown, Kampong Glam and Little India which can be used for commercial, hotel or residential use;
- (b) Historic Districts of Blair Plain, Cairnhill and Emerald Hill which are for residential use;
- (c) Secondary Settlements of Beach Road, Geylang, Jalan Besar, Joo Chiat and River Valley where new rear extensions up to the maximum height under the Master Plan may be allowed behind the conservation buildings; and
- (d) Conservation of bungalows within the Good Class Bungalow Areas (GCBA) of Chatsworth Park, Holland Park / Ridout Road, Nassim Road/White House Park and Mountbatten Road.

### ACTIVITY GENERATING USES

3 In sites where activity-generating uses are required, the activity-generating uses include shops, restaurants, gymnasium and fitness centres etc. For uses within the historic districts, special consideration can be given if the uses or activities are compatible with the heritage and cultural character of the area and if such uses and activities cater to the local or wider community.

### USE & DEVELOPMENT OF FORESHORE

4 The purpose of safeguarding the foreshore is to ensure that the stability and integrity of the shoreline and waterfront structure are maintained. It also serves the purpose of allowing full public access to the beaches and coastal areas. For planning purposes, the foreshore is defined as the area between the high water mark of the Spring Tide or the top of the sea wall and the low water mark of the Spring Tide.

5 The foreshore line is defined as the high water mark of the Spring Tide (Diagram 1) or the top of the existing sea wall (Diagram 2), revertment or river wall (where appropriate) for controlling landward development (Diagram 3).

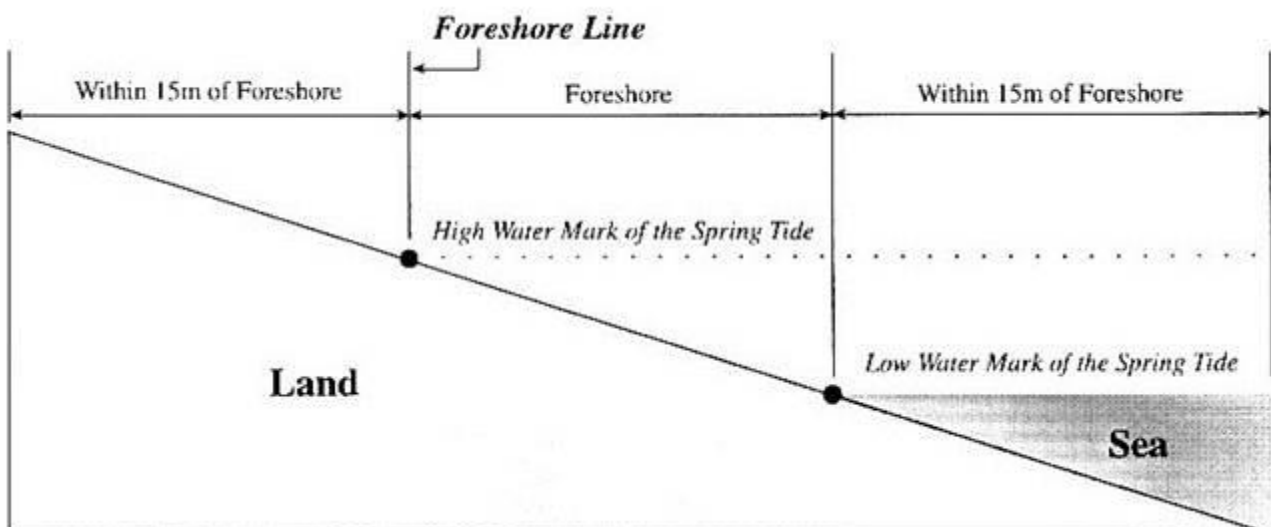
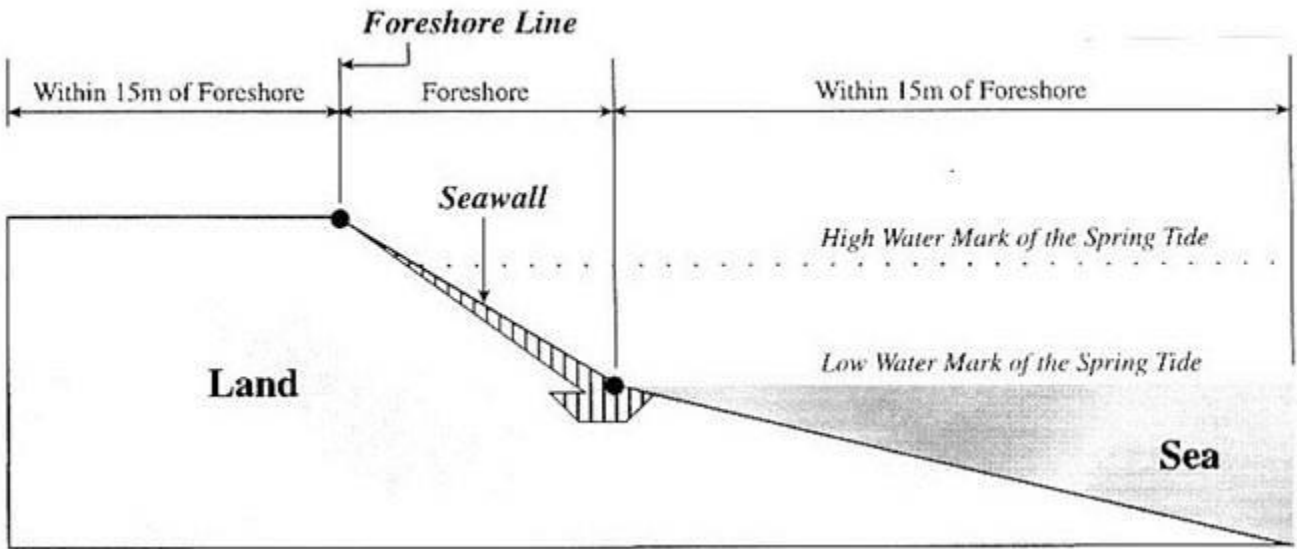
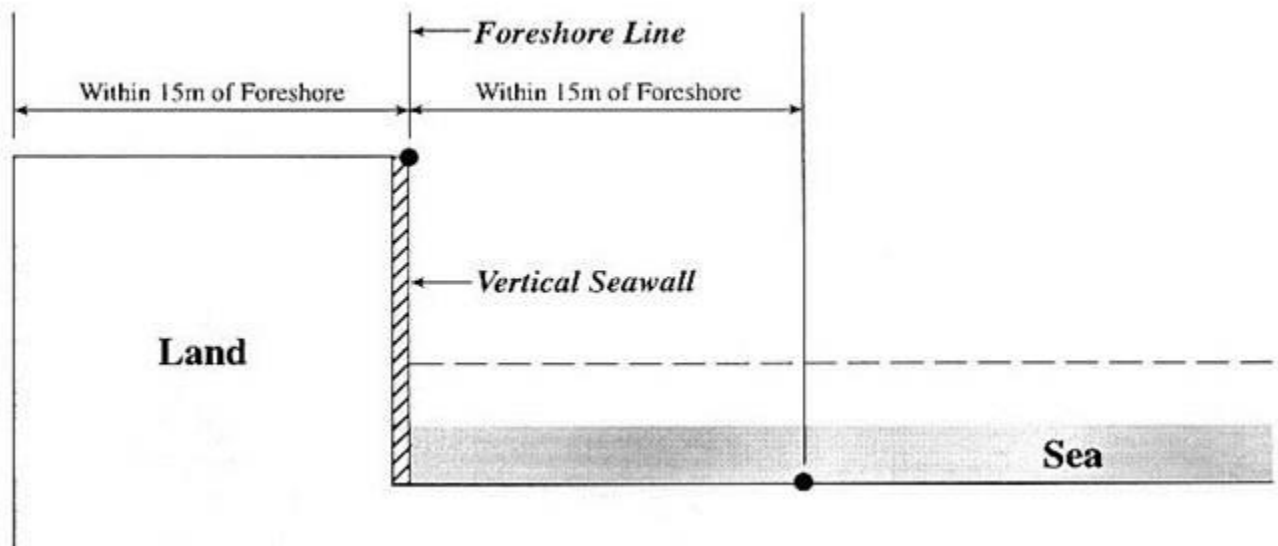


DIAGRAM 1



**DIAGRAM 2**

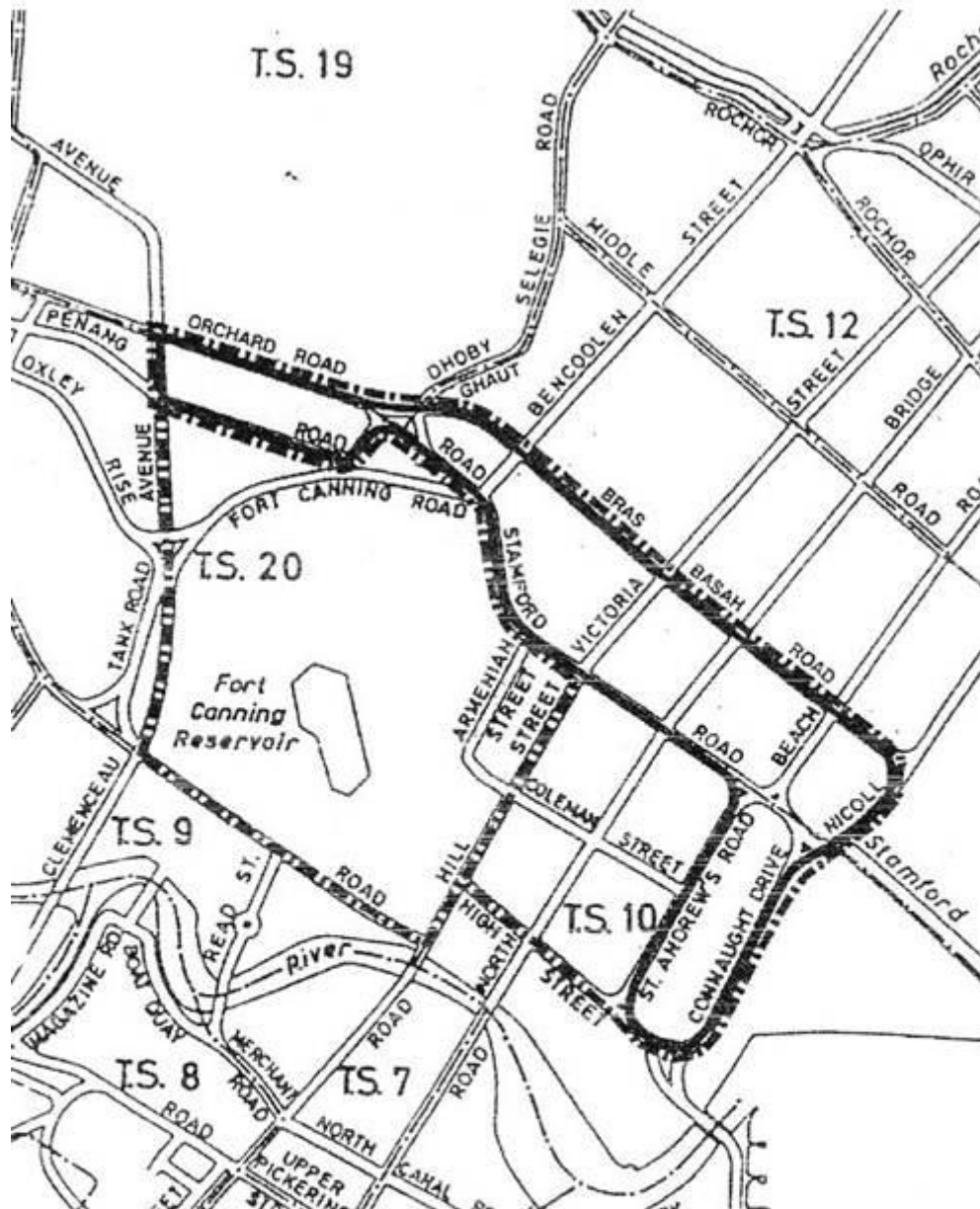


**DIAGRAM 3**

**6** The foreshore and the area within 15m on both the landward and seaward side of the foreshore line should be kept free of structures. However, some structures such as ramps may be permitted if they are constructed in connection with the use of approved development (e.g. marine industries, refineries and pleasure-boat storage complex). These are evaluated based on the needs for these facilities and the merits of each case.

### **CIVIC DISTRICT REQUIREMENTS**

**7** There is a Civic District Route (see Figure 4.3). The objective of the Civic District Steering Committee is to ensure quality buildings and good urban environment along prestigious route within the vicinity of the preserved monuments (See Figure 4.4). The committee's considerations are the lighting and landscaping requirements. Further information on lighting can be found in the "The Civic District Lighting Plan Guide Book" which is available for browsing at the URA \*Resource Centre.



ROUTE SUBJECT TO LIGHTING REQUIREMENT

-  Heritage Link
-  Celebration Route

Figure 4.3: Civic District Route

**Figure 4.4: List of Monuments under the Preservation of Monument Act as at 14 January 2000**



REF NO	NAME OF MONUMENT	LOCATION
1	The Old Thong Chai Medical Institution	Eu Tong Sen Street
2	Armenian Church	Hill Street
3	St Andrew's Cathedral	Coleman Street
4	Telok Ayer Market (now Lau Pat Sa)	Raffles Quay
5	Thian Hock Keng	Telok Ayer Street
6	Sri Mariamman Temple	South Bridge Road
7	Hajjah Fatimah Mosque	Beach Road
8	Cathedral of the Good Shepherd (1843-47)	Queen Street
9	Nagore Durgha (Shrine) (1828-30)	Telok Ayer Street
10	Al-Abrar Mosque (1850-55)	Telok Ayer Street
11	House of Tan Yeok Nee (The Old Salvation Army HQ)	Clemenceau Avenue
12	Tan Si Chong Su (1876-78)	Magazine Road
13	Jamae Mosque (Rebuilt 1830-35)	South Bridge Road
14	Sultan Mosque (Rebuilt 1924-28)	North Bridge Road
15	St George's Church (1910-13)	Minden Road
16	Hong San See (1908-13)	Mohammed Sultan Road
17	Sri Perumal Temple (1855)	Serangoon Road
18	Abdul Gaffoor Mosque (1907)	Dunlop Street
19	Siong Lim Temple (1898-1912)	Jalan Toa Payoh
20	Raffles Hotel (1887- 1907)	Beach Road
21	Telok Ayer Chinese Methodist Church (1924)	Telok Ayer Street
22	Goodwood Park Hotel (1900) (Tower Wing)	Scotts Road
23	The Old Convent of Holy Infant Jesus Chapel (now Chijmes Hall) (1903) and Caldwell House (1840-41)	Victoria Street
24	Istana and Sri Temasek (1867-69)	Orchard Road
25	City Hall (1926-29)	St. Andrew's Road
26	Victoria Theatre (1856-62) and Concert Hall (1902-05)	Empress Place
27	Parliament House and Annex Building (1826-27)	High Street
28	Supreme Court (1937-39)	St. Andrew's Road
29	Empress Place Building (1864-67)	Empress Place
30	National Museum (1884-87)	Stamford Road
31	Former St Joseph's Institution - Main Building (1855-67), Chapel (1911-12) and Classroom (1906-07)(now Singapore Art Museum)	Bras Basah Road
32	The Old Attorney-General's Chambers(Rebuilt c.a. 1906)	High Street
33	Sun Yat Sen Villa (1900-02) (now Sun Yat Sen Nanyang Memorial Hall)	Tai Gin Road
34	Yueh Hai Ching Temple (Rebuilt 1895)	Philip Street
35	The Old Tao Nan School (1910-12) (now Asian Civilisations Museum I)	Armenian Street
36	The Old Ministry of Labour Building (1928)	Havelock Road
37	Maghain Aboth Synagogue (1878)	Waterloo Street
38	Chesed-El Synagogue (1905)	Oxley Walk/ Rise
39	The Old Hill Street Police Station (1934)	Hill Street
40	Ying Fo Fui Kun (1881-82)	Telok Ayer Street

REF NO	NAME OF MONUMENT	LOCATION
41	Central Fire Station (1908-09)	Hill Street
42	The Old Nanyang University - Library and Administration Building, Memorial and Arch (1954-56)	Nanyang Technological University
43	Chinese High School Clock Tower Building	Bukit Timah Road
44	Prinsep Street Presbyterian Church	Prinsep Street

## WATERBODIES SUBMISSION AND DESIGN GUIDELINE

**8** Development projects adjacent to major waterbodies like rivers, canals, reservoirs and water frontages shall refer to Figure 4.5 below:

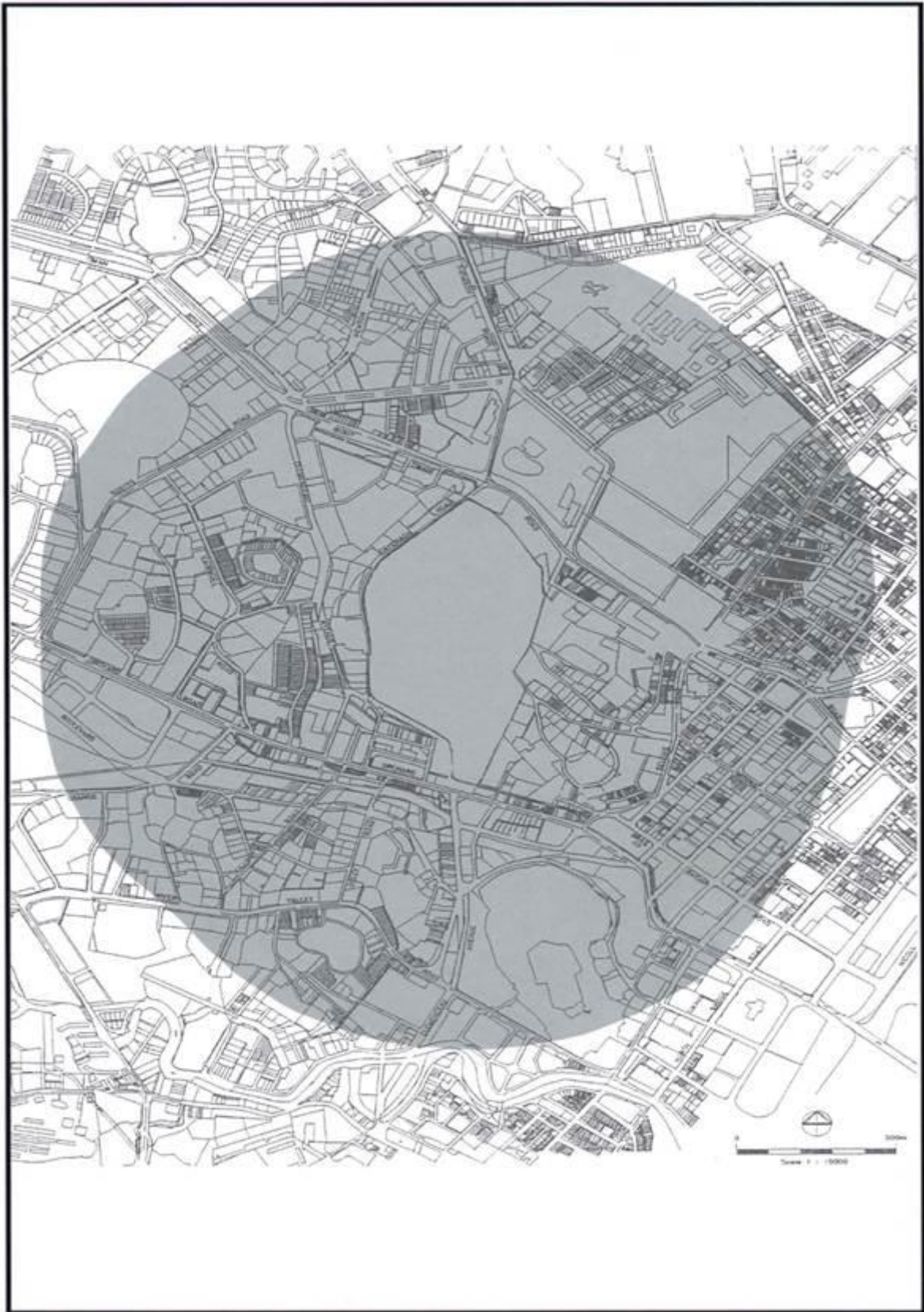
**Figure 4.5: Guidelines for developments adjacent to the various types of waterbodies**

I	<a href="#">Developments adjacent to rivers and canals of at least 17.5m wide drainage reserve</a>
II	<a href="#">Developments with rivers or canals of at least 17.5m wide drainage reserve cutting through the site</a>
III	<a href="#">Developments with a frontage to the sea</a>
IV	<a href="#">Developments with or adjacent to reservoirs and stormwater collection ponds</a>
V	<a href="#">Developments adjacent to rivers or canals with drainage reserve less than 17.5m</a>

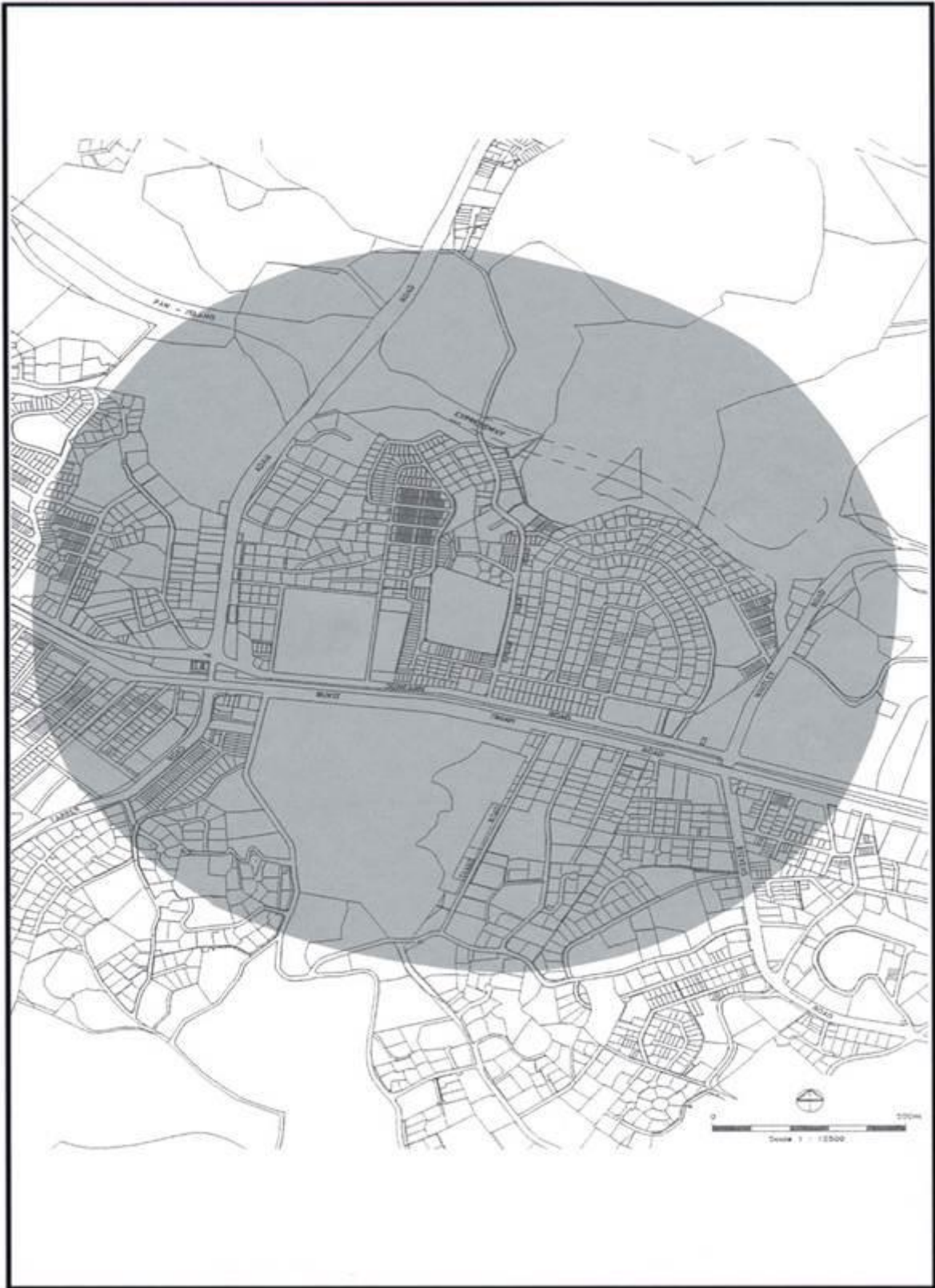
## SCREENING REQUIREMENT FOR DEVELOPMENTS WITHIN SPECIAL CONTROL AREAS

**9** Developments within the special control areas as shown shaded in Figures 4.6 & 4.7 are subject to screening requirements. Upon submission, URA will advise if the particular development is required to provide screening.

**10** Figure 4.8 provides general guidelines on screening within the special control areas. Qualified Persons (QPs) should consider the screening requirements in the early stage of their planning and design to avoid abortive work subsequently.



**Figure 4.6: Special Control Areas**



**Figure 4.7: Special Control Areas**

<u>Visual Screening</u>
<p>Screening measures should be permanent fixtures that are difficult, if not impossible to remove. There are no constraints on the type of screening measures that can be used and some measures that have been approved include the following:</p> <ul style="list-style-type: none"> <li>a blank wall</li> <li>b external concrete/metal fins</li> <li>c re-orientation of the building such that windows/openings/balconies do not have direct view towards the protected area.</li> </ul>
<u>Roof screening</u>
<p>The parapet wall at the rooftop should be at least 3m high and access to the rooftop from a public area should be secured by a lockable door/hatch. The door/hatch can be electronically linked to an alarm system monitored by the building management, if available.</p>
<p><b>Notes:</b></p> <p><i>The following building regulations should be observed by the Qualified Person (QP) when complying with any security screening:</i></p> <ul style="list-style-type: none"> <li>a <i>Claddings</i></li> <li>b <i>Natural Light and ventilation</i></li> <li>c <i>Energy Conservation Requirements</i></li> <li>d <i>General Building requirements (full-height glass wall or panel is to be designed to withstand the lateral design loads in Table 4 of the Fourth Schedule)</i></li> <li>e <i>Prohibited Construction Material (Reflective Glass)</i></li> </ul> <p><i>Details of the above regulations are available from BCA's Building Control Regulations 2003.</i></p>

**Figure 4.8: General Guidelines on Screening for Special Control Areas**

## OTHERS

**11** Other special controls which are reflected in the Master Plan include urban design requirements, envelop control and plans.

**12** Urban design requirements which aim to improve the quality of the built environment, will be evaluated on a case-by-case basis. They generally affect government sale sites and developments within the Central Area.

**13** Envelop control and street block plans (see Figure 4.9) are meant to guide development within defined localities and street blocks respectively. These guidelines, which differ from the current standard requirements, are meant to rationalise the development patterns for properties within these demarcated boundaries.

**14** There is also a design and submission guidelines for implementation of the Singapore River Promenade which aim to ensure good urban environment including landscaping and lighting along the Singapore River.

**Figure 4.9: List Of Street Block, Envelop Control & Revised Height Control Plans**

<b>STREET BLOCK PLANS</b>		
<b>S/NO</b>	<b>ROAD NAME</b>	<b>URA/DC PLAN RELEASE NO.</b>
1	Jalan Masjid (Superseded by Master Plan 2008)	<a href="#">1/91-E</a>
2	Lorong 23 Geylang	<a href="#">3/91-E</a>
3	Area bounded by Onan Road/Carpmael Road/Ceylon Lane/HDB Land	<a href="#">4/91-E</a>
4	The Junction of Fowlie Road/Marshall Road	<a href="#">5/91-E</a>
5	Ceylon Road	<a href="#">6/91-E</a>
6	Area bounded by Boon Teck Road/Jalan Kemmam	<a href="#">1/92-E</a>
7	Holland Village Area at the Junction of Holland Road & Holland Avenue	<a href="#">1/93-E</a>
8	Area bounded by Valley Road, Upper Serangoon Road, Tampines Road and the Existing Service Road/Back Lane (Superseded by Master Plan 2008)	<a href="#">2/93-E</a>
9	Area Bounded by Chuan Hoe Avenue/Parry Avenue/Phillips Avenue and Sandilands Road (Superseded by Master Plan 2008)	<a href="#">4/93-E</a>
10	Devonshire Road	<a href="#">2/94-E</a>
11	Hillview Terrace Area (Refer to URA/DC Plan Release 1/2001-E)	<a href="#">3/94-E</a>
12	Area Bounded by Macpherson Road, Upper Aljunied Road, Cedar Avenue, Willow Avenue, Wan Tho Avenue and Bidadari Christian Cemetery & Upper Serangoon Road	<a href="#">4/94-E</a>
13	Upper Thomson Road	<a href="#">2/95-E</a>
14	Sophia Road	<a href="#">3/95-E</a>
15	Flower Road (Superseded by Master Plan 2008)	<a href="#">4/95-E</a>
16	Everitt Road	<a href="#">5/95-E</a>
17	Playfair Road (Rescinded on 26.09.01)	<a href="#">6/95-E</a>
18	Thomson Garden Estate	<a href="#">7/95-E</a>
19	Paya Lebar Gardens	<a href="#">8/95-E</a>
20	Hong Leong Garden Estate	<a href="#">1/96-E</a>
21	Sembawang Hills Drive	<a href="#">2/96-E</a>
22	Makepeace Road	<a href="#">3/96-E</a>
23	Sembawang Road	<a href="#">1/98-E</a>
24	Upper Bukit Timah Road	<a href="#">2/98-E</a>
25	Along Yan Kit Road	<a href="#">3/98-E</a>
26	Dido Street/ Dafne Street/ Aida Street	<a href="#">1/2000-E</a>
27	Lowland Road	<a href="#">2/2000-E</a>
28	Killiney Road/ Devonshire Road	<a href="#">3/2000-E</a>
29	Jasmine Road	<a href="#">4/2000-E</a>
30	Along Upper Thomson Road/ Jalan Keli/ Jalan Todak/ Sin Ming Road (Rescinded on 26.06.2003)	<a href="#">5/2000-E</a>
31	Along Upper Thomson Road/ Lorong Mega/ Thomson Ridge/ Jalan Pelatina (Rescinded on 26.06.2003)	<a href="#">6/2000-E</a>
32	Faber Avenue/ Faber Crescent/ Faber Terrace/Ayer Rajah Expressway	<a href="#">7/2000-E</a>
33	Hillview Terrace (Addendum to URA/DC Plan Release 3/94E)	<a href="#">1/2001-E</a>

34	House No.104 - 114 and 132 - 190 Hillcrest Road	<a href="#">2/2001-E</a>
35	Pheng Geck Avenue/Wan Tho Avenue/Puay Hee Avenue	<a href="#">1/2003-E</a>
36	Cashew Terrace	<a href="#">2/2003-E</a>
37	Clementi Green Estate	<a href="#">3/2003-E</a>
38	Changi Heights	<a href="#">1/2004-E</a>
39	Lasia Avenue	<a href="#">2/2004-E</a>
40	Peach Garden	<a href="#">3/2004-E</a>
41	The Inglewood	<a href="#">1/2018-E</a>
42	Along Upper Thomson Road/Jalan Todak/Sin Ming Road/Lorong Mega/Thomson Ridge/Jaln Pelatina	<a href="#">5/2004-E</a>
43	Along Upper Thomson Road/Jalan Keli/Jalan Todak/Soo Chow Walk/Lorong Mega/Thomson Ridge/Jalan Pelatina	<a href="#">6/2004-E</a>
44	Chun Tin Road	<a href="#">7/2004-E</a>
45	Along Telok Blangah Road (Lots 2592)	<a href="#">8/2004-E</a>
46	Along Telok Blangah Road (226-184, 471, 126-183, 468 & 469)	<a href="#">9/2004-E</a>
47	Along Telok Blangah Road/Wirshart Road	<a href="#">10/2004-E</a>
48	Along Telok Blangah Road (Lots 561)	<a href="#">11/2004-E</a>
49	Along Cheong Chin Nam Road	<a href="#">12/2004-E</a>
50	Along Jalan Jurong Kechil	<a href="#">13/2004-E</a>
51	Along Jalan Leban/Jalan Kuras and Jalan Gelenggang	<a href="#">14/2004-E</a>
52	Along Upper Thomson Road/Casuarina Road	<a href="#">15/2004-E</a>
53	Jalan Legundi/Sembawang Road	<a href="#">16/2004-E</a>
54	Along Jalan Kayu	<a href="#">17/2004-E</a>
55	Along Jalan Kayu/Lorong Samak	<a href="#">18/2004-E</a>
56	House Nos. 57 – 87 Jalan Salang	<a href="#">19/2004-E</a>
57	House No. 2 – 2P Jasmine Road and 2 to 30 Gardenia Road	<a href="#">20/2004-E</a>
58	House No. 1 to 73 (odd numbers) Cheng Soon Garden and No. 2 to 68 (odd numbers) Kismis Avenue	<a href="#">21/2004-E</a>
59	Along Seletar Road from Jalan Lebat Daun/Jalan Joran to Seletar Close	<a href="#">22/2004-E</a>
60	Along Li Hwan Walk, Li Hwan Close, Li Hwan Terrace, Li Hwan Place & Li Hwan Drive	<a href="#">1/2005-E</a>
61	House No. 5 to 41 (odd numbers) and No. 2 to 18 (even numbers) Watten Rise and No. 26 to 60 (even numbers) Watten Drive	<a href="#">2/2005-E</a>
62	House No. 11 to 69 (odd numbers) Jalan Wangi	<a href="#">3/2005-E</a>
63	Ford Avenue	<a href="#">4/2005-E</a>
64	Richards Place/Richards Avenue	<a href="#">5/2005-E</a>
65	House No. 1 to 73 (odd numbers) and No. 2 to 24 (even numbers) Watten Drive, No. 2 to 28 (even numbers) Watten Close and No. 49 to 61 (odd numbers) Watten Estate	<a href="#">6/2005-E</a>
66	Jalan Jelita, Jalan Istimewa, Jalan Tenang and Nos. 263 to 289 (odd numbers) Holland Road	<a href="#">1/2006-E</a>
67	House No. 88, 88A, 90, 90A, 92 & 92A Yuk Tong Avenue	<a href="#">2/2006-E</a>
68	Houses at Pang Seng Road and House Nos. 27 to 27J Wan Tho Avenue	<a href="#">1/2008-E</a>
69	House Nos. 1 to 35 Jalan Limbok and House Nos. 183 to 205 Yio Chu Kang Road	<a href="#">2/2008-E</a>
70	Balestier Road Between Thomson Road and Moulmein Road	<a href="#">3/2008-E</a>



71	House No. 2 to 38 (even) Ernani Street, House No. 1 to 41 (odd & even) Rienzi Street and House No. 1 to 41 (odd) Norma Terrace	<a href="#">1/2009E</a>
72	House No. 2 to 12 (even numbers) Jalan Ayer	<a href="#">1/2010E</a>

ENVELOP CONTROL PLAN	
S/NO	ROAD NAME
1	<a href="#">Beach Road</a>
2	<a href="#">Upper Circular Road</a>
3	<a href="#">Robertson Quay</a>
4	<a href="#">Mohamed Sultan / Martin Road</a>
5	<a href="#">River Valley Road / Tank Road</a>

## NOTES

- \* The details of the Envelop Control Plans are available for browsing and purchase at the URA Customer Service Centre, The URA Centre.
- \* The details of the street block plans can be found in the circulars released to the Professional Bodies under the respective URA/DC Plan Release Number and URA release date respectively. As for the revised height control plans, please refer to the MP 2008.
- \* The boundaries of the various street block plans and a brief summary of the controls are also available for browsing at the URA Customer Service Centre.

