

**Calculation of Gross Floor Area and Non-accountable Gross Floor Area
Building (Planning) Regulation 23(3)(a) and (b)****Calculation of Gross Floor Area**

Regulation 23(3)(a) of the Building (Planning) Regulations (B(P)R) stipulates that gross floor area (GFA) is the area contained within the outer surface of external walls of a building measured at each floor level. Any portions of this area not floored over must be included in the plot ratio calculations.

2. However where large voids occur, a modification of Regulation 23(3)(a) of the B(P)R may be granted on application for voids in the following circumstances and subject to compliance with the pre-requisites (for items (a) to (g)) and the overall cap on GFA concessions (for items (f) and (g) only) stipulated in PNAP APP-151 on Building Design to Foster a Quality and Sustainable Built Environment:

- (a) in front of cinema and theatre balconies;
- (b) in banking halls;
- (c) in shopping arcades provided that the total area of voids in the shopping arcade does not exceed 10% of the total GFA of the shopping arcade;
- (d) in single-staircase buildings in which cockloft floors for storage are provided in the ground storey;
- (e) in auditoria, sporting halls (including squash courts), school halls and religious institutions;
- (f) in main common entrance lobbies of non-domestic buildings; and
- (g) in duplex domestic flats or houses if they satisfy the criteria set out in Appendix A.

3. In the case of "split level" designs where the difference in level between adjoining floors is less than 1 m, the floor may be regarded as being level for the purposes of this regulation. For greater differences in level, the authorized person should clarify with the Buildings Department (BD) before embarking on the project.

4. Subject to the special circumstances of each case and compliance with the pre-requisites (for all items except item (e)) and the overall cap on GFA concessions (for items (a) to (d) only) stipulated in PNAP APP-151 on Building Design to Foster a Quality and Sustainable Built Environment, the Building Authority (BA) is **in general** prepared to consider favourably application for modification of Regulation 23(3)(a) of the B(P)R in respect of :

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- (a) chimney shafts forming an integral part of a new building;
- (b) filtration plant rooms for swimming pools in hotels or for water features in communal gardens/ landscape area;
- (c) a room of a size not exceeding 1.2m(W) x 1.2m(D), housing Satellite Master Antenna Television (SMATV) system equipment, located in the common area of a building under multi-ownership (Notes 1 & 2),
- (d) genuine and properly designed pipe-ducts/air ducts with adequate access for inspection and maintenance which form part of the distribution network for non-mandatory feature or non-essential plant (Note 3);
- (e) genuine and properly designed pipe-ducts/air ducts with adequate access for inspection and maintenance which form part of the distribution network for mandatory feature or essential plant (Note 3); and
- (f) plant rooms for environmentally friendly systems and features such as rainwater / grey water recycling system, battery room for solar panels, or similar.

5. A modification of Regulation 23(3)(a) of the B(P)R may also be granted on application for refuge floors which comply with the Code of Practice for the Provision of Means of Escape in Case of Fire 1996.

6. Where a curtain wall system forms the external face of a building, the BA is prepared to accept the outer face of the structural elements, e.g. beams, columns and floor slabs, as the external wall for the purpose of measurement of GFA and site coverage (SC) where:

- The curtain wall system itself does not form part of the structural system of the parent building;
- The system does not result in any additional floor area at a floor level; and
- The projection of the system from the outer face of the structural elements does not exceed 300 mm.

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Note 1: Where the SMATV equipment is installed in the form of a cabinet and does not involve any building works, such an equipment cabinet is in fact a plant which is not subject to the control of the Buildings Ordinance. Two cabinets each of a standard size not exceeding 0.6m(W) x 0.6m(D) x 2.2m(H) should normally be adequate for a typical SMATV system.

Note 2: A radio base station constructed in the form of an equipment cabinet of size not exceeding 1.5m(w) x 1.0 m(D) x 2.3 m(H) and solely for the purpose of housing transmission equipment is considered as plant and equipment installations which will not require the prior approval from the BD. For equipment cabinet size exceeding the captioned dimensions, the radio base station will usually be accountable for GFA calculations as such installation is usually not constructed solely to serve the parent building.

Note 3: Please refer to PNAP APP-151 for examples on plant rooms that are considered mandatory / essential or non-mandatory / non-essential plant.

