Central and Wan Chai
Reclamation Feasibility Study

Technical Paper T4
Evaluation of Urban Design Controls

February 1988

Maunsell Consultants Asia Ltd
in association with
URBIS Ltd and Balfours International (Asia)
This book was a gift
from
Faculty of Architecture
The University of Hong Kong
Central and Wan Chai Reclamation Feasibility Study

Technical Paper T4
Evaluation of Urban Design Controls

February 1988
TECHNICAL PAPER
EVALUATION OF URBAN DESIGN CONTROLS

Index

1.0 Introduction 1- 5

2.0 District and Local Plans
2.1 Background 6- 7
2.2 Evaluation of Layout Plans 7- 9
2.3 Opportunities and Constraints 10-14
2.4 Recommendations 14-16

3.0 Lease Conditions
3.1 Background 17-20
3.2 Assessment of Relevant Conditions 20-34
3.3 Lease Conditions relating to Detailed Conceptual Designs 34-39
3.4 Conclusions 40-41
3.5 Recommendations 41-46

4.0 Control Drawings
4.1 Background 47-50
4.2 Regulations of Control Drawing Functions 50-55
4.3 Conclusions 56
4.4 Recommendations 57-58

5.0 Buildings Ordinance Controls
5.1 Background 59-61
5.2 Regulations having a Major Impact on Urban Design 62-85
5.3 Bonuses, Modifications and Circular Letters 85-92
5.4 Conclusions 92
5.5 Recommendations 93

6.0 Summary of Recommendations 94-100

Tables
Table 5.1 Types of Regulation 61
Table 5.2 First Schedule : Percentage Site Coverages and Plot Ratios 63
Table 5.3 Analysis of Commercial and C/R Sites in Central District 91
EVALUATION OF URBAN DESIGN CONTROLS

Synopsis

This technical paper has been prepared in accordance with Task A.2.2 of the Inception Report. The purpose of the paper is to explore the range of building control mechanisms that are currently in force in Hong Kong, and that have clear implications for urban design, particularly in the Metropolitan Area.

Existing forms of building and development control are geared either towards achieving and maintaining standards of public health, or towards compliance with measures that limit the extent of development and ensure that new buildings and their component parts are broadly compatible with the surrounding land use and circulation system. For an extensive area of new reclamation in a strategic location however, existing controls must be considered not only in terms of their usefulness in helping to achieve the above factors, but in terms of the opportunities and constraints they afford to the achievement of coherent and well articulated urban design. In particular this relates to factors that effect three-dimensional form, inter-connectedness, and continuity.

Whilst building design itself is outside the scope of this study, the general massing of buildings and the ways in which these relate to each other and to the wider urban fabric in both
functional and visual terms, in a corner-stone of urban design and one of the most crucial determinants of city-scape. It is therefore considered that the overview presented in this paper will enable critical decisions to be made during the detailed layout and design stage of work, enabling the introduction of appropriate control measures to achieve certain design ends without being pervasive or in conflict with existing means of control.

The evaluation examines the following:
- District and Local Plans and the degree to which these can be used most effectively to circumscribe urban development.
- Lease Conditions in terms of the degree to which these are adequate in engendering positive urban design benefits.
- Control Drawings and the degree to which these can realise positive aspects of urban design without constraining either architectural innovation or development impetus.
- Buildings Ordinance Controls and their relevance to urban design.
1.0 Introduction

1.1 The nucleus of a formal planning structure in Hong Kong did not arise until 1953, when high-rise buildings began to permeate the grid-like street patterns in the urban area that had originally been laid out for low-density development. This new spatial pattern was the result of the limited amount of flat land available, coupled with the fact that capital investment in redevelopment was left entirely to the private sector. Rapid re-development, which took place in accordance with the 1955 Buildings Ordinance, was accompanied by great increases in residential density, leading to particularly high concentrations of people in certain areas and to the consequent deterioration of an already fragile urban infrastructure. However the most enduring impact on design was the establishment of small plots, or lots of varying shapes, many of which have undergone redevelopment several times during the past thirty years. Succeeding generations of building in the inner urban cores have therefore produced a situation where new development is generally reinterpreted according to the environmental patterns and constraints of its predecessors.
1.2 Most current land use control techniques applied in the urban area, are weighted heavily towards ensuring that public health standards are maintained through vigorous and uncompromising adherence to building controls, and generally through an urban planning system that is concerned primarily with managing and modifying the existing land use framework, rather than changing it in any radical way. However for large sites, largely unencumbered by existing buildings or infrastructure, and with no natural features to be conserved or protected, the means of control must be considered not only in terms of its usefulness, but also in terms of the opportunities and constraints it affords to the achievement of coherent urban design. This implies the need for an examination of various existing design and control procedures that influence urban form and which require Government intervention in the normal planning and design process. These are threaded together by their relevance to the design of attractive urban development.

1.3 Government's Monopoly on Land Ownership is reflected in its control over private development procedures via lease conditions, planning legislation and building regulations. In addition to these controls, Government itself oversees a substantial building programme in terms
of housing and municipal facilities. The mix of private and public development shapes the urban environment, but it is of course in the predominantly private sector that the ground rules of land use control must be adequately harnessed to the commercial drive in ways that ensure the integration of design aspects meaningful to the wider environment.

1.4 The urban form of Central District and Wan Chai has developed along lines that are perhaps unintentional but not accidental. They are the result of entirely rational but diverse decisions, building controls and zoning laws, whose inter-relationships and long-term effects have not been adequately considered in design terms. Policy decisions, controls and the general metropolitan context changes over time, and Hong Kong, in common with other major world cities has taken on, in term of scale, massing and density, a completely different form from that originally planned. The form of much new commercial development in the urban area is defined to a large extent by building regulations, lease conditions and site constraints, and the consequences of this in terms of the ability to achieve stimulating and coherent cityscape, need to be fully understood. If controls are to be pervasive, then they also need to be positive in nature – a formula or 'specification' of opportunities rather than a prohibition of what should not be done.
1.5 The general massing of buildings and the resulting architectural form is one of the major determinants of city-scape. Considerations of mechanisms that, to a lesser or greater extent, tend to influence building design and disposition is therefore a cornerstone of urban design, and the extent to which they can be regulated under existing control mechanisms and legislation, whilst respecting the prevailing lands policy, must be determined at the outset of the study. At the same time diversity of design must also be encouraged. The critical factor is to reconcile design and commercial factors, and elaborate on the means by which this can be achieved. It is the essence of urban design to provide a framework within which to meet changing economic contexts and occasionally to reconcile conflicting demands exemplified by a continuing redefinition of commercial needs and standards. The ways in which these are resolved will establish the eventual scope for architectural invention and viability.

1.6 Chapter 5 of Town Planning in Hong Kong (Town Planning Division of the Lands and Works Department, 1984) includes a chapter on Development Control and Practice. This emphasises the freedom given to private initiative in the design of built development, but also the need for a certain degree of restrictive control.
Statutory control is introduced through various mechanisms. The Town Planning Ordinance covers the preparation of Outline Zoning Plans for existing and potential designated urban areas, but has no direct power of development control. It is therefore the Buildings Ordinance and Government/Crown Lease Conditions that have the greater impact on urban design. In terms of non-statutory control, the major factor in terms of urban design is Density Zoning which specifies three basic types of residential density zoning in the Territory. In this respect, Zone 1 covers the main urban area where building development is permitted to go to full Building (Planning) Regulations Standards. Building volume is controlled in different density zones through restrictions on site coverage and plot ratios.

1.7 An evaluation of the major existing control mechanisms is set out in the following sections as follows:
- District and Local Plans
- Lease Conditions
- Control Drawings
- Buildings Ordinance Regulations
2.0 District and Local Plans

2.1 Background

2.1.1 A number of Government departments are involved in the preparation of plans and these vary considerably as to their scope and nature. At the district level, several types of plans are produced which, together with development control mechanisms, have an important influence on urban design.

2.1.2 Statutory Outline Zoning Plans (OZPs) are prepared under the provisions of the Town Planning Ordinance, and indicate the zoning categories in the form of proposed broad land use patterns as a guide to both public and private investment. A Schedule of Notes is attached to each statutory plan, showing the uses which are always permitted and others for which the Town Planning Board's permission must be sought.

2.1.3 Outline Development Plans (ODPs), normally drawn to a scale of 1:2500, are prepared within the framework of the Statutory Outline Zoning Plans and those for the Urban Area are generally prepared by the Urban Area Development Office under the auspices of the Territory Development Department. The functions of the ODPs is to supplement
the OZPs and to show the land use and road framework in greater detail. The ODPs therefore indicate the specific use of sites within each broad zoning category, as a guide for the reservation and allocation of sites, and for land sales.

2.1.4 Layout plans are produced at scale 1:1000 and serve as 'action' plans which are used as the basis for formulating lease conditions and development programmes. Layout plans indicate the detailed land use and schematic development proposals within the framework of the ODPs. They generally apply to large areas of newly-formed land or comprehensive redevelopment areas, and include basic design information such as formation levels, site constraints, site access etc. and once approved by Government, they are binding on all departments. They can then be used as a basis for land sales and allocations, as well as for the implementation of land formation projects such as the Central and Wanchai Reclamation, and the construction of roads.

2.2 Evaluation of Layout Plans

2.2.1 The consultants have discussed the preparation of layout plans with the UADO and the degree to which these can be used most effectively to circumscribe future development according to wider planning objectives rather than prescribe it in terms of wider design criteria.
A number of existing layout plans for various parts of the urban area have been examined. These have included:

- Kowloon Planning Area No.1 - Tsim Sha Tsui East
  - C/R Area Layout Plan
    No. L/K1A/1\(^B\)

- Hong Kong Planning Area No. 5
  - Wan Chai Reclamation Layout Plan No. L/H5/38\(^B\)

- Hong Kong Planning Area No.5 (Part Layout of Morrision Hill Area : Plan No. L/H5/12\(^Z\))

- Hong Kong Planning Area No.4
  - Admiralty Area Plan No. L/H4/43/1\(^H\)

- Hong Kong Planning Area No. 3
  - Western (Stages I and II) and Central (Stage V) Reclamation Layout Plan No. L/H3A/1\(^A\)

2.2.2 The land use zoning of a layout must conform with the statutory zoning plan but would generally show more detail. The detail has no statutory effect but will generally be followed in land transactions. The basic elements of the plans would then form part of the lease condition for the sale of Government land. However, if the use zoning shown on the layout plan is more detailed
than that shown on the statutory plan, and this conflicts with the use permitted under existing lease conditions, the plan can only serve as a guide to the type of development which Government wishes to encourage. Layout plans are amended with additional details as individual sites are sold or designs prepared.

2.2.3 The preparation of a layout plan is based on reconciling the requirements of various Government Departments, although it is apparent that the plan preparation process does not, in most cases, commence with an agreed land-use budget. However, the outstanding requirements of Government users generally act as a catalyst to a preliminary layout, together with Highways and Transport Department criteria.

