

**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:

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

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

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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.

A handwritten signature in black ink, appearing to read 'AU Choi-kai'.

(AU Choi-kai)
Building Authority

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This PNAP is previously known as PNAP 13

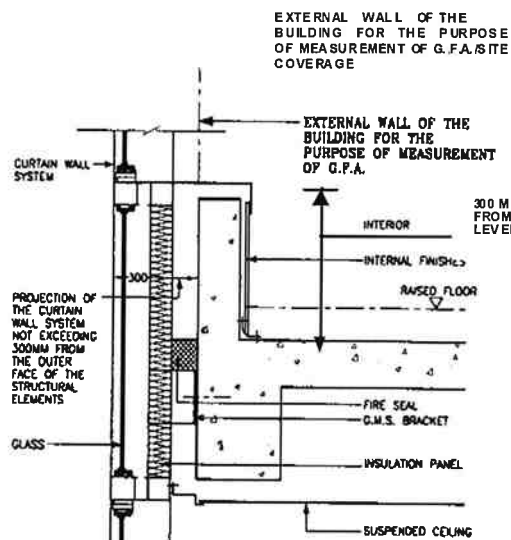
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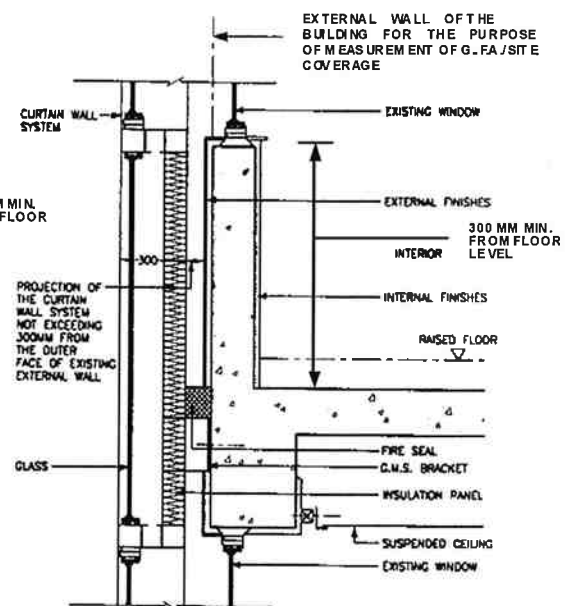
PNAP APP-2
APPENDIX A

CURTAIN WALL SYSTEM INSTALLED
AT NEW BUILDING



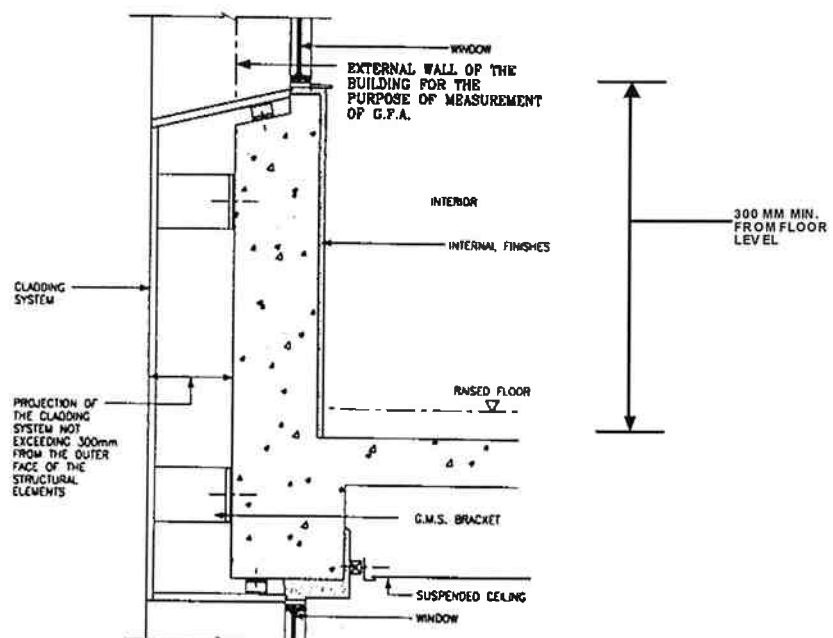
SECTION

CURTAIN WALL SYSTEM INSTALLED
AT EXISTING BUILDING



SECTION

CLADDING SYSTEM INSTALLED
AT BUILDING



SECTION