## URBAN DESIGN PLANS AND GUIDELINES FOR THE ORCHARD PLANNING AREA

**15** The following plans and guidelines aim to enhance pedestrian connectivity, attractiveness and vibrancy in the Orchard Planning Area:

- (a) Urban Verandahs
- (b) 2nd storey links
- (c) 1st storey links
- (d) Underground links to MRT stations
- (e) Building Edge, and
- (f) Activity generating uses

Please refer to the [Handbook for Urban Design Guidelines in Central Area](#) for the detailed guidelines.

## ENCOURAGING ROOF TOP GREENERY THROUGH ORA ON ROOF TOPS OF EXISTING BUILDINGS IN ORCHARD AND DOWNTOWN CORE PLANNING AREA

**16** Existing buildings within key activity corridors in Orchard and Downtown Core planning areas will be granted additional GFA, beyond the Master Plan Permissible GPR, to be used for outdoor refreshment areas (ORAs) on the rooftop level if owners provide rooftop landscaping for their developments. This is to encourage existing building owners in Orchard and Downtown Core planning areas to landscape their roof and to introduce compatible commercial activities like ORAs for the public and occupants of the building to better enjoy the rooftop greenery.

**17** Existing buildings refer to developments that have obtained TOP as at the date of the announcement. The outdoor refreshment areas will only be allowed in developments of compatible use (e.g commercial buildings & hotels), subject to the prevailing landuse and development control guidelines.

**18** The ORA use (both covered or uncovered areas) on the roof is meant to be kept small scale and ancillary to the landscaping on roof tops. Thus, the proposed ORA should not take up more than 50%

of the overall roof space or 200sqm, whichever is lower. The landscaping proposal will be assessed to ensure satisfactory predominant greenery provision, before supporting the additional GFA. Structures on the roof top (e.g. pavilions or enclosed spaces) of buildings will be assessed in accordance with the prevailing Development control guidelines and allowable building height for the development.

**19** Developments located close to residential or other non-commercial developments, as part of the planning evaluation, URA may require the applicant to propose noise abatement measures when proposing such activity generating uses on the roof top of buildings. In general, loud music and performances that poses disamenities to the surrounding uses will not be supported.

**20** The additional GFA, allowed above the MP permissible GPR, can only be used for ORA use and will not form the future development potential of the site upon redevelopment. The additional ORA GFA is subject to payment of development charge or differential premium, where applicable.

## GUIDELINES FOR ADVERTISEMENT SIGNS IN THE CENTRAL AREA

**21** URA and BCA supports advertisement signs and electronic signboards in the designated areas (shown in [Figure 4.26](#)) along major pedestrian, shopping and other activity corridors and hubs within the city, where the display of illuminated advertisement signs is consistent with the planning intention and character of the area. Detailed guidelines are shown in figure 4.27.

**22** Advertising banners are considered temporary signs because they are usually for a period of less than 3 months. They are allowed both within and outside the designated areas, provided that they are limited to promoting an event within the building.

**Figure 4.27: Guidelines for Advertisement Signs in Central Area**

NO.	PARAMETER	ADVERTISEMENT SIGNS												
1	Definition	An advertisement sign refers to a signboard used for display of commercial and product information for publicity and advertising purposes.												
2		<table border="1"> <tr> <td>a</td> <td>Within the Arts and Entertainment Area at Bugis (<a href="#">Figure 4.28</a>);</td> </tr> <tr> <td>b</td> <td>Along Orchard Road, within Orchard Planning Area (<a href="#">Figure 4.29</a>);</td> </tr> <tr> <td>c</td> <td>Along Eu Tong Sen Street and New Bridge Road (<a href="#">Figure 4.30</a>);</td> </tr> <tr> <td>d</td> <td>At Marina Centre (along Raffles Boulevard, Temasek Boulevard and Temasek Avenue) (<a href="#">Figure 4.31</a>);</td> </tr> <tr> <td>e</td> <td>Along Singapore River, between Coleman Bridge and Clemenceau Bridge (<a href="#">Figure 4.32</a>) and</td> </tr> <tr> <td>f</td> <td>At Raffles Place, directly fronting the open space (<a href="#">Figure 4.33</a>).</td> </tr> </table>	a	Within the Arts and Entertainment Area at Bugis ( <a href="#">Figure 4.28</a> );	b	Along Orchard Road, within Orchard Planning Area ( <a href="#">Figure 4.29</a> );	c	Along Eu Tong Sen Street and New Bridge Road ( <a href="#">Figure 4.30</a> );	d	At Marina Centre (along Raffles Boulevard, Temasek Boulevard and Temasek Avenue) ( <a href="#">Figure 4.31</a> );	e	Along Singapore River, between Coleman Bridge and Clemenceau Bridge ( <a href="#">Figure 4.32</a> ) and	f	At Raffles Place, directly fronting the open space ( <a href="#">Figure 4.33</a> ).
a	Within the Arts and Entertainment Area at Bugis ( <a href="#">Figure 4.28</a> );													
b	Along Orchard Road, within Orchard Planning Area ( <a href="#">Figure 4.29</a> );													
c	Along Eu Tong Sen Street and New Bridge Road ( <a href="#">Figure 4.30</a> );													
d	At Marina Centre (along Raffles Boulevard, Temasek Boulevard and Temasek Avenue) ( <a href="#">Figure 4.31</a> );													
e	Along Singapore River, between Coleman Bridge and Clemenceau Bridge ( <a href="#">Figure 4.32</a> ) and													
f	At Raffles Place, directly fronting the open space ( <a href="#">Figure 4.33</a> ).													

NO.	PARAMETER	ADVERTISEMENT SIGNS												
3	Location	<p><u>Building Facade</u> The advertisement sign (e.g. panel signboard or electronic display signboard) is to be neatly mounted on the building facade. Sky signs, which are free-standing signs that are mounted on the top of buildings, i.e. at the rooftop level of the tower or podium block are not allowed.</p> <p>Advertisement signs on building facades adjacent to residential developments shall not cause disamenity to the neighbouring residents.</p> <p><u>Ancillary Structures, Bus-Stops and Taxi-Stands</u> Advertisement signs are not allowed on ancillary structures. These include entrance and exit structures to Rapid Transit System (RTS) stations, underpasses, overhead bridges, kiosks, gantries and boundary walls, etc. However, advertisement signs can be allowed at bus stops and taxi stands provided that they are fully integrated into the overall design of the bus or taxi shelter. This is to ensure a visually neat and tidy streetscape and maintain unobstructed pedestrian movement along the open walkways.</p>												
4	Urban Design Requirements	<table border="1"> <tr> <td data-bbox="485 674 533 779">a</td> <td data-bbox="533 674 1399 779">The sign shall be located within a height of not more than 30m or 60-storeys, whichever is lower, above the open walkway, except for those at Singapore River and Raffles Place.</td> </tr> <tr> <td data-bbox="485 779 533 976">b</td> <td data-bbox="533 779 1399 976">The sign must be flush mounted and integrated into the overall design of the building facade.  Advertisement signs shall be neatly detailed and all structural supports, etc. shall be visually screened from the top, below and on all sides.</td> </tr> <tr> <td data-bbox="485 976 533 1081">c</td> <td data-bbox="533 976 1399 1081">Three-dimensional signs shall be allowed to project up to 600mm from the building facade, subject to clearances from the relevant clearances from the Competent Authorities and URA.</td> </tr> <tr> <td data-bbox="485 1081 533 1279">d</td> <td data-bbox="533 1081 1399 1279"><u>Singapore River</u> The sign shall be located within a height of not more than 15m above the walkway or 3-storeys, whichever is lower. This helps to ensure that the signs relate directly to the activities at street level and are not visible from other parts of the city, which are outside the designated areas for advertisement signs.</td> </tr> <tr> <td data-bbox="485 1279 533 1503">e</td> <td data-bbox="533 1279 1399 1503"><u>Raffles Place</u> - The sign shall be located within a height of not more than 15m or 3-storeys, whichever is lower, above the walkway. - For each development, the advertisement signs are to be grouped together and the maximum area allowed is 30 sqm in total. The signs shall be computed as part of the allowable area for advertisement banners under BCA's guidelines.</td> </tr> <tr> <td data-bbox="485 1503 533 1727">f</td> <td data-bbox="533 1503 1399 1727"><u>Conservation Areas</u> Advertisement signs are allowed on gazetted conservation buildings or National Monuments, subject to compliance with the Guidelines for Display of Signs in Conservation Areas. Clearance from Conservation Section, URA on the proposed sign on gazetted conservation buildings or National Monuments is required before applications are made to the Building and Construction Authority (BCA).</td> </tr> </table>	a	The sign shall be located within a height of not more than 30m or 60-storeys, whichever is lower, above the open walkway, except for those at Singapore River and Raffles Place.	b	The sign must be flush mounted and integrated into the overall design of the building facade.  Advertisement signs shall be neatly detailed and all structural supports, etc. shall be visually screened from the top, below and on all sides.	c	Three-dimensional signs shall be allowed to project up to 600mm from the building facade, subject to clearances from the relevant clearances from the Competent Authorities and URA.	d	<u>Singapore River</u> The sign shall be located within a height of not more than 15m above the walkway or 3-storeys, whichever is lower. This helps to ensure that the signs relate directly to the activities at street level and are not visible from other parts of the city, which are outside the designated areas for advertisement signs.	e	<u>Raffles Place</u> - The sign shall be located within a height of not more than 15m or 3-storeys, whichever is lower, above the walkway. - For each development, the advertisement signs are to be grouped together and the maximum area allowed is 30 sqm in total. The signs shall be computed as part of the allowable area for advertisement banners under BCA's guidelines.	f	<u>Conservation Areas</u> Advertisement signs are allowed on gazetted conservation buildings or National Monuments, subject to compliance with the Guidelines for Display of Signs in Conservation Areas. Clearance from Conservation Section, URA on the proposed sign on gazetted conservation buildings or National Monuments is required before applications are made to the Building and Construction Authority (BCA).
a	The sign shall be located within a height of not more than 30m or 60-storeys, whichever is lower, above the open walkway, except for those at Singapore River and Raffles Place.													
b	The sign must be flush mounted and integrated into the overall design of the building facade.  Advertisement signs shall be neatly detailed and all structural supports, etc. shall be visually screened from the top, below and on all sides.													
c	Three-dimensional signs shall be allowed to project up to 600mm from the building facade, subject to clearances from the relevant clearances from the Competent Authorities and URA.													
d	<u>Singapore River</u> The sign shall be located within a height of not more than 15m above the walkway or 3-storeys, whichever is lower. This helps to ensure that the signs relate directly to the activities at street level and are not visible from other parts of the city, which are outside the designated areas for advertisement signs.													
e	<u>Raffles Place</u> - The sign shall be located within a height of not more than 15m or 3-storeys, whichever is lower, above the walkway. - For each development, the advertisement signs are to be grouped together and the maximum area allowed is 30 sqm in total. The signs shall be computed as part of the allowable area for advertisement banners under BCA's guidelines.													
f	<u>Conservation Areas</u> Advertisement signs are allowed on gazetted conservation buildings or National Monuments, subject to compliance with the Guidelines for Display of Signs in Conservation Areas. Clearance from Conservation Section, URA on the proposed sign on gazetted conservation buildings or National Monuments is required before applications are made to the Building and Construction Authority (BCA).													

NO.	PARAMETER	ADVERTISEMENT SIGNS	
5	Submission Requirements	a	<p>Planning permission from URA is not required for putting up advertisement signs. Applications to display advertisement signs are to be made to Advertisement Licensing Section, Building and Construction Authority (BCA), prior to the installation of the signs.</p> <p>Submissions must be made in full compliance with the provisions of the Building Control (Advertisement) Regulations and the Building Control (Temporary Buildings) Regulations.</p>
		b	<p>Details to be included:</p> <ul style="list-style-type: none"> <li>- Elevational View of the sign showing position, subject matter and dimensions;</li> <li>- Section View of the sign showing the method of fixing and materials used;</li> <li>- Layout Plan showing relative position of sign to buildings, roads or other landmarks; and</li> <li>- Site plan showing the location of the lot at which the sign is to be displayed.</li> </ul> <p>For advertisement signs along major routes such as Orchard Road, Singapore River and within Raffles Place, submissions should include an Elevation Drawing to indicate the location of both the existing and proposed signs in relation to the overall building facade.</p>
		c	<p>Advertisement signs will be subject to the detailed requirements of relevant agencies, including BCA, Traffic Police Department, Land Transport Authority and ENV (Environmental Health Department).</p>

## **ELEVATED PEDESTRIAN LINKAGES WITHIN DEVELOPMENTS IN [JURONG GATEWAY ELEVATED PEDESTRIAN NETWORK \(EPN\) PLAN](#)**

**23** The 360-hectare Jurong Lake District is a key growth area identified in URA’s Master Plan to support our economic growth for the next 10 to 15 years, and to decentralise commercial activities out of the city centre. One of the strategies to enhance its attractiveness is to improve the pedestrian connectivity within and around [Jurong Gateway](#), the commercial and business precinct of Jurong Lake District.

**24** J-Walk is the elevated pedestrian network at Jurong Gateway. It is planned to provide seamless, all-weather pedestrian connectivity between developments and to Jurong East MRT Station.

**25** To facilitate implementation of additional elevated walkways that form part of the planned network, elevated walkways and associated vertical circulation points within developments, that are identified as key connections under the [Jurong Gateway EPN Plan](#), can be considered for GFA exemption subject to the guidelines in para 7.14.2.3 of the GFA handbook.

## **SUBMISSION OF [WALKING AND CYCLING PLAN \(WCP\)](#)**

**26** As part of the Walk Cycle Ride SG vision, we aim to make walking, cycling, and riding public transport the way of life for Singaporeans and a means of enhancing liveability in Singapore. To help realise this vision, developers of proposed development types that are listed in **Table 1** shall submit a walking and cycling plan (WCP) as part of their Development Application. These are developments with expected high pedestrian and cyclist traffic.

**27** Developments that are not listed in **Table 1** may also be required to submit a WCP if they meet the following criteria:

- (a) Developments located in car-lite precincts<sup>8</sup>; or
- (b) Developments located within 400m of major transport nodes, i.e. within Zone 2<sup>9</sup>; or
- (c) Retail, Office, Mixed Use developments.

Developers whose projects meet these criteria are strongly encouraged to check with the LTA for the requirement of a WCP prior to the Development Consultation stage.

**28** The WCP leverages on the existing Traffic Impact Assessment (TIA) process. The developer should submit the WCP as part of the TIA pre-scoping consultation with LTA (via [lta-dbc\\_registry@lta.gov.sg](mailto:lta-dbc_registry@lta.gov.sg)) before submitting a development application to URA. See **Diagram 1** below for submission flowchart. Before submitting the Development Application to URA, the appointed traffic consultant and the Qualified Personnel (Architect) of the project should work together in preparing the WCP as part of the TIA scoping process, and submit the WCP to LTA. LTA and URA will jointly evaluate the WCP to ensure that walking and cycling related designs have been considered in the development proposal. The QP should then revise the WCP based on LTA's and URA's comments, and incorporate the revised WCP in the Development Application to URA.

**29** As part of the WCP, developers will need to consider the safety, convenience and accessibility for pedestrians and cyclists in the design of the development. Developing the WCP at an early stage will also reduce the need for plans to be adjusted later in the development process to accommodate such needs.

**30** The WCP should incorporate the following elements:

- a. Facilitate convenient and direct pedestrian and cyclist access from nearby public transport facilities and adjacent developments, by providing covered paths and crossings (be they at-grade, underground, or elevated) where appropriate. These should also take into consideration existing or upcoming cycling paths in the area;
- b. Minimise conflict between pedestrians, cyclists and motor vehicles at locations such as vehicular ingress/egress, car park entrances, and drop-off points and taxi stands. Suitable measures such as signages or traffic calming features should also be considered;
- c. Provide sufficient and conveniently located bicycle parking spaces and supporting amenities for cyclists such as shower rooms and lockers;
- d. Provide easy-to-understand wayfinding signage giving directions to key public transport facilities, pedestrian and cycling facilities as well as key amenities nearby; and
- e. Design accesses and routes that are barrier-free and thoughtful for safe and comfortable passage for children, elderly and the mobility-challenged group.

**31** For detailed guidelines on WCP and the submission requirements, please refer to LTA's latest Code of Practice "Street Work Proposals Relating to Development Works" at <https://www.lta.gov.sg/content/ltaweb/en/industry-matters/development-and-building-and-construction-and-utility-works/street-proposals.html>.

**32** To aid the industry in developing active mobility-related infrastructure in a holistic manner, agencies have also produced a Walking & Cycling Design Guide as a supplement to the respective agencies' prevailing COPs, engineering and development standards. The Guide can be downloaded at <https://www.lta.gov.sg/content/dam/ltaweb/corp/GreenTransport/2018/walking-and-cycling-design-guide.pdf>.

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<sup>8</sup> The five car-lite precincts are Bayshore, Jurong Lake District, Kampong Bugis, Marina South and Woodlands North.

<sup>9</sup> Zone 2 as defined in the Zonal Car Parking requirement in the Code of Practice on Vehicle Parking Provision in Development proposals. Please refer to [https://www.lta.gov.sg/content/dam/ltaweb/corp/Industry/files/parking\\_zones.pdf](https://www.lta.gov.sg/content/dam/ltaweb/corp/Industry/files/parking_zones.pdf) for more details.

**Table 1: Development Types that require WCP as part of TIA<sup>10</sup>**

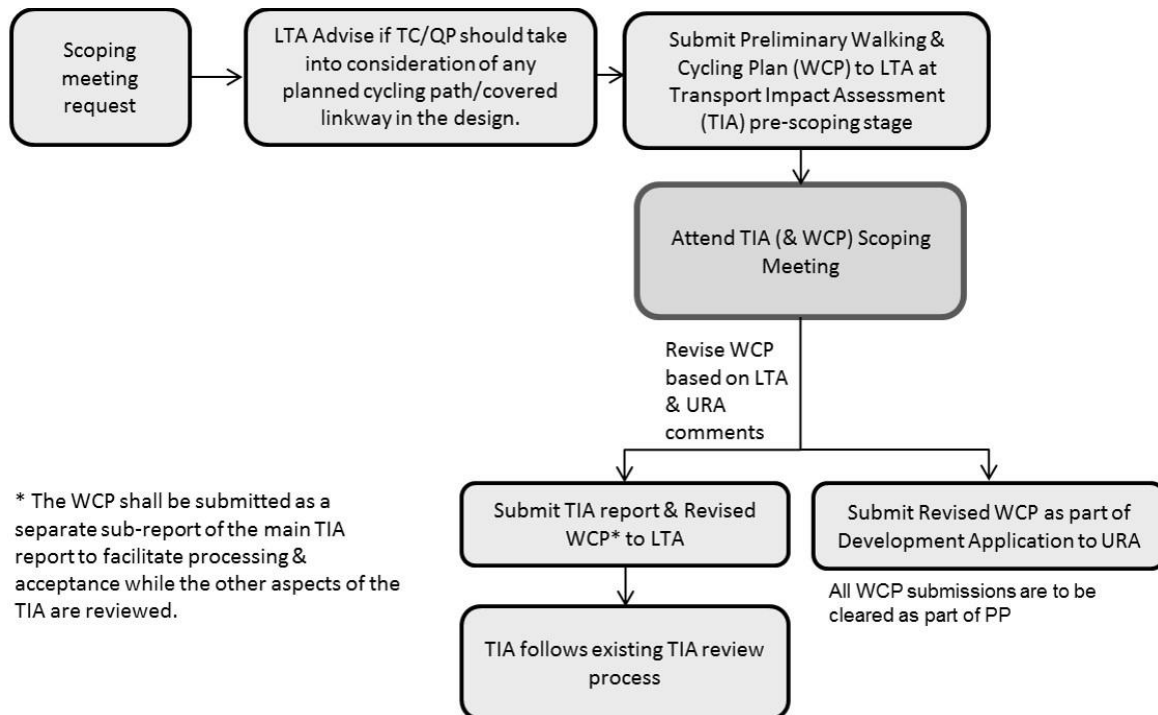
Development Type	Scale
<p><b><u>1. Residential</u></b>                      1.1 Landed properties/                      Condominiums/ Executive                      Condominiums                      1.2 HDB housing<sup>11</sup></p>	<p>1.1 ≥ 700 units                      1.2 ≥ 1,000 units</p>
<p><b><u>2. Commercial</u></b>                      2.1 Shopping centres/ Retail uses                      2.2 Office development                      2.3 Hotel</p>	<p>≥ 10,000m<sup>2</sup> GFA                      ≥ 20,000m<sup>2</sup> GFA                      ≥ 700 rooms</p>
<p><b><u>3. Industrial</u></b>                      3.1 Light/ General Industry<sup>12</sup>                      3.2 Warehousing/ Distribution<sup>12</sup>                      3.3 Science park/ High tech park/                      Business park</p>	<p>3.1 ≥ 60,000m<sup>2</sup> GFA                      3.2 ≥ 50,000m<sup>2</sup> GFA                      3.3 ≥ 40,000m<sup>2</sup> GFA</p>
<p><b><u>4. Educational</u></b>                      4.1 Primary school                      4.2 Secondary school                      4.3 International school                      4.4 Junior college                      4.5 University, polytechnic, ITE                      campus</p>	<p>4.1 ≥ 1,500 students (single-session)                      or. ≥ 2,000 students (double-session)                      4.2 ≥ 2,000 students                      4.3 ≥ 2,000 students                      4.4 ≥ 2,000 students                      4.5 TIA Required</p>
<p><b><u>5. Medical</u></b>                      Hospital</p>	<p>≥ 40,000m<sup>2</sup> GFA or ≥ 320 Beds                      (whichever is triggered first)</p>
<p><b><u>6. Recreational</u></b>                      Exhibition centre &amp; major tourist                      attraction</p>	<p>≥ 30,000m<sup>2</sup> GFA</p>

<sup>10</sup> Developments that have a master developer, and consist of two or more plots that staged at different time will also be required to submit a WCP at the concept design stage.

<sup>11</sup> LTA and URA will work with HDB on the WCP requirements.

<sup>12</sup> Only industrial developments located within car-lite precincts or 400m of major transport nodes i.e. within Zone 2, will be required to submit a WCP.

## Diagram 1: Walking & Cycling Plan Submission Flowchart



## PART 2 TYPES OF DEVELOPMENT

### 1 COMMERCIAL DEVELOPMENTS

#### OVERVIEW

- 1 Commercial developments in Singapore can broadly be categorised as:
  - (a) Commercial buildings such as an office block, shopping complex, convention/exhibition centre and food centre. These may include mixed commercial developments comprising a combination of commercial activities such as a shopping podium with an office tower block.
  - (b) Mixed commercial & residential buildings such as a shopping podium with an apartment tower block. These developments can have up to 40% of its total GFA being used for commercial activities.
  - (c) Residential with commercial use on the 1st storey only such as shophouses, and developments with shops at the 1st storey with flats above. The commercial use is restricted to the 1st storey only, excluding basements.

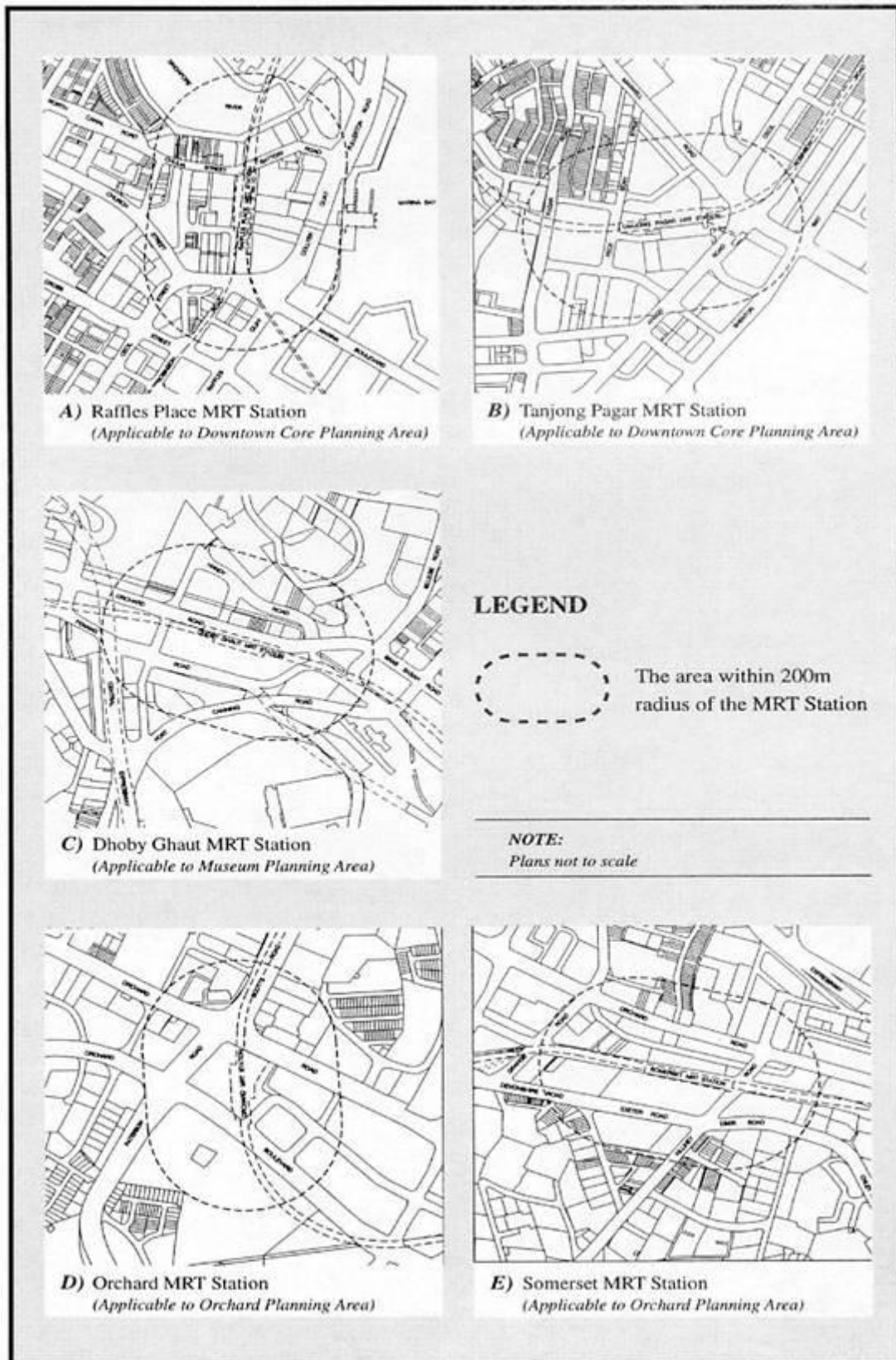
The detailed parameters for these developments are discussed in the later sections of this chapter.

- 2 Some development control parameters are unique to commercial developments. These are:
  - \* Base And Bonus Plot Ratio Calculation
  - \* Setback Requirements
  - \* Guidelines For Outdoor Kiosk And Outdoor Refreshment Areas (ORAs)

#### BASE & BONUS PLOT RATIO CALCULATION

3 Commercial sites within the Downtown Core and Orchard Planning Areas (see Figure 1.1) may be able to be built more intensively if they have large site areas or are located close to MRT stations. The GPR control for these sites is based on the “base plus bonus” component. A base plot ratio is assigned to the plot. Variable increases over and above the base plot ratio will be considered if the sites comply with the following conditions:





**Figure 1.1: Areas within 200m of the MRT Stations**

- (a) Proximity to area within 200m radius around the MRT station box
  - (i) For sites with less than 50% of the site within the area of influence, the allowable increase is 5%.
  - (ii) For site with 50% or more of the site within the area of influence, the allowable increase is 10%
- (b) Lot sizes

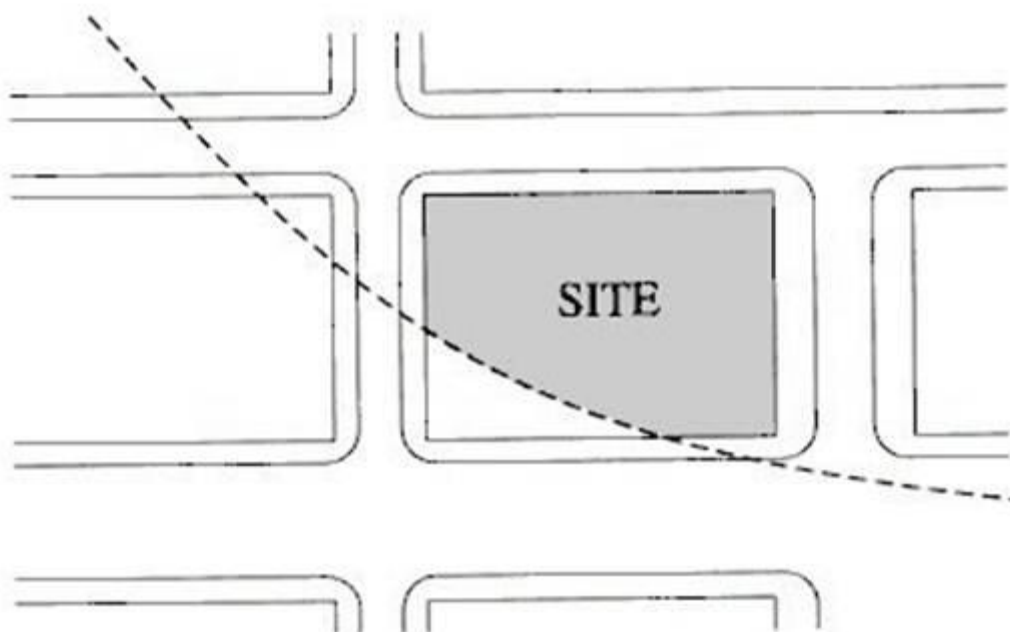
		ALLOWABLE INCREASE ABOVE BASE PLOT RATIO
For Downtown Core Planning Area	(i) 3,000 m <sup>2</sup> to 5,500 m <sup>2</sup>	5%
	(ii) 5,501 m <sup>2</sup> to 8,000 m <sup>2</sup>	10%
	(iii) more than 8,000 m <sup>2</sup>	15%
For Orchard & Museum Planning Area	(i) 10,000 m <sup>2</sup> to 15,000 m <sup>2</sup>	5%
	(ii) 15,001 m <sup>2</sup> to 20,000 m <sup>2</sup>	10%
	(iii) more than 20,000 m <sup>2</sup>	15%

The site area used for computation of plot ratio will be over the entire gross site area, except for cases where a Written Permission for a development has been or is being carried out. For such cases, the site area shall exclude any plot of land set aside for vesting to the State for roads or other public purposes.