7. For the provision of curtain walls to existing facades in the case of wholesale conversion or refurbishment of industrial buildings or other types of buildings, exemption from section 31 (1) of the Buildings Ordinance (BO) to allow the curtain walls to project over streets will be favourably considered if low-energy absorbent type glazing/energy efficient materials with energy efficient design of the curtain walls that could achieve 40% in the categories of Energy Use (EU) and Indoor Environmental Quality (IEQ) under the BEAM Plus certification with provisional assessment reports conferred by the Hong Kong Green Building Council are incorporated in the proposal. As a condition for the granting of the exemption, supporting documents to demonstrate achievement of 40% in the categories of EU and IEQ in the Final Assessment of the BEAM Plus certification are required to be submitted within 3 months of BA's letter of acknowledgement of the Form BA 14 for the project. For partial conversion or refurbishment of industrial or other types of buildings, application for exemption from section 31(1) of the BO to allow the curtain walls to project over streets should be accompanied with justification to demonstrate that low-energy absorbent type glazing/energy efficient materials with energy efficient design will be incorporated in the design and construction of the curtain walls. Curtain walls system projecting over streets, if permitted, will not be accountable for GFA and SC under the B(P)R.

8. Cladding may take a variety of forms and as a general rule, should be considered individually for the purpose of measuring GFA. In the case, however, of a form of cladding which may be equated in its design to a curtain wall system, the method of measurement of GFA and SC given in paragraph 6 above may be adopted as indicated in the sketches illustrating the above principle for the measurement of GFA and SC at Appendix B.

9. External wall finishes may be disregarded for the purpose of measurement of dimensions under Regulation 23(3) of the B(P)R. However, no part of any wall finishes should project beyond the site boundaries.

Non-accountable Gross Floor Area

10. Under Regulation 23(3)(b) of the B(P)R, the BA may disregard from GFA calculation floor space occupied solely by machinery or equipment for lift, air-conditioning, heating system or any similar service. The phrase "any similar service" may generally be interpreted to include fire control centre, water tanks, electrical switch rooms, meter rooms, transformer rooms, generator rooms, pump rooms, telephone equipment rooms, cable riser duct room, CO₂ rooms, hose reel closets, sewage treatment plant rooms and smoke extraction system. In each case, both the premises for and the size of any such feature should be justified. To guard against possible abuse, the BA will take the following into consideration when disregarding the above features from GFA calculation for single-family residence or house type developments:

- (a) There should not be any duplication in the provision of services when GFA exclusions are also being separately applied for; and

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- (b) Only the minimum amount of GFA necessary for accommodating and maintaining the services and commensurate with the development would be allowed to be disregarded. The authorized person may be required to demonstrate why it is not possible to consolidate the provision of all related services into multi-purposes or centralised rooms such that the area which is disregarded from GFA could be used for efficiently.

11. For plant rooms and other features that are to be disregarded from GFA calculation, the enclosing walls and the associated protected lobby, if any, solely serving the said rooms or features and do not serve any other function, may also be disregarded from GFA calculation. The maximum thickness of such wall to be disregarded from GFA calculation should normally be not greater than 100mm.

12. The granting of GFA concessions for plant room occupied solely by machinery or equipment for air-conditioning or heating system is subject to compliance with the pre-requisites and the overall cap on GFA concessions stipulated in PNAP APP-151 on Building Design to Foster a Quality and Sustainable Built Environment.

13. The horizontal area of staircases, lift shafts and vertical ducts should normally be measured for GFA together with the floor through which they pass, except refuge floor(s). However, where these features solely serve floor(s) (i.e. not serving GFA accountable floor(s) above or below) accepted as not being accountable for GFA (by reason of the captioned regulation), the area of the features may also be discounted. If these features serve underground car parks as well as other floors, the BA may consider discounting the portion of these features at underground carpark floors from GFA calculation.

Carparking and Loading and Unloading Areas

14. Under Regulation of 23(3)(b) of the B(P)R, the BA has the discretionary power to disregard from GFA calculations any floor space that he is satisfied is constructed and intended to be used solely for, inter alia, parking motor vehicles and loading and unloading of motor vehicles. The BA generally accepts that public and private car-parks, and public transport termini provided in buildings are space for parking or loading and unloading of motor vehicles falling within the meaning of Regulation of 23(3)(b) of the B(P)R. In exercising his discretionary power under Regulation of 23(3)(b) of the B(P)R to disregard or not to disregard such area or any part thereof from GFA calculation, the BA will determine each case on its merits and take into account all relevant considerations including the design of the car-park and the effect on public interest such as impact on infrastructure, density and building bulk. In general, the BA will follow the lines as mentioned in paragraphs 15 to 17 below in his exercise of discretion.