2.2.4 If one single developer is responsible for a large part of the scheme, and it is subject to detailed design at one time, the results should be better than individual site development. Many large-scale planning layouts are susceptible to major changes because they are carried out by different architects, for different clients, over a long period of time, long enough for development conditions to change.
2.3 Opportunities and Constraints

2.3.1 The current process and the resulting plan can be assessed in terms of both opportunities and constraints:

2.3.2 Opportunities:

i. the plan can provide a firm guide to eventual site layout within a specific context, enabling detailed proposals for individual sites to be prepared with respect to adjoining development, both existing and proposed, and to future circulation and road patterns.

ii. the plan can provide a basis for roads, infrastructure and major public works to be phased according to the development programme.

iii. the plan can provide a measure of control for private development sites in terms of rationalising vehicular access and pedestrian circulation links. This is exemplified by the ground and podium layout plans for the Admiralty Area where 4 large commercial sites are physically linked to the Queensway Shopping Mall which physically binds together the retail pattern, and provides a directional emphasis to pedestrian circulation in the form of a linear shopping mall. This leaves the ground level free for vehicular circulation, Bus/PLB terminus etc.
iv. the plan can provide a mean of coordinating G/IC and open space uses within a coherent site arrangement.

v. the plan can provide an appropriate layout for commercial or commercial/residential sites showing their relationship and possible connections.

vi. a mechanism exists to control tower location and the number of towers situated at podium level by means of no-build zones above 15m. This can effectively act to control building mass and height by directing tower development into particular areas with a limited plan size. It is considered that this mechanism could be used effectively in certain circumstances on the Central and Wan Chai Reclamation, but should only be used to control building mass and volume, rather than the actual design profile. It should also be the subject of detailed site and design evaluation in close consultation with the Land Office, to ensure that this design mechanism would not compromise the site sale.

2.3.3 Constraints

i. in reconciling diverse requirements within a limited layout plan area, the layout frequently becomes both inflexible and rigid.
ii. incompatible uses tend to be integrated within a layout plan area with few meaningful functional connections. This applies particularly to G/IC uses which are frequently located on sites remote from the area they are intended to serve. The Western Reclamation Area, for example, is planned entirely for public uses on individual sites, with some uses scheduled as 'undetermined' until the need for a third harbour crossing and approach roads are resolved. Most of the proposed uses serve a district-wide function, with no obvious functional propinquity to neighbouring sites or the harbour-frontage.

iii. once sites are allocated for Government uses these tend to become 'fixed' despite changing circumstances, priorities, and departmental budgets. Sites are frequently zoned as 'G' for Government use and the actual use designated at a later stage, or alternatively zoned as OU for other uses.

iv. Commercial or C/R sites are generally designated in square or rectangular form and must meet the requirements of the relevant District Lands Office. Sites therefore tend to follow a rigid road layout pattern, rather than create interesting built edges.
that can be used to articulate and define space. This tends to be the case with the Wan Chai Reclamation Layout Plan where, despite linking footbridges and pedestrian circulation space at podium level, individual sites and functions appear compartmentalised. In practice however this is accentuated by the lack of a coherent retail structure at ground and podium level, the result being that the circulation pattern is unfocussed.

v. no consideration is given to the urban and civic design implications of 3-dimensional massing, other than those dictated by existing controls. Good urban design has never been regarded up until the present time as an objective in its own right, and even underlying principles tend to be disregarded if these prove to conflict with other departmental requirements, particularly those of the Lands Department.

vi. areas designated as open space tend to be defined by rigid geometrical edges and are often used for 'filling in' parts of the planning framework, and separating buildings, rather than as part of a wider pattern or linked series of spaces. The Tsim Sha Tsui East layout plan provides for an interesting sequence of public open spaces in the form of a pedestrian precinct, piazza and other major areas of
DOS and LOS which are designed as an integral part of the layout. However, the planning geometry tends to constrain the functional and spatial relationship between both open space and adjoining buildings and this is accentuated by an incongruous vehicular circulation system.

vii. the necessity to gain a consensus of agreement on the layout between various Government agencies, whilst in itself allowing a wide level of participation in the plan formulation process, tends to result in a final design that represents an expedient compromise to efficiency.

2.4 Recommendations

i. An agreed land-use budget should be compiled before the commencement of plan preparation, based on a comprehensive evaluation of Government and commercial needs, and the underlying district planning structure within which the layout area will fit. Schematic layouts showing the layout principles and circulation elements should be presented to all relevant bodies before the final layout is prepared.

ii. Layout plans should seek to articulate physical linkage and correspondence between sites zoned for compatible uses. In certain cases, control drawings
and lease conditions should be used to reinforce these elements.

iii. Emphasis should be placed on a clear pedestrian circulation and open space framework at ground and podium level, and this should, in areas of commercial development, be accentuated by a strong directional retail pattern.

iv. Sites should not be designated for indeterminate or abstract uses to be defined at some later stage, unless further study is required.

v. Sites for G/IC and educational uses, unless serving a metropolitan or territory-wide function, should be located within the district they are intended to serve rather than on isolated sites adjacent to incompatible uses. This is particularly important for local open space, primary schools, clinics etc. In terms of redressing environmental deficiencies, the consultants consider that it should be possible in theory to use the proposed reclamation for non-in-situ land exchange in order to ensure the best utilisation of land in adjoining areas, particularly those undergoing urban renewal programme, it is not considered advisable to use the new reclamation to simply make good district deficiencies. Instead a suitable mechanism(s) to
implement necessary G/IC and open space facilities in appropriate locations within the existing districts should be investigated. In a similar way some existing G/IC uses which represent under utilisation of land could be moved to multi-user buildings by way of exchange. An important aspect of this is that land exchange on a metre-by-metre basis may not form part of the 50 ha. limit, and this should be examined further to assess land policy implications. However low-rise G/IC uses can also be used to reduce overall building massing and density, particularly in strategic locations adjacent to public open space and the waterfront, and this should be considered as part of the detailed plan preparation process.

vi. Layout plans should be used as a vehicle for expressing urban design guidelines, and should therefore take into consideration the likely built form resulting from land-use designations, particularly that relating to commercial and C/R development. In practice it is clear that site designation, taking into account viable development parcels and building regulations, has a major effect on massing of tall structures, and this should be considered in terms of urban design opportunities at the appropriate stage.
3.0 Lease Conditions

3.1 Background

3.1.1 Lease Conditions establish arguably the most consistent type of design and development control, comprising a standard general form of document with General and Special Conditions dealing with land use, built form, and circulation.

3.1.2 Land is sold or granted to the private sector for development on leasehold terms, and lease conditions are drawn up by the Lands Office of the Buildings and Lands Department after consultation with the Town Planning Office and other relevant Government departments. In the case of comprehensive large-scale private development, the lease conditions usually require a master layout plan to be prepared and submitted to Government for approval. In order to encourage a self-contained project, Government may require additional specifications on building density, G/IC uses, and access roads which should then be consolidated in modified lease covenants.

3.1.3 A set of lease conditions establishes the particulars and conditions of all sale sites, held by public auction or open to tender. These are set out in the form of:

- Particulars of the Lot including Registry Lot Number, Location, Area and Government/Crown Rent.
- General Conditions which refer to detailed aspects of auction or tender, setting out, maintenance, breach of conditions and entitlement to a Government/Crown lease.

- Special Conditions which refer to the possession of the site, formation of particular areas, access, compliance with Ordinances and development obligations.

3.1.4 In terms of development control, these conditions, in combination with accompanying diagrams and site plans, effectively define the extent, use and parameters of all built structures, and both vehicular and pedestrian access. In addition, for commercial/residential sites in new town central areas, in order to accord with control drawings and detailed particulars of development, a Technical Schedule establishes precise layout data including a specification of C/R areas, maximum number of units, and position of major elements within the site. This type of schedule is also used for the incorporation of major public facilities e.g. a bus terminal within urban area commercial sites.

3.1.5 The consultants have undertaken an appraisal of sample sets of lease conditions in order to ascertain the degree to which controls for major unencumbered sites in the urban area are in themselves adequate in engendering positive urban design benefits.
Lease Conditions for the following sites have been examined:

<table>
<thead>
<tr>
<th>Registry No.</th>
<th>Location</th>
<th>Site</th>
<th>Area (Ha.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inland Lot 8571</td>
<td>Queensway</td>
<td>Pacific Place</td>
<td>1.069</td>
</tr>
<tr>
<td>Inland Lot 8582</td>
<td>Supreme Court Road</td>
<td>Pacific Place</td>
<td>1.615</td>
</tr>
<tr>
<td>Inland Lot 8668</td>
<td>Connaught Road C</td>
<td>Exchange Square</td>
<td>1.340</td>
</tr>
<tr>
<td>Inland Lot 8601</td>
<td>Sing Woo Road</td>
<td>Government Uses/Private Residential</td>
<td>0.252</td>
</tr>
<tr>
<td>Inland Lot 8466</td>
<td>Harcourt Road</td>
<td>World Finance Centre</td>
<td>0.321</td>
</tr>
<tr>
<td>Inland Lot 8615</td>
<td>Cotton Tree Drive/ Bond Centre</td>
<td>Queensway</td>
<td>0.631</td>
</tr>
<tr>
<td>Inland Lot 8423</td>
<td>Harcourt Road</td>
<td>Admiralty</td>
<td>0.571</td>
</tr>
<tr>
<td>Kowloon I.L. 10743</td>
<td>Canton Road</td>
<td>China Ferry Terminal</td>
<td>2.443</td>
</tr>
<tr>
<td>Kowloon I.L. 10585</td>
<td>Tsim Sha Tsui East</td>
<td>Shangri-La Hotel</td>
<td>0.400</td>
</tr>
<tr>
<td>Kowloon I.L. 10548</td>
<td>Tsim Sha Tsui East</td>
<td>Holiday Inn Harbour/View</td>
<td>0.266</td>
</tr>
</tbody>
</table>
3.2 Assessment of Relevant Conditions

i. Possession and Formation of Specified Areas

This generally involves the construction of roads and pedestrian ways within broad corridor alignments with the provision that these should be designed to the approval of Government, to include the provision and construction of such items as culverts, street lighting, fire hydrants and street furniture. Where appropriate, these must also comply with Technical Schedules relating to the provisions of major public facilities. The phasing and method of construction must also be specified prior to works being carried out. The purchaser must allow free access to Government whilst he is in possession of these areas, and cannot use the areas for temporary uses such as storage. In the Conditions for the Shangri-La Hotel (K.I.L. 10585) the Purchaser was required to form large areas adjoining the lot that were then taken over by the Highways Office and by USD for public open space. On completion, works are to be handed back to Government, and the Purchaser must indemnify Government against any future costs, claims or damages arising from the works.
ii. Compliance with Buildings Ordinance and Covenant
This ensures that all buildings, including structures intended for public use are in accordance with all Conditions and Ordinances, Byes-Laws and Regulations relating to building and sanitation in force in Hong Kong, and any amending legislation.