- 4** The base & bonus plot ratio method will not apply to the following developments:
- (a)** Existing developments with approved plot ratio higher than the total of the base and bonus plot ratio;
  - (b)** Proposed developments with an approved plot ratio higher than the Master Plan 2008 plot ratio and for which development charges have been paid up;
  - (c)** All government sale sites. However, intensification of these sites may be considered.

**5** The following example illustrates the application of the fixed plus variable plot ratio control.  
Example:

Site in Orchard Planning Area with a site area of 12,250 m<sup>2</sup> of which more than 50% falls within the MRT station influence.



Assigned plot ratio is 4.9 +  
Variable allowable increases as follows:

- (i) More than 50% of site within area of MRT station influence will be accorded 10% variable increase.  
 $4.9 \times 10\% = 0.49$
- (ii) Lot size is 12,250 m<sup>2</sup> will be given 5% increase.  
 $4.9 \times 5\% = 0.245$

Therefore, the resultant plot ratio will be  $(4.9 + 0.49 + 0.245) = 5.635$

## SETBACK REQUIREMENTS

6 For commercial developments, the setback requirement is 3.0m to common boundaries and road buffer requirements from the road. Figure 1.2 sets out the details of the setback requirements for commercial developments while Figure 1.3 sets out the details of the road buffer requirements for commercial developments.

7 In the Central Area, the setback requirements are usually guided by the urban design requirements. In most instances, the building is to abut the road reserve line at the front. This is to achieve a consistent streetscape and continuous building edge.

**Figure 1.2: Setback Requirements for Commercial Developments**

SETBACKS		WITHIN CENTRAL AREA <sup>1</sup> & REGIONAL CENTRES <sup>3</sup>		OUTSIDE CENTRAL AREA <sup>1</sup> & REGIONAL CENTRES <sup>3</sup>	
		Party Wall Developments	Free Standing Developments	Party Wall Developments	Free Standing Developments
FRONT		Buffer or urban design requirements <u>or</u> Abut road reserve	Buffer or urban design requirements <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve <sup>2</sup>	Buffer requirement
SIDE	Facing Road	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement	Buffer requirement
	Facing Common Boundary	Abut adjacent development	3.0m	Abut adjacent development	3.0m
REAR	Facing Road	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve <sup>2</sup>	Buffer requirement
	Facing Common Boundary	3.0m	3.0m	3.0m	3.0m

### NOTES:

1 See Figure 1.1 in Part 1 for Central Area boundary.

2 Commercial developments can abut road reserve if

- (a) there is site constraint
- (b) the intention is to retain the existing streetscape which is abutting road widening line; or
- (c) tighter streetscape is desired.

3 The 4 Regional Centres are found in the vicinity of the MRT Stations in Tampines, Jurong East, Woodlands and Seletar

**Figure 1.3: Road Buffer Requirements for Commercial Developments**

ROAD CATEGORY	MINIMUM WIDTH OF BUFFER	SPECIFICATION OF BUFFER
CATEGORY 1 - Expressway	15m	5m green, 10m physical
CATEGORY 2 - Major Arterial A	7.5m	3m green, 4.5m physical
CATEGORY 3 - Major Arterial B	5m	3m green, 2m physical
CATEGORY 4 & 5 - Other Major Roads, Minor Roads & Slip Roads	5m	3m green, 2m physical

### PROVISION OF PRIVATE CAR PARKING LOTS WITHIN STRATA-TITLED COMMERCIAL DEVELOPMENTS

**8** Private car parking lots can be allowed within strata-titled commercial developments provided the following criteria are met:

- i. The private parking lots are surplus parking lots over and above LTA's minimum parking provision;
- ii. The actual floor area of the private parking lots are computed as GFA; and
- iii. The private parking lots are physically contiguous with the respective commercial strata unit

### OUTDOOR KIOSKS AND OUTDOOR REFRESHMENT AREAS (ORA) AT ORCHARD PEDESTRIAN MALL AND ALONG SINGAPORE RIVER PROMENADE

**9** Outdoor kiosks and outdoor refreshment areas (ORA) are encouraged at Orchard Planning Area and along the Singapore River Promenade to promote activities to enhance the vibrancy of the area. Please refer to the [Handbook for Urban Design Guidelines in Central Area](#) for the detailed guidelines:

Guidelines for Outdoor Kiosks and Outdoor Refreshment Areas (ORA) At [Orchard Planning Area](#)  
 Guidelines for Outdoor Kiosks and Outdoor Refreshment Areas (ORA) Along the Singapore River Promenade:

[For Boat Quay Promenade](#)

[For Clarke Quay And Robertson Quay](#)

OUTDOOR REFRESHMENT AREAS (ORA) LOCATED AT [ROOF TOP](#)

### COMMERCIAL BUILDINGS

**10** Commercial buildings include office blocks, shopping complexes, convention/ exhibition centres, commercial schools/banks, market/food centre/restaurants, cinemas, entertainment and trade missions. They may also include mixed commercial developments comprising a combination of commercial activities such as a shopping podium with an office tower block.

**11** Commercial buildings can be in the form of free-standing development, a podium/ tower arrangement, a pure tower block or party wall development. The building form depends on the location and street block plans for the site.

**12** Commercial buildings may be strata subdivided.

## LOCATION

13 Commercial buildings are allowed on land zoned “Commercial” in the Master Plan 2008.

## PARAMETERS

14 The parameters for commercial buildings are:

- (a) **Building Height**  
The maximum allowable building height is expressed in terms of number of storeys stipulated in the Master Plan. However, the resultant building height must also comply with the technical height controls imposed by other authorities such as aviation path restrictions, telecommunication and military installations.
- (b) **Floor-to-Floor Height**  
The floor-to-floor height control for commercial buildings is 5.0m (maximum) for every floor<sup>1</sup>
- (c) **Provision of Covered Public Walkways**  
Covered walkways are to be provided along the periphery of commercial buildings abutting/ facing major and minor roads as well as all pedestrian routes.
- (d) **Integration of Community and Sports Facilities in Existing Commercial Developments**  
Additional gross floor area (GFA) for community uses (such as public community library, community centres, social service and counselling centres, public museum, volunteer welfare association and sports facilities) within existing commercial developments, can be considered over and above the Master Plan (MP) allowable gross plot ratio (GPR) subject to a cap of 2,000 sqm or 10% of the total existing GFA (whichever is lower) and compliance with the following conditions:
  - (i) The commercial sites identified for co-location can support the additional Community and Sports facilities from the planning, land use and traffic points of view. An outline application is to be submitted to URA for consideration.
  - (ii) CSFS proposals are intended primarily for commercial retail developments which are highly accessible. Uses would not be supported in hotel developments as the resultant synergies are limited. Uses in office developments will only be considered if it is clear that the use has clear synergies with the office development and caters to the needs of the office workers.
  - (iii) The proposed community and sports uses should primarily be intended for public or community use and not profit driven. The allowable community uses include childcare services, disability services, family services, eldercare services, volunteerism/volunteer-based programmes, community libraries, community clubs, and other deserving uses which would be evaluated on a case-by-case basis. For sports uses, the CSFS is only applicable to selected sports facilities which are not provided for by the public or private sector (e.g. competition ice-skating rink). Other types of sports facilities, which are currently provided for (e.g. bowling alleys), would not qualify.
  - (iv) The space should be predominantly used for community outreach use and any ancillary space (e.g. offices) should be kept to a maximum of 40% of total GFA. Ancillary commercial uses within the community and sports space (e.g. cafes, souvenir or gift shops) will be computed as part of the overall commercial quantum of the entire development. Pure office, religious uses and recreational club are not supported.
  - (v) The proposed sports facility must be endorsed and supported by the Singapore Sports Council (SSC). For community uses, they must be endorsed and

supported by the relevant parent government agencies. A Letter of Undertaking (LOU) for [community/sports](#) use and an endorsement letter from the supporting government agency are to be submitted as part of the outline application to URA.

- (vi) Developers have the option of offering government agencies and NGOs/VWOs the strata-title of the community spaces or a long lease with a minimum tenure of 10 years with option of renewal by the government agencies or NGOs/VWOs.

Direct transfer of ownership or leases to NGOs/VWOs using the Community space is allowed, subject to support from the relevant government agencies. A letter of undertaking and an endorsement letter from the supporting government agency are to be submitted as part of the planning application to URA to obtain Provisional Permission (PP).

SSC will take up ownership of the strata-title or head lease of the space, with a minimum tenure of 10 years with option of renewal by SSC, and will take the lead in the operation and management of the sport facility. SSC may appoint a suitable managing agent to operate the facility.

- (vii) In the event that the original community/sports user ceases to operate in the approved community/sports space, a suitable replacement user for the entire community/sports space would have to be found. If no replacement community/sports user can be found, the community/sports space would not be allowed for conversion to other uses, and the Competent Authority has the option of requiring this space, allowed over and above the Master Plan GPR, to be removed. The community/sports user and the owner of the community/sports space shall seek approval from the Competent Authority on any change of user and proposed usage of the space. The party responsible for finding a replacement community/sports user depends on the ownership arrangement for the community/sports space as shown below:

No.	Lease Arrangement for the C&CI space	Who is responsible for finding replacement C&CI tenant?
1	Government agency takes strata-title	Government agency
2	Government agency leases space (minimum 10 year duration)	Developer
3	NGO / VWO takes strata-title directly from developer <sup>1</sup>	NGO / VWO
4	NGO / VWO leases space directly from developer <sup>1</sup> (minimum 10 year duration)	Developer

<sup>1</sup> Direct transfer of the strata-title or lease of the C&CI space to NGOs / VWOs is subject to the support of the relevant parent government agencies.

- (viii) Development charge or differential premium (DC/DP) is to be levied at C&CI rate for the additional community space and the relevant sports/recreational rate for the additional sports space.
- (ix) The championing government agencies will conduct a review every three years to confirm that the VWO/NGOs are providing meaningful public services.
- (x) The additional GFA can only be used for Community and Sport Facilities and will not form the future development potential of the site upon redevelopment.

**FOOTNOTE:**

<sup>1</sup> The floor-to-floor height may sometimes be dictated by urban design guidelines, particularly commercial buildings within the central area. Other variations in floor-to-floor height is subject to evaluation depending on the use and the location of the floor. See section in "overall building height and floor-to-floor height " in Chapter 3 of Part 1.

## MIXED COMMERCIAL & RESIDENTIAL DEVELOPMENT

**15** A commercial and residential development is an area used or intended to be used mainly for mixed residential and commercial purposes. Unlike a pure commercial development which can have up to 100% GFA used for commercial purpose, a commercial and residential development<sup>2</sup> has a maximum commercial quantum control of 40% of the total allowable GFA.

**16** The most common building form for mixed commercial & residential buildings is office/ shopping podium with apartment tower block. However, the commercial areas cannot be located above the residential areas. Commercial & residential buildings can also be in the form of a pure tower block or a party wall development. The residential component may also be physically separated from the commercial use. Determination of the building form depends on the location of the site and street block plans for the site.

**17** Strata subdivision may be allowed for mixed commercial and residential developments.

### FOOTNOTE:

<sup>2</sup> There is another form of mixed commercial / residential development where the commercial activity is confined to the 1st storey only. This form of development, referred to as “residential with commercial at the 1storey” will be discussed in the next section.

## LOCATION

**18** Mixed commercial and residential buildings are allowed on land zoned “Commercial & Residential” in the Master Plan 2008.

**19** For mixed commercial and residential development on land zoned “Commercial” in the Master Plan 2008, where the proposal has a non-commercial quantum exceeding 40% of the total GFA (e.g. a mixed commercial / residential development with a residential quantum of 80%), rezoning may be required. In considering the rezoning, an appropriate GPR and building height may be re-assigned, taking into consideration the compatibility of the proposals with the surrounding land uses and planning intention.

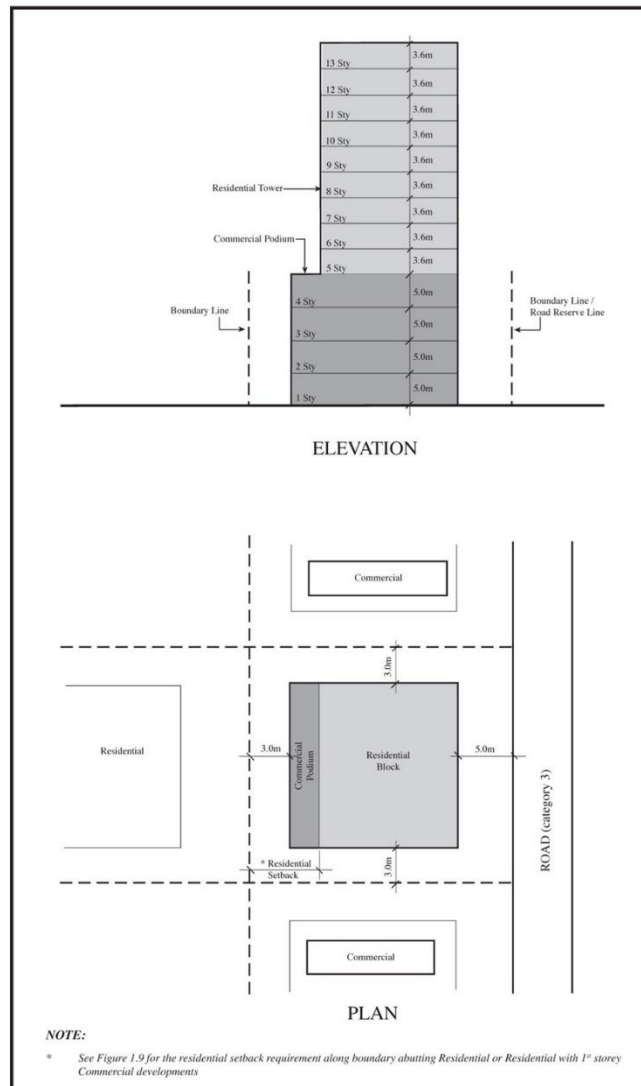
**20** The 60% (minimum) commercial quantum is not applicable for land zoned Commercial within the 4 Historical Conservation Districts of Chinatown, Kampong Glam, Little India and Boat Quay. Under the current guidelines, residential or institutional uses which are more than 40% of the total GFA can be allowed in these 4 locations without rezoning.

## PARAMETERS

**21** Mixed commercial and residential developments are usually in the podium and tower form arrangement. In this situation, the podium which is occupied by the commercial use, will follow the commercial development guidelines in terms of setbacks and floor-to-floor height. The residential tower block will follow flat standards in terms of floor-to-floor height, but will follow the commercial buffer and setback standards, except for the following circumstances:

- (a)** Flat standards will apply if the residential component is a separate independent block from the commercial component;
- (b)** Flat standards will apply along common boundaries where the neighbouring development is either zoned Residential or Residential with 1<sup>st</sup> storey Commercial; and
- (c)** For sites which are subject to urban design guidelines (i.e. where the buildings are allowed to abut the road widening line or comply with certain setback requirements), the urban design guidelines shall prevail.

See Figure 1.8 for illustrations.



**Figure 1.8: Example of Setback Requirements for Mixed Commercial & Residential Developments**

**22** Similarly, in a situation where the residential component is physically separated from the commercial use, the commercial building will adopt the commercial development parameters while the residential building will have to comply with the flat guidelines.

**23** The residential component in the commercial and residential development will not be accorded condominium status as they are not developed in accordance with the condominium housing guidelines.

**24** The parameters for mixed commercial and residential buildings are:

- (a)** Use Quantum Control  
The use quantum control for commercial/ residential is 40% (maximum) of the allowable GFA for commercial uses and 60% (minimum) of the GFA for residential purposes. Thus, a higher residential component in the development can be allowed within the commercial/ residential development if the commercial use does not exceed 40% of the total allowable GFA.
- (b)** Building Height  
The maximum allowable building height is expressed in terms of number of storeys stipulated in the Master Plan. However, the resultant building height must also comply with the technical height controls imposed by other authorities such as aviation path restrictions, telecommunication and military installations.



**(c) Setback & Road Buffer Requirements**

**(i) Commercial Component**

For the commercial component, the road buffer and setback requirements will follow the same standard as a pure commercial building or urban design guidelines, if any.

**(ii) Residential Component**

For the residential component, the commercial road buffer and setback requirements will apply, except for the following circumstances:

- flat standards (see Figure 1.9) will apply if the residential component is a separate independent block from the commercial component;
- flat standards will apply along common boundaries where the neighbouring development is either zoned Residential or Residential with 1<sup>st</sup> storey Commercial; and
- for sites which are subject to urban design guidelines (i.e. where the buildings are allowed to abut the road widening line or comply with certain setback requirements), the urban design guidelines shall prevail.

**(d) Floor-to-Floor Height**

**(i) Commercial Component**

The floor-to-floor height control for commercial buildings is 5.0m (maximum) for every floor.

**(ii) Residential Component**

The floor-to-floor height control for residential buildings is:

- 4.5m (maximum): For 1st storey
- 3.6m (maximum): For subsequent higher storeys

**(e) Provision of Covered Public Walkways**

Covered walkways are to be provided along the periphery of the commercial buildings abutting/facing major and minor roads as well as all pedestrian routes.

**Figure 1.9: Setback Requirement for Flats**

STOREY HEIGHT	SETBACK FROM PUBLIC ROAD FOR FLATS	SETBACK FROM COMMON BOUNDARIES FOR FLATS (m)
1	Road buffer requirement	3.0
2		3.0
3		3.0
4		3.0
5		3.3
6		3.6
7		3.9
8		4.2
9		4.5
10		4.8
11		5.1
12		5.4
13		5.7
14		6.0
15		6.3
16		6.6
17		6.9
18		7.2
19		7.5
20		7.8
21		8.1
22		8.4
23		8.7
24		9.0
25		9.3
26		9.6
27		9.9
28		10.2
29		10.5
30		10.8
31		11.1
32		11.4
33		11.7
34		12.0
35		12.3
36 and above	12.6	

**NOTE:**

Bay window, which is a cantilevered window, can be allowed within the setback distance (max 500mm protrusion into the setback distance) if it is raised at least 500mm above the floor slab.

## SHOPHOUSES & SHOP FLATS

**25** Shophouses and shop flats are typically developments with shops at the 1st storey with flats above. The commercial use is restricted to the 1st storey only. Basements are not allowed for commercial use.

**26** Shophouses and shop flats can be in the form of free-standing development or party wall development. The building form depends on the location of the site and street block plans for the site.

**27** Strata subdivision is generally allowed for shophouse and shop flats development except for conservation properties<sup>3</sup>.

### FOOTNOTE:

<sup>3</sup> There are 4 types of conservation buildings as mentioned earlier under Special Controls- Conservation Guidelines. Strata subdivision is not allowed for developments within the Historic Districts and Historic Residential Districts. However, only selected conservation buildings within Historic Residential Districts will be allowed to strata subdivide if they meet the following criteria:

- a) Original purpose-built compartmentalized common staircase designed to serve different floors;
- b) Staircase forms part of the external architectural expression; and
- c) Original reinforced concrete floors and structures.

## LOCATION

**28** Shophouses and shop flats are allowed on land zoned “Residential with commercial use on the 1st storey<sup>4</sup> in the Master Plan 2008.

### FOOTNOTES:

<sup>4</sup> Although shophouses and shopflats are typically in the “Residential with commercial use on the 1st storey” zone, it can also be allowed in the “Commercial & Residential” zone.

## PARAMETERS

**29** The guidelines for “Residential with commercial use on the 1st storey” developments are similar to the guidelines for commercial/ residential developments as discussed earlier. The difference being that the commercial component is confined to the first storey for the former development. Also, for such developments the commercial use will follow the commercial setback guidelines while the residential use will be guided by flat standards.

**30** Commercial uses that cause or are likely to cause disamenity to the residents are not allowed. For example, nightclubs and karaoke lounges may only be allowed on a case-by-case basis.

**31** There is however no use quantum control for shophouse and shop flats development. The commercial use is confined to the 1st storey.

**32** Pure residential developments without activity generating commercial uses, such as retail, entertainment and food & beverages (F&B) uses at street level, will not be supported on sites zoned “Residential with Commercial at the 1<sup>st</sup> storey” along key routes<sup>5</sup> in Central Area.

**33** Proposals for pure residential developments outside key routes will be assessed based on the compatibility of the proposal with the surrounding land uses and planning intention. If supported, site would remain zoned as “Residential with 1<sup>st</sup> storey Commercial”.

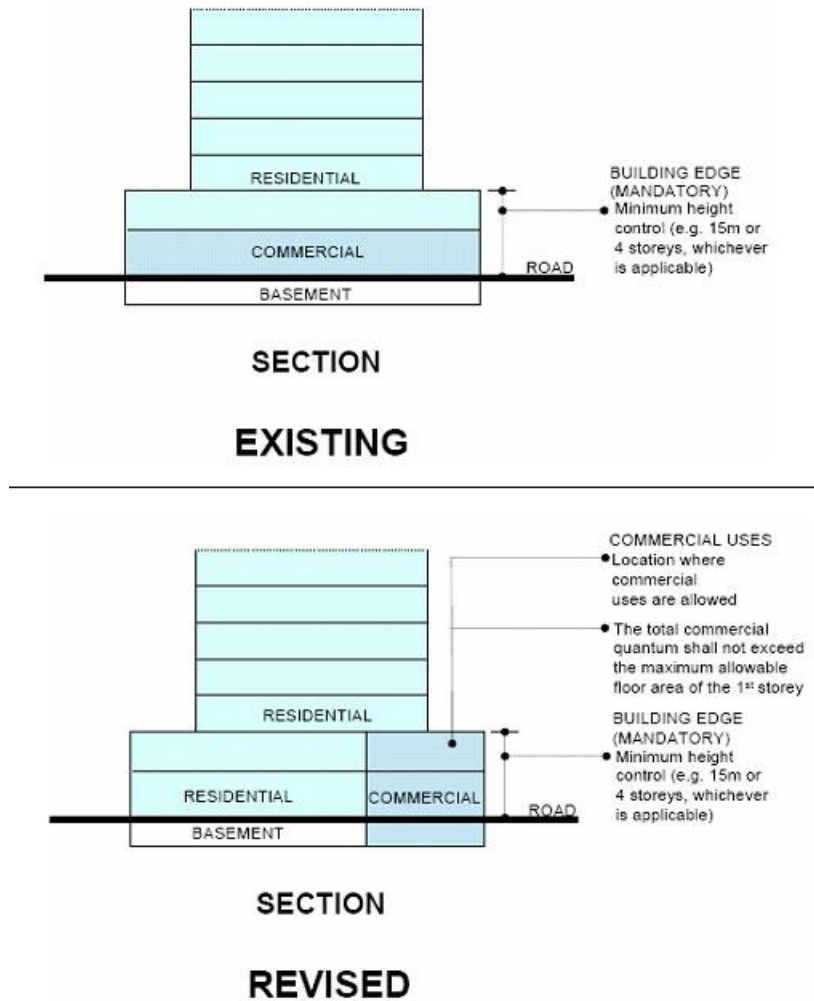
### FOOTNOTES:

<sup>5</sup> The key routes within Central Area are indicated in the Master Plan 2008 - Activity Generating Uses Plan.

**34** Proposals to transfer some of commercial uses to upper floors or to the basement would be assessed based on the surrounding context. For example, such proposals may be considered within

the Central Area or within mixed use areas fronting major arterial routes outside Central Area, subject to following guidelines:

- a) The total commercial quantum within the development is not to exceed the maximum commercial quantum that could be allowed at the first storey;
- b) Some commercial uses are to be provided at the 1<sup>st</sup> storey of the development fronting the street to contribute to street activities and the vibrancy of the area;
- c) The commercial uses are to be located on contiguous floors to provide for segregation between the commercial and residential uses and minimize disamenity to the residential uses within the development; and
- d) The commercial uses are not to be located on floors beyond the stipulated minimum height of the building edge for the streetblock or 4-storeys, whichever is applicable (see Figure 1.10) to ensure that the commercial uses relate to the street and do not create disamenity to the residential uses within adjacent developments.



**Figure 1.10: Application height of the building edge**

**35** However, such proposals at locations where the presence of commercial uses at the upper storey would pose potential disamenities to the neighbours (e.g. next to landed housing) would not be supported.

## 2 HOTEL & OTHER ACCOMMODATION FACILITIES

### OVERVIEW

- 1 Five types of development will be discussed in this section. They are:
  - (a) **Hotel**  
Hotels are developments used for accommodation purposes on a commercial basis. The predominant use shall be hotel rooms. Some form of commercial use such as shops, restaurants and bars may be allowed within hotel developments. Backpacker's hostels having open-layout with at least 6 beds per room are assessed akin to hotel developments.
  - (b) **Boarding/Guest House**  
Boarding/guest houses are developments used specifically for providing boarding and are run on a commercial basis. Unlike hotel development, commercial uses such as a bar and restaurant are not allowed within a boarding/guest house development.
  - (c) **Serviced Apartment**  
Serviced Apartments are residential developments that can be allowed on "Residential" zones and may also be considered on mixed use sites where a residential component can be allowed. They are self-contained apartments with provision for kitchenettes/kitchens and have support services such as concierge, housekeeping and/or laundry provided for the residents. They are rented out for lodging purpose for a minimum period of 7 days or other longer periods and are developed and/or managed under one ownership. Strata subdivision of the Serviced Apartments is not allowed.
  - (d) **Students' Hostel**  
Students' hostels are premises generally used for lodging students.
  - (e) **Workers' Dormitory**  
Workers' dormitories are purpose built premises used as lodging for workers.

The detailed parameters for these developments are discussed in the later sections of this chapter

### HOTELS

2 Hotels are developments used for accommodation purposes on a commercial basis. Thus, at least 60% of the total GFA shall be used for hotel. The remaining 40% (maximum) of the allowable GFA can be used for commercial purposes such as shops and restaurants.

3 Hotels can be in the form of free-standing development, a podium/tower arrangement, a pure tower block or party wall development. The building form depends on the location of the site and street block plans for the site.

4 The hotel rooms within a hotel development cannot be strata subdivided while the commercial component may be strata subdivided.

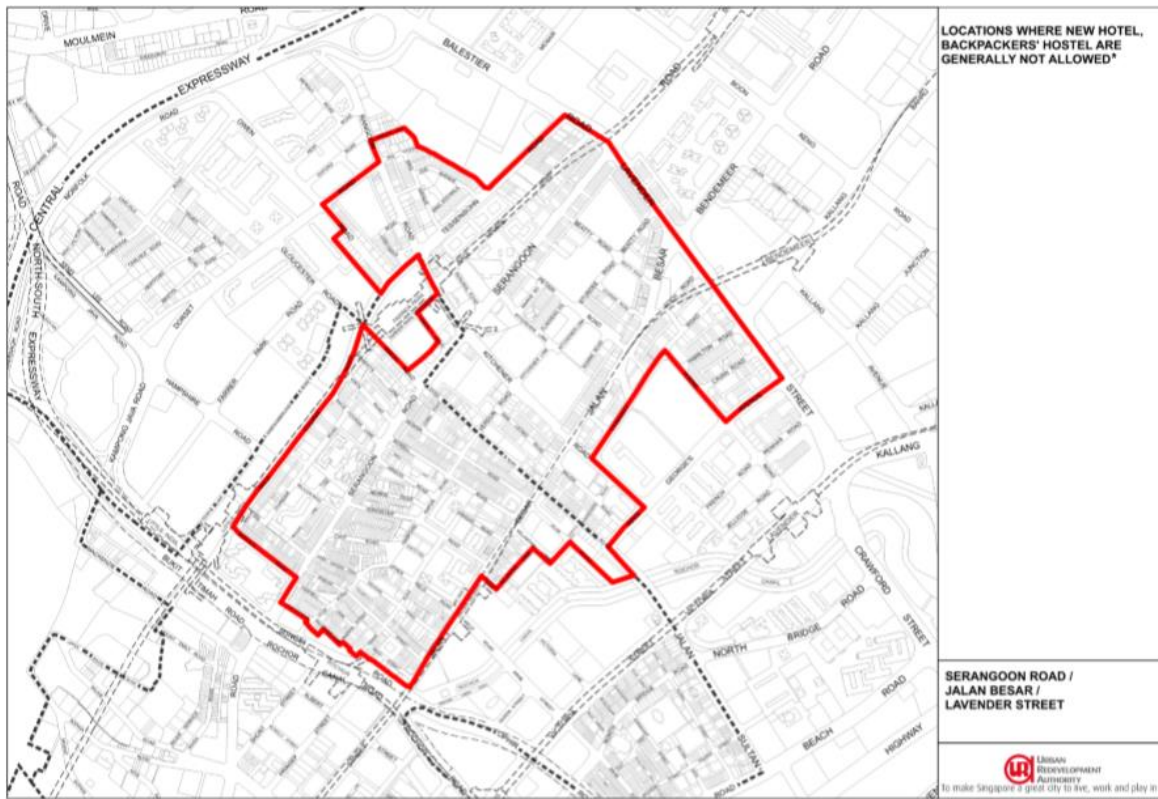
### LOCATION

5 Hotels are allowed on land zoned "Hotel" in the Master Plan.

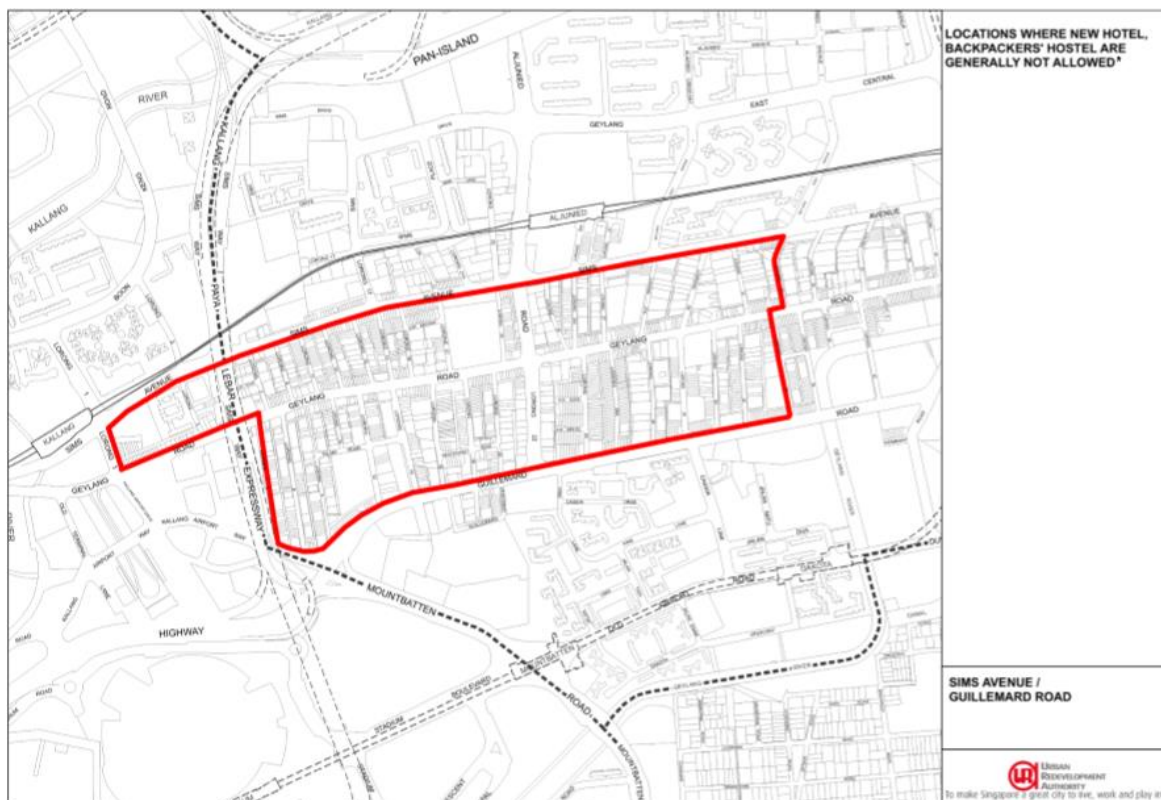
- 6 New hotel proposals on sites that are not zoned “Hotel” in the Master Plan will be evaluated taking into account the planning intention, and compatibility with the surrounding land uses. In some areas where an increase in numbers for such developments would displace other commercial uses or affect the residential amenity of these areas, new proposals for such uses will generally not be supported. See Figures 2.31-2.37 for the list of these areas.