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15. **Carparking spaces**

- (a) When a lot is subject to lease/grant conditions requiring the provision or incorporation of a **public** carpark within a building or buildings, all the required facilities and associated works, including service core areas of such public carpark should be accountable for GFA calculation.
- (b) For **private** carparking spaces which are intended for the use of the occupants and their bona fide visitors of the parent building, the BA may disregard them from GFA calculation under Regulation 23(3)(b) of the B(P)R subject to the following criteria :-
 - (i) In deciding on the number of car-parking spaces that could be disregarded, the BA will make reference to the standards set out in the Hong Kong Planning Standards and Guidelines (HKPSG) and the advice of the Commissioner for Transport (C for T).
 - (ii) All car-parking spaces to be disregarded from GFA are electric vehicle (EV) charging enabling, by putting in place the infrastructure, including electrical wiring, meter rooms and provision of sufficient power supply, for future installation of EV standard charging facilities, in accordance with the requirements stipulated under the Technical Guidelines on Charging Facilities for Electric Vehicles (EV) issued by the Electrical and Mechanical Services Department (which can be downloaded in the EMSD website: http://www.emsd.gov.hk/emsd/e_download/pps/pub/EV_guidelines.pdf).
 - (iii) In order to help reduce building bulk, 100% GFA concession may be granted for underground car parks while only 50% GFA concession may be granted for aboveground car parks.
 - (iv) 100% GFA concession may be granted for aboveground car parks if it is proven with sufficient evidence that it is technically infeasible to construct an underground car park due to site constraints in a specific site or that the above-ground car parks will not pose adverse environmental or visual impact to its surrounding areas.
 - (v) Examples of site constraints ^(Note 4) making underground car parks technically infeasible include:-

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Note 4: These serve as examples only and each case should be considered on its individual merits based on relevant information or justifications submitted

- sites located within Scheduled Area No.1 (Mid-levels) where the amount of bulk excavation is restricted to minimize adverse effects on the stability of the hillside;
 - sites located within Scheduled Areas No.2 (North-western NT) & 4 (Ma On Shan) where there may be large cavities within the marble bedrock and extensive underground construction works may encounter significant difficulties as a result of these ground conditions;
 - sites located within Scheduled Area No. 3 (railway protection areas) where underground construction works are restricted by the presence of railway structures and stations; or
 - sites located above major underground utilities or with other complex geotechnical constraint.
- (vi) Examples for accepting above-ground car parks as not posing adverse environmental or visual impact to its surrounding areas include ancillary car parks in low-rise low-density sites such as a development with plot ratio not exceeding 1 and not more than 6 storeys in height with maximum 5 storeys on top of one storey carpark.
- (vii) A carpark may be accepted as an underground carpark in the following circumstances:
- (1) If the site abuts on only one street, a carpark may be accepted as an underground carpark if the structural ceiling soffit of the carpark is at or below the mean level of that portion of the street on which the site abuts and subject to such mean level to be not more than 5m above the lowest level of such portion of the street;
 - (2) If the site abuts more than one street, a carpark may be accepted as an underground carpark if the structural ceiling soffit of the carpark is at or below the level obtained by dividing the sum of the mean levels of the respective portion of the streets on which the site abuts by the number of such streets on which the site abuts and subject to the level so obtained is not more than 5m above the mean level of that portion of the lowest street on which the site abuts;
 - (3) For the purpose of allowing the provision of natural lighting and ventilation to the topmost carpark floor, a carpark may be accepted as an underground carpark if not more than half of the height measured from the structural floor to the structural ceiling soffit of the topmost carpark floor and subject to a maximum height of 2.5m protrudes above the level as determined in (1) or (2) above for a site abutting on only one street or more than one street respectively.

- (4) When there are site constraints that affect the design and location of the carparking floors e.g. there is significant difference in the levels of the street(s) on which the site abuts; there is an existing large platform that governs the carparking design; the carpark is semi-sunken and follows the slope profile of the site and adjoining land, etc., the BA may consider the special circumstances of the case in accepting a carpark as an underground carpark.
- (viii) For underground carpark to be granted with 100% GFA concession as stated in (iii) above, any entrance lift lobby, lift shaft or ramp for vehicles which is above-ground, solely serving the underground carpark, may be allowed to be granted with 100% GFA concession if the area involved is of a reasonable size. However, any entrance lift lobby/lift shafts which serve the development as well as the underground carpark(s) should be fully accountable for GFA.
- (ix) For the avoidance of doubt, associated ramps and facilities passing through floors accountable for GFA may be excluded from GFA calculation if they are physically separated from and do not provide access to the accommodation on the floors they pass through, the extent of GFA concession of which will follow that of the carpark served by the associated ramps and facilities.
- (c) Where both **private and public** carparking spaces are proposed in the same building and upon being satisfied with the design of the carpark, the BA will assess the accountability of GFA on the following basis:
 - (i) Where private and public carparking spaces are provided on **separate floors**, the floor space exclusively provided for private carparking purposes on that floor may, subject to paragraph 15(b) above, be considered for disregarding from GFA calculation under Regulation 23(3)(b) of the B(P)R whereas the floor(s) provided exclusively for public carparking purposes would be accountable for GFA under Regulation 23(3)(a) of the B(P)R.
 - (ii) Where both private and public carparking spaces are provided on the same floor, only the areas, including carparking spaces, driveways, ramps, lift halls and staircases solely serving the private carpark would be considered for disregarding from GFA calculation under Regulation 23(3)(b) of the B(P)R. Those public parking spaces, associated driveways, lift halls, staircases, ramps which serve either the public carpark or both the public and the private carparks will not be disregarded from GFA calculation. Moreover the areas used by the public carpark and its associated facilities should be delineated on plans.