iii. Type of Development
This sets out the particular nature of buildings permitted. In some cases, for sites containing major public facilities this can be an extensive list. For Sing Woo Road, Happy Valley (I.L. 8601) this condition stipulates a particular type of Government accommodation at ground level, with a public multi-storey carpark above, apart from the commercial/residential component of the Lot. For Kowloon Inland Lot 10743 (Hong Kong - China Ferry Passenger Terminal) this covers the erection of a pier deck, and a podium structure over the pier deck comprising a ferry terminal for the berthing of vessels, together with associated passenger departure, arrival and baggage handling areas, offices, and public passage areas. Requirements and specifications for the design of the public uses were set out in accompanying Technical Schedules.
iv. Compliance with Development Conditions

This ensures that the design, disposition, height, external elevations and finishes, of any building must be subject to approval from Government. This also covers public pedestrian movement through the site at all reasonable times to link with adjoining areas.

v. Construction of Footbridges, Escalators and Stairways

This specifies the conditions under which footbridges, escalators and stairways, whose position is marked on a control plan, must be constructed in compliance with the standards of the Buildings Ordinance. This also includes for the maintenance of footbridges and connections, and for their use and access by the public. Lease Conditions for the Far East Finance Centre (I.L. 8466) the Bond Centre (I.L. 8615) and the Admiralty Centre (I.L. 8423) were required to build single storey footbridges to the Queensway Shopping Mall to be used by all members of the public. These must comply with the standards of the Buildings Ordinance and the design must be approved by Government. A sub-clause states that, in the event of non-fulfillment, these would be built by Government and the cost billed to the Purchaser. In the Conditions for K.I.L. 10585 in East Tsim Sha
Tsui, the Purchaser must acknowledge that in order to facilitate the construction of a footbridge, the future public roads adjacent to the lot may be temporarily or partially closed, and that no compensation will be due from Government.

vi. Construction of Tunnels
This relates to any Wayleave Agreements that might exist and that would be marked on a control plan. Tunnels would be reserved solely for Government use so long as this is not incompatible with the purpose for which the lot is sold, including the laying of pipes and cables. This gives Government the right to grant any wayleave or easement to other firms or organisations.

vii. Submission of Master Plans
This sets out the need for submission of Master Plans to Government for the development of the site in accordance with lease conditions, and provides a basis for the preparation of building plans which must be in compliance with the master plan.
viii. Development Obligation

This condition establishes the basis for development of the lot with buildings, ancillary works and facilities in accordance with the Master Plan, Technical Schedule and Drawings. This specifies the manner in which specific facilities, amenity areas and open space should be developed on various levels. This is particularly appropriate when a lot is divided into two or more sites, and where linkage and access are important for such facilities as Government accommodation, bus terminus, pedestrian plaza, parking areas and amenity areas. The condition may refer to a maximum bonus gross floor area for any specified ground level facility, notwithstanding Regulations No. 21(1) and (2) of the Building (Planning) Regulations.

In the conditions for Exchange Square (I.L. 8668), this relates to a Bus and PLP Terminus, Government Offices, and the Stock Exchange to be constructed in accordance with an accompanying Technical Schedule. In the conditions for the Bond Centre (I.L. 8615), the Purchaser is requested to erect, construct and provide a Telephone Exchange with a
net usable floor area of not less than 4200 sq. m. plus associated areas in accordance with an accompanying Technical Schedule. This is not taken into account for the purpose of calculating gross floor area as, in this case, the Purchaser undertakes to assign the facility to Government for a fixed sum. In the conditions for the Bond Centre, the Purchaser is granted the right to 3,000 sq. m. of gfa by virtue of providing a specified passage way and ancillary accesses referred to on an accompanying plan.

ix. Height, Design and Disposition
This condition establishes the maximum height above Principal Datum that should not be exceeded. The number of basement levels is normally specified. Design and disposition is subject to the prior approval by Government, for example the maximum height of the Far East Finance Centre and Admiralty Development are specified as 183m.

x. Partitioning
The Purchaser is not allowed to sub-divide the lot by way of assignment, deed of partition or otherwise, provided that subject to lease
conditions, the Purchaser may dispose of and deal in undivided shares in the Lot as a whole together with a part or parts of the buildings erected on the Lot.

xi. Garbage, Service Vehicles and Car Parking
This relates to the provision of facilities for the removal of garbage; space in the form of bays for the parking, loading and unloading of service vehicles and at a given rate of one bag per .... thousand square metres of total gfa, or at the rate of one space for every ...... residential units and to be laid out in such manner that on entering and leasing the Lot no reversing movement of service vehicles from or onto the road abutting the Lot will be necessary. This conditions may specify the precise levels on which parking is to be permitted, and prohibit parking of private motor vehicles except those belonging to persons or companies using office accommodation on the Lot. For the Far East Finance Centre and the Bond Centre, one loading/unloading bay is specified for every 4650 sq. m. of gfa, and no car parking spaces are provided.
A lay-out plan indicating all parking, loading and unloading spaces, and other picking up and setting down bays, must be prepared for Government approval.

In the Special Conditions for Inland Lot No. 8571 Queensway, one space of 3.0m x 7.65m with a minimum headroom of 3.5m was specified, not be used for any purposes other than the loading and unloading of vehicles.

In the event of the Lot or part of the Lot being used for an hotel, other parking/unloading requirements would apply:

- parking of taxis or hire cars with each space measuring 2.4m x 4.9m with a minimum headroom of 2.4m.
- parking of tourist buses with each space measuring 3.0m x 9.1m with a minimum headroom of 3.8m.
- parking/loading and unloading of goods vehicles with each space measuring 3.0m x 7.65m with a minimum headroom of 3.5m.
- a picking up and setting down bay not less than 20.0m x 3.0m.

Spaces should be provided so that vehicles entering or leasing the Lot will require no reversing movements from or onto the streets fronting the Lot.

xii. Vehicular Access
This condition sets out the right of vehicular ingress and egress to or from the site and this may be restricted between certain points to be shown on an accompanying control plan. Temporary access for construction vehicles may however be permitted in other positions subject to approval by Government.

xiii. Access of Fire Service Appliances and Personnel
This condition relates to the provision of an access for fire appliances and fire personnel to all buildings and structures to the satisfaction of the Director of Fire Services.

xiv. Public Open Space and Landscaping
This relates to the provision of a concept plan showing the location of public open space which might be referred to in any clause. This may be
required to be landscaped and planted with trees and shrubs, and thereafter maintained and managed by the Purchaser.

xv. Private Streets, Roads and Lanes

This requires the developer to form private areas included or excluded from the area to be leased as determined by Government. These areas would either be surrendered to Government who would install surfacing, kerbing, draining and channelling at the expense of the Purchaser, or if leased to the developer the latter would be responsible for these works. This would include for example the Passage Areas (not public right of way) associated with the HK-China Ferry Terminal.

xvi. Demolition of Breakwater Arm and Extracting Piles

This would be only be appropriate to Inland Lots having a marine frontage that may require demolition of existing breakwater or piers and re-instatement of areas of sea bed, including extraction of all supporting piles.
xvii. Assignment
This relates to the assignment of an agreed part of the lot or buildings to Government with vacant possession and free from encumbrance, and the proportional issue of shares in the lot to be similarly assigned. In the case of the HK-China Ferry Terminal, Government established a sum for the terminal which was specified as a fixed liability to be paid in stages. In the event that the total expenditure is lower than this, the original sum is still paid - however the Purchaser must make up any monies in excess of the estimate.

xviii. Reserved Accommodation
This relates to special accommodation excluding Government accommodation specified in lease conditions. In the case of the HK-China Ferry Terminal, this condition relates to a schedule of accommodation specified by the Marine Department required for their occupation or that of the vessel operators directly related to the HK-China services. These occupants would be tenants with first option on the specified accommodation, rental to be revised every 5 years.
xix. Definition of Gross Floor Area and Site Coverage

For the purposes of Special Conditions, the expression "gross floor area" means the area contained within the external faces of the external walls (or in the absence of such walls the external perimeters) of any building or buildings erected or to be erected on the lot measured at each floor level (including any floor below the level of the ground), together with the area of each balcony in such building or buildings, which shall be calculated from the overall dimensions of the balcony (including the thickness of the sides thereof) and the expression "site coverage" means the area of the lot or part of the lot that is covered by the building or buildings or part of the building or buildings thereon.

The definition of gross floor area is a major factor in development control, as this forms the basis for premium calculations or the auction price. Government, at its discretion, may in determining the gross floor area of any building or buildings erected or to be erected on the lot exclude any floor space that it is satisfied is constructed or intended to be used solely for the parking or for the loading or unloading of motor vehicles or occupied solely by machinery or
equipment for any lift, air-condition or heating system or any similar service, or any other floor space which the Building Authority may permit to be excluded through modifications of the provisions of the Buildings Ordinance.

For the purpose of determining the permissible plot ratio of the building or buildings erected or to be erected on the lot in accordance with these Conditions, and notwithstanding the definition of "gross floor area" contained in Regulation 23 (1)(b) of the Building (Planning) Regulations there shall be included in the calculation of gross floor area, in the case of a floor not having external walls, the area contained within the external perimeters of such floor and the Purchaser shall make no objection or claim on this account.

xx. Reservations for Mass Transit Railway
This relates to an area of site reserved to the Crown to construct, operate and maintain the MTR System at such level and depth as it sees fit below the Reserved Areas. In the case of the Bond Centre Development (Inland Lot 8615) this
reservation related to two areas, restricting development in one part below the level of 6.4m above HKPD and in the other below 10.9m above HKPD. The Purchaser must satisfy itself as to the extent of the MTR System and cannot make any claims against Government for noise, damage, inconvenience etc. Subject to the satisfaction of the relevant clauses, the Purchaser has the right to excavate under the Reserved Areas to lay foundations. In the Lease Conditions for Admiralty (I.L. 8423) the Purchaser is requested to build an MTR Station Complex not exceeding 3.0m above HKPD. Upon the issue of an Occupation Permit, within 48 months, the developer was then released from liability for the Station Complex.

xxi. Resumptions

A special condition applies to certain situations whereby Government has powers to resume, re-enter and re-take possession of all or any part of the lot if required for the improvement of Hong Kong or for any other public purposes. In the Conditions for Admiralty (I.L. 8423) the Conditions state that 24 months would be given, with compensation paid for the MTR Station Complex.
and Commercial Development. A related Condition stipulates that if the Admiralty Station Complex or buildings ceases to be used for the purpose specified, the Crown may re-enter and take back possession of the Station Complex.

xxii. Non-Building Areas
These are occasionally used in lease condition in order to retain important edge landscape features or to ensure set-backs. The lease conditions for the Far East Finance Centre (I.L. 8466) specify that no buildings are to be built in certain positions around the feeder road from Harcourt Road to Cotton Tree Drive, and that these areas shall be planted and landscaped, and an existing tree retained. Non-building areas are also used to separate the building line of the Bond Centre (I.L. 8615) from the Queensway Shopping Mall.