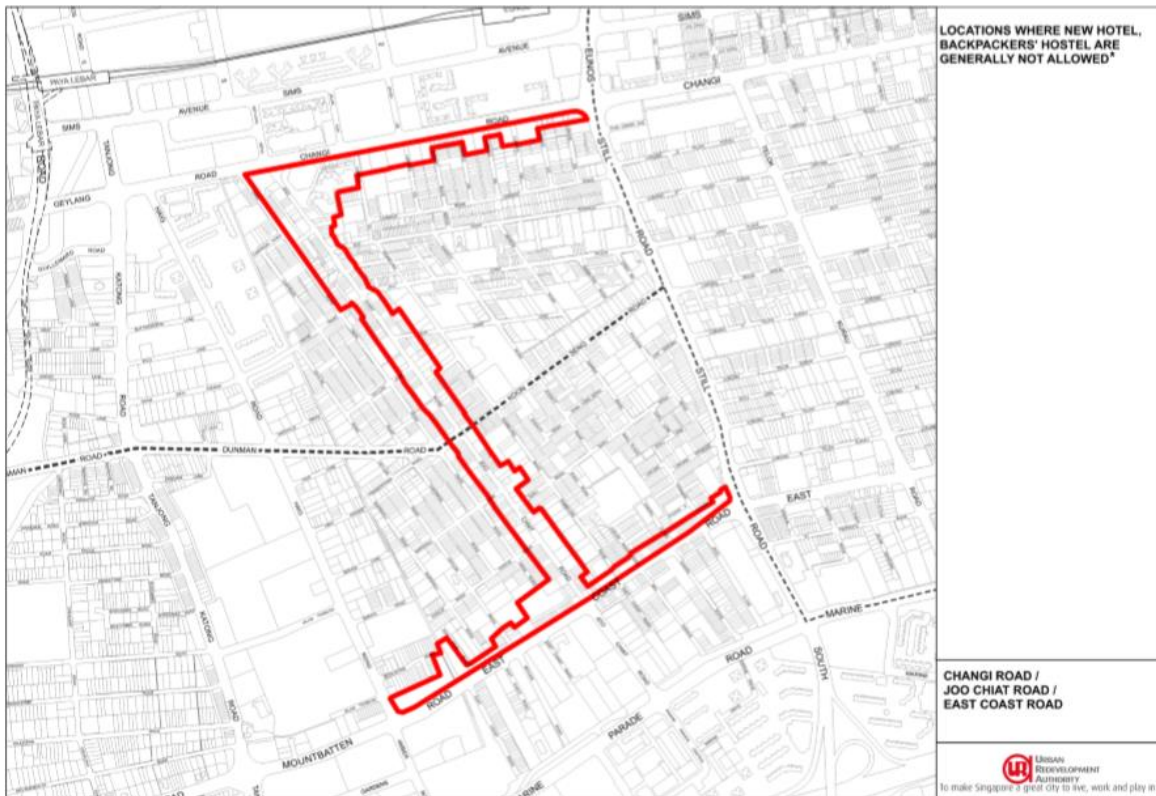
Figure 2.31: Areas Where Additional Hotels/Backpacker Hostels/Service Apartments Are Generally Not Allowed



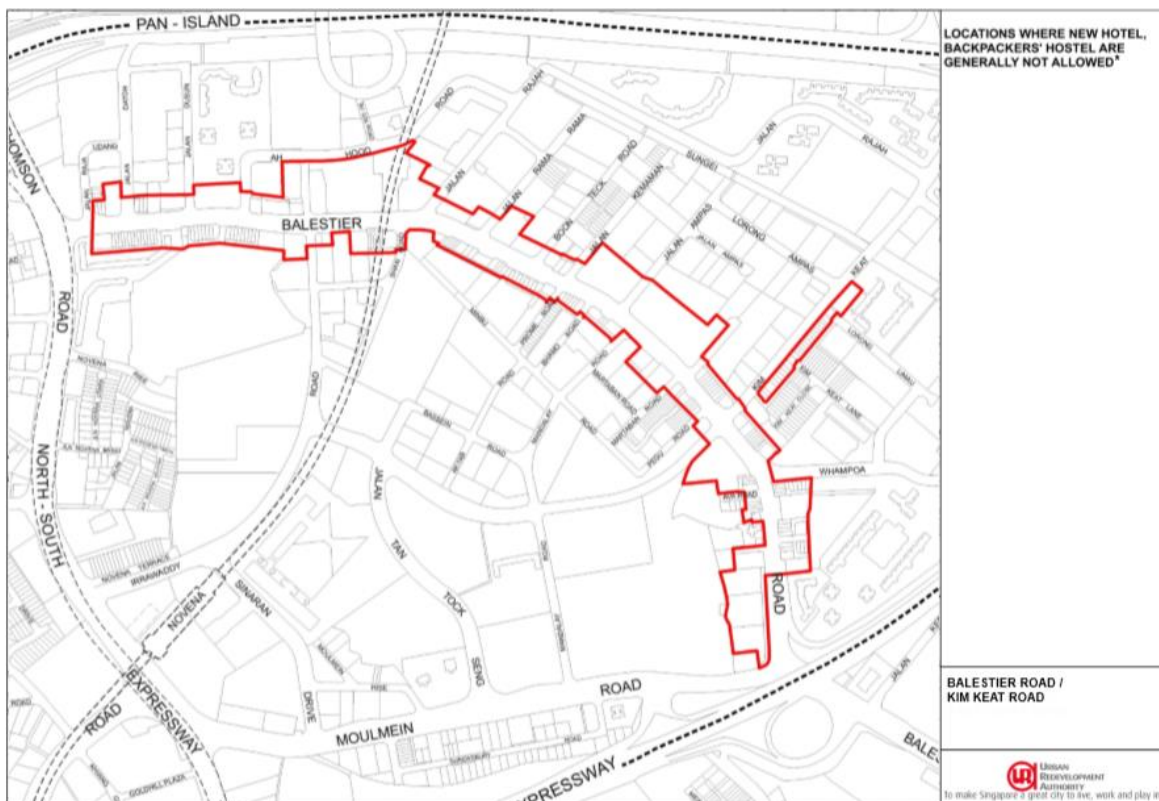
**Figure 2.32: Areas Where Additional Hotels/Backpacker Hostels/Serviced Apartments Are Generally Not Allowed**



**Figure 2.33: Areas Where Additional Hotels/Backpacker Hostels/Serviced Apartments Are Generally Not Allowed**

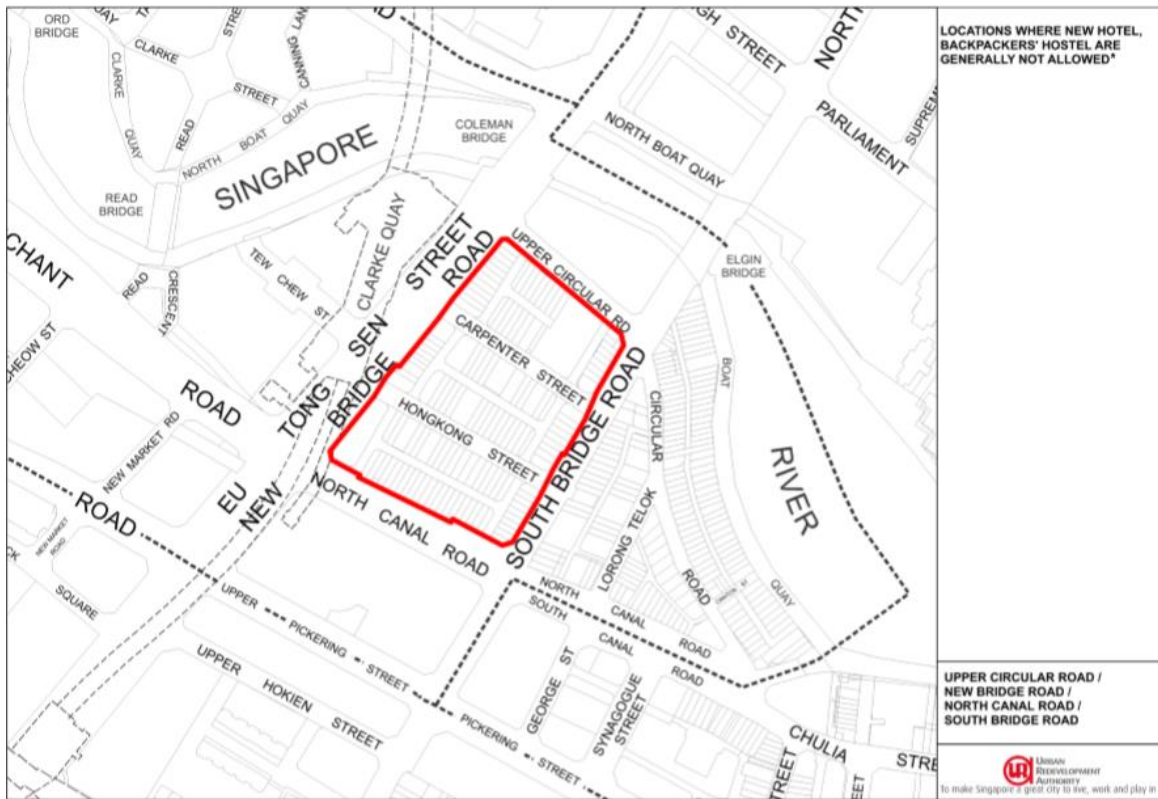


**Figure 2.34: Areas Where Additional Hotels/Backpacker Hostels/ Serviced Apartments Are Generally Not Allowed**

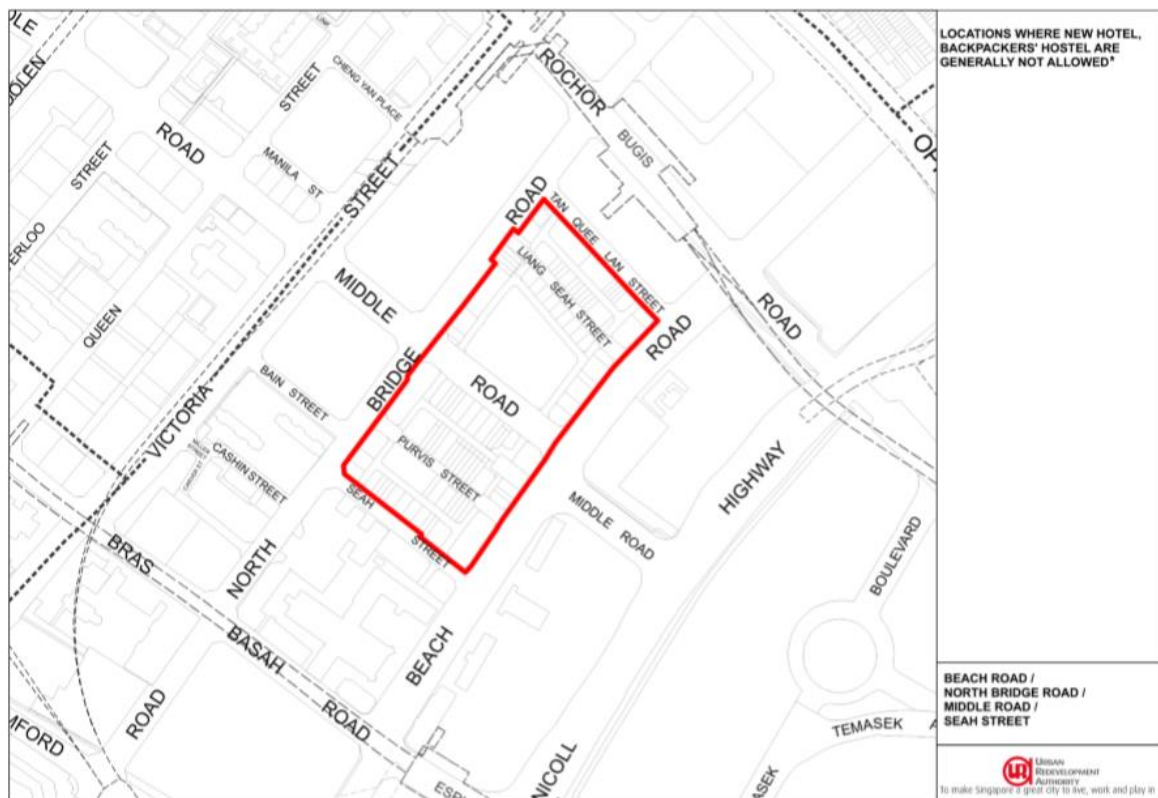


**Figure 2.35: Areas Where Additional Hotels/Backpacker Hostels/ Serviced Apartments Are Generally Not Allowed**





**Figure 2.36: Areas Where Additional Hotels/Backpacker Hostels/ Serviced Apartments Are Generally Not Allowed**



**Figure 2.37: Areas Where Additional Hotels/Backpacker Hostels/ Serviced Apartments Are Generally Not Allowed**

**PARAMETERS**

7 The parameters for hotels are:

- (a) **Intensity**  
The maximum allowable GPR is stipulated in the Master Plan. Hotel sites within the Downtown Core and Orchard Planning Area may be able to be built more intensively if they have large site areas or are located close to MRT stations<sup>1</sup>.
- (b) **Use Quantum**  
60% (minimum) of the total GFA within hotel developments must be used for hotel rooms and hotel related uses that are used solely by staying guests or hotel staff. Some examples are ancillary offices, housekeeping room and private executive lounge. Thus, higher hotel quantum is acceptable provided the commercial use such as shops does not exceed 40%.
- (c) **Building Height**  
The maximum allowable building height is expressed in terms of number of storeys stipulated in the Master Plan. However, the resultant building height must also comply with the technical height controls imposed by other authorities such as aviation path restrictions, telecommunication and military installations.
- (d) **Setback & Road Buffer Requirements**  
For hotel developments, the setback requirement is 3.0m to common boundaries and road buffer requirements from the road. Figure 2.1 and Figure 2.2 set out the details of the setback and road buffer requirements for hotel developments respectively.  
In the Central Area, the setback requirements are usually guided by the urban design requirements. In most instances, the building is allowed to abut the road reserve line at the front. This is to achieve consistent streetscape and continuous building edge.
- (e) **Floor-to-Floor Height**  
The floor-to-floor height control for hotel buildings is 5.0m (maximum) for every floor.
- (f) **Provision of Covered Walkways**  
Covered walkways are to be provided along the periphery of hotels abutting/ facing major and minor roads as well as all pedestrian routes.

**FOOTNOTE:**

<sup>1</sup> See earlier section on Commercial Developments for the topic on "Base & Bonus Plot Ratio Calculation".

**Figure 2.1: Setback Requirements for Hotel Developments**

SETBACKS	WITHIN CENTRAL AREA <sup>1</sup>		OUTSIDE CENTRAL AREA <sup>1</sup>	
	Party Wall Developments	Free Standing Developments	Party Wall Developments	Free Standing Developments

FRONT		Buffer or urban design requirements <u>or</u> Abut road reserve	Buffer or urban design requirements <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve <sup>2</sup>	Buffer requirement
SIDE	Facing Road	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement
	Facing Common Boundary	Abut adjacent development	3.0m	Abut adjacent development	3.0m
REAR	Facing Road	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve	Buffer requirement <u>or</u> Abut road reserve <sup>2</sup>	Buffer requirement
	Facing Common Boundary	3.0m	3.0m	3.0m	3.0m

**NOTES:**

1 See Figure 1.1 in Part 1 for Central Area boundary.

2 Commercial developments can abut road reserve if

(a) there is site constraint

(b) the intention is to retain the existing streetscape which is abutting road widening line; or

(c) tighter streetscape is desired.

**Figure 2.2: Road Buffer Requirements For Hotel Developments**

ROAD CATEGORY	MINIMUM WIDTH OF BUFFER	SPECIFICATION OF BUFFER
CATEGORY 1 – Expressway	15m	5m green, 10m physical
CATEGORY 2 - Major Arterial A	7.5m	3m green, 4.5m physical
CATEGORY 3 - Major Arterial B	5m	3m green, 2m physical
CATEGORY 4 & 5 - Other Major Roads, Minor Roads & Slip Roads	5m	3m green, 2m physical

**HOTEL CONVERSIONS**

8 To develop Singapore as a vibrant global city, many key districts such as Orchard Road, Singapore River and Marina Centre within the Central Area are planned with a mix of uses (e.g. office, retail, convention facilities, hotel and residential uses) to enhance their attractiveness as destinations for both locals and tourists alike. The contribution of hotels to this mix of uses is vital to the vibrancy and character of these districts and critical to their continued success.

9 These key districts are also preferred locations for tourists and hotel accommodation. Hence, it is important to ensure a critical mass of hotel rooms within the key districts to meet the projected demand from visitors.

10 As a general rule, hotels will not be allowed to be converted to other uses where:

- a) The hotels are located on sites zoned for hotel use in the Master Plan; and
- b) The hotels are located within sites zoned for other uses but where there is a specific planning or sales requirement for a minimum hotel quantum to be provided.

11 Similarly, non-hotel developments currently on sites zoned for hotel use will only be allowed to be redeveloped for hotel uses in line with the planning intention as reflected in the

Master Plan. Any exception will be considered on a case-by-case basis, taking into consideration the land use and planning intention (such as the planning vision for the area and the appropriateness of having hotels within specific areas), and strategic planning objectives to ensure sufficient hotel development in Singapore to meet tourism needs and sustain economic growth.

**12** Hotel uses located on sites that are zoned for other uses under the Master Plan, such as commercial or 'white' sites, without any requirement for a minimum hotel quantum, will be allowed to be converted to other uses based on the suitability of the alternative use.

## **BOARDING/GUEST HOUSE**

**13** Boarding/guest houses are developments used specifically for providing boarding and are run on a commercial basis. Unlike hotel development, commercial uses such as a bar and restaurant are not allowed within a boarding/guest house development.

**14** No strata subdivision is allowed for boarding/guest house development.

## **LOCATION**

**15** Generally, new boarding/ guest house would be allowed only if the land can support a "Hotel" zone.

## **PARAMETERS**

**16** The parameters for boarding / guest house are:

- (a)** Use Quantum  
The predominant use should be boarding/guest rooms. Only basic ancillary uses such as administrative office, reception and lobby areas which are essential to operate a boarding / guest house may be allowed. Therefore, commercial uses such as shops, bar and restaurant are not allowed within a boarding/guest house development.
- (b)** Setback & Road Buffer Requirements  
The setback requirements of a boarding / guest house development follow that of a hotel development.  
In the Central Area, the setback requirements are usually guided by the urban design requirements. In most instances, the building is allowed to abut the road reserve line at the front. This is to achieve consistent streetscape and continuous building edge.
- (c)** Floor-to-Floor Height  
The floor-to-floor height control for boarding/guest house developments is 5.0m (maximum) for every floor.
- (d)** Provision of Covered Walkways  
Covered walkways are to be provided along the periphery of boarding / guest houses abutting/facing major and minor roads as well as all pedestrian routes; except for independent buildings which are setback from the boundaries.

## **SERVICED APARTMENTS**

**17** Serviced Apartments are residential developments that can be allowed on "Residential" zones and may also be considered on mixed use sites where a residential component can be allowed. Unlike hotels and boarding houses, Serviced Apartments have self-contained

apartments with provision for kitchenettes/kitchens and have support services such as concierge, housekeeping and/or laundry provided for the residents. They are rented out for lodging for a minimum period of 7 days or other longer periods.

**18** Serviced apartments are developed and/or managed under one ownership. Strata subdivision of the Serviced Apartment is not allowed.

## LOCATION

**19** Given the more transient nature of Serviced Apartment occupants, a set of locational criteria is in place to guide their location, to safeguard amenity of the surrounding residents, especially those living in predominantly residential areas.

**20** Generally, Serviced Apartment developments proposed on “Residential” zones or mixed use sites (Commercial, Commercial and Residential, White, or White component of Business Park zones) where a residential component can be allowed, will be assessed according to this set of revised locational criteria:

Allowed within the following areas:

- (i) Sites fronting major and arterial roads (Category 1, 2 3 roads or equivalent) within predominantly residential areas; or
- (ii) Sites located in mixed use areas, such as commercial centres and business parks; or abutting medical hubs.

Not allowed within the following areas:

- (i) Landed Housing Areas; and
- (ii) Areas where there are already dis-amenities in the surrounding area. Examples of such areas where new Serviced Apartments and hotels are generally not allowed are shown in Figures 2.31 to 2.37; and
- (iii) Areas where Serviced Apartments may potentially cause dis-amenities to the neighbouring residents

**21** Applicants may submit an Outline Application to URA to determine the suitability of the location, the Gross Plot Ratio (GPR) control and the storey height for a proposed Serviced Apartment development. URA will evaluate the application on its merits, taking into consideration the locational criteria, as well as other localized factors.

## PARAMETERS

**22** The guidelines for Serviced Apartments are similar to the guidelines for flat standards which are explained in the Development Control Handbook Series on Development Control Parameters for Residential Development.

**23** However, unlike flat development, support services such as concierge, housekeeping and/or laundry provided for the residents of Serviced Apartments are allowed. In addition, restaurants and bar/lounge facilities are permitted, subject to a maximum of 0.3% of the total residential GFA.

## STUDENTS’ HOSTEL DEVELOPMENT

**24** Students’ hostels are premises used to provide boarding and lodging for students who are studying in the local primary schools, secondary schools, junior colleges and tertiary institutions.

## LOCATION

**25** Students' hostel developments may be allowed on sites zoned Educational Institution, Commercial/Residential and Residential with 1st storey commercial.

**26** Students' hostel developments may also be allowed on sites zoned Residential subject to the following locational criteria:

- (a) The site is not located in estates safeguarded for landed housing only (e.g. Good Class Bungalow Areas and other Bungalow Areas);
- (b) The site is located at the fringe of non-landed residential estates and in street blocks which already have non-residential uses;
- (c) The site should be fronting a category 2 or 3 road; and
- (d) The amenity of the surrounding areas is not adversely affected.

## GUIDELINES FOR CONVERSION OF EXISTING FLATS TO STUDENTS' HOSTEL

**27** The guidelines for conversion of residential flats to students' hostel are as follows:

- (a) Conversion of existing flats to students' hostel can be either on an en-bloc or a "per floor" basis. Conversion on a "per floor" basis (i.e. all the flat units on the same floor sharing a common staircase or lift access) can be considered only under a single TP (regardless of the number of owners involved) and subject to no disamenity to residents.
- (b) The students' hostel should preferably be located below existing residential floors to minimise any potential inconvenience and disturbances to the residents.
- (c) All owners will have to submit a Letter Of Undertaking (LOU) that the students' hostel will be run by a single operator. For conversion at per floor basis, all owners on the floor are to sign the LOU. A fresh LOU will have to be submitted for subsequent renewals of the TP.

## PARAMETERS

**28** The development control parameters for students' hostel developments are the same as that for residential flats development.

## WORKERS' DORMITORY

**29** A workers' dormitory is defined as premises used primarily as lodging for workers unrelated by blood, marriage or adoption or legal guardianship.

**30** Workers' dormitories can be:

- (a) in the form of a free standing development;
- (b) as an extension to an existing development within B1 / B2 zone; or
- (c) be converted from the existing space of the development within B1 / B2 zone.

**31** No land and strata subdivision is allowed for workers' dormitories.

## LOCATION

**32** Workers' dormitories can be considered on:

- (a) sites within an industrial estate which are outside health and safety buffers as defined by NEA and SCDF;
- (b) sites within an area earmarked for such development;
- (c) sites within an existing development within B1 / B2 zone.

**33** All proposed locations will be subject to case-by-case evaluation. The proposed workers' dormitory should be located away from residential areas and areas where the use is likely to cause amenity problems. Workers' dormitories are not allowed in the Central Area. Applicants are required to obtain prior clearances from NEA, PUB, SCDF, LTA and MOM before submitting planning application to URA for evaluation.

**34** New ancillary and secondary workers' dormitories within industrial/warehouse development, as well as increase in number of workers in existing approved dormitories, are not allowed in certain industrial estates. This is because the existing large number of dormitories in these estates has caused significant strain on the infrastructure, such as road and/or sewer systems. New workers' dormitories and increases in number of workers in existing dormitories will also not be allowed in industrial areas near strategic industries. The areas are shown in Figure 2.4.1 and will be subject to review by the agencies from time to time. Ancillary and secondary workers' dormitories are also not allowed in all areas zoned as Business Park or Business Park- White. These areas are intended for non-pollutive industries that engage in high technology, research and development (R&D), high value-added and knowledge intensive activities.

**Figure 2.4.1: Areas where new workers' dormitories are disallowed**

<b>List of industrial areas where no new ancillary and secondary workers' dormitories are allowed</b>		
<b>No.</b>	<b>Area</b>	<b>Plan</b>
1	Changi South Avenue 2/3	<a href="#">A1</a>
2	International Road	<a href="#">A2</a>
3	Jurong Island	<a href="#">A3</a>
4	Kaki Bukit	<a href="#">A4</a>
5	Loyang	<a href="#">A5</a>
6	Pioneer (new)	<a href="#">A6</a>
7	Senoko (new)	<a href="#">A7</a>
8	Serangoon North Avenue 5	<a href="#">A8</a>
9	Shaw Road / Tai Seng	<a href="#">A9</a>
10	Sungei Kadut (expanded area)	<a href="#">A10</a>
11	Tagore	<a href="#">A11</a>
12	Tanglin Halt	<a href="#">A12</a>

13	Toh Guan Road	<a href="#">A13</a>
14	Tuas (expanded area)	<a href="#">A14</a>
15	Ubi (new)	<a href="#">A15</a>

**35** Independent workers' dormitory sites are to be rezoned to "Civic & Community Institution" upon approval.

**36** If the workers' dormitories are located within multiple-unit industrial and/or warehouse developments, they should be located in a separate whole block within the development site.

### PARAMETERS

**37** The development control parameters for the various workers' dormitories are shown in Figure 2.4.2.



**Figure 2.4.2: Guidelines for Workers' Dormitories**

Type of Workers' Dormitories	Located within an Industrial/ Warehouse development		Independent Workers' Dormitories
	Ancillary Workers' Dormitories	Secondary Workers' Dormitories	
<b>Type of Workers Housed</b>	Can only house workers employed by the owner or lessee of the factory; and workers who work on-site at the subject factory.	Can house workers who are not employed by the owner or lessee of the factory; as well as both on-site and off-site workers	For all workers.
<b>Gross Plot Ratio</b>	Overall plot ratio of the site including worker's dormitories shall not exceed the Master Plan Gross Plot Ratio (GPR) of the site.		1.0 (GPR in excess may be allowed on a case-by-case basis).
<b>Use Quantum Control</b>	Use quantum of the workers' dormitories (either ancillary or secondary) and other ancillary and secondary uses shall not exceed <b>40%</b> of the overall gross floor area (GFA) of the development.		100% of GFA for dormitory use.
<b>Duration</b>	<b>A Temporary Permission (TP) up to 3 years</b> subject to the use not causing any amenity problems. Renewal of the TP will be subject to compliance with the prevailing guidelines.		Permanent Permission (Temporary Permission may be issued on a case-by-case basis)
<b>Number of Workers</b>	The maximum allowable number of workers in a dormitory is subject to a living space standard (*) of 4.5 sqm (min) per worker and requirements of technical agencies such as LTA, PUB, SCDF, NEA, MOM and SPF. The lowest number allowed will be taken as the cap for the housing capacity.  (* see Table 2.4.2 on living space standards)		The maximum allowable number of workers in a dormitory is subject to a living space standard (*) of 4.5 sqm (min) per worker and requirements of technical agencies such as LTA, PUB, NEA, SCDF, MOM, and SPF.  The lowest number allowed will be taken as the cap for the housing capacity.
<b>Applicable DC rate for Development Charge or Temporary Development Levy purposes</b>	Civic & Community Institution use rate.		Civic & Community Institution use rate.
	Commercial uses are subject to commercial use rate.		

Type of Workers' Dormitories	Located within an Industrial/ Warehouse development		Independent Workers' Dormitories
	Ancillary Workers' Dormitories	Secondary Workers' Dormitories	
<b>Building setbacks</b>	a) For conversion of space within existing developments to workers' dormitories, the existing industrial setback requirements will apply. b) For new workers' dormitories blocks within existing developments, front setback (from road) of 7.5m or road buffer (green and physical buffer) will apply, whichever is greater. Side and rear setbacks of 3m (min) will apply.		Front setback (from road) of 7.5m or road buffer (green and physical buffer) will apply, whichever is greater. Side and rear setbacks of 3m (min) will apply.
<b>Building Height</b>	Subject to height control for the area.		
<b>Floor to floor height</b>	a) For conversion of space within existing developments to workers' dormitories, there are no controls on floor to floor height. b) For new workers' dormitories blocks within existing developments, 3.6m (max) floor to floor height control will apply.		3.6m (max).
<b>Other requirements</b>	a) All proposals will be subject to assessment individually, based on prevailing guidelines and local site context. b) Applicants are to provide NEA's, SCDF's, LTA's, PUB's and MOM's prior clearances before submission to URA. c) Applicants are to provide the landowners' prior endorsement d) No land or strata subdivision of the dormitories. e) Applicants to comply with the prevailing amenity provision guidelines and show this computation in the submission plans; as well as comply with any other requirements from the relevant authorities such as MOM. f) Worker's dormitories should cater for the needs and well-being of the residents. Operators are to provide adequate recreational facilities and amenities within the premises for the workers' use, e.g. TV lounge, fitness facilities, games room etc. See table 2.4.2 below. g) Satisfactory layout; in particular the workers' dormitories are to be segregated from the industrial activities.		a) To comply with MOM's licensing requirement under Foreign Employee Dormitories Act for workers' dormitories with more than 1,000 workers b) To comply with pollution control and other health and safety requirements by NEA. Applicants are to obtain NEA's prior clearance before submission to URA. c) To ensure the availability or adequacy of sewerage system serving the workers' dormitory development, applicants are to obtain PUB's prior clearance before submission to URA. d) No land or strata subdivision of the dormitories. e) All proposals will require landowners' endorsement. f) Worker's dormitories should cater for the needs and well-being of the residents. Operators are to provide adequate recreational facilities and amenities within the premises for the workers' use, e.g. TV lounge, fitness facilities, games room etc. See Figure 2.4.3 below.

**38** Ancillary and secondary workers' dormitories in industrial developments are required to comply with Amenity Provision Guidelines as shown in Figure 2.4.3.