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- (d) The area of driveways, ramps, staircases and lift halls at the level(s) providing access to/ from a building for use by both private and public carparks should be included in the GFA calculation.
- (e) For the avoidance of doubt, any parking provision on open areas of a site, or on an open podium roof, need not be measured for GFA.

16. **Public Transport Terminus (PTT)**

The BA would take the advice of the Planning Department in determining the effect of excluding PTT from GFA calculation on the infrastructure, density and building bulk. As Planning Department has advised that the town planning intention is that all PTT should count for GFA calculation unless otherwise provided for in the relevant town plan, hence as a general rule, unless otherwise specified in the relevant town plan or any specific planning approval for the site, all PTT should be accountable for GFA.

17. **Loading and Unloading Areas**

- (a) Areas for loading/unloading purposes would only qualify for disregarding from measurement of GFA if they are directly associated with spaces specifically earmarked for parking of motor vehicles for loading and unloading purposes and are designed to the satisfaction of the BA and the provision are not excessive with reference to the standards set out in the HKPSG or requirements stipulated by the C for T. For instance, areas set aside for loading/unloading detached container boxes in a container yard should be measured for GFA.
- (b) 100% GFA concession may be granted for such loading and unloading areas if they are provided at ground level or underground but may only be qualified for 50% GFA concessions if they are provided at upper storeys above ground level. For cases where run-in/out or driveway at ground level serve loading and unloading areas at ground level or underground but also serve car parking spaces aboveground entitling only 50% GFA concessions, the percentage of GFA concessions of such run-in/out or driveway areas will be calculated on a pro-rata apportionment basis judging on the merits of each individual cases.
- (c) Apart from (b) above, areas for loading and unloading purposes and parking space for refuse collection vehicle next to a refuse storage and material recovery chamber may be disregarded from GFA calculation if vehicular access is required to be provided to the refuse storage and material recovery chamber under the Building (Refuse Storage and Material Recovery Chambers and Refuse Chutes) Regulations. 100% GFA concession may be granted for such space solely for refuse collection vehicle, which is provided either underground or above-ground.

18. This practice note is applicable to all new building plans or major revision of building plans for development proposals submitted to the BA for approval on or after 1 April 2011. Subject to paragraph 19 below, this practice note is also applicable to building plans which have been previously disapproved and are resubmitted for approval on or after 1 April 2011.

19. For building plans which have been firstly submitted on or before 31 March 2011 and subsequently disapproved by the BA but not on ground relating to proof of ownership or realistic prospect of control of the land forming the site, the first resubmission of such plans to the BA on or after 1 April 2011, which is submitted within 6 months from the date of disapproval of the firstly submitted plans, would not be subject to the requirements of this practice note. For the avoidance of doubt, if such first resubmission of plans eventually has been disapproved by the BA, any further resubmission of the plans would be subject to the requirements of this practice note.

20. Subject to section 16(3)(d) of the BO, building plans approved by the BA prior to the implementation of this practice note should make reference to the “September 2010” version of this practice note (Appendix C).