3.3 Lease Conditions relating to Detailed Conceptual Designs
3.3.1 A number of sites in the New Territories have been developed for the home ownership programme according to land sales conditions operated on the basis of bidders having to submit a detailed conceptual design and specifications for a proposed development which is then
and Commercial Development. A related Condition stipulates that if the Admiralty Station Complex or buildings ceases to be used for the purpose specified, the Crown may re-enter and take back possession of the Station Complex.

xxii. Non-Building Areas

These are occasionally used in lease condition in order to retain important edge landscape features or to ensure set-backs. The lease conditions for the Far East Finance Centre (I.L. 8466) specify that no buildings are to be built in certain positions around the feeder road from Harcourt Road to Cotton Tree Drive, and that these areas shall be planted and landscaped, and an existing tree retained. Non-building areas are also used to separate the building line of the Bond Centre (I.L. 8615) from the Queensway Shopping Mall.

3.3 Lease Conditions relating to Detailed Conceptual Designs

3.3.1 A number of sites in the New Territories have been developed for the home ownership and PSPS programme according to land sales conditions operated on the basis of bidders having to submit a detailed conceptual design and specifications for a proposed development which is then vetted by Government before the best tender is chosen. The purchaser is required to tender a premium
for a lot in accordance with the Special Conditions in the Conditions of Sale and a set of Master Plans approved by the Tender Board. Once the tender is awarded, the Master Plans become binding on the purchaser as part of the contract. This procedure has led to some extremely innovative design solutions, but is not currently applicable to R1 development - the most ubiquitous form of residential development in the urban area.

Several tender notices have been examined:

Fanling Sheung Shui Town Lot No. 1
- Junk Bay Town Lot No. 10
- Sha Tin Town Lot No. 313

: Area 2.090 ha.
: Area 2.450 ha.
: Area 1.949 ha.

3.3.2 Tenders must be accompanied by:

i. A Schedule detailing the number, type and area of the residential flats together with general specifications of standards of building construction and materials.

ii. Master Plans showing the tenderer's proposed development including:
- the positions, widths etc. of all roads and footpaths together with proposals for pedestrian/vehicular segregation and emergency access.
- details showing the proposals for local facilities, management offices etc. as referred to in the General and Special Conditions of Sales.
- a typical floor layout of the residential flats, including the adjacent common parts.
- the landscaping and planting proposals including a description of the treatment to be given to areas of open space.
- lift capacity calculations to illustrate the adequacy of lift services.
- designs and measures for noise amelioration.

iii. A Statement of the time required for:
- submission of the building plans for the development of the lot to the Building Authority under the provisions of the Buildings Ordinance.
- approval of the said building plans by the Building Authority under the provisions of the Buildings Ordinance.
- completing the site formation works on the lot.
- completing the foundation works on the lot.
- commencement of the construction of the buildings comprising the development on the lot.
- completing the development of the lot, including all buildings, roads, footpaths, car parking spaces, lawns, gardens and all internal and external facilities.
iv. A Statement with details of proposals for the management scheme to be provided under the said General and Special Conditions of Sale and the amount of management fees that would be charged.

The Government has the right to call upon any Tenderer to amplify in writing or otherwise any statement, evidence or details provided in accordance with the provisions of paragraph i. - iv. above and to require any amendments thereto prior to the acceptance of any tender.

3.3.3 The Special Conditions are generally consistent with those for normal sale sites although certain clauses are aimed at ensuring, from the outset, an acceptable standard of design and environment. These include the following:

- Submission of a model within three months from the date of approval of Building Plans at a scale of 1:200.

- Landscaping proposals and plans to be prepared by a qualified landscape architect or consultant, to a high level of detail. The Purchaser must also maintain the landscaped area.

- A specification of the maximum number of residential flats and the percentage of each in terms of saleable area.
The Purchaser shall, within two months of the commencement of construction of the superstructure of the lowest level of residential development, complete one each of the types of residential flats specified in the Special Conditions to serve as standards of workmanship and materials for all remaining units. These must accord with an accompanying Technical Schedule.

The Purchaser shall provide facilities such as a kindergarten, committee offices, segregated covered pedestrian paths, and open space, to specifications laid down in the Special Conditions.

3.3.4 The District Lands Office, Hong Kong West, with whom these Conditions have been discussed, stress that this type of control, specified on a broad guideline basis with a fair degree of flexibility, should be sufficient to ensure compliance with planning intentions, without controls being imposed on a stringent scale. This would leave the actual design itself to the developer and his architect.
3.4 Conclusions

3.4.1 The appraisal of Special Lease Conditions has highlighted a large number of clauses applicable to the Central and Wan Chai Study in terms of their urban design connotations. Some of these tend to be quite standard clauses, whilst others are site specific and create an important precedent in terms of the degree of control over private development. They also establish an effective means of incorporating specific facilities or Entrusted Works.

Lease conditions, in combination with Technical Schedules and Control Drawings or Layout Plans, provide an effective means of development control that is both acknowledged and respected. These also establish a legal framework which ensures that Purchasers meet their development obligations.

3.4.2 Whilst Technical and Special Lease Conditions provide a framework for development control, this must be allied with the preparation of adequate layout plans for the sites in question, ensuring that wider urban design objectives can be achieved.
3.4.3 In the Urban Area Density Zone 1 which covers the entire study area and adjoining built-up areas, planning and other engineering controls are the least complicated. The District Lands Office with whom this has been discussed, believe firmly that as sites in these areas include all the necessary development criteria, there is no need to introduce more conditions than required. Whilst a lack of complicated controls is clearly not a bad thing and may be said to actually encourage development, the local layout context is often ill-considered and frequently un-coordinated leading to a tendency on the part of developers to regard individual sites in isolation from their surroundings. It is precisely in the high density development zones within the urban area that environmental problems and poor urban design occurs. The existing means of development control are inadequate in bringing about improvements through redevelopment where existing lease conditions prevail.

3.5 Recommendations

3.5.1 The consultants are not requested to formulate lease conditions as part of the Central and Wan Chai Reclamation Feasibility Study, and the general evaluation of lease conditions is considered as a means of establishing appropriate levels of design control in accordance with possible urban design solutions. However in certain cases, the possibility of incorporating additional clauses as extensions to existing conditions could be considered at a
more detailed design stage, and could be used to tighten the degree of design and layout control. The following recommendations are therefore set out not only in the context of meeting urban design objectives, but in terms of meeting detailed design considerations at an appropriate stage.

i. Use of Levels may be used to specify areas of retail use and such other uses as may be approved by Government at podium levels in order to ensure continuity of shopping patterns. In some cases these areas may involve the integration of public rights of way together with the right to connect at various levels with pedestrian facilities to be built by Government or the developers of adjoining sites. Open pedestrian arcades can also be introduced at various shopping levels and particularly at ground level to a minimum clear width, and specified as a no-building zone. The District Lands Office stress that market forces and consumer demand should not be overlooked however. If controls are applied too rigidly this may result in modifications of leases. Ideally developers prefer maximum freedom to introduce retail uses at whatever levels they desire. This is clearly a contentious issue and is unlikely to be resolved to the satisfaction of all parties within the context of the current study. The consultants wish to stress however, that control over
The primary retail and pedestrian circulation system is necessary in order to achieve an overall coherent design solution.

ii. The Development Obligation condition may be taken to include all specified accommodation which might be introduced to accord with the feasibility study. The lease conditions for Exchange Square included a feasibility study for ground, first and second levels, and a specification for various buildings, ancillary works and facility works to be included within multi-storey buildings on the two sites. This may include atria or galleria at ground and podium level to provide a particular kind of space or environmental conditions which help to preserve the multi-facetted character and liveliness of the shopping areas, for example along a leading building edge adjoining a pedestrian plaza or waterfront promenade. It is considered that in certain areas, in order to ensure both pedestrian continuity and a degree of visual transparency, space beneath buildings at ground level should remain free of building elements other than structural and access elements. The specification of these areas may be compensated by granting a bonus gross floor area up to a maximum limit, or alternatively the area given over to the public could be exempted from the permitted GFA. It is noted however that Government
do not appear to use this system widely, and the District Lands Office have expressed doubts as to whether the bonus could be conveniently used by Government to achieve urban planning objectives. The District Lands Office explain that granting bonus floor area under Regulation 22(1) is basically 'against the spirit' of the Ordinance which was not designed for such a purpose - it was instead intended to achieve the surrender of land in order to achieve certain development ends. The Lands Office prefer that planning elements deemed to be necessary should be introduced as a result of a planning feasibility study, and a decision should then be taken to introduce these elements into a new site and probably sacrifice site value, as the area would be deducted from total gfa permitted under plot ratio conditions. It is clear however that 'design' feasibility as well as planning feasibility studies are necessary. In most lease conditions, unless there are exceptional circumstances, dedicated areas for e.g. public right of passage, are specifically excluded from Regulation 21(1) in the lease conditions. Where this Regulation has been used in the past most effectively e.g. for the HK and Shanghai Bank, the lease was an old one. With old leases, a Deed of Dedication can be granted with a bonus of up to five times the area dedicated. However these are clearly exceptional cases, and for most new sites, bonus plot ratio is only rarely
considered. For example in the conditions relating to the HK-China Ferry Terminal, the Purchaser's obligation regarding the Passage Areas i.e. non-public rights of way, do not provide for any additional site coverage or plot ratio under Regulation 22(1) of the Building (Planning) Regulations. It is understood that this Regulation is seen as being mainly applicable to sites with old leases; in new leases there is clearly no need to compensate owners later if the facilities were initially clearly stipulated in the sale or grant particulars. On balance however, the consultants consider that the 'bonus system' has considerable merits if considered in a broad urban design context and intended to meet particular planning and design objectives.

iii. Preparation of plans could provide for detailed landscaping proposals to be prepared for podium, plaza and other amenity areas within a lot on which any of the lease conditions may prohibit the erection of structures to the requirements of Government. This may include details of footpaths and planting schemes together with a design layout to be submitted to Government for approval.
iv. Deed of Mutual Covenant

A Deed of Mutual Covenant and Management Agreement in respect of each lot must contain provisions to be approved by Government. These generally relate to rights of access, public benefits or easements deemed desirable by Government. This condition can be extended in practice to ensure that major retail avenues in strategic locations e.g. at either end of an important footbridge are not sold, but retained by the developer, so as to ensure on-going maintenance and management. A Deed of Mutual Covenant would not help to ensure retail efficiency however - this should be dealt with either by special lease conditions or control drawings. This could for example help ensure that major retail avenues along important pedestrian circulation 'spines' are strengthened by an unbroken pattern of convenience and durable shops, stores, retail services and restaurants rather than allow these to be disrupted by inappropriate uses such as utilities, offices or lobby entrances. This not only ensures retail efficiency, but helps to create a strong image and sense of liveliness.
4.0 Control Drawings

4.1 Background

4.1.1 Control drawings represent a viable means of development control for new town central areas, acting to define both the overall form and extent of buildings, and the extent of uses for each development package. This also promotes a system of mutual co-operation between Government and private developers, and between individual purchasers of sites themselves. They are therefore more architecturally explicit than a zoning plan. Control drawings do not act as a design guide in terms of recommending architectural treatment, but represent a set of planning layouts for each site which comply with standard lease conditions, Buildings (Planning) Ordinance requirements, and the need for a well-ordered development in line with Outline Development and Zoning Plans.