**Figure 2.4.3**

<b>Amenity Provision Guidelines for Workers' Dormitories</b>																
<b>Basic facilities</b>	<p>Basic amenities such as living quarters, common toilets and dining areas are required to be provided. The design, construction and provision of such basic facilities and amenities for the workers' dormitory shall meet the relevant authorities' requirements. (PUB, NEA, SCDF, MOM etc.).</p> <p>The developer is strongly encouraged to construct and provide additional amenities such as sickbay, laundry washing, drying area and collection point within the development.</p>															
<b>Recreational amenities</b>	<p>In addition to the basic amenities, the developer is also required to provide recreational amenities within the development. The minimum GFA for the recreational amenities, which depends on the number of workers housed in a dormitory, is as follows:</p> <table border="1"> <thead> <tr> <th><b>No. of workers housed in a dormitory</b></th> <th><b>a) Minimum GFA dedicated for indoor recreational amenities<sup>1</sup></b></th> <th><b>b) Minimum land area dedicated for outdoor recreational facilities</b></th> </tr> </thead> <tbody> <tr> <td>50 to 300</td> <td>50 sqm</td> <td>Encouraged<sup>2</sup></td> </tr> <tr> <td>301 to 500</td> <td>75 sqm</td> <td>Encouraged<sup>2</sup></td> </tr> <tr> <td>501 to 1000</td> <td>100 sqm</td> <td>Encouraged<sup>2</sup></td> </tr> <tr> <td>1001 to 5000</td> <td>0.10 sqm per worker<sup>3</sup> (min. of one 100 sqm multi-purpose room for the first 1,000 workers)</td> <td>0.30 sqm per worker (min. of one 240 sqm hard court for the first 1,000 workers)  Only recreational spaces are to be counted towards this provision requirement</td> </tr> </tbody> </table> <p>For foreign workers' dormitories in industrial/warehouse developments, the recreational amenities shall form part of the 40% ancillary quantum control within industrial developments.</p> <p>[1] Examples of indoor recreational amenities are multi-purpose room, gymnasium, reading room, TV rooms and basketball court. The reasonable sizes of a TV room and a gymnasium are 24 sqm and 40 sqm respectively.</p> <p>[2] The developer is strongly encouraged to construct and provide outdoor games court, recreation and socializing area within the development.</p> <p>[3] Where the site is subject to higher provision standards stipulated under the site's tender conditions, the higher standards shall apply.</p>	<b>No. of workers housed in a dormitory</b>	<b>a) Minimum GFA dedicated for indoor recreational amenities<sup>1</sup></b>	<b>b) Minimum land area dedicated for outdoor recreational facilities</b>	50 to 300	50 sqm	Encouraged <sup>2</sup>	301 to 500	75 sqm	Encouraged <sup>2</sup>	501 to 1000	100 sqm	Encouraged <sup>2</sup>	1001 to 5000	0.10 sqm per worker <sup>3</sup> (min. of one 100 sqm multi-purpose room for the first 1,000 workers)	0.30 sqm per worker (min. of one 240 sqm hard court for the first 1,000 workers)  Only recreational spaces are to be counted towards this provision requirement
<b>No. of workers housed in a dormitory</b>	<b>a) Minimum GFA dedicated for indoor recreational amenities<sup>1</sup></b>	<b>b) Minimum land area dedicated for outdoor recreational facilities</b>														
50 to 300	50 sqm	Encouraged <sup>2</sup>														
301 to 500	75 sqm	Encouraged <sup>2</sup>														
501 to 1000	100 sqm	Encouraged <sup>2</sup>														
1001 to 5000	0.10 sqm per worker <sup>3</sup> (min. of one 100 sqm multi-purpose room for the first 1,000 workers)	0.30 sqm per worker (min. of one 240 sqm hard court for the first 1,000 workers)  Only recreational spaces are to be counted towards this provision requirement														
<b>Commercial amenities</b>	<p>The developer is allowed to provide up to 20 sqm of GFA in the development for commercial amenities if there are more than 100 workers and up to 500 workers housed in the dormitory.</p> <p>The developer is required to provide a minimum of 0.05 sqm per worker up to a maximum of 0.10 sqm per worker, if there are more than 500 workers and up to 5000 workers housed in the dormitory. The commercial quantum is subject to evaluation for workers' dormitory housing more than 5000 workers.</p> <p>For foreign workers' dormitories in industrial/warehouse developments, the commercial amenities shall form part of the ancillary quantum control within industrial developments.</p> <p>Examples of commercial amenities are mini-mart, barber shop, bicycle repair shop, telecommunications shop, internet shop, remittance shop, postal service shop and ATM.</p>															

<b>Living space standards</b>	The developer is required to provide a minimum of 4.5 sqm GFA per worker for the living space. These should include the basic living facilities, such as the kitchen and toilet areas as well. This would serve the purpose of improving dormitory living standards and helped to reduce likelihood of amenity issues.
<b>Applicable DC rate for Recreational and Commercial amenities</b>	<p>The relevant Development Charge (DC) rates for Temporary Development Levy (TDL) or Differential Premium (DP) by SLA are as follows:</p> <p><u>Recreational amenities</u> Recreational amenities are to be computed under Civic &amp; Community Institution use rate - i.e. Group E.</p> <p><u>Commercial amenities</u> Commercial amenities are to be computed under Commercial use rate, i.e. Group A.</p>

### 3 INDUSTRIAL / WAREHOUSE / UTILITIES / TELE-COMMUNICATION / BUSINESS PARK DEVELOPMENTS

#### OVERVIEW

- 1 This section will be discussed in relation to:
  - (a) **Single-user industrial / warehouse / utilities / telecommunication development**  
This refers to an industrial / warehouse / utilities / telecommunication development that is intended for use by a single occupier. No strata subdivision is allowed for this form of industrial / warehouse / utilities / telecommunication.
  - (b) **Multiple-user industrial / warehouse / utilities / telecommunication development**  
This refers to an industrial / warehouse / utilities / telecommunication development that is capable of being strata subdivided and thus can be used by multiple users. The users of the individual units can be independent of one another.
  - (c) **Business Park development**  
This refers to an area set aside for non-pollutive industries and businesses that engage in high technology, research and development (R&D), high value-added and knowledge intensive activities. Although a business park development is usually multiple-user, it is discussed separately as the guidelines are significantly different from that of the conventional industrial / warehouse / utilities / telecommunication development.
  - (d) **Warehouse Retail / Industrial Retail Building (under the Warehouse Retail Scheme)**  
This refers to a single-user development operating on industrial sites with integrated business models that encompass elements of both retail and warehouse functions (warehouse retail) or retail and industrial functions (industrial retail).
- 2 A development, if approved as a single-user will not be allowed to be strata subdivided, whereas a multiple-user development can be allowed to be strata subdivided. It is thus important to reflect in the project caption whether a development is single-user or multiple-user.

#### LAND USE ZONES

- 3 Industrial / warehouse / warehouse-retail / industrial-retail / business park developments in Singapore can also be classified under the various Master Plan zonings as follows:
  - (a) **Business 1 (B1)<sup>1</sup>**  
These are areas used or intended to be used for industry, warehouse, utilities and telecommunication uses for which the relevant authority (i.e. NEA) does not impose a nuisance buffer greater than 50m.
  - (b) **Business 2 (B2)<sup>1</sup>**  
These are areas used or intended to be used for industry, warehouse, utilities and telecommunication uses, whereby the business uses will impose nuisance buffer more than 50m and within health and safety buffers. Special industries such as manufacture of industrial machinery, shipbuilding and repairing, may be allowed in selected areas subject to evaluation by the Competent Authority.
  - (c) **Business Park**

The Master Plan zoning of “Business Park” specifically sets aside land for non-pollutive industries and businesses that engage in high-technology, research and development (R&D), high value-added and knowledge-intensive activities. Business parks and science parks are examples of developments within this zoning.

#### FOOTNOTES:

<sup>1</sup> The nuisance buffers level is defined by Pollution Control Department (PCD), NEA ([http://www.nea.gov.sg/cms/pcd/coppcc\\_2002.pdf](http://www.nea.gov.sg/cms/pcd/coppcc_2002.pdf))

### E-BUSINESS

- 4 The e-business activities shown in Figure 3.0 are regarded as industrial uses allowed as part of the 60% predominant use quantum:

**Figure 3.0: E-business activities regarded as industrial uses**

E-business activity	Description	Remarks
Telecommunications	Provides voice / data communication services such as data / information transmission, electronic message sending, voice calls and broadcasting services.	Can be located in Business Park, Business 1 and Business 2 developments.
Data farm / data centre	Requires the use of predominantly heavy equipment such as servers to process data. Excludes data processing that can be run on desktop computers or laptops.	
Internet Service Provider	Provides access to Internet and other related services such as web hosting, web site building, etc.	
Software development	Provides software design, customisation and maintenance. Includes software application providers.	
Call centre	Centralised backend support functions that handle a large volume of telephone services primarily targeted at providing information to meet callers' needs. Typically require large spaces for their operations, which comprise specialised technology and equipment.	Can be located in Business Park and Business 1, but not in Business 2 developments.

### CORE MEDIA ACTIVITIES

- 5 Core media activities, which are production services that require technical facilities such as studios and high-tech production software / hardware, are allowed as part of the 60% predominant use quantum in Business 1, Business 2 and Business Park developments. See Figure 3.1 for more details.

**Figure 3.1: Planning guidelines for core media activities**

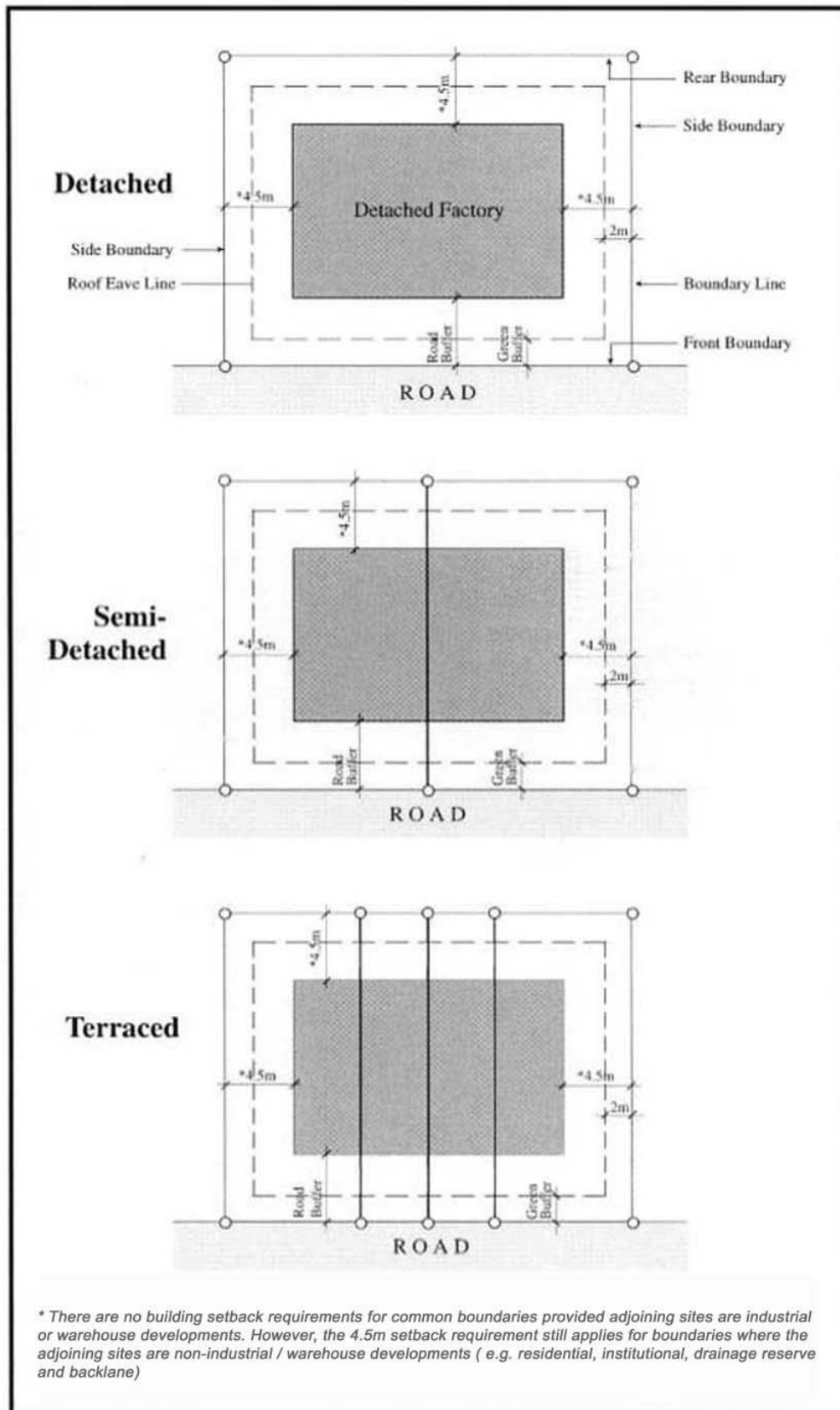
Core Media Activity	Description	Examples
Pre-production	Provide creative conceptualisation, scripting, editorial editing, composing and text layout	ESPN Star Sports, SPH
Production	Studio production (including dressing rooms), location production, audio recording, dubbing, media library services, printing press	ESPN Star Sports, MTV Asia

Network Programming	Scheduling, programme management, transmission services, origination playback	ESPN Star Sports, AXN
Post production and distribution	Video editing, digital authoring, audio engineering, format conversion, standard conversion, tape duplication, image and audio restoration, film printing, optical disk media (e.g. mastering and replication), sorting and packaging for print media	CNBC, Walt Disney TV, SPH

## BUILDING FORMS FOR INDUSTRIAL / WAREHOUSE DEVELOPMENT

6 Industrial / warehouse development in Singapore can broadly be categorised by building form as follows:

- (a) Detached factory / Warehouse  
This category would also include flatted factory / warehouse.
  - (b) Semi-detached factory / Warehouse
  - (c) Terrace factory / Warehouse
- See Figure 3.2 for the different building forms.



**Figure 3.2: Minimum Setback Requirements for Industrial and Warehouse Development**

**SETBACKS FOR INDUSTRIAL / WAREHOUSE DEVELOPMENT**

7 The building setbacks for industrial / warehouse developments are as follows:



<b>Boundary fronting public road</b>	<b>Road buffer requirement</b>
Boundary fronting a drainage reserve, backlane, non-industrial or non-warehouse development	4.5m
Common boundary to adjoining industrial or warehouse development	No setback requirement. No openings are allowed if the development abuts the common boundary.
Common boundary adjoining a Place of Worship development	No setback is required for industrial / warehouse development adjoining Place of Worship (PW) development, subject to the following conditions: <ul style="list-style-type: none"> <li>i. The PW site is located well within the industrial estate;</li> <li>ii. The PW site is not abutting a Reserve Site;</li> <li>iii. The maximum allowable gross plot ratio (GPR) and building height for the respective PW and industrial development are complied with;</li> <li>iv. The party wall of the PW and industrial building abutting the common boundary shall not have any openings. Temporary structures and tentages are not supported.</li> </ul>

### ROAD BUFFER REQUIREMENTS FOR INDUSTRIAL / WAREHOUSE DEVELOPMENT

- 8 All industrial / warehouse developments are required to provide a buffer between the road reserve line and the building unless there are special setback control within the street block.
- 9 The minimum buffer width which determines the setback of building depends on the hierarchy of the category of the road the site fronts. There is no differentiation on the setback requirement based on building height of the development. See Figure 3.3 for details.

**Figure 3.3: Road Buffer Requirements for Industrial / Warehouse Developments**

<b>ROAD CATEGORY</b>	<b>MINIMUM WIDTH OF BUFFER</b>	<b>SPECIFICATION OF BUFFER</b>
CATEGORY 1 – Expressway	15m	5m green, 10m physical
CATEGORY 2 – Major Arterial A	7.5m	3m green, 4.5m physical
CATEGORY 3 – Major Arterial B	5m	3m green, 2m physical
CATEGORY 4 & 5 – Other Major Roads, Minor Roads & Slip Roads	5m	3m green, 2m physical

- 10 The buffer requirements consist of a green buffer and a physical buffer. The green buffer is meant as a planting strip. Ancillary structures can also be allowed within this green buffer and physical buffer. See Figure 3.4.

**Figure 3.4: Small Ancillary Structures Allowed Within the Green Buffer and the Physical Buffer**

BUFFER SPECIFICATION	ANCILLARY STRUCTURES
Green Buffer*	Guard house (< 2.6m high). Bin point (<1.8m high). Flag pole/lamp post. Meter compartment (< 1.8m high). OG Boxes Water bulk meter Entrance gate / post Vehicular impact guardrails Inspection chamber (must be laid at least 2.0m below plant level) Minor sewer lines (must be laid at least 2.0m below plant level)
Physical Buffer	The new objective-based guidelines replace the prescriptive guidelines. For details of the objective-based guidelines, please see "Figure 3.25 : Objective-based Guidelines On Minor Ancillary Structures Within The Building Setback Area" in Micro Considerations.

**FOOTNOTES:**

\* Applicant can choose to either apply the above prescriptive list or the new objective-based guidelines if the structures proposed are not in the list. For details of the objective-based guidelines, please see "Figure 3.17 : Objective-based Guidelines On Minor Ancillary Structures Within the Green Buffer and 2m Planting Strip Along Common Boundaries" in Micro Considerations.

**FLOOR-TO-FLOOR HEIGHT FOR INDUSTRIAL / WAREHOUSE DEVELOPMENT**

**11** Industrial and warehouse developments, including ancillary workers’ dormitory, should have a minimum floor to floor height of 4.0m, to ensure that the developments meet industrialists’ needs..Any floor that protrudes more than 1m above the ground level is considered as a storey. Notwithstanding this, developments are subject to the relevant technical height controls.

For areas with storey height control, such as Sindo Industrial Estate (see Figure 3.5), the floor-to-floor height control for industrial/warehouse developments should not exceed 6.0m. However, this control can be varied due to operational needs of industrial machinery on a case by case basis. The 1<sup>st</sup> storey of the development can be raised by 1.2m (maximum) for loading and unloading purposes.

**MINIMUM UNIT GFA**

**12** Industrial, warehouse and showroom units are to have a minimum GFA of 150 sqm to ensure they are suitable for industrial activities.

**GOODS LIFT AND LOADING BAYS**

**13** Industrial and warehouse developments should have a minimum provision of goods lift and loading bays to ensure that they meet operational needs. These are as shown below:

MAXIMUM PERMISSIBLE GFA OF DEVELOPMENT	TECHNICAL CONDITIONS
< 10,000 sqm	Minimum 1 goods lift and 1 loading bay
10,000 – 30,000 sqm	Minimum 2 goods lift and 2 loading bay
> 30,000 sqm	Minimum 3 goods lift and 3 loading bay

14 The above guideline is not required for full ramp-up developments.

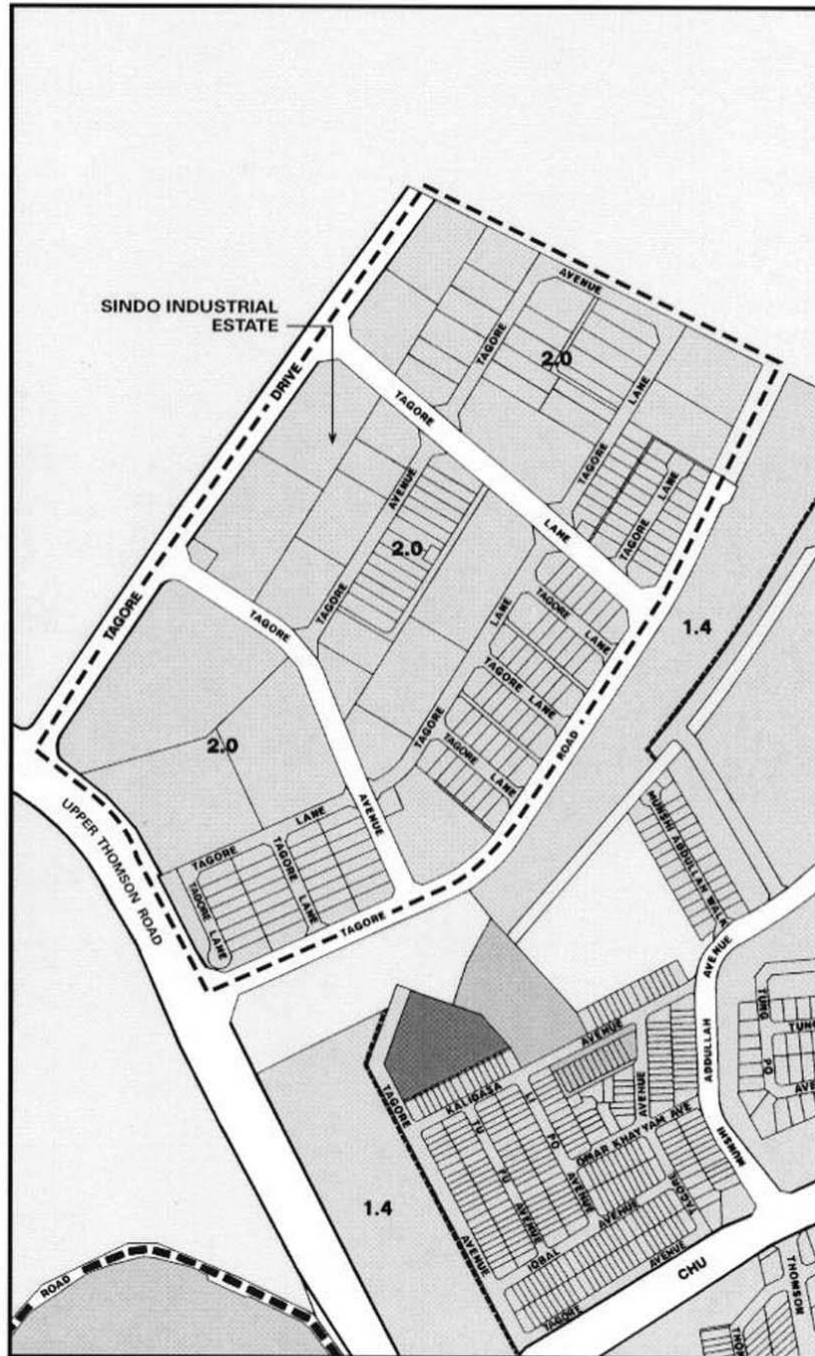


Figure 3.5: Sindo Industrial Estate

### EARTHWORKS, RETAINING WALL AND BOUNDARY WALL FOR INDUSTRIAL, WAREHOUSE AND BUSINESS PARK DEVELOPMENTS

15 The guidelines for earthworks, retaining wall and boundary wall for industrial, warehouse and business park developments are as follows:

IF ADJOINING DEVELOPMENT IS:	INDUSTRIAL*	NON-INDUSTRIAL	BEYOND PUBLIC ROAD OR DRAINAGE RESERVE	
			INDUSTRIAL*	NON-INDUSTRIAL
Earthwork guideline is lifted for the whole site	/	X	/	X

FOR THE BOUNDARY ADJOINING	INDUSTRIAL*	NON-INDUSTRIAL	PUBLIC ROAD	DRAINAGE RESERVE
Control on height of retaining wall is lifted	/	X	X	/
Control on height of boundary wall is lifted	/	X	X	/

**NOTES:**

“/” means that the existing guidelines (as given in the DC Handbook [Part 1, general considerations (micro)]) are lifted.

“X” means that the existing guidelines (as given in the DC Handbook [Part 1, general considerations (micro)]) remain.

\*\*“Industrial” here also refers to warehouse and Business Park developments.

If the development beyond the public road or drainage reserve is a non-industrial development, the existing guidelines on earthwork remain.

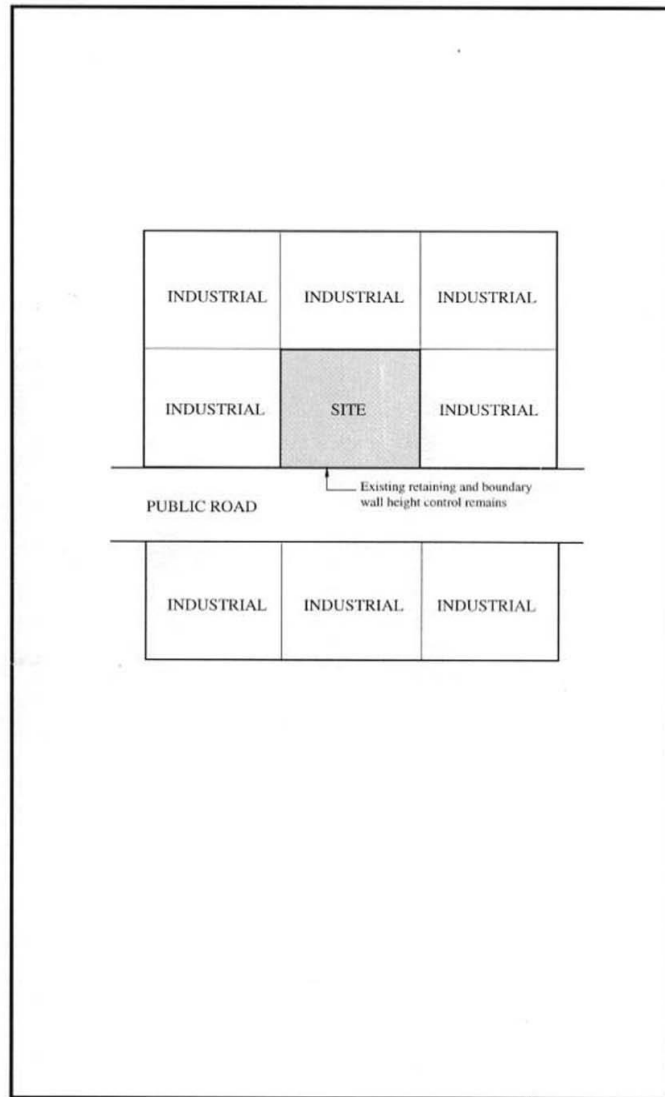
If subject site is within an area where there is storey height control (e.g. Sindo Industrial Estate), the existing earthwork guideline of 1.0m (maximum) applies.

**(a)** Where the adjoining developments are industry

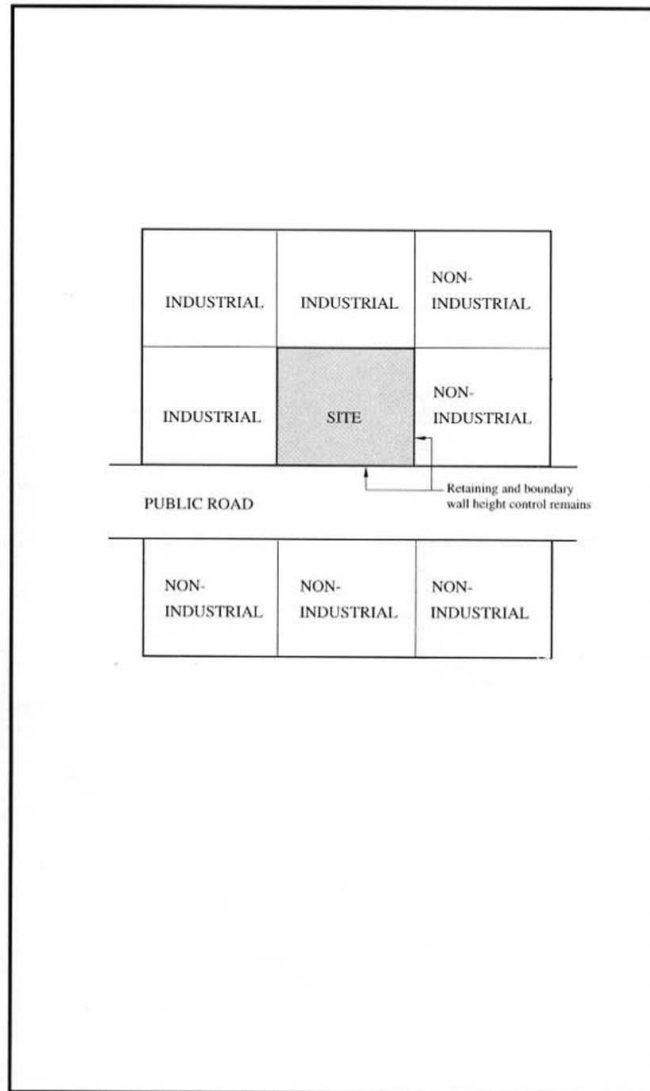
There is no control on earthworks for subject site. There is no control on the height of the retaining and boundary walls where the adjoining developments are industrial. However, the existing control remains for the side facing the public road (see Figure 3.6).

**(b)** Where the adjoining developments are non-industry

The existing earthworks guidelines remain for subject site. There is no control on the height of the retaining wall and boundary wall if they are adjoining another industrial site. However, where the retaining and boundary wall faces a non-industrial site, the existing controls on the height of the retaining and boundary walls will remain (see Figure 3.7).



**Figure 3.6: Where the Adjoining Developments are Industry**



**Figure 3.7: Where the Adjoining Developments are Non-Industry**

## **DIESEL AND PETROL PUMP POINTS**

**16** Only transport-related companies or certain industries requiring diesel or petrol to serve their own fleet of vehicles or for their industrial operations are allowed to set up their own pump points subject to planning approval. The companies' own fleet would include vehicles owned by their affiliated companies (i.e. subsidiary, sister or parent companies).

Pump points for retailing of diesel and petrol to the general public will continue to be confined to only approved designated petrol kiosk or petrol station sites.

Companies wishing to set up pump points to serve their own fleet of vehicles or for their own internal operations are required to comply with the following:

- (a)** The premises on which the diesel/petrol pump points are to be installed must be either under Business 2 or Transport Facilities zone in the Master Plan 2008.
- (b)** A maximum of 2<sup>1</sup> pump points are allowed per development.
- (c)** The pump points must be ancillary to the predominant use such as vehicles depots, garages, transport bases, motor repair/service workshops and vehicle inspection centres.

- (d) The sale of fuel at these pump points to the general public and other vehicles not owned by the company or its affiliated companies is strictly not allowed.
- (e) If the premises are open to the general public (e.g. a car repair workshop that services vehicles owned by both the company as well as other members of the public), a prominent notice must be displayed at the pump points to indicate that the diesel/petrol pump points are reserved solely for the use by company's own fleet or the fleet of its affiliated companies.

Relevant clearance from the National Environmental Agency (NEA) and Fire Safety and Shelter Department (FSSD) must be obtained for the diesel and petrol pump points.

For factories and other industrial activities that required diesel or petrol for their own internal operations (for example, to power their generators, boilers, fork-lifts, cranes, etc), ancillary pump points will continue to be allowed subject to planning approval. The sale of fuel to the general public from these premises is not allowed.

#### FOOTNOTE:

<sup>1</sup> Requests for additional ancillary pump points are considered on a case-by-case basis if justification is provided. The storage tank should also be placed underground so that it is not visually obtrusive.

## SINGLE-USER INDUSTRIAL / WAREHOUSE / UTILITIES / TELE-COMMUNICATION DEVELOPMENT

- 17** This refers to an industrial / warehouse / utilities / telecommunication development that is intended for use by a single occupier. Owners of such single-user developments can, however, be allowed to temporarily sub-lease part of their industrial/warehouse/utilities/telecommunication premises to a different operator for short duration provided they can comply with the 60/40 quantum control for the entire development. This arrangement provides flexibility to landowners to respond to market changes in tiding over temporary demand and supply fluctuations in space requirements. No strata subdivision is allowed for this form of industrial / warehouse / utilities / telecommunication building. There is no need to separately submit for planning permission for temporary sub-leasing of space if it does not result in any change in the use of the space and the approved industrial use quantum for the development.

## USE QUANTUM CONTROL

- 18** The types of allowable uses within the quantum control are shown below.

QUANTUM CONTROL FOR THE TYPE OF USES IN SINGLE-USER INDUSTRIAL / WAREHOUSE / UTILITIES / TELECOMMUNICATION DEVELOPMENTS		
QUANTUM CONTROL	USE TYPE	EXAMPLE OF ALLOWABLE USES
60%(MINIMUM)	Predominant Use	- Manufacturing, production, assembly, servicing, repair, workshop, storage, e-business <sup>1</sup> and core media activities  - Warehousing (For warehouse only)
40%(MAXIMUM)	Ancillary/Secondary Use	Ancillary office, meeting room, sick room / first aid room, toilets, M&E services, industrial canteen <sup>2</sup> , showroom <sup>3</sup> , childcare centre <sup>4</sup> and selected commercial uses <sup>5</sup>

#### NOTES:

**1** E-business activities include telecommunications, call centre, data farm / data centre and Internet Service Provider. Call centre can be located in Business Park and Business 1, but not Business 2 zones. See details in Figure 3.0.

**2** Industrial canteens are capped at a size of 700sqm or 5% of the total proposed GFA per development, whichever is lower. See details in Figure 3.8.

**3** Showroom is confined to the 1<sup>st</sup> storey of the development. See details in Figure 3.8.

4 Childcare centre is levied Group E Civic & Community Institution (C&CI) rates for the purposes of computing development charge/differential premium.

5 Selected commercial uses are subject to locational criteria. See details in Figures 3.8 and 3.8a.

6 Other ancillary uses which are not specified under “predominant use” column are to be treated as part of the 40% quantum.

## ANCILLARY / SECONDARY USES

19 Ancillary / secondary uses (e.g. ancillary office, meeting room, sick room / first aid room, toilets, M&E service, industrial canteens and showroom) support the parent industrial / warehouse / utilities / telecommunication operations conducted within the same premises. These uses must collectively not exceed 40% of the entire development’s GFA. Some ancillary / secondary uses have specific planning requirements. These are detailed in Fig 3.8.