(AU Choi-kai)
Building Authority

Ref. : BD GP/BREG/P/9 (VII)

This PNAP is previously known as PNAP 13

First issue December 1974

Last revision September 2010

This revision January 2011 (AD/NB1) – (General revision)

**1. Exemption Criteria for
Exclusion of Voids in Duplex Domestic Flats and Houses from Gross Floor Area
Calculations**

| | Duplex Flats | Houses |
|---------------------------------|--|---------------------------------------|
| UFS ⁽¹⁾ of premises | 150 m ² (min.) | 250m ² (min.) |
| % of void to UFS of premises | 10% (max.) | 5% (max.) |
| % of void to total domestic GFA | Only two levels of voids will be allowed for each residential tower block, subject to a maximum of 0.5% ⁽²⁾ of the total domestic GFA of the development. | N.A. |
| Headroom of void | 6.5m (max.) | 7.0m (max.) ⁽³⁾ |
| Location of void | Living/ dining room or entrance foyer | Living/ dining room or entrance foyer |

- (1) “UFS” means any floor space other than staircases, staircase halls, lift landings, the space used in providing water-closet fittings, urinals and lavatory basins and the space occupied by machinery for any lift, air-conditioning system or similar services.
- (2) The “0.5% cap” will be applied with some flexibility for low-rise and low-density flat-type development which is similar to house-type development. Each case will be considered on individual merits.
- (3) In case of sloping ceiling resulted from a pitch roof, the headroom should be measured to the mean level of the underside of the portion of ceiling that is above the void area.

2. Conditions of Exemption

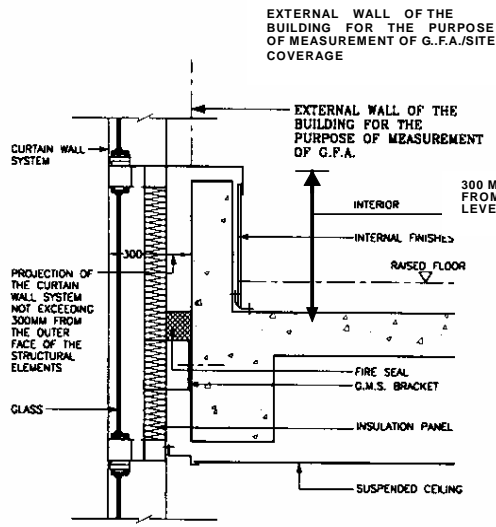
- (i) The Building Authority (BA) is satisfied that the void design is compatible with the type of residential development and that effective measures to prevent any possible abuse are provided, such as up-stand beam design, voids fronted by large glazing panels facing the exterior, no adjoining structural wall or beam, etc.; and
- (ii) The development after excluding the area of voids from GFA calculation will not contravene the development restrictions relating to building height, GFA, etc. in the relevant statutory town plan and any specific provisions or restrictions in the lease conditions.

- (iii) To support an application for exemption of voids from GFA calculations, the developer or owner is required to submit a letter of undertaking for his proposed development. It shall include an undertaking from the developer or owner to the BA to designate the area(s) of the voids as 'voids' in the Deed of Mutual Covenant (DMC) with their locations clearly indicated. The DMC should contain binding and enforceable conditions for the control, management and maintenance of the features. Where no DMC is to be in force for a development, such designation shall be incorporated into the Sales and Purchase Agreement, Assignment, Tenancy Agreement or conveyancing document such that the future owners or tenants are aware of their rights and liabilities.

- (iv) Applications for exemption of voids from GFA calculations in duplex domestic flats or houses or in the case of a development with houses and flats on the same site, would be considered on the special circumstances of each case.

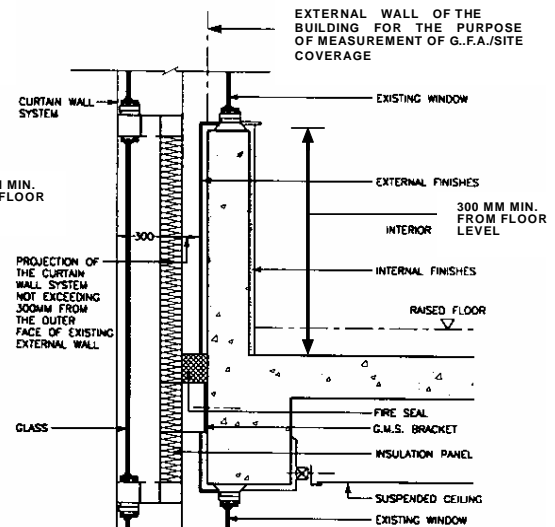
Appendix B
(PNAP APP-2)