4.1.2 It is not intended that highly restrictive controls should constrain design innovation and constructive ideas, but should encourage a response to the challenge of designing buildings within a framework that combines uses and spaces in ways that are not merely commercial stereotypes. Inevitably this implies the subordination
of design on individual sites to the overall urban design structure. This system should also help to replace a development review each time a detailed design is submitted after purchase of individual sites.

4.1.3 This type of control has, in the new towns of Tai Po, Fanling/Shek Wu Hui, Sha Tin and Tuen Mun encouraged developers to co-operate with Government, and realise aspects of urban design that would not have been possible for an individual developer to co-ordinate.

4.1.4 Control drawings reflect the need, in the new towns, to specify a design "envelope" for the central area. However, more detailed considerations of fenestration, plan shape colour etc. are left to the developer and his architect. A degree of design flexibility is therefore offered through control drawings, and these together with master plans, landscape plans, model and design guide information, combine to illustrate overall design cohesion and a desirable end-state in three-dimensional terms. The development that follows can then be implemented in a manner compatible with the effective functioning of the commercial core. The lands Department have however expressed some concern over any rigid application of control drawings in new town central areas, particularly with regard to the specification of numbers of residential units, which have been the subject of modification in several cases.
4.1.5 In the urban area, factors influencing the sale of sites vary considerably from the new town situation, particularly in respect to commercial and C/R sites which are offered by tender or auction on the basis of a carefully orchestrated programme under the auspices of the Lands and Works Department, based on market factors. The high price of land in the urban area coupled with periodic fluctuations in demand and market confidence, make the sales process vulnerable to any extraneous factors. There is consequently a clear reluctance on the part of Government departments with whom these issues have been discussed, to exert controls which might be interpreted by developers as restricting commercial viability.

4.1.6 It has been fundamental to this evaluation, to ensure that any proposed control drawings are limited to those that are considered most crucial to the successful implementation of the master plan, in order that planning and design parameters are clearly set out. There is also a danger, inherent in control drawings, that if these are too explicit, they may have to be amended on a case-by-case basis, and the resulting series of compromises may well prejudice or invalidate the entire urban design concept. Design drawings and
model should be interpreted as a statement of intent, not a form of development control. Illustrative material is therefore intended to describe possible development in terms of mass and organisation, rather than define it.

4.2 Evaluation of Control Drawing Functions

4.2.1 A type of control drawing is produced by Government for particular sites that incorporate specific facilities for use by the public or that have a significant public amenity function. These are known as Entrusted Works and include all works that would normally be built by Government. The development costs of these are reimbursed to the developer. Plans are prepared by the Architectural Office, based on the requirements of relevant Government departments e.g. Transport, Town Planning Office etc., and these drawings accompany lease conditions.

4.2.2 The consultants have examined several sets of lease conditions, where quite explicit control drawing layouts have been included as part of the Special Conditions. These are accompanied by Technical Schedules which set out, in some detail, a precise breakdown of areas, facilities, fixtures, carriageway slabs, fixtures etc. The sites include:

- Inland Lot No. 8668 - Exchange Square, Connaught Road.
- Property Management - Queensway Shopping Mall Tenancy PM B/277
4.2.3 Queensway Shopping Mall: PM B/277

The Queensway Shopping Mall is a short-term Property Management Tenancy under the management of the Buildings and Lands Department. The control drawing for this site sets out the limit of retail development, and the width of both the main mall and secondary mall. This includes connections to footbridges which link with adjoining sites, and the position of stairs, light wells and toilets. The accompanying relevant lease conditions state:

- that the premises shall not be used for any purpose other than retail shops, banks, restaurants, showrooms, or ancillary offices.

- that a clear and unobstructed passageway must be maintained of not less than 5.0m width within the secondary mall. All members of the public must be allowed right of passage during the period when the MTR is in operation.

- that the interior is fitted out in a manner suitable to a first-class shopping centre in accordance with the requirements stipulated in the accompanying Technical Schedule.
4.2.4 Exchange Square: I.L. 8668

The control drawings for Exchange Square Sites A and B, comprise ground, first and second floor plans, produced by the architectural Services Department in consultation with the UADO, TPO and Transport Department, as part of a feasibility study for the site.

- The GF Plan sets out the layout for a Bus and PLB terminus together with the locations of foyers, stairs, ramps, and toilets.

- The first floor plan sets out the broad location and disposition of the Stock Exchange on Site A including the trading hall and offices, together with a shopping arcade and lift lobby on Site B, separated from Site A by a landscaped plaza.

- The second floor plan sets out the upper part of the Stock Exchange on Site A with a shopping arcade and lift lobby on Site B, separated from Site A by a void over the plaza.

The areas referred to on the control drawings are set out as development obligations in the lease conditions for both Sites A and B.
4.2.5 China Ferry Terminal Kowloon I.L. 10743

The control drawings for the China Ferry Terminal were prepared by the Architectural Services Department, and comprise detailed layouts for the terminal areas, passage areas and Government operational zones. Areas for shops and offices at various levels within the podium structure are also shown. Separate plans show the arrangement of different facilities and areas at basement level, and levels 1-5 above for the podium development. The locations for floating pontoons, pier and berthing positions are also shown at level 1. Technical Schedules contained in the lease conditions, set out building, accommodation and environmental requirements in accordance with the plans.

The special lease conditions, through a Building Covenant, ensure that the Purchaser develops the lot in compliance with all the conditions and the specifications laid down in the Technical Schedules.

4.2.6 Control Drawings for New Town Central Areas

Control Drawings are prepared to accompany Technical and Special Lease Conditions for new town C/R sites. In the new towns this mechanism works extremely well in terms
of co-ordinating both the retail and residential components of the centre. New town centres are however of a different nature to central urban sites in that:

- the nature of site uses is established at the outset, the centre providing the potential for extensive private residential development, with shopping provision laid out on 1-2 podium levels according to a projection of retail requirements.

- the central areas are generally developed within a short time-frame so that development can be effectively co-ordinated.

- the lots do not command the same value as urban area sites and developers therefore take less financial risk.

- developers are familiar with the new town system of design controls, and the degree of flexibility inherent in conditions i.e. range of flat sizes based on market assumptions.

Particulars of development which form part of new town central area control drawings, are set out as follows:

- Plot Area used for calculation purposes
- Levels above datum
- Residential and commercial gfa
- Number of blocks
- Number of commercial and residential storeys
- Number of flat units based on maximum and minimum provision.
- Number of parking places

Control Drawings specify, on plan, all or some of the following:
- Development Plot Boundary
- `No Building' Zones where only structural supports, landscape elements and passive recreational facilities are permitted.
- Podium Deck `No Building' Zones
- Residential Building Zones
- Commercial Retail Zones
- Parking and Service Zones
- Landscaped Area outside lot boundary
- Landscaped Area on roof deck
- Alignment of shopping malls
- Lift cores
- Access to entrance lobbies
- Vehicle Access
- Stair Connections
- Public Facilities to be included in design
4.3 Conclusions

4.3.1 It is clear that control drawings, and in some cases quite detailed layouts, are necessary for large commercial sites in the urban area that incorporate major public facilities as Entrusted Works. Whilst these are, in the main, restricted to the schematic design and integration of particular elements, normally at ground level or within the podium, they clearly exert a design influence over large parts of a development and possibly on the eventual form of a building itself.

4.3.2 Control drawings represent the means to achieve certain design ends and, depending on the nature and level of 'compensation', i.e. bonus plot ratio or agreed financial reimbursement, the results achieved have brought about genuine public benefits. The incorporation of particular elements such as an internal public mall with specified commercial retail facilities, also act as complementary elements to the benefit of the Purchaser. As an alternative to the incorporation of control drawings in lease conditions under a tender situation, these may form part of a Private Treaty Grant to be negotiated with one developer after plans have been drawn up for a particularly strategic site.
4.4 Recommendations

i. Control drawings should be produced in a specific form for all Entrusted Works that Government may wish to be incorporated in private development sites. There is no actual list of these, and the precise type and nature of facilities should be discussed between the various planning and design agencies involved, prior to the production of control drawings.

ii. Control drawings could be introduced in particular cases for commercial development sites in order to achieve important urban design objectives and to incorporate key urban elements such as transportation nodes or pedestrian circulation routes.

iii. Design controls, together with layout plans showing non-building areas, important linkages etc. can be used to effectively circumscribe an overall building envelope, to define the particular shape and configuration of a podium, and to specify particular zones within it. They can also be used to specify works contingent on development such as landscape areas, service areas, access roads and parking zones. Controls with regard to tower location and height are best effected as a combination of non-building areas, and this could only be specified with recourse to Building (Planning) Regulations.
iv. Control drawings should not be used as a means to set architectural standards.

v. Control drawings should not seek to define the precise nature of a 'commercial/residential' site, as developers prefer to capitalise on the most appropriate form of development allowable under the respective zoning classifications.

vi. Control drawings should be used to specify major areas of retail shopping, and this should be specified in lease conditions in a similar way to those for the Queensway shopping mall, with restrictions on non-retail activities. The Queensway mall has been a marked success, serving to link together several commercial development sites at podium level, whilst providing a strong retail pattern which also serves to direct strong pedestrian circulation flows.

vii. It is particularly important to ensure the correct distribution of commercial office space, as the ability to sub-divide floor areas may vary considerably with designs. Large floor areas in short towers may for example be preferable to slim taller buildings.
5.0 Buildings Ordinance Controls

5.1 Background

5.1.1 From origins in the year 1844 as part of the Good Order and Cleanliness Ordinance, the current style of the Buildings Ordinance evolved in 1955 and is subject to periodic review. It governs the erection and alteration of buildings, and prescribes the maximum height, amount of open space, width of private streets and lanes, and all structural details. The Ordinance is administered by the Buildings Ordinance Office of the Buildings and Lands Department.

5.1.2 The Building (Planning) Regulations of the Buildings Ordinance contain provisions regarding heights and volumes of buildings, projections, open spaces within sites, access lanes, lighting and ventilation, staircases and fire escapes etc. and special clauses relating to domestic and temporary buildings\(^1\). The Regulations have a significant impact on building volumes and massing, and the relationship between the heights of building, site coverages, plot ratio and use. They therefore have a potentially great effect on urban design.