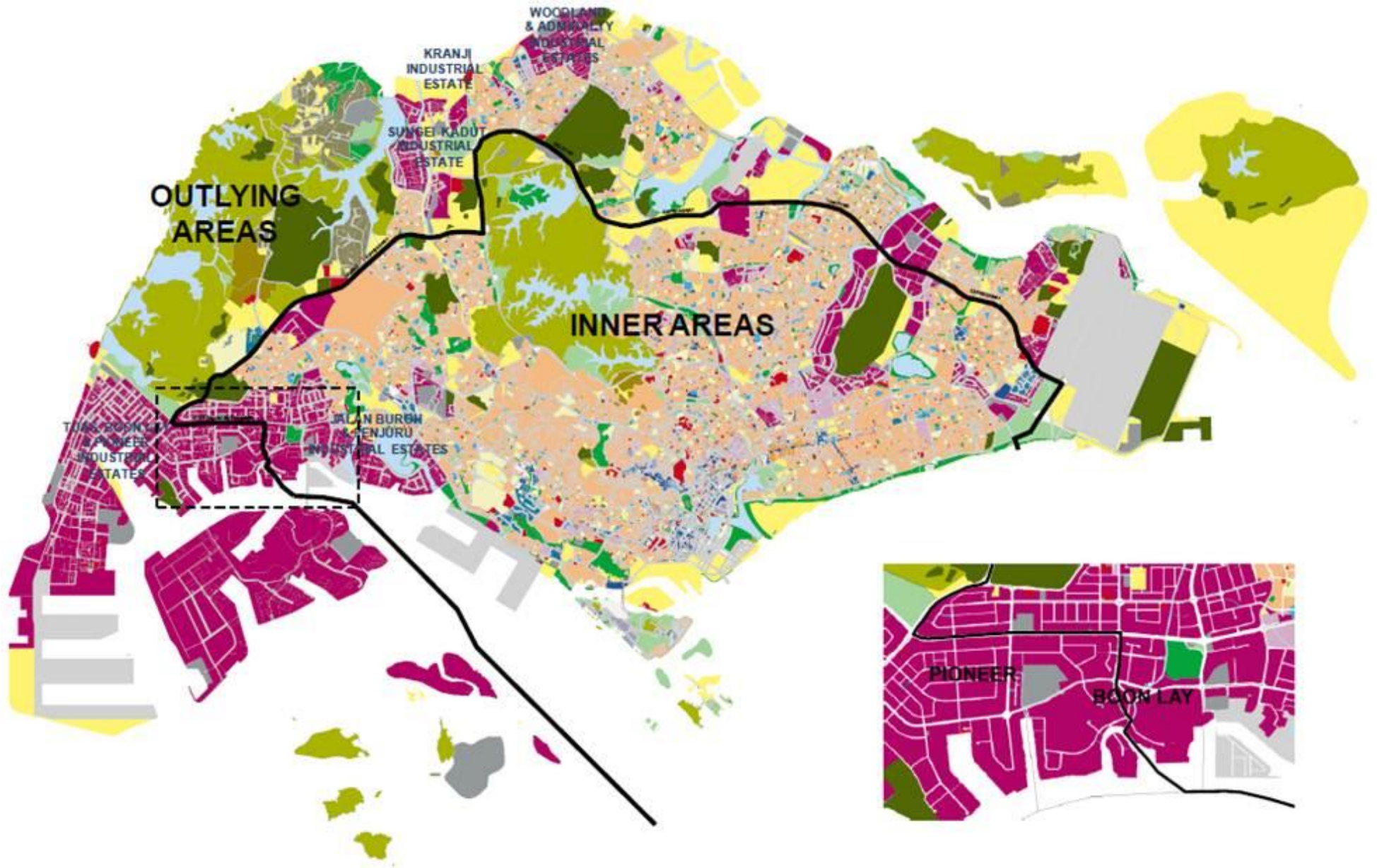
**Figure 3.8: Specific Planning Requirements for ancillary / secondary uses**

Ancillary / Secondary Use	Specific Planning Requirements
Industrial canteens	<ul style="list-style-type: none"> <li>a. Capped at a size of 700 sqm or 5% of the total proposed GFA per development, whichever is lower;</li> <li>b. Levied Group D Industrial rates for the purposes of computing Development Charge/Differential Premium; and</li> <li>c. Approved on Temporary Permission (TP) for up to 3 years.</li> </ul>
Showrooms	<p>Showrooms are meant for the display<sup>1</sup> of primarily two categories of products:</p> <ul style="list-style-type: none"> <li>a. Products that are not typically transacted or exchanged over the counter (e.g. furniture); and</li> <li>b. Products that are predominantly delivered and installed off-site (e.g. floor tiles)</li> </ul> <p>Showroom is confined to the 1<sup>st</sup> storey of the development. Showroom proposals will only be considered as part of a Change of Use application, after the building has obtained the Temporary Occupation Permit (TOP) and when the potential occupier or business operator for the spaces is known. If supported, showrooms will be approved on Temporary Permission (TP) and levied Group A Commercial rates for the purposes of computing Development Charge/Differential Premium.</p> <p><sup>1</sup> Incidental sales of small items or “cash-and-carry” may be considered provided the main activity of the showroom is for the display of the 2 categories of products listed in Para 22.</p>



Ancillary / Secondary Use	Specific Planning Requirements												
Display area	<p>Display area is for display of own products related to the predominant industrial / warehouse / utilities / telecommunication operations only. No strata subdivision or sub-leasing of the display area will be allowed. Showcased products are purely for corporate or demonstration purposes serving corporate visitors of the industrial companies only. The products cannot be for sale. Endorsement from relevant agencies (e.g. HDB &amp; JTC for its leased premises; EDB &amp; SPRING Singapore for private premises) may be requested for.</p> <p>Prior to the introduction of display area, showrooms for display of own products related to the predominant operations were approved as ancillary showrooms. The owner or operator of existing ancillary showrooms in industrial/warehouse developments can apply for planning permission to convert these areas to showroom, if they satisfy the guidelines for showroom. Existing ancillary showrooms that cannot comply with the guidelines for display area can continue to remain until redevelopment. The treatment for approved ancillary showrooms is summarised below.</p> <table border="1" data-bbox="418 632 1390 1350"> <thead> <tr> <th colspan="2" data-bbox="418 632 1390 674"><b>SUMMARY OF TREATMENT FOR APPROVED ANCILLARY SHOWROOM</b></th> </tr> <tr> <th data-bbox="418 674 800 779"><b>SCENARIO FOR APPROVED ANCILLARY SHOWROOM</b></th> <th data-bbox="800 674 1390 779"><b>IMPLICATIONS FOR CONVERSION</b></th> </tr> </thead> <tbody> <tr> <td data-bbox="418 779 800 915">Complies with guidelines on Display Area</td> <td data-bbox="800 779 1390 915">Ancillary showroom can be used for Display Area without further planning permission. Expansion of Display Area can be allowed subject to change of use approval.</td> </tr> <tr> <td data-bbox="418 915 800 989">Does not comply with guidelines on Display Area</td> <td data-bbox="800 915 1390 989">Existing ancillary showroom cannot be expanded.</td> </tr> <tr> <td data-bbox="418 989 800 1213">Complies with guidelines on Showroom</td> <td data-bbox="800 989 1390 1213">Ancillary showroom can be converted to Showroom subject to change of use approval. Expansion of Showroom is allowed on the 1<sup>st</sup> storey of the development. Entire Showroom is assessed for development charge / differential premium based on commercial rates.</td> </tr> <tr> <td data-bbox="418 1213 800 1350">Does not comply with guidelines on Showroom</td> <td data-bbox="800 1213 1390 1350">Existing ancillary showroom cannot be expanded. Conversion of ancillary showroom to Showroom is not allowed.</td> </tr> </tbody> </table>	<b>SUMMARY OF TREATMENT FOR APPROVED ANCILLARY SHOWROOM</b>		<b>SCENARIO FOR APPROVED ANCILLARY SHOWROOM</b>	<b>IMPLICATIONS FOR CONVERSION</b>	Complies with guidelines on Display Area	Ancillary showroom can be used for Display Area without further planning permission. Expansion of Display Area can be allowed subject to change of use approval.	Does not comply with guidelines on Display Area	Existing ancillary showroom cannot be expanded.	Complies with guidelines on Showroom	Ancillary showroom can be converted to Showroom subject to change of use approval. Expansion of Showroom is allowed on the 1 <sup>st</sup> storey of the development. Entire Showroom is assessed for development charge / differential premium based on commercial rates.	Does not comply with guidelines on Showroom	Existing ancillary showroom cannot be expanded. Conversion of ancillary showroom to Showroom is not allowed.
<b>SUMMARY OF TREATMENT FOR APPROVED ANCILLARY SHOWROOM</b>													
<b>SCENARIO FOR APPROVED ANCILLARY SHOWROOM</b>	<b>IMPLICATIONS FOR CONVERSION</b>												
Complies with guidelines on Display Area	Ancillary showroom can be used for Display Area without further planning permission. Expansion of Display Area can be allowed subject to change of use approval.												
Does not comply with guidelines on Display Area	Existing ancillary showroom cannot be expanded.												
Complies with guidelines on Showroom	Ancillary showroom can be converted to Showroom subject to change of use approval. Expansion of Showroom is allowed on the 1 <sup>st</sup> storey of the development. Entire Showroom is assessed for development charge / differential premium based on commercial rates.												
Does not comply with guidelines on Showroom	Existing ancillary showroom cannot be expanded. Conversion of ancillary showroom to Showroom is not allowed.												
Selected commercial uses	<p>Selected commercial uses (i.e. clinic, banking hall / ATM, minimart and fitness centre / gym) can be allowed in the outlying industrial estates indicated in Figure 3.8a. These commercial uses will be capped at a size of 200sqm or 10% of the total proposed GFA per development, whichever is lower. They have to be located on the first storey of the building. If supported, the uses will be approved on TP for up to three years and levied Group A Commercial rates.</p>												

**Figure 3.8a:** Outlying industrial estates in which selected commercial uses can be allowed



- 20 MULTIPLE-USER INDUSTRIAL / WAREHOUSE / UTILITIES / TELE-COMMUNICATION DEVELOPMENT** This refers to an industrial / warehouse / utilities / telecommunication development that is capable of being strata subdivided and thus can be used by multiple users. The users of the individual units can be independent of one another.

### USE QUANTUM CONTROL

- 21** The allowable uses within the quantum control are shown in Figure 3.9.

QUANTUM CONTROL FOR THE TYPE OF USES IN MULTI-USER INDUSTRIAL/WAREHOUSE/UTILITIES/ TELECOMMUNICATION DEVELOPMENTS		
USE QUANTUM CONTROL	USE TYPE	REMARKS
60%(MINIMUM)	Predominant Use	- Manufacturing, production, assembly, servicing, repair, workshop, storage, e-business <sup>1</sup> and core media activities  - Warehousing (For warehouse only)
40%(MAXIMUM)	Ancillary / Secondary Use	Ancillary office, meeting room, sick room / first aid room, toilets, M&E services, industrial canteen <sup>2</sup> , showroom <sup>3</sup> , childcare centre <sup>4</sup> and selected commercial uses <sup>5</sup>

**Figure 3.9: Allowable Uses within Multi-user Industrial / Warehouse / Utilities / Telecommunication Developments**

#### NOTES:

- 1** E-business activities include telecommunications, call centre, data farm / data centre and Internet Service Provider. Call centre can be located in Business Park and Business 1, but not Business 2 zones. See details in Figure 3.0.
- 2** Industrial canteens are capped at a size of 700sqm or 5% of the total proposed GFA per development, whichever is lower. See details in Figure 3.8.
- 3** Showroom can be strata subdivided but is confined to the 1<sup>st</sup> storey of the development. See details in Figure 3.8.
- 4** Childcare centre is levied Group E Civic & Community Institution (C&CI) rates for the purposes of computing development charge/differential premium.
- 5** Selected commercial uses are subject to locational criteria. See details in Figures 3.8 and 3.8a.
- 6** Industrial canteen, showroom, childcare centre and selected commercial uses can be individual strata units or within the communal area.
- 7** Other ancillary uses which are not specified under "predominant use" column are to be treated as part of the 40% quantum.

**Figure 3.9a: Allowable Uses within Multi-user Industrial / Warehouse / Utilities / Telecommunication Developments**

USE TYPE	MULTI-USER (E.G. FLATTED FACTORIES)	
	INDIVIDUAL STRATA UNIT	COMMON AREA
PREDOMINANT USE	Manufacturing Production, assembly Servicing, repair, workshop Storage E-business <sup>1</sup> Core media activities	Not Applicable
ANCILLARY / SECONDARY USES	Ancillary office Internal toilets M&E services Sick room / first aid room Industrial canteen <sup>2</sup> Showroom <sup>3</sup> Childcare centre <sup>4</sup> Selected commercial uses <sup>5</sup>	Management office Corridors, staircases, lifts Communal toilet M&E services Sick room / first aid room Industrial canteen <sup>2</sup> Showroom <sup>3</sup> Childcare centre <sup>4</sup> Selected commercial uses <sup>5</sup>

**NOTES:**

**1** E-business activities include telecommunications, call centre, data farm / data centre and Internet Service Provider. Call centre can be located in Business Park and Business 1, but not Business 2 zones. See details in Figure 3.0.

**2** Industrial canteens are capped at a size of 700sqm or 5% of the total proposed GFA per development, whichever is lower. See details in Figure 3.8.

**3** Showroom can be strata subdivided but is confined to the 1<sup>st</sup> storey of the development. See details in Figure 3.8.

**4** Childcare centre is levied Group E Civic & Community Institution (C&CI) rates for the purposes of computing development charge/differential premium.

**5** Selected commercial uses are subject to locational criteria. See details in Figures 3.8 and 3.8a.

**6** Industrial canteen, showroom, childcare centre and selected commercial uses can be individual strata units or within the communal area.

**7** Other ancillary uses which are not specified under “predominant use” column are to be treated as part of the 40% quantum.

**PREDOMINANT USES**

**22** For multiple-user developments, the predominant industrial / warehouse / utilities / telecommunication use quantum shall be at least 60% of the total GFA on a global basis (i.e. the industrial / warehouse / utilities / telecommunication use within the entire development must be at least 60%). Within each strata subdivided unit, the predominant industrial / warehouse / utilities / telecommunication use quantum shall be at least 60%.

**23** Coffin workshop, being a sensitive use, will be evaluated based on the merits of the proposal. The total GFA of the coffin workshop (including its showroom, where applicable) must not exceed 1% of the total GFA of the development or 1,000sqm whichever is lower; waiver can be considered if the conversion involves 100% of the individual strata units in the development. Coffin workshop may be considered on Temporary Permission (TP) of up to 3 years in industrial and warehouse developments subject to the following conditions:

**a)** The premises not being used as a funeral parlour or for any other funeral related uses (e.g. embalming, prayers, rites / rituals etc.),

**b)** The premises being located at the 1<sup>st</sup> storey to minimise the use of common lifts and corridors or have its own separate access from other units; they can be located on upper floors only if they are an integral part of the 1<sup>st</sup> storey unit with their own separate access;

c) The premises should be located away from the “front” of the development where vehicular access is taken;

d) The premises should be screened from the public’s view. All activities are to be confined within the premises and there shall be no spillage of any activities, storage or display of coffins or other funeral related paraphernalia outside the premises;

e) The operator taking appropriate measures to minimise any inconvenience or adverse impact on the neighbours.

If the use creates excessive disamenities and the operator and owner fail to take satisfactory remedial measures to address the problems, the TP may be terminated or will not be renewed upon expiry.

The activities of a coffin workshop may include the making, assembling of coffins and finishing works. Applicants for coffin workshop and its showroom will need to secure clearance from Pollution Control Department (NEA) for the carpentry operations (e.g. the making, assembling of coffins and finishing works) within sites zoned for Business 1 use for clean and light industrial flat factories and warehouse developments.

### ANCILLARY / SECONDARY USES

**24** Ancillary / secondary uses (e.g. ancillary office, meeting room, sick room / first aid room, toilets, M&E service, industrial canteens and showroom) support the parent industrial / warehouse / utilities / telecommunication operations conducted within the same premises. These uses must collectively not exceed 40% of the entire development’s GFA. Some ancillary / secondary uses have specific planning requirements. These are detailed in Fig 3.8.

### PROVISION OF PRIVATE CAR / LORRY PARKING LOTS WITHIN STRATA-TITLED INDUSTRIAL DEVELOPMENTS

**25** **22** Private car / lorry parking lots can be allowed within industrial developments provided the following criteria are met:

- i.** The private parking lots are surplus parking lots over and above LTA’s minimum parking provision;
- ii.** The actual floor area of the private parking lots are computed as GFA; and
- iii.** The private parking lots are physically contiguous with the respective industrial strata unit

**26** **23** All applications involving new erection of industrial developments with private car/lorry parking lots no longer qualify to be submitted under the lodgment scheme.

### BUSINESS PARKS

**27** Business Parks are specifically set aside for non-pollutive industries and businesses that engage in high-technology, research and development (R&D), high value-added and knowledge-intensive activities.

**28** The two main features that distinguish business parks from industrial estates are:

- (a) The range of permitted uses that are generally non-production in nature but are characteristic of high-technology and research-oriented industries; and
  - (b) The emphasis on landscaping, quality building designs and provision of amenity facilities to reflect the importance companies placed on the image of the business park and the welfare of their employees.
- 29** Business Parks may be strata subdivided. The units in Business Park and Science Park developments can be leased out for a period of up to 21 years without having to obtain strata subdivision permission and comply with requirements under the Land Titles (Strata) Act such as allocation of share value, forming a Management Corporation etc.

## LOCATION

- 30** Business Parks are allowed on land zoned “Business Park” and Business Park – White

## USE QUANTUM

### **31 (a) Business Park Zone**

The use quantum controls for developments in the Business Park zone are as follows (see Figure 3.10):

- (i) A maximum of 15% of the overall GFA of a Business Park development will be allowed for ‘White’ uses.

Examples of uses allowed and not allowed within the ‘White’ component of a Business Park development are shown in Figure 3.11. As the list of uses is not exhaustive, other uses may be considered subject to planning consideration on a case-by-case basis. Clearances from relevant authorities and landowners are required for proposals which introduce ‘White’ uses into existing Business Park developments.

- (ii) A minimum of 85% of GFA will be retained for Business Park component, which will comprise the usual 60% for pure Business Park uses and 40% for ancillary uses. See Figure 3.10.

The Business Park and ‘White’ components within a site zoned Business Park can be proposed as separate buildings provided there is no land subdivision. The ‘White’ component may also be sold off as separate strata titles.

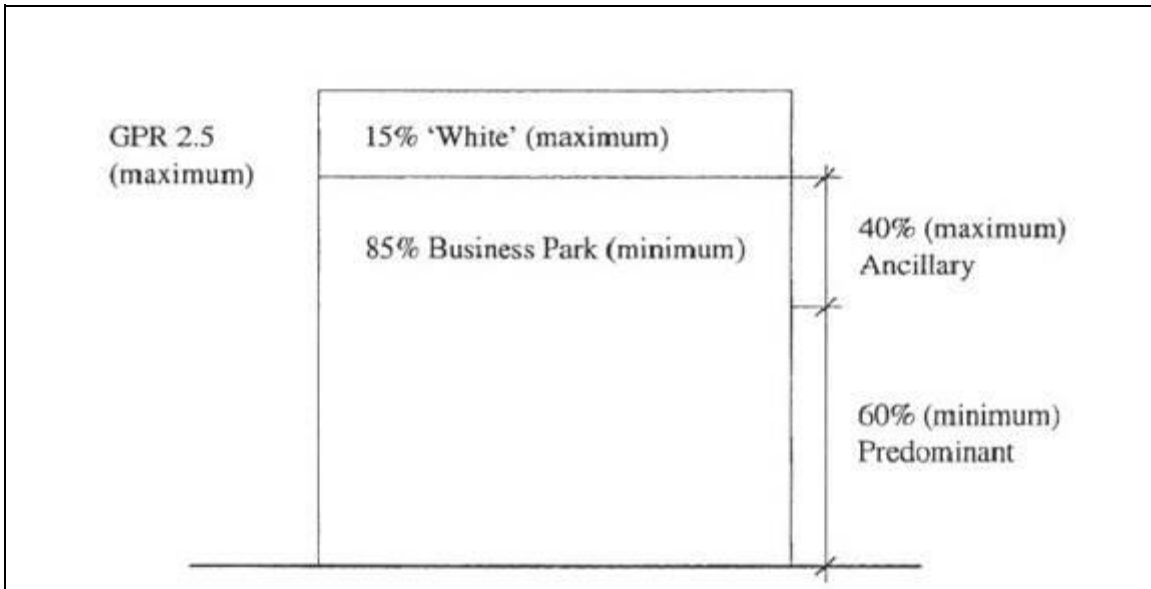
### **(b) Business Park – White (BP-W) Zone**

The Business Park-White zone will allow a larger White quantum than the 15% allowable in a Business Park zone.

- (i) The allowable use quantum for BP and white uses depends on location criteria such as public accessibility and compatibility with neighbouring land uses. For example, prime sites closer to MRT

stations can have a higher white component. Rezoning of the site BP-W zone may be required.

- (ii) Examples of uses allowed and not allowed within the 'White' components of a Business Park development are shown in Figure 3.11. As the list of uses is not exhaustive, other uses may be considered subject to planning consideration on a case-by-case basis. Clearances from relevant authorities such as LTA and landowners such as JTC are required for Business Park – White developments.
- (iii) The Business Park and 'White' components within a site zoned Business Park – White can be proposed as separate buildings provided there is no land subdivision. The "White' component can be sold off as separate strata titles.



QUANTUM CONTROL FOR TYPE OF USES IN BUSINESS PARK COMPONENT		
QUANTUM CONTROL	USE TYPE	EXAMPLES OF ALLOWABLE USES
60% (minimum)	Predominant Use <sup>1&amp;2</sup>	Manufacturing of high technology products using advanced processes
		Test laboratory
		Research and development
		Product design / development
		Data processing
		Industrial training
		Central distribution centre
		E-business <sup>3</sup>
40% (maximum)	Ancillary / Secondary Use	Ancillary office
		Meeting room
		Sick room / first aid room
		Toilets, M&E services
		Industrial canteen <sup>4</sup>
		Showroom <sup>5</sup>

	Childcare centre <sup>6</sup>
	Selected commercial uses <sup>7</sup>
Exclusionary Uses <sup>1</sup> (i.e. Uses with these characteristics are not allowed)	Pollutive
	Bad neighbour
	Independent warehousing
<p><b>NOTES:</b></p> <p><b>1</b> The definitions of the listing and criteria for evaluation are found in Figure 3.12.</p> <p><b>2</b> The allowable and combined activities in the Business Parks are found in Figure 3.13.</p> <p><b>3</b> E-business activities include telecommunications, call centre, data farm / data centre and Internet Service Provider. See details in Figure 3.0.</p> <p><b>4</b> Industrial canteens are capped at a size of 700sqm or 5% of the total proposed GFA per development, whichever is lower. See details in Figure 3.8.</p> <p><b>5</b> Showroom is confined to the 1<sup>st</sup> storey of the development. See details in Figure 3.8.</p> <p><b>6</b> Childcare centre is levied Group E Civic &amp; Community Institution (C&amp;CI) rates for the purposes of computing development charge/differential premium.</p> <p><b>7</b> Selected commercial uses are subject to locational criteria. See details in Figures 3.8 and 3.8a.</p>	

**Figure 3.10: Use Quantum Controls for Business Park Developments**

**Figure 3.11: Examples of Allowable and Non-allowable Uses within the 'White' Component**

<b>ALLOWABLE USES WITHIN THE 'WHITE' COMPONENT</b>	
<b>S/NO</b>	<b>BUILDING / UNIT USE (INDEPENDENT USE)</b>
<b>Subject to Planning Permission and Compliance with DC guidelines</b>	
1	Shop
2	Office (includes bank), commercial school
3	Restaurant
4	Showroom
5	Motor vehicle renting / trading showroom or office
6	Residential (includes staff quarters and serviced apartments)
7	Hotel
8	Child day-care centre, before & after school care, kindergarten
9	Association use, civic cultural & community
10	Sports & recreation facilities, fitness centre
<b>Subject to Special Consideration</b>	
11	Medical centre
12	Light industrial



<b>USES NOT ALLOWED WITHIN THE 'WHITE' COMPONENT</b>	
<b>S/NO</b>	<b>BUILDING / UNIT USE (INDEPENDENT USE)</b>
1	General industrial, special industrial
2	Warehouse
3	Workers' dormitory
4	Religious use
5	Bus / MRT depot
6	Petrol station
7	Vehicle park (car / lorry)

**Figure 3.12: Definition and Criteria for Evaluation (continued)**

### **1 Manufacturing of high technology products using advanced processes**

Uses falling under 'Permitted' and 'Conditional' categories of allowable activities in *Figure 3.13* where advanced manufacturing processes are used to produce high technology products.

### **2 Test Laboratory**

Scientific investigation and testing of products and processes including food and feed additives, bio-tech, pharmaceuticals, textiles and geological analysis.

### **3 Research and Development/Product Design and Development**

Activities which include research, development and/ or design of new or substantially modified products or processes, prototype production, laboratory testing and software development.

### **4 Data Processing**

A main-frame or mini-computer facility that handles high-volume transactions over a telecommunications network supporting a large user base. Examples of these could include computer reservation systems, seismic data analysis centres, supercomputing centres, financial or manufacturing back-end processing centres, regional marketing / customer support centre, online directories, value-added networks, etc. The feature that would distinguish a data processing centre from an in-house information systems department is the scale involved. The scale of the project would most likely demand equipment. The floors on which the computer equipment rests may have to be reinforced to bear the heavy loading of the equipment. The scale of the data processing centre would also require greater electricity supply to power the mini / main-frame computers, back-up generators, and perhaps high speed telecommunication networks.

Activities in a data processing centre could include:

- \* Transaction processing
- \* Hardware / software maintenance/ upgrades
- \* Systems performance tuning
- \* Trouble shooting
- \* Network management and monitoring
- \* Reports / statements / charts generation
- \* Supporting on-line enquiries
- \* Data backups / disaster recovery

### **5 Industrial Training**

Training and teaching involving the use of industrial machinery, industrial systems, industrial equipment and industrial components.

### **6 Central Distribution Centres (CDC)**

These centres provide total logistics support for MNC's regional / international business and comprise a warehouse which undertakes operations such as freight management, inventory control, storage, packaging and consolidation. CDCs can also undertake regional marketing, sales, technical support and training. CDCs that are predominantly warehousing in nature will be required to site within a warehouse zone because of nuisance from excessive goods vehicle movement

### **7 Pollutive**

A pollutive activity includes any of the following:

- (a) Use or storage of significant quantities of chemicals.

(b) Use of machinery and processes which require pollution control equipment to abate pollution.

(c) Use of solid or liquid fuel burning equipment.

### **8 Bad Neighbour**

A bad neighbour activity includes:

(a) Intense glare or heat discernible from the edge of the plot

(b) Noise levels exceeding any public regulation or likely to cause nuisance to adjoining uses

(c) Ground vibration that is perceptible without instruments at any point on the edge of the plot

(d) Any other nuisance to neighbouring Business Park occupants (including excessive movement of goods), where it is agreed that the activity constitutes a nuisance by the relevant Business Park management committee or organisation.

.

**Figure 3.13: Allowable & Conditional Activities In Business Parks**

<b>PERMITTED</b>			
1	Development / production of software, maintenance of software and user training	21	Electronic control systems design
2	Upgrading of software	22	Mechatronics components design & development
3	Computer system integration	23	Tooling design
4	Industrial training	24	Prototype making
5	Plastic product design & development	25	Production planning, technology & engineering Development
6	Fashion, furniture, jewellery & exhibition design	26	Quality assurance, technical inspection & testing services
7	Oil rig design	27	Engineering design & development centre
8	Offshore structure design	28	Technical service centre
9	Ships design	29	Diagnostic product design e.g. medical, biotech
10	Computer systems design	30	Systems customising centre
11	Communication equipment design	31	Materials application centre
12	Electronic instruments & device design e.g. IC	32	Publishing
13	Audio / video product design	33	CAD / CAM / CAE Support
14	Electrical appliances & devices design	34	Factory automation / CIM design & development
15	Automation equipment & systems design	35	Information systems design & development
16	Storage device (disk drives) design & development	36	Product demonstration
17	Office automation equipment design	37	Project planning & management
18	Opto-electronics devices design & development	38	Equipment & component applications engineering
19	Hybrid circuit modules devices design	39	R&D laboratory
20	Electric motors design	40	Geological analysis on well samples and rocks

**Figure 3.13: Allowable & Conditional Activities In Business Parks (continued)**

<b>CONDITIONAL</b>			
1	Agricultural services	1 3	Postal services
2	Plastic product services	1 4	Communication services
3	Manufacture and repair of material handling equipment	1 5	Art and graphic design services
4	Manufacture of machine tool accessories	1 6	Medical and health services( except veterinary services and environmental health services)
5	Manufacture and repair of semi-conductor manufacturing equipment	1 7	Services allied to motion picture / video production / video distribution
6	Manufacture of electronic products and components	1 8	Computer system integration including servicing and repair assembly of computer equipment
7	Manufacture of instrumentation equipment, photographic and optical goods	1 9	Electronic workshop for repair and system integration of data communication equipment and consultancy services
8	Other manufacturing industries	2 0	Petroleum, mining and prospecting services
9	Supporting services to electricity, gas and water distribution	2 1	Engineering consultancy services, oil exploration
10	Air transport	2 2	International specialist engineering and consultancy services
11	Services allied to transport	2 3	Central distribution centres
12	Services allied to transport not elsewhere classified		

## **PARAMETERS**

**32** The parameters for Business Parks are:

**(a) Land Area**

The minimum land area of an entire Business Park is 5 hectares. This is to ensure the land is large enough to landscape and create a park-like environment. Within the Business Park, individual plots are demarcated to be developed.

**(b) Intensity**

The maximum allowable GPR is stipulated in the Master Plan 2008. The intensity will vary depending on the planning intention and surrounding developments.

**(c) Building Height**

The maximum allowable building height is expressed in terms of number of storeys stipulated in the Master Plan. However, the resultant building height must also

comply with the technical height controls imposed by other authorities such as aviation path restrictions, telecommunication and military installation.

**(d) Building Setback & Road Buffer Requirements**

The building setback and road buffer requirements for BP developments are set out in Table A and Table B below:

**Table A: Building setback for Business Park**

Boundary fronting public road	Road buffer requirement
Boundary fronting a drainage reserve backlane, or other developments	4.5m

**Table B: Road buffer requirements for Business Park**

ROAD CATEGORY	MINIMUM WIDTH OF BUFFER	SPECIFICATION OF BUFFER
CATEGORY 1 – Expressway	15m	5m green, 10m physical
CATEGORY 2 – Major Arterial A	7.5m	3m green, 4.5m physical
CATEGORY 3 – Major Arterial B	5m	3m green, 2m physical
CATEGORY 4 & 5 – Other Major Roads, Minor Roads & Slip Roads	5m	3m green, 2m physical

**(e) Floor-to-floor height**

No Control. Developments are subject to the relevant technical height controls. For areas with storey height control, the floor-to-floor height control is 6.0m (maximum).

**(f) Landscaping**

To allow flexibility in providing attractive landscaping within developments on Business Park and Business Park-White zones, there is no minimum provision requirement for green areas. A 2.0m (minimum) wide planting strip is to be developed along all sides of the development site boundary. For the boundary fronting a public road, the width of the green buffer shall be provided in accordance with the category of the road. The planting strip shall be continuous except where an access road is required.

**(g) Amenity Centre**

There is no requirement for a separate amenity center within the business park.

**(h) Earthworks, boundary and retaining walls**

Please refer to Para 13 on guidelines under industrial and warehouse developments.

## WAREHOUSE RETAIL SCHEME

- 33** Warehouse Retail Scheme (WRS) is a new pilot scheme intended to facilitate businesses with integrated business models that encompass elements of both retail and warehouse functions (warehouses retail) or retail and industrial functions (industrial retail) on industrial sites. Details of the scheme are explained in the EDB press release on 28 April 2004.

Applicants interested in this scheme should first submit their proposals to one of the economic agencies involved [i.e. Economic Development Board (EDB), SPRING Singapore or Singapore Tourism Board (STB)]. After the proposal is endorsed, the applicant can then follow up with a development application to URA for planning approval. The approval letter from the relevant economic agency must be attached to the development application.

## PLANNING PARAMETERS

- 34** If an operation qualifies for the WRS based on the criteria set out by EDB, the following planning parameters will apply:

**(a)** Zoning

The proposed warehouse retail or industrial retail sites will be rezoned from Business 1 or Business 2 to Business-White to better reflect the allowable uses comprising both retail and warehouse or retail and industrial functions. The allowable GPR will be based on assessment on a case by case basis.

**(b)** Use Quantum and Allowable Uses

The allowable use quantum under this pilot scheme is indicated in Figure 3.14.

As the WRS is set up to facilitate new business models which genuinely require the integration of warehouse / industrial function with retail use, the allowable 40% ancillary retail quantum must support the warehouse / industrial use. Independent retail unrelated to the warehouse / industrial use will not be supported. The endorsing economic agency (EDB, SPRING or STB) will be screening the proposals on this particular aspect.

The ancillary use quantum for ancillary warehouse/industrial uses must not exceed 24% and the ancillary retail uses must not exceed 40% of the total GFA. The 24% use quantum for ancillary industrial/warehouse uses should be mainly set aside for ancillary industrial purposes such as circulation space, M&E services, toilets, meeting rooms, sick rooms / first aid room etc. If there are canteens proposed as part of the 24% ancillary industrial quantum, it must be meant for staff use only and not opened to the public.



**Figure 3.14: Quantum Control and Examples of Allowable Uses**

QUANTUM CONTROL		USE TYPE	EXAMPLE OF ALLOWABLE USES
60%(min)	36% (min)	Predominant Warehouse/Industrial Use	All industrial uses allowed for developments in B1/B2 zone such as: Manufacturing, production, assembly, servicing, repair, workshop, storage, e-business and, core media activities
	24% (max)	Ancillary Warehouse/Industrial Use	Ancillary office, meeting room, sick room / first aid room, toilets, M&E services
40%(max)		Ancillary Retail Use	Must be supporting & ancillary to the warehouse / industrial activities.
USES WHICH CANNOT BE ALLOWED			Independent retail unrelated to the warehouse / industrial use

**NOTES:**

WRS is applicable to sites zoned B1 or B2 in the outlying area (Refer to EDB press release - Annex 1). Other sites proposed for the scheme will be subjected to evaluation and approved on a case by case basis.

**35 Single User and Operator Requirement**

Proposals under the WRS must be carried out in single user developments and operated as a single entity. No subletting of space within the development will be allowed.

Proposals will be approved on a temporary basis at the first instance and could be subject to temporary development levy (TDL).

- (a) Renewal of the temporary planning permission is subject to re-endorsement by the original endorsing economic agency (EDB, SPRING or STB). The temporary permission can either be extended for up to 10 years and pay TDL or converted to a permanent permission that ties in with the remaining lease period of the site or for 25 years, which ever is lower. Development charge will be payable in this situation.
- (b) For the industrial / warehouse component of proposals under the WRS, development charge will be computed using the prevailing industrial rates in the Table of Development Charges, which are based on 50% of the enhancement in land value. For the ancillary retail component, development charge will be based on the full enhancement in land value.
- (c) Proposal submitted under the WRS is to reflect in the caption as “Proposed \_\_\_ storey Warehouse Retail / Industrial Retail\* Building comprising .....”. The floor area used for the ancillary retail uses must be clearly indicated in the submission floor plans.