**CURTAIN WALL SYSTEM INSTALLED
AT NEW BUILDING**



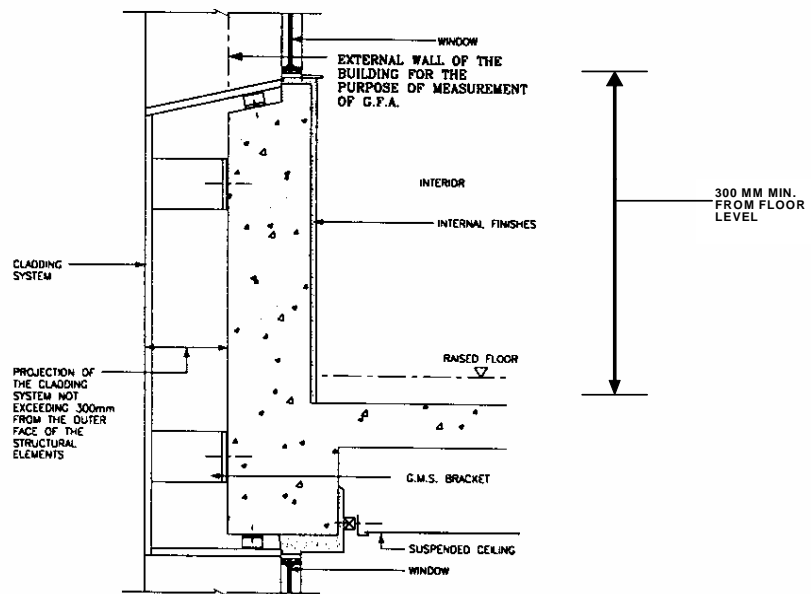
SECTION

**CURTAIN WALL SYSTEM INSTALLED
AT EXISTING BUILDING**



SECTION

**CLADDING SYSTEM INSTALLED
AT BUILDING**



SECTION

Buildings Department

**Practice Note for Authorized Persons,
Registered Structural Engineers and
Registered Geotechnical Engineers**

APP-2

**Calculation of Gross Floor Area and Non-accountable Gross Floor Area
Building (Planning) Regulation 23(3)(a) and (b)**

Calculation of Gross Floor Area

Building (Planning) Regulation (B(P)R) 23(3)(a) stipulates that gross floor area (GFA) is the area contained within the outer surface of external walls of a building measured at each floor level. Any portions of this area not floored over must be included in the plot ratio calculations.

2. However where large voids occur, a modification of B(P)R 23(3)(a) may be granted on application in the following circumstances :

- (a) in front of cinema and theatre balconies;
- (b) in banking halls and shopping arcades;
- (c) in single-staircase buildings in which cockloft floors are provided in the ground storey;
- (d) in auditoria, sporting halls (including squash courts), school halls and religious institutions; and
- (e) in main common entrance lobbies.

3. In the case of "split level" designs where the difference in level between adjoining floors is less than 1 m, the floor may be regarded as being level for the purposes of this regulation. For greater differences in level, the authorized person should clarify with the Buildings Department before embarking on the project.

4. Subject to the special circumstances of each case, the Building Authority (BA) is **in general** prepared to consider favourably application for modification in respect of :

- (a) chimney shafts forming an integral part of a new building;
- (b) refuge areas which observe the stated criteria (see Code of Practice for the Provision of Means of Escape in Case of Fire);
- (c) covered areas clearly intended for and designed as playgrounds (see Practice Note for Authorized Persons, Registered Structural Engineers and Registered Geotechnical Engineers PNAP APP- 42);
- (d) swimming pool filtration plant rooms; and
- (e) genuine and properly designed pipe-ducts with adequate access for inspection and maintenance.

/5. Where

5. Where a curtain wall system forms the external face of a building, the BA is prepared to accept the outer face of the structural elements, e.g. beams, columns and floor slabs, as the external wall for the purpose of measurement of GFA and site coverage (SC) where :

- The curtain wall system itself does not form part of the structural system of the parent building;
- The system does not result in any additional floor area at a floor level; and
- The projection of the system from the outer face of the structural elements does not exceed 300 mm.

6. For the provision of curtain walls to existing facades in the case of wholesale conversion or refurbishment of industrial buildings or other types of buildings, exemption from section 31(1) of the Buildings Ordinance (BO) to allow the curtain walls to project over streets will be favourably considered if low-energy absorbent type glazing/energy efficient materials with energy efficient design of the curtain walls that could achieve 40% in the categories of Energy Use (EU) and Indoor Environmental Quality (IEQ) under the BEAM Plus certification with provisional assessment reports conferred by the Hong Kong Green Building Council are incorporated in the proposal. As a condition for the granting of the exemption, supporting documents to demonstrate achievement of 40% in the categories of EU and IEQ in the Final Assessment of the BEAM Plus certification are required to be submitted within 3 months of BA's letter of acknowledgement of the Form BA 14 for the project. For partial conversion or refurbishment of industrial or other types of buildings, application for exemption from section 31(1) of the BO to allow the curtain walls to project over streets should be accompanied with justification to demonstrate that low-energy absorbent type glazing/energy efficient materials with energy efficient design will be incorporated in the design and construction of the curtain walls. Curtain walls system projecting over streets, if permitted, will not be accountable for GFA and SC under the B(P)R.