\(^1\) Ref. Town Planning in Hong Kong, Town Planning Division, Buildings and Lands Department.
5.1.3 It is possible to categorise the Building (Planning) Regulations into several types of control, each having differing functions. Not all of the regulations have a great relevance to urban design as they control aspects of a building that are either consistent across all building types (e.g. provision of fire escape staircases), have a minimal physical impact on built form (e.g. provision of room-sealed gas water heaters in bathrooms), or are so variable in impact that they cannot be analysed (e.g. minimum requirements of windows).
<table>
<thead>
<tr>
<th>TYPE</th>
<th>OPERATING MECHANISM</th>
<th>REGULATION NO.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Definitive</td>
<td>Defines terms used in other Regulations to clarify interpretation.</td>
<td>2</td>
</tr>
<tr>
<td>2. Public Health</td>
<td>Related to controls on inadequate construction, provision of lighting and ventilation, means of escape in case of fire and sanitation.</td>
<td>3, 4, 24, 27, 29-70, 71.</td>
</tr>
<tr>
<td>3. Density Restrictions</td>
<td>Site coverage and plot ratio controls (site area related) to prevent over-development.</td>
<td>20, 21 First Schedule</td>
</tr>
<tr>
<td>4. Street Shadow and Building Depth</td>
<td>Street shadow angle controls overshadowing of streets: building depth control for narrow sites (street-related controls).</td>
<td>16, 19A Those regulations have now been revoked</td>
</tr>
<tr>
<td>5. Projections</td>
<td>Controls all projections to prevent spread of development by filling in of balconies etc.</td>
<td>7-15</td>
</tr>
<tr>
<td>6. Open Space around Domestic Buildings</td>
<td>Prevents inadequate spatial provision around new domestic buildings. Primarily for new work in existing dense areas.</td>
<td>25, 28 Second Schedule</td>
</tr>
<tr>
<td>7. Widening of Existing Streets</td>
<td>Allows government to widen streets by resuming an area from developer. Bonus usually given.</td>
<td>26</td>
</tr>
<tr>
<td>8. Discretionary</td>
<td>Overrides other regulations to allow B.O.O. to insist on access lanes and roads or define road and street widths where these are otherwise inadequate.</td>
<td>5(2), 6</td>
</tr>
<tr>
<td>9. Bonus for Dedication of Public Passage</td>
<td>Bonus provision on plot ratio where, with the consent of the Building Authority, a developer provides space at lower levels for public passage.</td>
<td>22</td>
</tr>
<tr>
<td>10. Facilities for the Disabled</td>
<td>B.O.O. can insist on adequate provision of facilities for the Disabled in new buildings.</td>
<td>72 Third Schedule</td>
</tr>
</tbody>
</table>
5.2 Regulations having a major impact on Urban Design

5.2.1 It is clear that not all regulations and controls listed above under Table 5.1 will have a strong effect on the form of a proposed development. Of these the Public Health and Safety related regulations are the least influential. Density controls have the strongest single impact on development, and these raise important issues as to the effectiveness of the regulations.

5.2.2 Density Restrictions related to Site Area Calculations
(Regulations 20 and 21, First Schedule)

i. Site Coverage (Regulation 20, First Schedule)

a) The First Schedule of the Regulations classifies sites into A, B and C type sites. The type of site affects the allowable site coverage. More site coverage is allowed on the type C site than on the type A, as the type C site is more open in character.

b) A simplified analysis of the three site types Classes A, B, C is set out below:
<table>
<thead>
<tr>
<th>Height of Building in Metres</th>
<th>Domestic Buildings</th>
<th>Non-domestic Buildings</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Percentage Site Coverage</td>
<td>Plot Ratio</td>
</tr>
<tr>
<td></td>
<td>Class A site</td>
<td>Class B site</td>
</tr>
<tr>
<td>Not exceeding 15m</td>
<td>66.6</td>
<td>75</td>
</tr>
<tr>
<td>Over 15m but not exceeding 18m</td>
<td>60</td>
<td>67</td>
</tr>
<tr>
<td>Over 18m but not exceeding 21m</td>
<td>56</td>
<td>62</td>
</tr>
<tr>
<td>Over 21m but not exceeding 24m</td>
<td>52</td>
<td>58</td>
</tr>
<tr>
<td>Over 24m but not exceeding 27m</td>
<td>49</td>
<td>55</td>
</tr>
<tr>
<td>Over 27m but not exceeding 30m</td>
<td>46</td>
<td>52</td>
</tr>
<tr>
<td>Over 30m but not exceeding 36m</td>
<td>42</td>
<td>47.5</td>
</tr>
<tr>
<td>Over 36m but not exceeding 43m</td>
<td>39</td>
<td>44</td>
</tr>
<tr>
<td>Over 43m but not exceeding 49m</td>
<td>37</td>
<td>41</td>
</tr>
<tr>
<td>Over 49m but not exceeding 55m</td>
<td>35</td>
<td>39</td>
</tr>
<tr>
<td>Over 55m but not exceeding 61m</td>
<td>34</td>
<td>38</td>
</tr>
<tr>
<td>Over 61m</td>
<td>33.33</td>
<td>37.5</td>
</tr>
</tbody>
</table>
CLASS, C SITE:

CLASS, B SITE:

CLASS, A SITE:
c) From an examination of several large development sites in Central District. The Class 'A' type of site is rare and most sites are 'B' or 'C'. It is likely that on a large-scale reclamation, only 'B' or 'C' sites will be appropriate as 'A' sites are only found where plot divisions are small, such as infill sites or the older parts of the urban area.

It is considered that any proposed amendments to the First Schedule would be impractical, and this must therefore be accepted as the basis for Plot Ratio and Site Coverage calculations for the Central and Wan Chai reclamation. However lease conditions could be used to prescribe less than the maximum plot ratio and site coverage for particular sites, in the context of a broad urban design concept.

This must also be set against other factors which have less to do with regulations and more with practical design concerns. The modern office buildings in Hong Kong, on sites unconstrained by existing development, can be standardised by a central core and a gross floor area of 10,000 - 15,000m². This is set by business and commercial factors such as the optimum working area. Even the general design module of 2-3m
evolves out of economic considerations and office infrastructure, standardised for corporate needs and sub-divided for minimum internal office sizes. This tends to suggest rectangular or square block forms, with column-free space which is easiest to plan internally. This in turn has implications for both their building structure and the resulting architectural configuration.

The site area and application of the First Schedule have certain implications for massing of tall blocks.

An analysis of existing Commercial and C/R Sites in Central District has been carried out and this is shown on Table 5.3. It tends to show a correlation between site area and the number of towers, although there are some notable exceptions such as the Bank of China Building, where a relatively large site houses only one very tall tower.

d) The site coverage regulation has a major impact on urban design as it determines the balance of massing on a site. 100% site coverage is allowed below 15m, but not above, and this given rise to the characteristic "Podium and Tower" arrangement of development sites.
In order to obtain maximum benefit from their sites, developers generally utilize the 100% coverage potential allowed below a level of 15m.

This has led to massive solid podia relieved only by small permitted canopies, which provide shelter for ground level circulation.
e) The 15m limit allows up to 5 floors at 100% site coverage for car parking although 3 or 4 are normally used for commercial retail purposes.

f) In order to fully utilize valuable podium space, developers often provide non-commercial areas which do not count for plot ratio of development such as car parks and A/C plant areas in basements.
g) Regulation 20 to some extent influence on hotel developers to provide a large proportion of the public areas in basements as they cannot be fitted into the podium space limited by the 100% site coverage regulation.

h) The First Schedule places a restriction on the development of atriums above podium level. Atriums are currently counted in site coverage, and therefore an hotel designed around a central open space cannot roof this space in as an atrium, without calculating the roofed-over area in the site coverage calculation.

A Special modification of the site coverage regulation (e.g. Royal Garden) would have to be granted in order to encourage atrium developments over 15m. Atriums below 15m still count for site coverage but developers
of shopping centres tend to recognize their commercial value and are now reducing their arcade/shop ratios accordingly; for example City Plaza at Tai Koo Shing, and the Landmark Shopping Centre in Central Business District.

1) Two of Hong Kong's most prestigious buildings have overcome the problem of integrating an atrium within permitted site coverage above 15m, although in both cases the buildings are of a prestigious nature, and 'efficiency' in terms of design form has been consciously sacrificed to some extent for architectural effect.
The Hongkong and Shanghai Bank has sacrificed working space at the base of the building in order to provide an atrium. They did however receive a bonus gfa for the provision of a public plaza at ground level.

THE HONGKONG BANK BUILDING (SECTION)
In the Bank of China Building, the atrium is attached to the side of the main mass of office development. This is possible because the extended height of the building reduces the site coverage so that the base of the building including the atrium is still within permitted site coverage. In this case the architect has chosen not to develop a podium and to use the regulations to increase the height of the building to generate the maximum permitted gfa.
The results of this manipulation of regulations can lead to interesting architectural solutions on individual sites, which in certain circumstances can make a highly stimulating addition to the cityscape. However, there is also, inherent in this, the fact that adjoining sites, whilst complying with all regulations and controls can easily lack any overall coherence and consistency, both in terms of massing and design, and in terms of linkage and functional continuity.
ii. Plot Ratio (Regulation 21 and First Schedule)

a) The First Schedule of the Building (Planning) Regulations contains a sliding scale relating development height to plot ratio. The site classifications A, B and C apply to the working of this regulation.

Allowable plot ratio for a non-domestic site can generate up to 1.5 times as much as that for domestic site, reflecting the objective of preventing residential overcrowding and the effect of the lighting/ventilation regulation on domestic tower block spacing.

b) It is considered that in all but exceptional circumstances, developers will maximise their site potential up to the limits of PR15 generally for non-domestic and 8, 9 or 10 for domestic, according to site classification, as this is what the actual site value has been based on. Although tall blocks will be designed in different ways by site developers and their architects, the result of major development on contiguous sites will be an overall uniformity of density, particularly on adjoining sites under 'C' and 'C/R' zoning categories. In order to alleviate the impact of high buildings in mass, particularly from
critical viewpoints and from the harbour, consideration must be given to means by which disposition of tall blocks can be controlled. This implies the introduction of no-building zones in lease conditions, the use of control drawings in certain areas, or the use of open space as a positive element to divide and define large building volumes.

c) Areas for functional services can generally be deducted from plot ratio calculations, these are:
- parking areas and motor vehicle areas
- loading and unloading bays
- lift machinery
- A/C equipment and other services

Developers normally wish to increase the amount of car parking space in their buildings, partly because of the exemption from the plot ratio calculation and partly because parking is commercially attractive. However, the number of parking spaces has a clear impact on traffic generated by the development, and the maximum number of spaces stated in lease conditions is dictated by Transport Department directives.
5.2.3 Street Shadow (Regulation 16 - now revoked)

1. Shadow Angle

Because modifications continued to be given for predominantly commercial development in the urban area before Regulation 16 was revoked, the location and size of towers in relation to the street has not therefore been considered by developers to be a major design constraint. Many architects found the shadow angle calculation too restricting in relation to permitted plot ratio and site coverage. B.O.O. generally felt that the given plot ratio and site coverage restrictions on a site are sufficient to control site density and appearance and that shadow angle is of secondary importance, particularly as artificial means of illumination rather than natural daylight is widespread for inner urban commercial development.
In order to prevent floor-to-ceiling heights which fail to meet public health and safety consideration, a minimum height is set out in the Regulations. However, given the type of anticipated development on the Central and Wan Chai Reclamation, it is likely that the developers will wish to exceed this height rather than use it as a minimum. This is due to the increasing use of modern air-conditioning equipment, computer and services installations which have led to overall floor to floor heights of up to 4.0m on commercial buildings such as Exchange Square and Pacific Place. Residential developments including hotels, generally remain at about 2.95 floor to floor e.g. the Marriott Hotel, Queensway.
This differential in floor to floor height among different building types has major implications for overall height control limitations that the consultants may wish to impose for urban design purposes excluding those imposed by the Hong Kong Airport (Control of Obstructions) Ordinance and Regulations. Variations of up to 25% are possible between towers with the same number of floors.