\*delete where appropriate

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**4 PLACE OF WORSHIP & INSTITUTIONAL DEVELOPMENTS**

## OVERVIEW

- 1 Three main types of developments will be discussed in this section. They are:
  - (a) Place of Worship  
These include temples, churches and mosques.
  - (b) Civic & Community Institutions  
These include buildings like police stations, community clubs / centres, homes for the aged, associations, libraries and museums.
  - (c) Educational Institutions  
These include primary/secondary schools, junior colleges, universities, polytechnics, foreign and special education schools (e.g. school for the disabled).

The detailed parameters for these developments are discussed in a later part of this section.

- 2 Some development control parameters are common to places of worship and institutional developments. These are:

- \* Setback requirements
- \* Road buffer requirements
- \* Use Quantum Control

## SETBACK REQUIREMENTS

- 3 For place of worship and institutional developments, the setback control is as follows:

From boundary facing road: Road buffer

From other boundaries: 4.5m (minimum)

Place of worship (PW) and adjoining industrial developments can abut each other at the common boundary provided the following location criteria and conditions are satisfied:

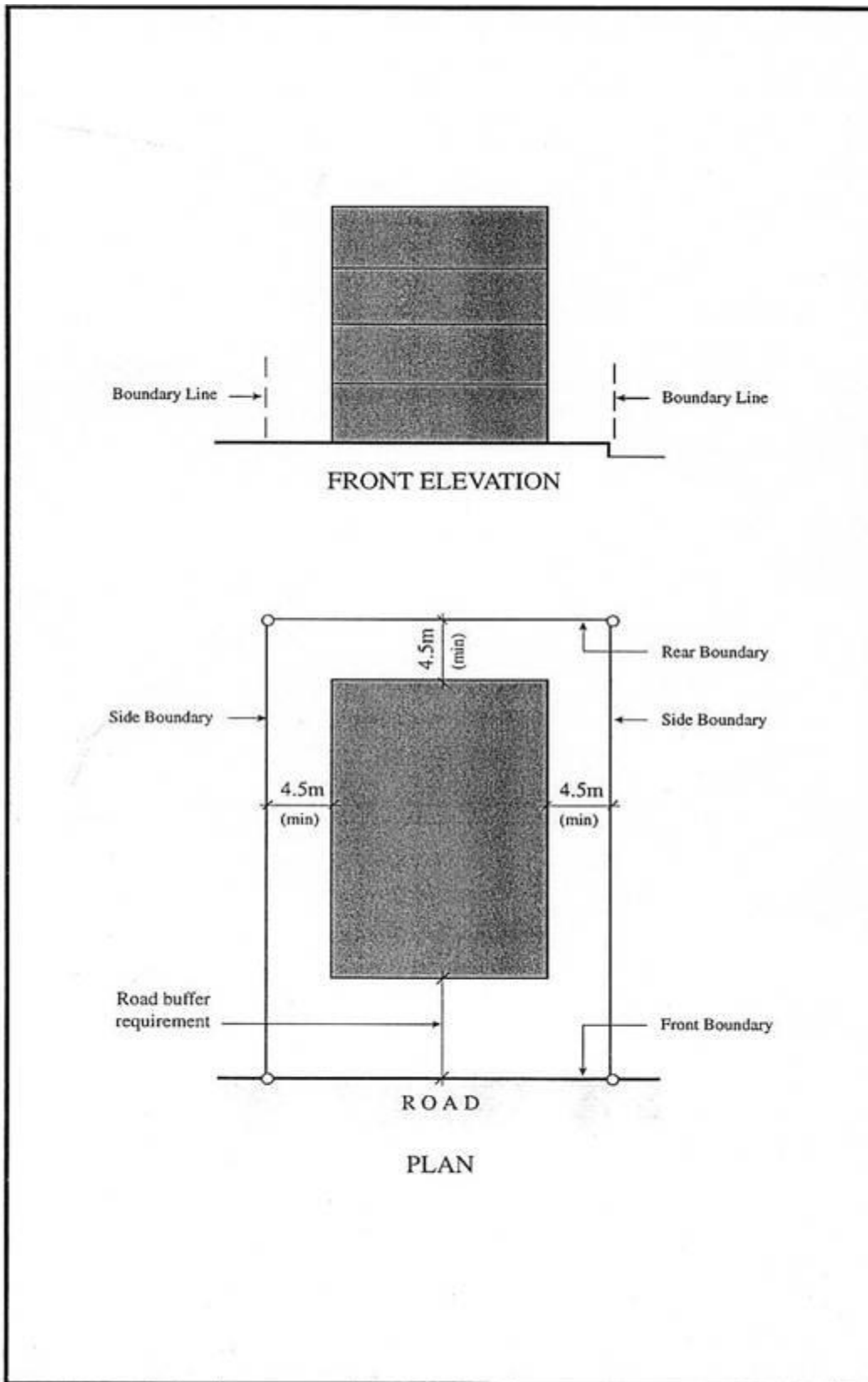
Location criteria	i. The PW site is located well within the industrial estate.
	ii. The PW site is not abutting a Reserve Site.
	iii. The PW site is abutting another PW or industrial site.
Conditions	i. The maximum allowable gross plot ratio (GPR) and building height for the respective PW and industrial development are complied with.
	ii. The party wall of the PW and industrial building abutting the common boundary shall not have any openings. Temporary structures and tentages are not supported.

See Figure 4.1 for illustration.

**4** The setbacks for developments may sometimes be guided by urban design requirements instead of the 'standard' setbacks. This is particularly so for institutional buildings located in the Geylang area which are guided by the Geylang Urban Design Guidelines (GUDG)<sup>1</sup>

**FOOTNOTE:**

<sup>1</sup> The demarcated boundary and the guidelines of the GUDG is found in Appendix 1 in Part 3.



**Figure 4.1: Building Setbacks For Place Of Worship & Institutional Developments**

## ROAD BUFFER REQUIREMENTS

**5** All developments are required to provide a buffer between the road reserve line and the building unless there are urban design requirements allowing the buildings to abut the road reserve line/site boundaries like buildings in the Central Area.

**6** The minimum road buffer width which determines the setback of the building depends on the hierarchy of the category of the road the site fronts, the type and height of development. See Figure 4.2 for details on the road buffer requirements for place of worship and institutional buildings.

**Figure 4.2: Road Buffer Requirements for Place of Worship & Institutional Developments**

ROAD CATEGORY	MINIMUM WIDTH OF BUFFER	SPECIFICATION OF BUFFER
CATEGORY 1 - Expressway	15m	5m green, 10m physical
CATEGORY 2 - Major Arterial A	7.5m	3m green, 4.5m physical
CATEGORY 3 - Major Arterial B	5m	3m green, 2m physical
CATEGORY 4 & 5 – Other Major Roads, Minor Roads & Slip Roads	5m	3m green, 2m physical

**NOTE:**

See Figure 3.4 in Part 1 for details on the road buffer requirements for Educational Institutions.

## USE QUANTUM CONTROL

**7** The quantum control for place of worship developments will be discussed in detail under the section on “Place of Worship”.

There are however no specific quantum control on the detailed uses of an institutional development. Generally, there should not be independent offices or shops. Office use, if provided, should be ancillary to the function of the institution. Such offices or other related commercial use are considered on a case-by-case basis.

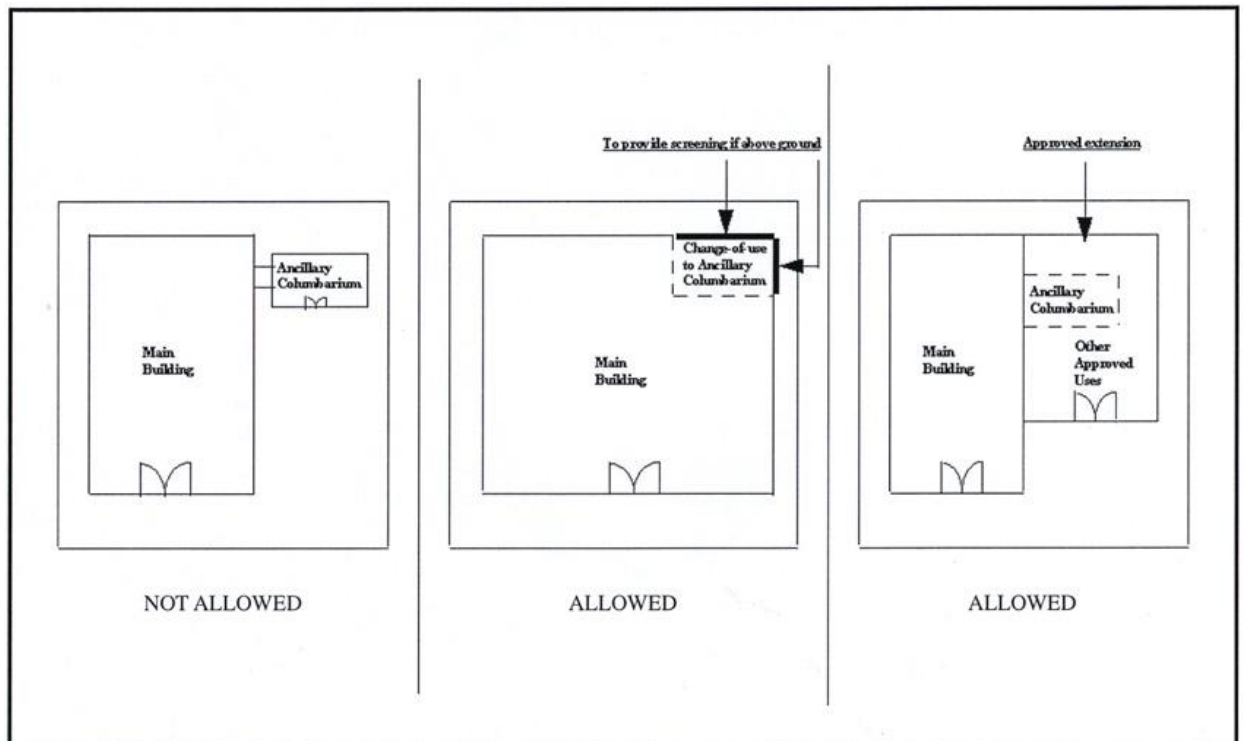
## ANCILLARY COLUMBARIUM USE

**8** Ancillary columbarium use may be allowed within free-standing buildings for certain developments such as places of worship and clan associations. Any proposal for ancillary columbarium use is subject to evaluation.

**9** For ancillary columbarium use, the following have to be adhered to:

- (a)** It is sited within the main building of the development;
- (b)** It must not exceed 20% of total GFA; and

- (c) Basement location is preferred. Above ground location can be considered subject to complete screening from public view. Columbarium use must be sited at the basement for party wall developments.
- (d) The columbarium niches must be located within the main building. No independent (i.e. free-standing) columbarium structure would be allowed. Any new building extension for columbarium use must abut the main building and must be fully integrated with it (see Figure 4.3). If only part of the extension is used for ancillary columbarium use, the niches should be housed inside the building, furthest away from public view.



**Figure 4.3 Allowable Building Form for Ancillary Columbarium**

## PLACE OF WORSHIP

**10** A place of worship is an area used or intended to be for religious public worship purpose. Examples of these developments are churches, temples and mosques.

**11** Places of worship are commonly free-standing developments. In some rare situations, the building form may be a party wall development. The building form depends on the location of the site and street block plans for the site.

**12** Strata subdivision is not allowed for place of worship developments.

## LOCATION

**13** Places of worship are allowed on land zoned “Place of Worship” in the Master Plan 2008.

## PARAMETERS

**14** The parameters for place of worship developments are:

**(a)** Intensity

The maximum allowable GPR for place of worship (PW) developments is subject to detailed localised planning and traffic assessment. For PW developments located within landed and low-density housing areas, the maximum allowable GPR is set up to GPR 1.0 in keeping with the surrounding low-density developments. A GPR of up to 1.4 can be considered for PW developments located at the fringe of landed and low-density housing areas, for example those fronting major roads. For PW developments located within HDB estates and in high density residential areas, a GPR of up to 1.6 can be considered (see Figure 4.4).

Further intensification beyond GPR 1.6 could be considered in exceptional cases if there are special circumstances that warrant exceptions to the guidelines, provided that the relevant agencies have assessed that the potential impact arising from intensification are adequately addressed.

Religious organisations will have to seek prior planning approval from URA for any proposed intensification of their PW premises. Clearances from relevant agencies, including LTA, will need to be obtained. Proposals to increase the intensity of PW developments will be evaluated on a case-by-case basis, taking into consideration the local context, and whether the proposed intensification will adversely affect surrounding uses.

**(b)** Building Height

The allowable storey height of place of worship depends on the location of the place of worship (PW) and gross plot ratio (GPR) control (see Figure 4.4).

For PWs located within landed housing estates, the PW can develop up to 2 or 3 storeys based on the specific storey height control of the landed housing estate.

For PWs located at the fringe of landed and low-density housing areas with residential GPR  $\leq 1.4$ , they can be allowed up to 4 storeys, subject to detailed localised planning assessment.

For PWs located within HDB estates and high-density residential areas, storey height controls for PWs with GPR up to 1.4 will be capped at 4 storeys. For PWs with GPR of more than 1.4 and up to 1.6, storey height will be capped at 5 storeys, within the allowable envelop control of 25m (including attic), subject to detailed localised planning assessment and provided the proposed storey height does not cause adverse impact to the

surrounding developments. For PWs located within or at the fringe of industrial estates, similar storey height controls to those within HDB estates and high-density residential areas will apply.

For PWs located within HDB estates and high-density residential areas that provide above-ground car park, an additional height allowance of up to 5m (i.e. within envelop control of 30m) can be considered, to facilitate the provision of car parking within the site. This is subject to detailed assessment of the impact of the increase in building height on the adjoining developments. The additional building height will not be supported if it is likely to cause adverse impact on the adjoining developments.

For exceptional cases where the PW proposal exceeding a GPR of 1.6 is supported, the allowable building height will be subject to case-by-case evaluation.

The above guidelines on GPR and building height are not applicable to PW located within Central Area and within other commercial centres, including party-walled developments. The allowable GPR and building height for PW developments in such locations will be subject to case-by-case evaluation.

The height of any religious symbolic structure (e.g. cross, minaret, statue) is not to exceed the overall aggregate height of the place of worship building based on the permitted number of storeys and with allowance of an additional 5.0m.

- (c) **Quantum Control**  
For place of worship developments, the total praying area must be at least 50% of the total GFA. Ancillary related uses like library, conference room, meeting room, childcare centre and kindergarten must not exceed a maximum of 10% of total GFA. In addition, the area for childcare centre should not exceed 500 m<sup>2</sup>. Childcare centre more than 300 m<sup>2</sup> can be considered subject to ECDA's prior endorsement (see Figure 4.5).

Columbarium use is allowed within the place of worship development provided it does not exceed 20% of the total gross floor area. Place of worship developments sited within or at the fringe of industrial estates that are not facing residential areas can be allowed a higher quantum control of up to 40%. However, if the place of worship developments are at the fringe of industrial estates and face residential areas, the 20% quantum control shall apply.

- (d) **Site Coverage Control**  
There is no site coverage control for place of worship development.

**Figure 4.4: Maximum Allowable Plot Ratio/Storey Height for Place of Worship Developments**

LOCATION OF PW-ZONED SITE	GROSS PLOT RATIO CONTROL	STOREY HEIGHT CONTROL
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Within landed and low-density housing areas with residential GPR $\leq 1.4$	Up to 1.0	Up to 2 or 3 storeys based on the specific storey-height control of the landed housing estate
At the fringe of landed and low-density housing areas with residential GPR $\leq 1.4$	Up to 1.4*	Up to 4 storeys*
Within HDB estates and in areas with residential GPRs $> 1.4^{**}$	Up to 1.6*	For GPR $\leq 1.4$ , up to 4 storeys* For $1.4 < \text{GPR} \leq 1.6$ , up to 5 storeys, within 25m envelop control (including attic) <sup>#</sup>
Within or at the fringe of industrial estates**	Up to 1.6*	For GPR $\leq 1.4$ , up to 4 storeys* For $1.4 < \text{GPR} \leq 1.6$ , up to 5 storeys, within 25m envelop control (including attic) <sup>#</sup>
Within Central Area and within other commercial centres, including party-walled developments such as in the Geylang area	Subject to evaluation	Subject to evaluation

#### NOTES

- \* Subject to detailed localised planning and traffic assessment.
- \*\* Further intensification beyond GPR 1.6 could be considered in exceptional cases if there are special circumstances that warrant exceptions to the guidelines, provided that the relevant agencies have assessed that the potential impact arising from intensification are adequately addressed.
- # An additional height allowance of up to 5m can be granted if purpose-built above-ground car park floors are provided. The additional height allowance would need to be designed sensitively and will be subject to detailed evaluation (e.g. site context, visual impact, etc).

**Figure 4.5: Allowable Uses within Place of Worship Developments**

QUANTUM CONTROL	USE TYPE	ALLOWABLE USES
50% (Minimum)	Predominant Use	Praying area
50% (Maximum)	Ancillary Use	Ancillary religious uses (remaining GFA)  Examples: - Religious classrooms - Priest's room - Caretaker's room
		Ancillary related uses (maximum 10% of total GFA)  Examples: - Library - Conference room - Meeting room - Kindergarten* - Childcare centre*

		<p>Columbarium (maximum 20% of total GFA)</p> <p>Place of worship developments sited within or at the fringe of industrial estates that are not facing residential areas can be allowed a higher quantum control of up to 40% for columbarium use.</p>
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**NOTE:**

\* Childcare centre not to exceed 500sqm. Proposed childcare centre larger than 300sqm is subject to ECDA's prior endorsement.

**CIVIC & COMMUNITY INSTITUTIONS**

**15** A civic & community institution development is an area used or intended to be used mainly for civic, community or cultural facilities or other similar purposes.

**16** Civic and community institutions may be further categorised into the following:

- (a)** Civic Institutions such as a court, police station, fire station, special government building, prison;
- (b)** Community Institutions such as an association/clan building, guild house, community club / centre, professional institution, welfare home, home for the disabled, home for the aged/sheltered homes, halfway house, youth and children complex, social welfare complex, funeral parlour; and
- (c)** Cultural Institutions such as Performing Arts Centre, Library, Museum, Arts/ Science Centre, Art Gallery.

**17** Institutional developments can be in the form of free-standing development, or be in the form of a party wall development. The building form will be determined depending on the location of the site and street block plans for the site.

**18** Strata subdivision is not allowed for civic and community institutions.

**LOCATION**

**19** The above Institutions are allowed on land zoned "Civic & Community institutions" in the Master Plan 2008. They are also allowed within the "Residential / Institution" zone.

**PARAMETERS**

**20** Generally, civic and community institutions (C&CI) developments are guided by the parameters for setback and road buffer that are common to all place of worship and institutional developments discussed earlier.

**21** The maximum allowable GPR and building height for civic and community institutions (except for home for the aged, home for the disabled and community club/centre) are shown in Figure 4.6.

**Figure 4.6: Maximum Allowable Plot Ratio/Storey Height for Civic & Community Institution Developments (except for home for the aged, home for the disabled and community club/centre) and Educational Institutions (except for special education school)**

LOCATION OF C&CI AND EDUCATIONAL INSTITUTION ZONED SITE	GROSS PLOT RATIO CONTROL	STOREY HEIGHT CONTROL
Within landed housing estates	Up to 1.0	Up to 2 or 3 storeys based on the specific height control of the landed housing estate
At the fringe of landed housing estates and within low-density housing areas with surrounding residential GPRs not exceeding 1.4		Up to 3 storeys
Within HDB estates and in areas with surrounding residential GPRs greater than 1.4	Up to 1.4	Up to 4 storeys
Within industrial estates or at the fringe of industrial areas	Up to 1.4	Up to 4 storeys
Within Central Area and within other commercial centres, including party-walled developments such as in the Geylang area	Subject to evaluation	Subject to evaluation

**NOTES**

- 1 Higher storey heights may be considered on a case by case basis
- 2 Existing C&CI developments are allowed to intensify up to the above plot ratio bands, as and when there are proposals for additions and alterations or redevelopment.
- 3 Existing C&CI developments with approved gross plot ratios exceeding the above plot ratio bands, are allowed to redevelop up to the previous approved gross plot ratio.

**22** Some institutional buildings have special development control requirements due to the peculiar nature of their usage. The detailed parameters of these buildings will be discussed:

- \* Home for the aged
- \* Home for the disabled
- \* Community clubs / centres

**23** As these developments are generally low intensity uses, they are encouraged to co-locate with other compatible institutional uses to make better use of land and achieve higher plot ratios, whenever possible.

## HOME FOR THE AGED

**24** A home for the aged is a place where elderly people dwell in and are cared for by trained personnel.

**25** Homes for the aged are commonly free-standing developments. In some rare situations, the building form may be a party wall development. The building form depends on the location of the site and street block plans for the site.

**26** Strata subdivision is not allowed for home for the aged developments.

## LOCATION

**27** Purpose built home for the aged developments are allowed on land zoned “Civic and Community Institution”, “Residential/ Institution” and in areas where they are unlikely to create environmental nuisance to their neighbours. However, these developments may be allowed at the void decks of public housing blocks, as facilities ancillary to the residential use.

**28** Conversion of properties to homes for the aged will be evaluated on a case-by-case basis. They will similarly be considered in areas where they are unlikely to cause adverse impact to the amenity of the neighbours.

## PARAMETERS

**29** The parameters<sup>2</sup> for home for the aged developments are:

- (a)** Building Height  
The building height is to be evaluated on the merits of each case, taking into consideration its compatibility with the surrounding developments. Homes for the aged that are 3-storey and above should be provided with lifts.
- (b)** Site Coverage  
There is no site coverage control for Home for the Aged.
- (c)** Communal Open Space  
Home for the aged developments are required to provide 35% (minimum) of the nett site area for communal open space. These are gardens and landscaped areas meant for the enjoyment of the occupants. It includes open-sided pavilions and shelters, swimming pools, sandpits, fountains and other recreational facilities; but exclude areas taken up by open and covered car park and driveways, electrical substation, septic tank, bin centre, gas compound and other service areas.
- (d)** Ancillary Facilities  
Provision of mortuary or a temporary holding area for the deceased inmates can be considered on the merits of each case. This takes into consideration its location in relation to adjoining and surrounding developments.

#### **FOOTNOTE:**

**2** In some rare situations where the home for the aged is a party wall development, then the building coverage and the communal open space requirements will not be applicable.

### **HOME FOR THE DISABLED**

**30** A home for the disabled is a place where the disabled dwells in and are cared for by trained personnel.

**31** Homes for the disabled are commonly free-standing developments. In some rare situations, the building form may be a party wall development. The building form depends on the location of the site and street block plans for the site.

### **LOCATION**

**32** Purpose-built home for the disabled developments are allowed on land zoned “Civic and Community Institution” and “Residential/ Institution”. They can also be allowed on government allocated land for such purposes.

**33** Conversion of properties to homes for the disabled will be evaluated on a case-by-case basis. They will be allowed in areas where they are unlikely to cause adverse impact to the amenity of the neighbours.

### **PARAMETERS**

**34** The parameters for home for the disabled developments are:

- (a)** Intensity  
The allowable GPR is evaluated on a case-by-case basis, taking into consideration surrounding land uses and amenities and the Master Plan 2008’s proposed intensity for the area.
- (b)** Site Coverage  
There is no site coverage control for Home for the Disabled.
- (c)** Building Height  
The building height is to be evaluated on the merits of each case, taking into consideration its compatibility with the surrounding developments.

### **COMMUNITY CLUBS/ CENTRES**

**35** Community clubs / centres are managed by the People’s Association, providing community facilities and services to the public.

**36** Community clubs / centres are commonly free-standing developments. They are encouraged to co-locate with compatible institutional uses like libraries, neighbourhood police centres, etc.

**37** Strata subdivision is not allowed for community club / centre developments.

## LOCATION

**38** Community clubs / centres are allowed on land zoned “Civic and Community Institution” and “Residential/Institution”. These developments may also be allowed at the void decks of public housing blocks, as facilities ancillary to the residential use.

## PARAMETERS

**39** The parameters for community clubs / centres are:

- (a)** Use Quantum Control  
For community clubs / centres, the maximum allowable commercial use is 20%.
- (b)** Building Height  
The building height is to be evaluated on the merits of each case, taking into consideration its compatibility with the surrounding developments.
- (c)** Intensity  
The GPR for community club / centre sites is 1.4 (minimum).

## EDUCATIONAL INSTITUTION

**40** An educational institution is an area used or intended to be used mainly for educational purposes.

**41** Examples of educational institution include kindergartens, primary/secondary schools, polytechnics, junior colleges, vocational institutes, training institutes, universities, foreign and special schools (e.g. school for the disabled).

## LOCATION

**42** Educational institutions are allowed on land zoned “Educational Institution” in the Master Plan 2008.

**43** Commercial schools and tuition centres are considered commercial uses and should be located on land zoned “Commercial” in the Master Plan 2008. It is therefore not allowed under the “Educational Institution” zone.

**44** Subsequent to the proposal for redevelopment (i.e. New Erection, Additions & Alteration or Amendment), the school fields of government primary and secondary schools are to be rezoned to “Public Open Space”. Both the school and the field (including the access footpath) should be independently accessible. The proposal should show a clear demarcation between the school and the school field; so that the field could be fenced up and used by the community after school hours. The maintenance of the field will come under the jurisdiction of the school.

## PARAMETERS

**45** For higher learning institutes zoned Educational Institution such as universities, polytechnics, Singapore Institute of Management (SIM), Nanyang Academy of Fine Arts (NAFA), LASALLE and INSEAD, commercial uses are computed as commercial GFA.

Examples of the uses that are computed as commercial GFA include food courts, restaurants, cafes, book & stationery shops, hair salons, mini supermarkets, banks, travel agencies, medical clinics and student run businesses.

**46** The maximum allowable commercial use quantum for the above institutes of higher learning zoned Educational Institution is 5% of the total proposed GFA or 30,000 sqm whichever is lower.

**47** Educational institution developments are guided by the parameters for setback and road buffer that are common to all places of worship and institutional developments discussed earlier. The maximum allowable GPR and building height for Educational Institutions (except for special education schools) are shown in Figure 4.6.

**48** Special education schools have special development control requirements due to the peculiar nature of their usage. The detailed parameters of special education schools will be discussed in the next part of this section.

### **SPECIAL EDUCATION SCHOOLS**

**49** Special education schools provide training for the disabled; aged 1 to 18 years old. The disabled will be trained in various skills, according to their potential capabilities so that they can live a better life after they leave school at 18.

**50** The special education schools are grouped into two broad categories for the purpose of development control. They are:

- (a)** Ambulatory  
These include schools for the mentally retarded (MR), visually handicapped (VH) and the hearing impaired (HI).
- (b)** Non-ambulatory  
These include schools for the orthopaedic impaired (OI) or multi-handicaps (MH).

**51** Special education schools are commonly free-standing developments. In some rare situations, the building form may be a party wall development. The building form depends on the location of the site and street block plans for the site.

### **LOCATION**

**52** Purpose-built special education schools are allowed on land zoned "Educational Institution". They can also be allowed on government allocated land for such purposes.

**53** Conversion of properties to special education schools will be evaluated on a case-by-case basis, depending on the amenity of the area.

### **PARAMETERS**

**54** The parameters for special education schools are:

- (a) Intensity  
The minimum GPR for special education schools is 0.5 (minimum). The maximum allowable GPR is evaluated on a case-by-case basis, taking into consideration surrounding land uses and amenities and the Master Plan 2008's proposed intensity for the area.
- (b) Site Coverage  
There is no site coverage control for Special Education school.
- (c) Building Height  
The building height control is as follows:
  - Ambulatory - 4 storey (maximum)
  - Non ambulatory - 2 storey (maximum)

**55** In the case of a mixed ambulatory and non-ambulatory accommodation, the latter category should be on the lower floors. Lifts could be provided subject to BCA's requirements.

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## 5 OTHER USES

### OVERVIEW

- 1 Three types of development will be discussed in this section. They are:
  - (a) **Hospitals**  
Hospitals are developments that provide healthcare and ward services to patients.
  - (b) **Petrol Station**  
A petrol station engages in the sale of fuel for motor vehicles. It may also accommodate a range of facilities including minor repairing, retail outlet and car wash facilities.
  - (c) **Golf Course**  
A golf course is an area designated for playing golf and may consist a driving range and clubhouse for use by its members.
  
- 2 The detailed parameters for these developments are discussed in a later part of this section.

### HOSPITALS

- 3 A hospital development provides healthcare and ward services to patients.
  
- 4 Hospitals are commonly free-standing developments.
  
- 5 Strata subdivision is generally not allowed for hospital developments. However, shops (e.g. shops, clinics) within hospitals held in private ownership can be considered for strata subdivision.

### LOCATION

- 6 Hospitals are allowed on land zoned “Health & Medical Care” in the Master Plan 2008. If a private hospital is proposed in any other zone, the applicant should first submit an Outline Application.

### PARAMETERS

- 7 The parameters for hospital developments are:
  - (a) **Intensity**  
The maximum allowable GPR for hospitals is subject to evaluation.
  - (b) **Building Height**  
The building height is to be evaluated on the merits of each case, taking into consideration its compatibility with the surrounding developments.
  - (c) **Use Quantum Control**  
At least 60% of the total GFA shall be provided for hospital uses. The uses within the 60% (minimum) hospital quantum shall include in-

patient/outpatient facilities, medical suites, diagnostic and treatment facilities.

Visitors' hostel for family members and companions of the hospital's patients and outpatients can be allowed in hospital developments located on sites zoned a "Health & Medical Care" in the Master Plan subject to the following requirements:

- (i) A cap of 10% of the total proposed GFA or 1,500 sqm, whichever is lower.
- (ii) Proposed visitors' hostel is subject to payment of development charge or differential premium, where applicable and the visitors' hostel GFA will be computed under Residential (Non-landed) Group B2 rate.
- (iii) A letter of undertaking ([LOU](#)) is to be provided by the applicant to undertake that the visitors' hostel shall only be occupied by the family members and companions of the hospital's patients and the hospital's outpatients.

Supporting commercial uses are not to exceed 5% of the total GFA. The uses within the 5% commercial quantum may include retail shops, retail pharmacies, food & beverage outlets and banks.

Examples of hospital and hospital related uses are shown in Figure 4.6.

- (d) Floor-to-floor Height  
The floor-to-floor height control for hospitals is 5.0m (maximum).
- (e) Setbacks  
For hospitals, the setback control is as follows:  
From boundary facing road: Road buffer  
From other boundaries: 4.5m (minimum)

**Figure 4.6: Guidelines on allowable uses for hospitals in “Health and Medical Care” zones**

USE	QUANTUM CONTROL		EXAMPLES OF ALLOWABLE USES*	DEVELOPMENT CHARGE RATE
Hospital	60% (min.)		<ul style="list-style-type: none"> <li>- Private medical suites</li> <li>- In-patient facilities</li> <li>- Outpatient facilities</li> <li>- Diagnostic and treatment facilities</li> <li>- Dispensary</li> <li>- Hospital support services</li> <li>- Translational &amp; Clinical Research facilities</li> <li>- Education facilities</li> <li>- Patient-facing administration facilities</li> </ul>	<p>Group “A” (commercial) rate for medical suites</p> <p>Group “C” (hospital) rate for hospital uses.</p>
Visitors’ Hostel	10% (max.) or 1,500 sqm, whichever is lower	40% (max.)	Visitors’ hostel	Group “B2” (residential non-landed) rate
Supporting Commercial Uses	5% (max.)		Retail pharmacies, shops, F&B outlets, foodcourt and banks	Group “A” (commercial) rate
Ancillary Hospital Uses	Up to 40 %		<ul style="list-style-type: none"> <li>- Nurses quarters</li> <li>- General administration facilities</li> <li>- Staff facilities</li> <li>- Mechanical and Electrical services</li> </ul>	Group “C” (hospital) rate

\*Refer to more [examples](#) of hospital and hospital related uses.

## PETROL STATION

**8** A petrol station engages in the sale of fuel for motor vehicles. It may also accommodate a comprehensive range of facilities including minor repairing and servicing of vehicles. The facilities may also include a retail outlet, lubritorium, car wash and tyre service facilities.