7. Cladding may take a variety of forms and as a general rule, should be considered individually for the purpose of measuring GFA. In the case, however, of a form of cladding which may be equated in its design to a curtain wall system, the method of measure of GFA and site coverage given in paragraph 5 above may be adopted as indicated in the sketches illustrating the above principle for the measurement of GFA and site coverage at Appendix A.

8. External wall finishes may be disregarded for the purpose of measurement of dimensions under B(P)R 23(3). However, no part of any wall finishes should project beyond the site boundaries.

Non-accountable Gross Floor Area

9. Under B(P)R 23(3)(b), the BA may exclude from GFA calculation floor space occupied solely by machinery or equipment for lift, air-conditioning, heating system or any similar service. The phrase "any similar service" may generally be interpreted to include

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water tanks, boiler rooms, electrical switch rooms, meter rooms, transformer rooms, generator rooms, pump rooms, telephone equipment rooms, cable riser duct room, CO₂ rooms, hose reel closets, sewage treatment plant rooms and ducts for central ventilation or smoke extraction system. In each case, both the premises for and the size of any such feature should be justified. To guard against possible abuse, the BA will take the following into consideration when considering exclusion of the above features from GFA calculation for single-family residence or house type developments:

- (c) There should not be any duplication in the provision of services when GFA exclusions are also being separately applied for; and
- (d) Only the minimum amount of GFA necessary for accommodating and maintaining the services and commensurate with the development would be allowed to be excluded. The authorized person may be required to demonstrate why it is not possible to consolidate the provision of all related services into multi-purposes or centralised rooms such that the area which is excluded from GFA could be used for efficiently.

10. For plant rooms and other features that are excluded from GFA calculation, the enclosing walls/columns and the associated protected lobby, if any, solely serving the said rooms or features and do not serve any other function in accordance with paragraph 12, may also be excluded from GFA calculation.

11. Air-conditioning plant rooms to be excluded from GFA calculation should as a rule be located outside the individual residential units. For an air-conditioning plant room proposed with access within an individual residential unit, the authorized person should justify why access to such room cannot be located outside the unit. In any event, the provision and size of such rooms need to be justified before consideration for exclusion from GFA will be given. In the event that such room is permitted to be provided with access within the individual unit, such plant room should meet the following criteria before it can be considered for exclusion from GFA calculation under B(P)R 23(3)(b) :-

- (a) The floor of the plant room should have a level difference of a minimum of 500 mm with the floor of the main accommodation;
- (b) The plant room should have at least one side open, but railing, open grille and louvre on the open side to parapet level are acceptable. Enclosure above parapet level may be allowed where there is a need to separate the intake air and exhaust air. Enclosure for the purpose of compliance with paragraph 12.3 of the Code of Practice for Fire Resisting Construction may also be allowed on the open side; and
- (c) The open side should face into open air.

Where an air-conditioning plant room is not proposed, air-conditioning platforms, complying with the requirements set out in PNAP APP-19, provided on the external elevations of the building are not accountable for GFA calculation under regulation 23(3) of the B(P)R.

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12. The horizontal area of staircases and lift shafts should normally be measured for GFA together with the floor through which they pass. However, where these features pass through a floor accepted as not being accountable for GFA (by reason of the captioned regulation), the area of the features may also be discounted, with one exception. The exception is that entrance lobbies, lifts, staircases and exit corridors, other than those solely serving the non-accountable floors, at the level(s) of main access to a building from the street(s) should always be included in the measurement for GFA. In such locations, these features have a local function and do not merely pass through a floor. For the features passing through a floor that is partly accountable and partly non-accountable for GFA, their exclusion from GFA either in its entirety or parts thereof will be considered on a case-by-case basis taking into account their locations and functions. The principle is that such features on a particular floor should be counted for GFA if the area they serve at that floor is accountable for GFA calculation.

Carparking and Loading and Unloading Areas

13. Under B(P)R 23(3)(b), the BA has the discretionary power to disregard from GFA calculations any floor space that he is satisfied constructed and intended to be used solely for, inter alia, parking motor vehicles and loading and unloading of motor vehicles. The BA generally accepts that public and private car-parks, and public transport termini provided in buildings are space for parking or loading and unloading of motor vehicles falling within the meaning of B(P)R 23(3)(b). In exercising his discretionary power under B(P)R 23(3)(b) to disregard or not to disregard such area or any part thereof from GFA calculation, the BA will determine each case on its merits and take into account all relevant considerations including the design of the car-park and the effect on public interest such as impact on infrastructure, density and building bulk. In general, the BA will follow the following lines in his exercise of discretion :-