There appears to be no effective means of control to achieve height consistency, as it would clearly be irrational to constrain developers in this respect. However, this aspect should be considered as a design factor in the preparation of alternative planning and urban design options.
5.2.5 Public Health - Prescribed Window (Regulation 31)

Because of the greater building depth allowed for commercial office blocks, these aggregate larger floor areas than residential blocks and are spaced further apart. Prescribed window requirements do not therefore have a strong impact on commercial developments. Also, commercial space core orientation is very flexible allowing one side of a block that may have prescribed window problems in relation to a boundary, to become a core edge without windows. The characteristic cruciform residential block widely used for flat sizes of between 500-1000 sq. m. gfa e.g. Tai Koo Shing, Mei Fu or Whampoa Gardens, is the result of a combination of efficiency (normally 8 flats per floor) and the prescribe window rule. It would be difficult to modify this building type to achieve any greater efficiency for medium income flats.
within this size range, planned in the form of a residential estate. To achieve a more interesting design appropriate to a waterfront setting, there must either be a sacrifice of efficiency, or the adoption of larger flat sizes as part of luxury developments e.g. Ocean Terminal. If a Tai Koo Shing type of development is to be avoided on the Central and Wan Chai Reclamation, then control drawings or special criteria in lease conditions may have to be adopted.

5.2.6 Projections (Regulations 7-15)

Balconies are counted as gross floor area in plot ratio calculations and consequently they are generally minimised or simply excluded from small to medium residential developments. Part II of the Regulations prevents the spread of balconies, canopies, corbels etc. The result of these regulations is that developers tend only to provide canopies over footpaths in particular circumstances, where there is an economic advantage e.g. to provide shade for shoppers at ground level, adjacent to major retail development.
However, heights vary from building to building as there is no control over canopy height and design.

It is recommended that this issue is addressed in lease conditions, where relevant, and that designs for these and other similar elements e.g. footbridges, are standardised. This aspect should be explored further in urban design studies for the Central and Wan Chai Reclamation.

5.2.7 Provision of Facilities for the Disabled (Regulation 72 Third Schedule)

Regulation 72 Part X and the Third Schedule, are quite exhaustive in taking into account provisions for the disabled, but these relate only to individual buildings. Most of the clauses relate to vertical movement, and these can be complied with by the provision of lifts, and small ramps in strategic locations, and do not have a significant impact on design.
External traffic arrangements e.g. footbridges, in practice have a more relevant impact for the average disabled person, and this issue should be considered as part of the urban design recommendations.

5.2.8 Fire Regulations

A number of fire services requirements have a potential impact on both building design and layout.

i. Refuge Floors

The incorporation of refuge floors is not compulsory and conditions relating to their definition are set out in the Code of Practice, Means of Escape, 1986. Refuge floors may be provided in buildings exceeding 25 storeys in height, although developers must observe stringest conditions in order that these be excluded from plot ratio calculations. Under the existing regulations it is not allowed to utilise refuge floors for mechanical and electrical plant and developers have become reluctant to include these in buildings. Practice Note 1983.94 has been deleted from October 1987. The new development at Pacific Place which includes buildings up to 50 storeys does not include refuge floors, although several mechanical floors for air-conditioning
plants and lift motor rooms are incorporated which are, in themselves, excluded from plot ratio calculations. Where refuge floors are provided, they are not normally less than 10 nor more than 15 storeys apart, or not exceeding 15 storeys above a place of ultimate safety. These can, where incorporated, for example in the HK and Shanghai Bank building or the Shun Tak Centre towers, provide a distinctive design feature.
ii. Access for Fire Appliances

There is no BOO Practice Note on this subject although it is covered under the Fire Services Circular No. 1/87 Part X Section 5. The conditions are not rigid and, on a new (as opposed to a redevelopment) site, fire access is discussed with the fire Services Department according to the general layout criteria and site context. In the case of towers located above a podium, it is preferable to incorporate a maximum 3m setback between the principal building face and the podium edge, and this is specified on control drawings for new town central area sites. However, in the urban area there are clearly problems in determining the principal face of buildings and the criteria for
access are not rigid. The two major aspects of
design and layout that must be answered to the
satisfaction of FSD, are:
- Direct access to developments for fire
  appliances to at least one principal face of the
  building.
- The operation of a ladder, pumping appliance and
  unimpeded minimum hose length.

5.3 Bonuses, Modifications, and Practice Notes

5.3.1 Apart from the Regulations stated in the Building
(Planning) Regulations, there are other mechanisms of
control provided by the Buildings Ordinance that allow
the B.O.O. to modify the Regulations in special cases.

There are three types of control:
i. Bonuses

ii. Modifications

iii. Practice Notes
i. Bonuses

The Regulation Bonus for dedication of Public Passage (Type 1.2.8) allows a plot ratio bonus of up to five times the area dedicated to Public Passage.

There are several other situations in which a similar 5 times dedicated area bonus may be applicable:

a) Set backs where an existing street is widened (Regulation 26) resulting in the developer dedicating some of his site.
b) Dedication of a triangle of area at the corner of the site to provide a splay in the building for sight line improvement.

c) Concession areas in hotels i.e. set-down, pick-up, loading and unloading, and vehicle waiting areas can be set against a 5 times bonus added to the domestic plot ratio (provided this does not exceed 20% of such a plot ratio) Practice Note 1985.111.

d) Provision of a public passageway within the development. The definition of "public" is difficult to quantify in general terms but is often related to the period during each day in which access is made available to the public.

For hotels all gross floor area in basements is now discounted from plot ratio calculations (Practice Note 1985.111).
Bonus allowable for the provision of site services may prove to be irrelevant for development on the Central and Wan Chai Reclamation, where Government is likely to provide serviced sites and adequate infrastructure.

ii. Modifications
Developers can apply for modifications to the regulations if they can give a justifiable reason why the regulation is unworkable in their case and the B.O.O. feel that such a modification does not compromise health, safety or basic planning constraints. These are granted only in carefully controlled circumstances. The shadow angle modifications were an indication that discretionary means of control are difficult to substantiate or categorise in terms of their impact on urban design.

As Regulation 16 (Street Shadow) has now been revoked, there is only one modification that is frequently requested and granted. This relates to permission........
To include bathrooms and kitchens without windows (Part III 29, 30 and 36), but with artificial ventilation.

This is a request made in relation to all hotels and some service apartments. Prestige value of the development, services (central air-con.) and reliability of the developer to carry out maintenance are taken into consideration when granting the modification. However, it is virtually never granted for residential development.

iii. Practice Notes

From time to time Practice Notes are sent to all authorized persons by the B.O.O. to explain a problem in the regulations, or as is the case with "Hotel Concessions" (1985.111), to confirm that concessions will be granted under certain circumstances.

These provide considerable potential for expanding the meaning of the Regulations to cover special requirements such as the provision of large-scale atria in commercial or hotel developments. The "Hotel Concessions" (1985.111) state that a modification of Regulation 21 to permit any otherwise accountable gfa in basements to be
excluded from measurement if compatible with the hotel use as specified. This also allows any covered space at ground level within the building reserved for exclusive use by the hotel for setting down, picking up, loading/unloading etc. as coming under the scope of Regulation 23(3) if it would have been accountable for gfa under Regulation 23(1)(b), will not therefore count for gfa. Furthermore, a modification may be given to Regulation 21, to permit the area to qualify for an excess in plot ratio for the domestic part of the development, but should not exceed 20 per cent, or the sum of the plot ratio and the figure obtained by dividing the product of five and 'the concession area' by the area of the site, whichever is the less. A limited amount of parking for administrative use may also be permitted without bonus under Regulation 23(3). The coverage for the hotel may be taken as that permitted for a non-domestic building under Regulation 20(2). This may have actually influenced developers, together with external market factors, in making applications for a large number of hotel developments, since 1985.
### Table 5.3 Analysis of Commercial and C/R Sites in Central District