**9** Petrol stations are commonly free-standing developments.

**10** Strata subdivision is not allowed for petrol station developments.

## LOCATION

**11** Petrol stations are allowed on land zoned “Transport Facilities” in the Master Plan 2014.

## PARAMETERS

**12** The parameters for petrol station developments are:

- (a)** Intensity  
The maximum allowable GPR for petrol station developments is 0.5.
- (b)** Building Height  
Petrol station should be single-storey.
- (c)** Quantum Control  
For petrol station developments, the maximum allowable retail quantum is \*150 m<sup>2</sup> or 15% of total approved GFA, whichever is lower. The ancillary retail space is to provide convenience to motorists who patronize the petrol station. Preparation, processing and cooking of food is not allowed within the site.  
The maximum allowable quantum for ancillary facilities such as office, store and compressor room will be 10% of total approved gross floor area.  
Mechanical/ repair bays can be considered if the petrol station is not located within the Water Catchment Area.
- (d)** Site Coverage  
The site coverage should not exceed 50%.
- (e)** Setback  
The setback required are:  
From Road (for all categories of road): 7.5m(minimum) from line of road reserve  
From other boundaries: 4.5m (minimum)

## GOLF COURSE

**13** A golf course is an area designated for playing golf and may consist of a driving range and clubhouse for use by its members.

**14** Land or strata subdivision is not allowed for golf course developments, including any allowable commercial uses and ancillary facilities within the golf course developments.

## LOCATION

**15** Golf courses can be considered on land zoned “Sports and Recreation”.

## PARAMETERS

**16** The parameters<sup>1</sup> for golf course developments are:

- (a)** Intensity  
The allowable GPR for golf courses is subject to evaluation.

- (b)** Quantum Control  
Chalet/Guest House Facilities  
The GFA for chalet/guest house facilities should not exceed 30% of the total GFA or 10,000sqm, whichever is the lower. These facilities shall be subject to payment of development charge or differential premium, where applicable.
- (c)** Zoning  
The chalet/guest house facilities are intended to be ancillary to the golf course development and should remain under the same zoning, "Sports & Recreation", as the golf course development. The lease for these facilities shall be tied to the lease of the golf course.
- (c)** Commercial Use  
The GFA for commercial uses should not exceed 30% of the total GFA or 4,000 m<sup>2</sup>, whichever is the lower. Allowable commercial uses include:
- (i)** Restaurant
  - (ii)** Bar & lounge
  - (iii)** Refreshment area
  - (iv)** Canteen
  - (v)** Kitchen
  - (vi)** Dining area
  - (vii)** Saloon
  - (viii)** Golf equipment/Pro shop
- Commercial uses not listed above may be considered on a case-by-case basis.

**FOOTNOTE:**

<sup>1</sup> Technical requirements which are more stringent than these planning requirements may be applicable. In particular; the requirements of the Water Department, PUB and Pollution Control Department (PCD), ENV should be taken into account for, proposed golf courses in Water Catchment Areas. In addition, golf courses with night golfing facilities need to be referred to Mindef for their clearance before any approval is granted.

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## PART 3 THE GUIDELINES AT A GLANCE

### THE GUIDELINES AT A GLANCE

Figure 1: Use Quantum Control under Different Land Use Zoning

ZONING	PREDOMINANT USES		ANCILLARY / SECONDARY USES	
Residential with Commercial at 1st storey only	Residential		Commercial <sup>1</sup>	<i>At 1st storey only</i>
Commercial & Residential	Residential		Commercial	<i>Max 40%</i>
Business 1 / Business 2	<ul style="list-style-type: none"> <li>- Manufacturing</li> <li>- Production, assembly</li> <li>- Servicing, repair, workshop</li> <li>- Industrial training</li> <li>- E-business<sup>2</sup></li> <li>- Core media activities</li> <li>- Warehousing, storage</li> <li>- Utilities<sup>4</sup></li> <li>- Telecommunication<sup>4</sup></li> </ul>	<i>Min 60%</i> (For B1 zone, uses cannot impose nuisance buffer greater than 50m on the surrounding site)	- Ancillary uses (including ancillary office use)	<i>Max 40%</i>
Business 1-White / Business 2-White <sup>5</sup>	All uses permissible under the B1/B2 zone and White zone as a mixed use development.		Types of ancillary uses are subject to evaluation	<i>Max 40% of total gross floor area for B1/B2 uses</i>
Business Park/ BP-White <sup>3</sup>	'White' uses – 15%			
	<ul style="list-style-type: none"> <li>- High-tech manufacturing</li> <li>- Test laboratory</li> <li>- Research and development</li> <li>- Product design/ development</li> <li>- Data processing</li> <li>- Industrial training</li> <li>- Central distribution centre</li> <li>- E-business</li> <li>- Core media activities</li> </ul>	<i>Min 60% of remaining 85%</i>	Examples: <ul style="list-style-type: none"> <li>- Ancillary office</li> <li>- Childcare centre</li> <li>- Security facilities</li> <li>- Showroom</li> <li>- Industrial canteen</li> </ul>	<i>Max 40% of remaining 85%</i>

Hotel	Hotel room Hotel Related Uses	Min 60%	Shopping and other commercial uses	Max 40%
Place of Worship	Praying area	Min 50%	Columbarium	Max 20%
			- Ancillary non-religious uses (Childcare centre not to exceed 500 sqm. Proposals exceeding 300sqm are subject to ECDA's prior endorsement)	Max 10%
			- Ancillary religious uses	Remaining GFA

**NOTES:**

- 1 Commercial uses that cause or are likely to cause disamenity to the residents are not allowed.
- 2 E-business activities include telecommunications, call centre, data farm/data centre and Internet Service Provider. Call centre can be located in Business Park and Business 1, but not Business 2 zones.
- 3 For Business Park-White, the allowable quantum of white uses is dependent on locational criteria.
- 4 Strategic utilities and telecommunication infrastructure cannot be integrated or sited in B1 and B2 zones. Such uses (eg. Water works, sewage disposal works and power station) should be located on sites zoned Utility.
- 5 For B1-W/B2-W zone, the site must achieve a minimum plot ratio for the B1/B2 uses before White uses can be allowed (eg. a site zoned as "4.2[B-2W]", the permissible B1/B2 uses must achieve a minimum plot ratio of 2.5 before White uses can be allowed up to the maximum prescribed for the whole development). For proposals under the Warehouse Retail Scheme, sites will be rezoned from B1 or B2 to B1-W/B2-W zone and the GPR will be based on the actual proposal.

**Figure 2: Buffer Requirements Along Roads**

PROPOSED USE/DEVELOPMENT <sup>1</sup>		ROAD BUFFER (MINIMUM)	GREEN BUFFER <sup>2</sup> (WITHIN ROAD BUFFER)
Category 1	Residential/Educational (6-storeys or above)	30 m	5 m
	Residential/Educational (up to 5-storeys)	24 m	5 m
	Commercial/Industrial/Institutional/Multi-storey carpark(MSCP)/Place of worship	15 m	5 m
Category 2	Residential/Educational (6-storeys or above)	15 m	5 m
	Residential/Educational (up to 5-storeys)	12 m	5 m
	Commercial/Industrial/Institutional/Multi-storey carpark(MSCP)/Place of worship	7.5 m	3 m
Category 3	Residential/Educational (6-storeys or above)	10 m	3 m
	Residential/Educational (up to 5-storeys)	7.5 m	3 m
	Commercial/Industrial/Institutional/Place of worship	5 m	3 m
	MSCP <sup>3</sup>	-	-
Category 4 – 5 & Slip Roads	Residential <sup>4</sup> /Educational	7.5 m	3 m
	Commercial/Industry/Institution/Place of Worship	5 m	3 m
	MSCP <sup>3</sup>	-	-

## NOTES:

- 1 For the Central Area, the buffer standard for residential developments in the River Valley/Orchard/Newton Planning Area is 7.5m (minimum, of which 3m is for the green buffer). The buffer standard for residential developments outside these three Planning Areas as well as other types of developments within the Central Area will be determined by urban design considerations.
- 2 The following definitions are adopted for the interpretation of buffer zones
  - \*A buffer is defined as a strip or an area of land which falls either between the road reserve and the building line or between the building lines of neighbouring structures.
  - \*A physical buffer is a buffer within which car park, driveway, cycle tracks, jogging tracks, walkway and small ancillary structures e.g. guardhouses, flag-poles/ lamp posts, sign posts, bin centres, gas pressure regulator kiosks, gas governor houses-types A & B, overground (electricity) boxes, ring main compact units-reinforced concrete structure/ fenced-up area, below-ground-level structures and canopies for pump islands within petrol service stations may be permitted.
  - \*A green buffer is the segment within the road buffer that is meant for tree planting and turfing only. Small structures e.g. guardhouse, flag poles, lamp posts may be permitted.
- 3 The road buffer for MSCPs facing a Category 3-5 road is based on that for the predominant use of the development
- 4 For landed housing with the sides/rear fronting a Category 5 road, the buffer standard is the same as the minimum boundary clearance requirement. There is no need to provide any green buffer.
- 5 Reserves for drains sewers and minor roads bordering along expressways or major arterials may be considered as part of required buffers for expressways and major arterials.
- 6 For a drainage reserve with a width greater than that of the buffer and bordering along expressways of major arterials, a planting strip is to be provided within the site nearer to the building line. An additional buffer zone will not be required. However; the Drainage Department, ENV may impose such requirements from time to time for technical reasons.
- 7 The classification of the road category is obtainable from LTA through the purchase of the Road Interpretation Plan (RIP).



**Figure 3: Quantum Control for Industrial/Warehouse / Utilities / Telecommunication Development**

QUANTUM CONTROL	USE TYPE	SINGLE-USER INDUSTRIAL / WAREHOUSE / UTILITIES / TELECOMMUNICATION DEVELOPMENTS	MULTI-USER INDUSTRIAL / WAREHOUSE / UTILITIES / TELECOMMUNICATION DEVELOPMENTS
60%(MINIMUM)	Predominant Use	Manufacturing, production, assembly, servicing, repair, workshop, storage, e-business <sup>1</sup> and core media activities  Warehousing (For warehouse only)	The predominant industry/warehouse/utilities/telecommunication/ e-business/core media activities use shall be at least 60% of the total GFA. This may include ancillary store/ancillary warehouse which are used as storage for raw materials and work in progress.
40%(MAXIMUM)	Ancillary/ Secondary Use	Ancillary office, meeting room, sick room / first aid room, toilets, M&E services, industrial canteen <sup>2</sup> , showroom <sup>3</sup> , childcare centre <sup>4</sup> and selected commercial uses <sup>5</sup>	These are uses that support the predominant industrial/warehouse/utilities/telecommunication operations conducted within the same premises. Examples include management office, corridor, staircase, lifts, sick room / first aid room, communal toilets and M&E services. Industrial canteen, showroom, childcare centre and selected commercial uses can also be considered.

**NOTES:**

**1** E-business activities include telecommunications, call centre, data farm/data centre and Internet Service Provider. Call centre can be located in Business Park and Business 1, but not Business 2 zones.

**2** Industrial canteens are capped at a size of 700sqm or 5% of the total proposed GFA per development, whichever is lower.

**3** Showroom is confined to the 1<sup>st</sup> storey of the development.

**4** Childcare centre is levied Group E Civic & Community Institution (C&CI) rates for the purposes of computing development charge/differential premium.

**5** Selected commercial uses are subject to locational criteria.

**6** Other ancillary uses which are not specified under “predominant use” column are to be treated as part of the 40% quantum.

**Figure 4: Allowable & Conditional Activities in the Business Parks**

<b>PERMITTED</b>	
1	Development / production of software, maintenance of software and user training
2	Upgrading of software
3	Computer system integration
4	Industrial training
5	Plastic product design & development
6	Fashion, furniture, jewellery & exhibition design
7	Oil rig design
8	Offshore structure design
9	Ships design
10	Computer systems design
11	Communication equipment design
12	Electronic instruments & device design eg IC
13	Audio / video product design
14	Electrical appliances & devices design
15	Automation equipment & systems design
16	Storage device (disk drives) design & development
17	Office automation equipment design
18	Opto-electronics devices design & development
19	Hybrid circuit modules devices design
20	Electric motors design
21	Electronic control systems design
22	Mechatronics components design & development
23	Tooling design
24	Prototype making
25	Production planning, technology & engineering development
26	Quality assurance, technical inspection & testing services
27	Engineering design & development centre
28	Technical service centre
29	Diagnostic product design eg. medical, biotech
30	Systems customising centre
31	Materials application centre
32	Publishing
33	CAD/CAM/CAE Support
34	Factory automation / CIM design & development
35	Information systems design & development
36	Product demonstration
37	Project planning & management
38	Equipment & component applications engineering
39	R&D laboratory
40	Geological analysis on well samples and rocks

**Figure 4: Allowable & Conditional Activities In The Business Parks  
(continued)**

<b>CONDITIONAL</b>	
1	Agricultural services
2	Plastic product services
3	Manufacture and repair of material handling equipment
4	Manufacture of machine tool accessories
5	Manufacture and repair of semi-conductor manufacturing equipment
6	Manufacture of electronic products and components
7	Manufacture of instrumentation equipment, photographic and optical goods
8	Other manufacturing industries
9	Supporting services to electricity, gas and water distribution
10	Air transport
11	Services allied to transport
12	Services allied to transport not elsewhere classified
13	Postal services
14	Communication services
15	Art and graphic design services
16	Medical and health services(except veterinary services and environmental health services)
17	Services allied to motion picture/video production/video distribution
18	Computer system integration including servicing and repair assembly of computer equipment
19	Electronic workshop for repair and system integration of data communication equipment and consultancy services
20	Petroleum, mining and prospecting services
21	Engineering consultancy services, oil exploration
22	International specialist engineering and consultancy services
23	Central distribution centres

**Figure 5: Maximum Allowable Plot Ratio/Storey Height for Place of Worship  
Developments**

LOCATION OF PW-ZONED SITE	GROSS PLOT RATIO CONTROL	STOREY HEIGHT CONTROL
Within landed and low-density housing areas with residential GPR $\leq 1.4$	Up to 1.0	Up to 2 or 3 storeys based on the specific storey-height control of the landed housing estate
At the fringe of landed and low-density housing areas with residential GPR $\leq 1.4$	Up to 1.4*	Up to 4 storeys*
Within HDB estates and in areas with residential GPRs $> 1.4^{**}$	Up to 1.6*	For GPR $\leq 1.4$ , up to 4 storeys* For $1.4 < \text{GPR} \leq 1.6$ , up to 5 storeys, within 25m envelop control (including attic)#
Within or at the fringe of industrial estates**	Up to 1.6*	For GPR $\leq 1.4$ , up to 4 storeys* For $1.4 < \text{GPR} \leq 1.6$ , up to 5 storeys, within 25m envelop control (including attic)#
Within Central Area and within other commercial centres, including party-walled developments such as in the Geylang area	Subject to evaluation	Subject to evaluation

**NOTES:**

\* Subject to detailed localised planning and traffic assessment.

\*\* Further intensification beyond GPR 1.6 could be considered in exceptional cases if there are special circumstances that warrant exceptions to the guidelines, provided that the relevant agencies have assessed that the potential impact arising from intensification are adequately addressed.

# An additional height allowance of up to 5m can be granted if purpose-built above-ground car park floors are provided. The additional height allowance would need to be designed sensitively and will be subject to detailed evaluation (e.g. site context, visual impact, etc).

**Figure 6: Maximum Allowable Plot Ratio/Storey Height for Civic & Community Institution Developments (except for home for the aged, home for the disabled and**

**community club/centre) and Educational Institutions (except for special education school)**

<b>LOCATION OF C&amp;CI AND EDUCATIONAL INSTITUTION ZONED SITE</b>	<b>GROSS PLOT RATIO CONTROL</b>	<b>STOREY HEIGHT CONTROL</b>
Within landed housing estates	Up to 1.0	Up to 2 or 3 storeys based on the specific height control of the landed housing estate
At the fringe of landed housing estates and within low-density housing areas with surrounding residential GPRs not exceeding 1.4		Up to 3 storeys
Within HDB estates and in areas with surrounding residential GPRs greater than 1.4	Up to 1.4	Up to 4 storeys
Within industrial estates or at the fringe of industrial areas	Up to 1.4	Up to 4 storeys
Within Central Area and within other commercial centres, including party-walled developments such as in the Geylang area	Subject to evaluation	Subject to evaluation

**NOTES:**

- 1** Higher storey heights may be considered on a case by case basis .
- 2** Existing C&CI developments are allowed to intensify up to the above plot ratio bands, as and when there are proposals for additions and alterations or redevelopment.
- 3** Existing C&CI developments with approved gross plot ratios exceeding the above plot ratio bands, are allowed to redevelop up to the previous approved gross plot ratio.

**Figure 7: Quantum Control for Warehouse Retail / Industrial Retail Building**

QUANTUM CONTROL		USE TYPE	EXAMPLE OF ALLOWABLE USES
60%(min)	36% (min)	Predominant Warehouse/Industrial Use	All industrial uses allowed for developments in B1/B2 zone such as: Manufacturing, production, assembly, servicing, repair, workshop, storage, e-business and core media activities
	24% (max)	Ancillary Warehouse/Industrial Use	Ancillary office, meeting room, sick room / first aid room, toilets, M&E services
40%(max)		Ancillary Retail Use	Must be supporting & ancillary to the warehouse / industrial activities.
USES WHICH CANNOT BE ALLOWED			Independent retail unrelated to the warehouse/ industrial use

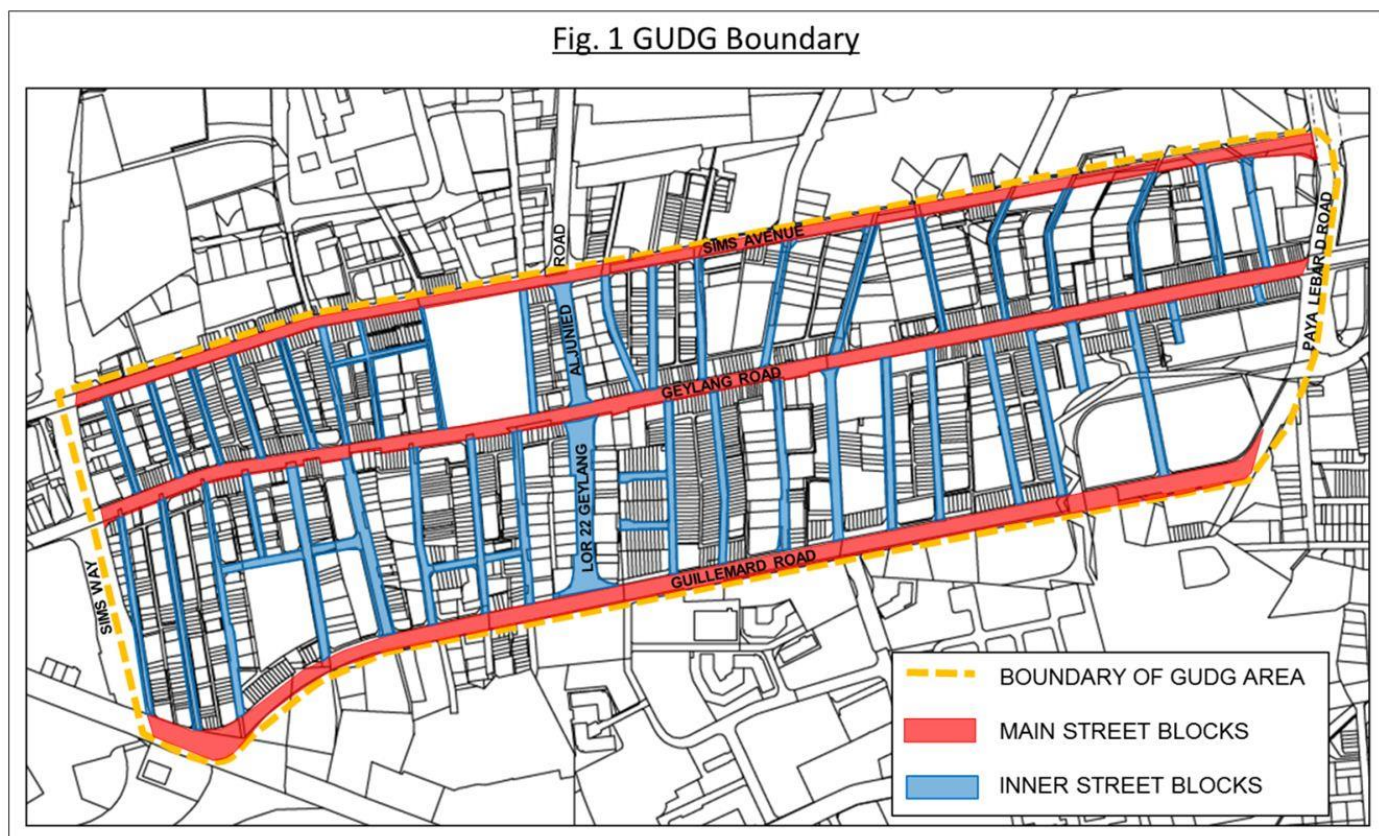
**NOTES:**

WRS is applicable to sites zoned B1 or B2 in the outlying area (Refer to EDB press release - Annex 1). Other sites proposed for the scheme will be subjected to evaluation and approved on a case by case basis.

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## GEYLANG URBAN DESIGN GUIDELINES (GUDG)

- 1 The objective of the GUDG is to guide development works within the area bounded by Sims Avenue, Paya Lebar Road, Sims Way and Guillemard Road and create a consistent streetscape. See Figure 1 for the boundary where the GUDG applies.
- 2 The design guidelines are stipulated in terms of the 'main' street block and the 'inner' street block. The main street block refers to developments along Geylang Road, Sims Avenue and Guillemard Road, while the inner street block refers to the remaining developments along the lorongs within the GUDG boundary.



### PARAMETERS

- 3 The following parameters apply:
  - (a) **Building Form**
    - (i) Buildings within the GUDG area shall be party wall developments.
    - (ii) For developments along the main street block, the full party wall is to be provided.
    - (iii) For developments in the inner street block, a minimum depth of 4.0m full height party wall is required. The 4.0m party wall shall begin exactly at the front setback.
    - (iv) There shall be no openings along the common party wall.



**(b) Minimum Plot Size**

- (i) New developments within the GUDG area, except for institution developments, are required to meet a minimum plot size of 600sqm to facilitate better communal spaces and car parking facilities.
- (ii) The aggregate land area of the left behind plots must also meet the minimum plot size of 600sqm before any redevelopment can be approved. This is to ensure that the development potential and quality of left behind plots will not be compromised.
- (iii) Any infill plots with site areas of less than 600sqm, which are sited between two existing developments which have been redeveloped, will be assessed on a case-by-case basis.

**(c) Storey Height & Overall Building Height**

- (i) For developments along the main street block, the storey height control is at 5-storeys. The overall building height, excluding the attic, is not to exceed 18m (See Figure 2A).
- (ii) For developments along the inner street blocks, the storey height control is at 8-storeys. The overall building height, excluding the attic, is not to exceed 26m (See Figure 2B).
- (iii) The overall building height is to be measured from the minimum platform level stipulated by the PUB.

**(c) Setback**

**Main Street block (see Figure 2A)**

- (i) The front façades of the buildings, except for residential & institutional developments along Guillemard Road, are required to abut the road reserve line/ service road exactly.
- (ii) Residential & institutional developments along Guillemard Road are to be set back exactly 3.0m from the road reserve line/ service road at the front of the building.
- (iii) The rear façades of the buildings are allowed to abut the road reserve line/ service road.

**Inner Street blocks (see Figure 2B)**

- (i) The front facades of the building are to be set back exactly 3.0m from the road reserve line. A 2m green buffer for tree planting is to be provided within the 3.0m setback area.
- (ii) For sites along Lorong 22 and Aljunied Road, the front façades of the buildings are to be set back by exactly 7.5m from the road reserve line. A 3m green buffer for tree planting is to be provided within the 7.5m setback area. For sites along the eastern side of Lorong 27A, the front facades of the buildings are allowed to abut the road reserve line.
- (iii) The exact front setback requirement is to ensure a consistent alignment of the front building facade.

(iv) The rear setback shall be 1.0m(minimum) from the road reserve line of any rear service road/backlane , or 4.0m from the common boundary line where there is no rear service road/backlane.

**(e) Vehicular Access**

Vehicular access to the developments, including the carpark and service areas (e.g. bin centre) shall be taken from the rear service road. Vehicular access from the front of the developments is discouraged.

**(e) Covered Walkway**

(i) For developments along the main street blocks and on the eastern side of Lorong 27A, a covered walkway of 3.0m width is to be provided along the front of the building to open out onto the open walkway within the adjacent Road Reserve.

(i) Where columns are provided, the internal clear width of the covered walkways is to be at least 2.4m.

(iii) Covered walkways need not be provided for full residential & institutional developments along Guillemard Road, nor for other developments along the inner street blocks.

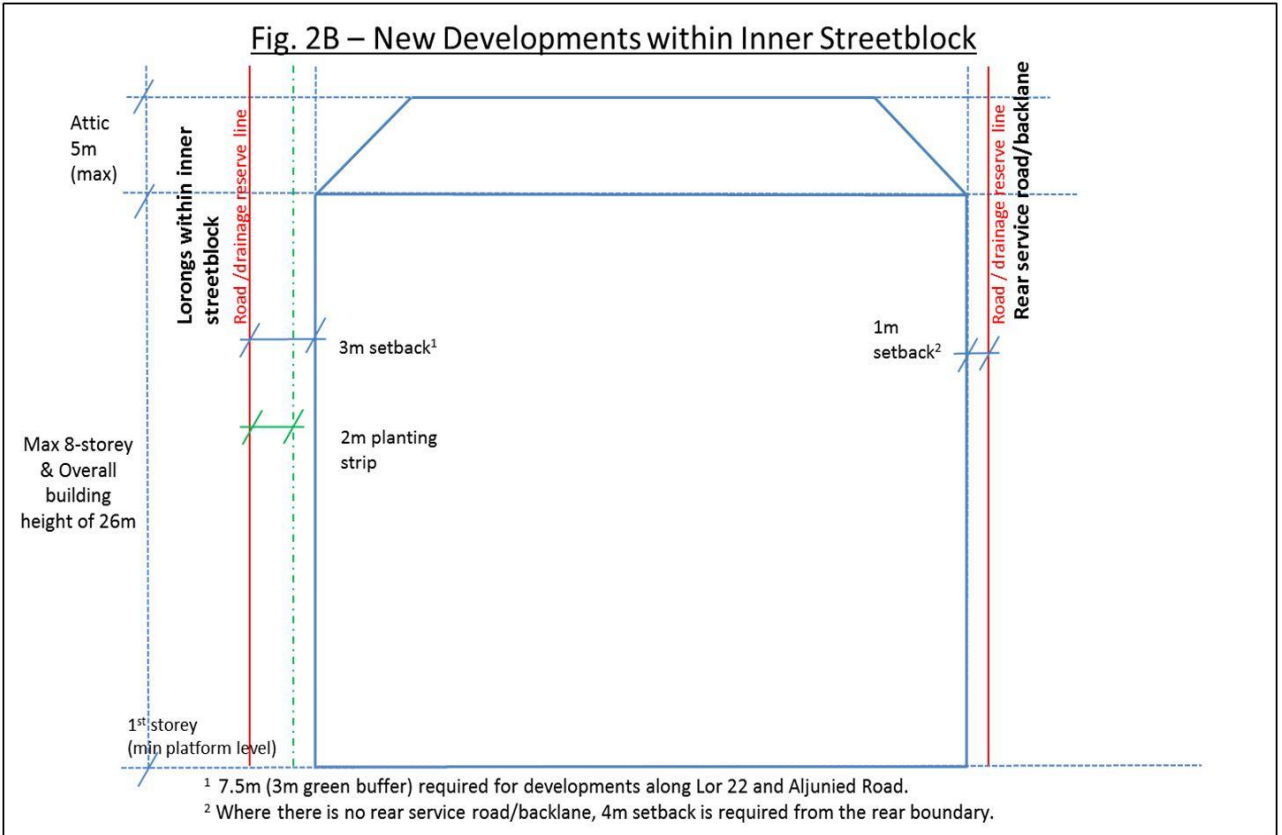
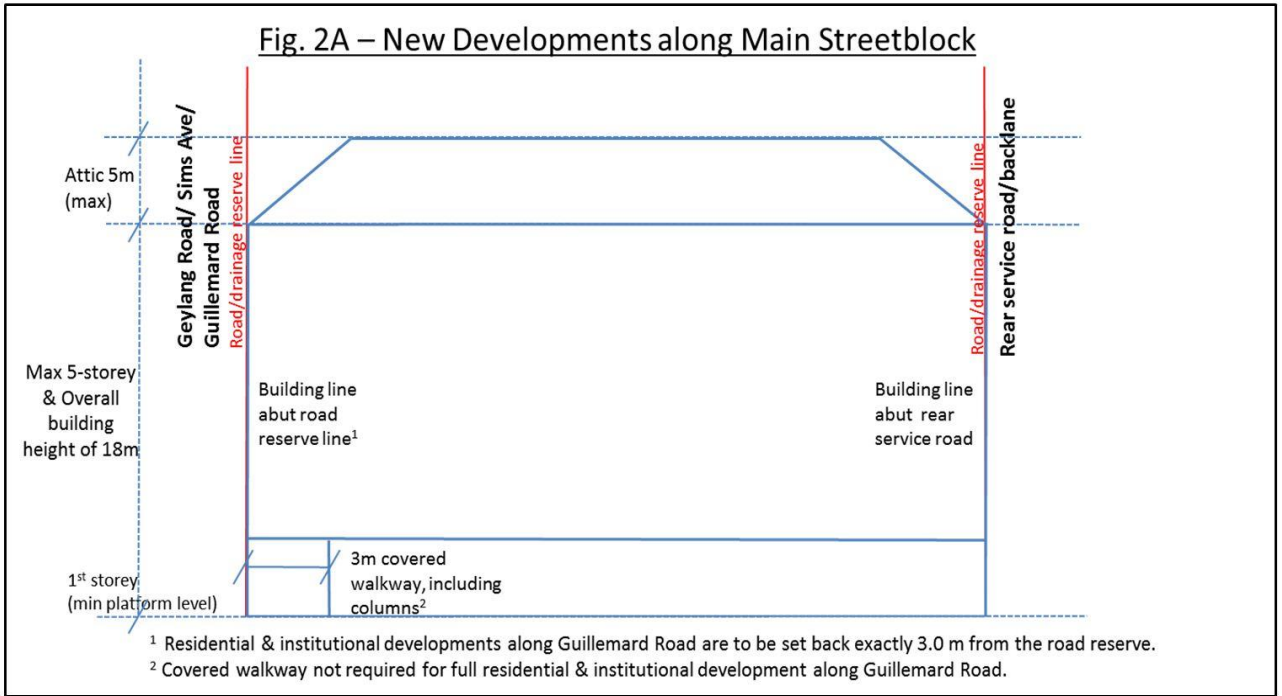
**(e) Roof**

The roof form is to be determined on individual merits. Attics can be permitted, provided they comply with the prevailing attic guidelines.

**SUMMARY OF GEYLANG URBAN DESIGN GUIDELINES (GUDG)**

	<b>MAIN STREET BLOCK</b>	<b>INNER STREET BLOCK</b>
DESCRIPTION/ LOCATION	Design Controls for redevelopment proposals along Geylang Road, Sims Avenue and Guillemard Road	Design Controls for redevelopment proposals along the lorongs within the inner street blocks
BUILDING HEIGHT	The overall height of the development, excluding the attic, should not exceed 5 storeys and an overall building height of 18.0m.	The overall height of the development, excluding the attic, should not exceed 8 storeys and an overall building height of 26.0m
	The overall height of the building is to be measured from the minimum platform level stipulated by PUB.	
SETBACK	<b>Front</b> To about road reserve line/service road except for residential & institutional developments along Guillemard Road	<b>Front</b> For inner Lorongs • 3.0m from road reserve (including 2.0m green buffer for tree planting).  For Lorong 22/Aljunied Road

	<b>MAIN STREET BLOCK</b>	<b>INNER STREET BLOCK</b>
		<ul style="list-style-type: none"> <li>• 7.5m from road reserve (including 3.0m green buffer for tree planting)</li> </ul>
	<b>Rear</b> To abut rear service road.	<b>Rear</b> The rear building line is to be taken either from the rear boundary line or the road reserve line where applicable.  Minimum setback: With backlane: 1.0m Without backlane: 4.0m
<b>COVERED WALKWAY</b>	A 3.0m-wide covered walkway, is to be provided along the front of the building with column expressed. Not required for full residential & institutional developments along Guillemard Road.	Not required, except for along the eastern street block of Lorong 27A. This will follow the guidelines indicated for the main street block.
<b>OTHER REQUIREMENTS</b>		
<b>BUILDING FORM</b>	Buildings are to be built from party wall to party wall. For inner street blocks, the minimum depth of the party wall is 4.0m	
<b>MINIMUM PLOT SIZE FOR REDEVELOPMENT</b>	The plot size for all new Commercial developments and Residential flat developments within the GUDG area is to be at least 600sqm.	
<b>ROOF FORM</b>	To be determined on individual merits.	
<b>ACCESS TO CAR PARK &amp; SERVICE AREAS</b>	To be taken from the rear service road. Access from the main street is discouraged	
<b>AIR CONDITIONER UNITS &amp; LEDGES</b>	Air conditioner units are to be located out of sight from the main roads and lorongs. Air conditioner ledges are allowed to encroach up to 0.5m onto the rear setback for the inner street blocks.  For Conservation buildings, the prevailing guidelines regarding the location and screening of mechanical and electrical services will apply.	



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