(a) Carparking spaces

- (i) When a lot is subject to lease/grant conditions requiring the provision or incorporation of a **public** carpark within a building or buildings, all the required facilities and associated works, including service core areas of such public carpark should be accountable for GFA calculation.
- (ii) For **private** carparking spaces which are intended for the use of the occupants and their bona fide visitors of the parent building, the BA may allow their exclusion from GFA calculation under B(P)R 23(3)(b). In deciding on the number of car-parking spaces that could be excluded, the BA will make reference to the standards set out in the Hong Kong Planning Standards and Guidelines (HKPSG), the design and layout of the car-park as well as the advice of the Commissioner for Transport. For the avoidance of doubt, associated ramps and facilities passing through floors accountable for GFA may be excluded from GFA calculation if they are physically separated from and do not provide access to the accommodation on the floors they pass through.

/(iii) Where

- (iii) Where **both private and public** carparking spaces are proposed in the same building and upon being satisfied with the design of the carpark, the BA will assess the accountability of GFA on the following basis:
- Where private and public carparking spaces are provided on **separate floors**, the floor space exclusively provided for private carparking purposes on that floor will not be accountable for GFA and the floor(s) provided exclusively for public carparking purposes would be accountable for GFA under B(P)R 23(3)(a).
 - Where both private and public carparking spaces are provided on the **same floor**, only the areas, including carparking spaces, driveways, ramps, lift halls and staircases solely serving the private carpark would be considered for exclusion from GFA calculation under B(P)R 23(3)(b). Those public parking spaces, associated driveways, lift halls, staircases, ramps which serve either the public carpark or both the public and the private carparks will not be excluded from GFA calculation. Moreover the areas used by the public carpark and its associated facilities should be delineated on plans.
- (iv) The area of driveways, ramps, staircases and lift halls at the level(s) providing access to/ from a building for use by both private and public carparks should be included in the GFA calculation.
- (v) For the avoidance of doubt, any parking provision on open areas of a site, or on an open podium roof, need not be measured for GFA.

(b) Public Transport Terminus (PTT)

The BA would take the advice of the Planning Department in determining the effect of excluding PTT from GFA calculation on the infrastructure, density and building bulk. As Planning Department has advised that the town planning intention is that all PTT should count for GFA calculation unless otherwise provided for in the relevant town plan, hence as a general rule, unless otherwise specified in the relevant town plan or any specific planning approval for the site, all PTT should be accountable for GFA.

(c) Loading and Unloading Areas

Areas for loading/unloading purposes would only qualify for exclusion from measurement of GFA if they are directly associated with spaces specifically earmarked for parking of motor vehicles for

/loading

loading and unloading purposes and in accordance with the minimum requirements as specified in lease conditions or the HKPSG, whichever is the less. For instance, areas set aside for loading/unloading detached container boxes in a container yard should be measured for GFA.



(AU Choi-kai)
Building Authority

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This PNAP is previously known as PNAP 13

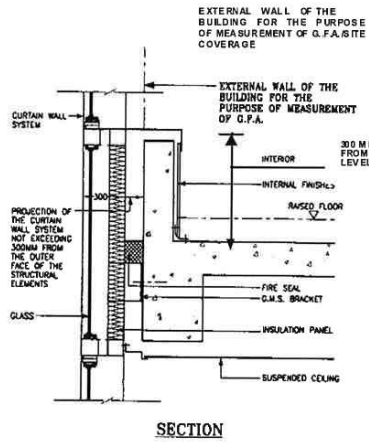
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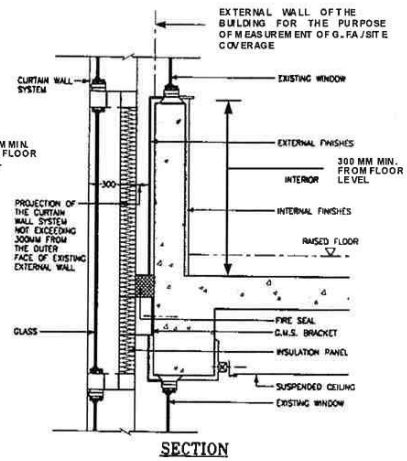
This revision September 2010 (AD/NB1) – (Paragraph 6 added)

PNAP APP-2
PREVIOUS APPENDIX A

CURTAIN WALL SYSTEM INSTALLED
AT NEW BUILDING



CURTAIN WALL SYSTEM INSTALLED
AT EXISTING BUILDING



CLADDING SYSTEM INSTALLED
AT BUILDING