<table>
<thead>
<tr>
<th>Name</th>
<th>Zoning Category</th>
<th>Site Area (m²)</th>
<th>Site Type A.B.C.</th>
<th>No. of Towers</th>
<th>No. of Storeys</th>
<th>No. of Podium Levels</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bank of China</td>
<td>Office</td>
<td>7,900</td>
<td>C</td>
<td>1</td>
<td>66.3</td>
<td></td>
</tr>
<tr>
<td>Far East Finance C.</td>
<td>Office/Retail</td>
<td>3,214</td>
<td>C</td>
<td>1</td>
<td>47.3</td>
<td>3</td>
</tr>
<tr>
<td>Bond Centre</td>
<td>Office/Retail</td>
<td>6,312</td>
<td>C</td>
<td>2</td>
<td>42/46</td>
<td>2</td>
</tr>
<tr>
<td>Landmark</td>
<td>Office/Retail</td>
<td>9,014</td>
<td>C</td>
<td>2</td>
<td>43.3</td>
<td>3</td>
</tr>
<tr>
<td>Hang Seng Bank</td>
<td>Office/Retail</td>
<td>2,184</td>
<td>C</td>
<td>1</td>
<td>25.3</td>
<td>2</td>
</tr>
<tr>
<td>Central Bldg.</td>
<td>Office/Retail</td>
<td>1,720</td>
<td>C</td>
<td>1</td>
<td>14.3</td>
<td></td>
</tr>
<tr>
<td>Dina/Ruttonjee</td>
<td>Office/Retail</td>
<td>1,860</td>
<td>A</td>
<td>2</td>
<td>26.3</td>
<td></td>
</tr>
<tr>
<td>Bank of America</td>
<td>Office/Retail</td>
<td>3,289</td>
<td>C</td>
<td>1</td>
<td>40.3</td>
<td>4</td>
</tr>
<tr>
<td>Hutchison House</td>
<td>Office/Retail</td>
<td>2,944</td>
<td>C</td>
<td>1</td>
<td>22.4</td>
<td>4</td>
</tr>
<tr>
<td>Sun Tak Centre</td>
<td>Office/Retail/Hotel/Res.</td>
<td>6,720</td>
<td>C</td>
<td>2</td>
<td>39.4</td>
<td>4</td>
</tr>
<tr>
<td>Exchange Square</td>
<td>Office/Retail</td>
<td>10,640</td>
<td>C</td>
<td>3</td>
<td>51.3</td>
<td>3</td>
</tr>
<tr>
<td>Admiralty Centre</td>
<td>Office/Retail</td>
<td>5,710</td>
<td>C</td>
<td>2</td>
<td>26/31</td>
<td>3</td>
</tr>
<tr>
<td>Pacific Place</td>
<td>Office/Retail/Hotel/Res.</td>
<td>14,000</td>
<td>C</td>
<td>4</td>
<td>55/51</td>
<td>3</td>
</tr>
<tr>
<td>Exhibition Centre</td>
<td>Hotel/Exhib.</td>
<td>18,000</td>
<td>C</td>
<td>4</td>
<td>48/50</td>
<td></td>
</tr>
<tr>
<td>Harbour Centre</td>
<td>Office/Retail</td>
<td>6,110</td>
<td>C</td>
<td>2</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>Great Eagle Ctr.</td>
<td>Office/Retail</td>
<td>5,650</td>
<td>C</td>
<td>1</td>
<td>47.3</td>
<td>2</td>
</tr>
<tr>
<td>Sun Hung Kai Ctr.</td>
<td>Office/Retail</td>
<td>4,680</td>
<td>B</td>
<td>1</td>
<td>41.3</td>
<td>2</td>
</tr>
<tr>
<td>Windsor House</td>
<td>Office/Retail</td>
<td>3,840</td>
<td>B</td>
<td>1</td>
<td>31.3</td>
<td></td>
</tr>
<tr>
<td>Park Lane Hotel</td>
<td>Hotel</td>
<td>3,250</td>
<td>B</td>
<td>1</td>
<td>26.3</td>
<td>4</td>
</tr>
<tr>
<td>Hilton Hotel</td>
<td>Hotel</td>
<td>2,592</td>
<td>C</td>
<td>1</td>
<td>26.3</td>
<td>4</td>
</tr>
<tr>
<td>Mandarin Hotel</td>
<td>Hotel</td>
<td>2,209</td>
<td>C</td>
<td>1</td>
<td>33.3</td>
<td>4</td>
</tr>
<tr>
<td>Furama</td>
<td>Hotel</td>
<td>2,688</td>
<td>C</td>
<td>1</td>
<td>33.3</td>
<td></td>
</tr>
<tr>
<td>Alexandra House</td>
<td>Office/Res.</td>
<td>3,760</td>
<td>C</td>
<td>1</td>
<td>26.3</td>
<td>5</td>
</tr>
<tr>
<td>Prince’s Bldg.</td>
<td>Office/Retail</td>
<td>3,264</td>
<td>C</td>
<td>1</td>
<td>27.3</td>
<td>5</td>
</tr>
<tr>
<td>Swire House</td>
<td>Office/Retail</td>
<td>1,716</td>
<td>C</td>
<td>1</td>
<td>42.3</td>
<td></td>
</tr>
<tr>
<td>Chartered Bank</td>
<td>Office</td>
<td>4,000</td>
<td>C</td>
<td>1</td>
<td>40.3</td>
<td>1</td>
</tr>
<tr>
<td>Hennessy Centre</td>
<td>Hotel</td>
<td>3,000</td>
<td>B</td>
<td>1</td>
<td>35.3</td>
<td>5</td>
</tr>
<tr>
<td>Excelsior Hotel</td>
<td>Office/Retail</td>
<td>3,400</td>
<td>B</td>
<td>1</td>
<td>40.3</td>
<td>3</td>
</tr>
<tr>
<td>World Trade Centre</td>
<td>Office/Retail</td>
<td>4,950</td>
<td>C</td>
<td>1</td>
<td>49.3</td>
<td></td>
</tr>
<tr>
<td>Connought Centre</td>
<td>Office/Retail</td>
<td>4,969</td>
<td>C</td>
<td>1</td>
<td>52.3</td>
<td></td>
</tr>
</tbody>
</table>

91
In a property market highly attuned to changing development conditions and incentives, then a 'Practice Note' modification to the regulations may create the right incentives to develop particular building types.

5.4 Conclusion

5.4.1 The Buildings Ordinance is accepted as being in need of continuous review in view of changing technology, and the blanket application of regulations, with regard to residential development, has clearly led to convoluted design solutions, whilst site coverage and plot ratio controls on commercial development have probably led directly to the box-like massing of new building forms and maximisation of podium development that tends to typify the urban area.

5.4.2 The Building (Planning) Regulations have a significant impact on building form and massing, particularly in relation to the regulations concerning public health and density restrictions. These also effect, to a marked extent, the relationships of buildings on adjacent sites. Related provisions of the Buildings Ordinance such as Modifications and Practice Notes, provide some flexibility in the interpretation of regulation. The provisions contained in Practice Notes have, in some cases, led to quite major changes in the design conception of major building elements.
5.5 Recommendations

i. The existing Buildings Ordinance should be adopted as a control measure for urban design purposes in the Central and Wan Chai Study, including Bonuses, Modifications, and Practice Notes.

ii. Urban design proposals should meet all regulations apart from those where there is a degree of flexibility through the issue of Modifications and Practice Notes. This should also apply to the production of any control-type drawings aimed at achieving certain design ends.

iii. Whilst bonuses are generally applicable in certain situations or are granted in return for facilities that address a shortfall in one particular area, these are not generally considered as a means to promote design.

It is recommended that this mechanism should be used more widely to bring about certain urban design solutions (e.g. an open plaza beneath a building in a particular location in order to open up a view corridor or articulate a large pedestrian open space) whereby the purchaser would receive a bonus based on the dedicated area.
6.0 Summary of Recommendations

6.1 Chapters 2-5 have explored the various design control measures which stem from current planning and building regulatory mechanisms and procedures. These exert considerable influence over both urban design and layout, given the tight site conditions that exist in the urban area. The analysis contained in this technical paper has therefore aimed to identify the following:

- controls which, acting together, define building and development envelopes to such an extent that they positively inhibit and constrain imaginative design solutions.

- opportunities for working within controls or extending these to create opportunities for a better urban environment.

6.2 In general the most fundamental conclusion to be drawn from the analysis is that whilst buildings and lands controls are ubiquitous and far reaching in their potential impact, these tend to inhibit rather than stimulate the creation of imaginative design, developers and their architects being concerned primarily with fulfilling development and lease conditions whilst maximising the full potential of their sites. Layout plans, in the few cases where they have been produced in the urban area, have failed to provide an adequate framework for positive design, good environment and
specific character, as the local planning process is geared primarily to reconciling frequently diverse requirements and keeping development options open for uses to be designated at some future time. A further constraint, although one which is difficult to address precisely, is the undoubted reluctance of the Lands Office to introduce any form of design control that might be seen to limit the design flexibility generally accorded to developers, even if this does not effect the overall plot ratio and site coverage, as this might introduce problems arising from controls subsequent to land disposal, which might in turn hamper the overall design and adversely affect the value, rendering development commercially unviable.

6.3 In discussion with a number of private and public bodies during the preparation of this paper, the uniquely volatile nature of the property market has been frequently stressed - for example sites originally earmarked by a developer for office development may be changed to residential or hotel development virtually overnight. This has in fact recently occurred on a large site in Fenwick Street, Wan Chai. A rigid definition of uses may well have a detrimental effect on the property market.
6.4 Recommendations have been set out in this technical paper at the end of each section, and these are summarised below, together with policy recommendations:

i) Master Layout Plan

The plan preparation process for the Central/Wanchai reclamation should be based on clear planning objectives, and an assessment of land-use options based on a detailed assessment of needs, and the district planning and community structure prior to the formulation of initial layouts. This should correlate with urban design criteria (discussed in a separate technical paper) that seeks to articulate linkage, continuity and physical correspondence between sites zoned for compatible uses.

ii) Lease Conditions

Special and General Conditions together with relevant technical specifications and plans provide an effective control framework with which purchasers are familiar. These vary considerably according to the nature of each site, in particular the degree to which tight site constraints must be respected and varying requirements to integrate public facilities or amenities taken into consideration. These have created both interesting relevant precedents in
terms of the degree to which important aspects of site design can be effectively controlled within a binding framework which ensures that purchasers meet their development obligations. It is noted however that Government only infrequently allows any form of compensation for the introduction of site or building works which might benefit the wider environment. It is recommended that the following mechanisms can be used to good effect where considered appropriate on the Central/Wanchai reclamation:

- The means to incorporate 'Entrusted Works' such as major public facilities or ground level public open space on strategic sites, the cost of these to be either reimbursed by Government, or compensated by a bonus in plot ratio notwithstanding Regulations No. 21(1) and (2) of the Building (Planning) Regulations. Similarly Reserved Accommodation e.g. a ferry terminal can also be incorporated within a private development package, to be specified in lease conditions with or without a plot ratio bonus. The District Lands Office stress that the practical problems associated with 'Entrusted Works' are not easy to overcome, mainly due to the fact that many Government departments demand free-standing sites for G/IC development rather than combining complementary uses on a single site.
This appears to be mainly for operational and future management/maintenance reasons. It is also worth nothing that the existing Government system on finance and administrative control of 'Entrusted Works' often frustrates the scheduled timing of site sales which, in turn, will have implications for the 50 ha. limit.

The submission of a detailed conceptual design and specifications for a proposed development package by prospective purchasers, to be vetted by Government before the best tender is chosen. This would generally call for the additional submission of a model and detailed landscaping proposals following a successful tender, aimed at ensuring a high standard of design and environment. This broadly accords with the procedure adopted by the Urban Development Authority in Singapore, and which has resulted in a high standard of urban environment, albeit in a lower density situation. This could conceivably work well for the development of a site sold by tender in Hong Kong, and would be a precursor to the choice of tender by Government. Although this has not been tested for a major urban development site there is a precedent in the Red Hill project, where a Preliminary Development Concept was requested by Government to accompany each tender submission. However, land is normally sold by auction which is obviously a
limiting factor as this ultimately reduces Government's powers of development control, these being concerned more with meeting regulations than with architectural and urban design standards.

Deeds of Mutual Covenant and Management Agreement can, in combination with special lease conditions or control drawings, ensure retail efficiency coupled with a strong directional circulation framework, strengthened by an unbroken pattern of retail uses.

iii) Control Drawings

Control drawings, whilst representing a viable means of realising desirable development and even architectural objectives, are generally regarded as being difficult to reconcile with the traditional flexibility accorded to developers in the urban area.

It is recommended that, in certain circumstances, control drawings should be produced for particular development sites that are integral components of the urban fabric and that therefore entail a significant public amenity function, for example a major shopping mall with a strong directional and circulation emphasis, that includes connections to adjoining sites. These 'Entrusted Works' (See (ii) above) and would be expected to exert a design influence over a large part of the development. It
is not intended that restrictive controls should constrain designs innovation but should encourage, to some extent, the subordination of individual creativity to the overall civic design.

iv) Buildings Ordinance Controls
The Building (Planning) Regulations have a significant impact on virtually all aspects of building design, and in terms of urban design they particularly effect the relationship between building height, site coverage, plot ratio and use. Ordinance should be adopted as a control measure. However, related provisions such as Modifications, Bonuses, and Practice Notes provide some flexibility in the interpretation of regulations and, in same cases, have led to changes in the design conception of major building elements. Whilst these are not generally considered as a means to promote design, they should be taken into account during the urban design process, as a means of achieving certain design ends. Consideration should be given, as to the possibility of designating the Central/Wanchai reclamation as a 'Special Design Area', for purposes of applying Modifications and Bonuses, possibly in conjunction with the measures set at in (iii) above.