

**Independent Checking Unit, Office of The Permanent Secretary
For Housing**

(Only for Housing Authority's Properties/Divested Housing Authority's Properties)

**General Guidelines on Building Safety Requirements for New Applications
and Extension of School Premises Applications**

1. The Role of the Independent Checking Unit
 - a. The Independent Checking Unit (ICU) works directly under the Office of the Permanent Secretary for Housing. Under the delegated authority from the Building Authority (i.e. the Director of Buildings), the ICU exercises statutory building control to properties developed by the Hong Kong Housing Authority (HA) that have been sold or divested, in accordance with the Buildings Ordinance (BO)(Cap. 123) and the policies and guidelines of the Building Authority (BA). The ICU also exercises administrative building control to the HA's new development works and existing buildings in line with the BO and the BA's policies and guidelines.
 - b. A new application and extension of school in premises not designed and constructed for the purposes of a school should be accompanied by certificates issued by the ICU as the competent authority under section 12(1)(a), (b) and (ca) of the Education Ordinance (Cap. 279) and a notice issued by the BA under section 12(1)(d) of the same Ordinance.
 - c. In processing an application for the requisite certificates and notice, the ICU will assess the suitability of the premises and consider whether it is appropriate to issue such certificates and notice stating:
 - i. an opinion as to the design loading of the premises (section 12(1)(a));
 - ii. that the premises do not have structural timber floors (section 12(1)(b));
 - iii. that the means of escape in the premises would be adequate (section 12(1)(ca)); and
 - iv. that the BA does not intend to prohibit, under section 25 of the BO, the use of the premises as a school (section 12(1)(d)).

2. General Requirements

- a. Each case shall be considered on its merits after full consideration of the circumstances. Nothing contained herein shall be taken as in any way derogating from the powers of the ICU under the BO and its subsidiary regulations.
- b. If the premises are constructed of structural timber floor, the issue of a certificate under section 12(1)(b) of the Education Ordinance will be refused.
- c. As the subject matters are often related to complicated technical issues which may be difficult to overcome, **the applicant is strongly advised to enlist the service of an Authorized Person (AP) (an architect, engineer or surveyor registered under the Buildings Ordinance (BO)) at the early stage to avoid unnecessary waste of time and efforts resulting from unsuccessful applications.**
- d. Where alteration and addition works involving the structure and/or means of escape of a building are to be carried out, formal submission of plans for the proposed works to the ICU by an AP and, if necessary, Registered Structural Engineer (RSE) may be required for obtaining prior approval and consent of the ICU. It is strongly recommended that the advice of an AP or RSE should be sought well in advance. The lists of the AP and RSE registered under the BO are available in the BD for viewing. The lists can also be viewed at BD's website at <http://www.bd.gov.hk>.
- e. Following the implementation of the Building (Minor Works) Regulation (B(MW)R) on 31 December 2010, certain building works have been specified as minor works. As an alternative to obtaining prior approval and consent from the ICU, minor works may be carried out under the simplified requirements of the Minor Works Control System (MWCS). Paragraph 7 below for the details of the minor works items and the associated requirements refers.
- f. Submission of plans
 - i. Each application should be accompanied by sufficient number of plans as required by the EDB (including 4 sets for the ICU) showing the extent and layout of the premises and the information listed in Appendix 6b.
 - ii. The submitted plans should be drawn to a suitable scale (1:50 or 1:100) with all the principal dimensions of the premises and the exit routes/doors marked thereon. The construction material of any proposed partition walls and exit doors should also be specified.

- iii. The maximum capacity of each classroom (no. of students and teachers) and the total number of staff/teachers to be accommodated should be indicated on the plans.

3. Location of Premises

- a. A school shall not be situated in an industrial building.
- b. For kindergartens located above G/F in a non-purpose built building, the following guidelines apply:

Location	Conditions
i. in composite buildings with not more than two commercial floors above G/F; or ii. in composite buildings with three or more commercial floors where the kindergarten itself occupies one or more entire commercial floors and not more than two floors above G/F remain commercial; or iii. in institutional buildings; or iv. in high-rise domestic buildings.	I. Premises shall conform to general standards of the Code of Practice for Fire Safety in Buildings (FS Code) II. Kindergarten is subject to the 24m maximum height rule under Education Regulation 7.
v. in wholly commercial buildings; or vi. in composite buildings with three or more commercial floors above G/F other than (ii).	III. In addition to conditions (I) and (II), two independent means of escape are provided for the exclusive use of the occupants of the kindergarten.

vii. in single staircase buildings.	IV. In addition to conditions (I) and (II), two extra staircases must be provided to the premises to be licensed and the single staircase serving the whole building must be sealed off therefrom.
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4. Structural Safety

The main issues to be considered on structural safety are:

- i. The minimum designed loading of the premises for the purpose of school and kindergarten shall not be less than 3 KPa (i.e. 60 lbs/ft²) and 2.5 kPa (i.e. 50 lbs/ft²) respectively.
- ii. In cases where there are non-structural solid screeding on floor slabs, heavy equipment/plant or non-load bearing block walls¹, structural justification on the adequacy of the existing supporting structure to cater for such superimposed loads should be submitted by an AP/RSE.

5. Fire Resisting Construction

- a. Premises shall be designed and constructed of fire resisting constructions which satisfy the provisions of the Building (Construction) Regulations and the FS Code issued by the BD from time to time.
- b. Some general requirements on fire resisting construction are listed below for reference:
 - i. The premises should be separated from the adjoining occupancy/use by fire barriers having the longer fire resistance rating (FRR) in respect of such Use Classification as stipulated in Table C1 of the FS Code.

¹ Erection of any non-load bearing block walls in a flat or thickening of any floor slab of a flat by laying solid screeding may be subject to the control of the B(MW)R. Details of the minor works items and the associated requirements can be viewed at BD's website at <http://www.bd.gov.hk>

- ii. The internal corridors serving the premises and other occupancies should be separated by fire barriers having an FRR of not less than that of the Use Classification of that floor. Where these FRRs differ, the higher the FRR value should be adopted. For premises situated in a shopping arcade, such separation is normally not required between the premises and the internal corridors of arcade.
- iii. Openings for passage of ducts, pipes, wires etc., through fire barriers should be properly protected by fire resisting constructions in order to maintain the FRR of that fire barrier.
- iv. In cases where **new or modified** fire barriers are involved², a duly completed Form (Appendix A PNAP APP-13) with supporting test/assessment report from an AP/RSE shall be submitted to substantiate the FRR of the fire resisting components/ materials/ products. Submission of such test/assessment report is not required if PNAP ADM-20 is applicable.
- v. Doors should be installed with smoke seals under Clause C6.1 and C16.5 of the FS Code. Such provision usually applies to the entrance doors of the premises which form part of a protected lobby of a required staircase. In addition, reference should be made to the prevailing requirements on the smoke seal performance in Clause E9.1 and E9.2 of the FS Code as amended by the Corrigenda issued on 22 January 2013 which have been uploaded to BD's website at www.bd.gov.hk

6. Means of Escape and Means of Access for Firefighting and Rescue

- a. Every school shall be provided with adequate means of escape and access for firefighting and rescue in accordance with Part V of the Building (Planning) Regulations and the FS Code issued from time to time by the BD.

² Formation or alteration of any openings to the enclosure (other than a load bearing wall) of any staircase that is used as a means of escape or a means of access for firefighting and rescue or its protected lobby may be subject to the control of the B(MW)R. Details of the minor works items and the associated requirements can be viewed at BD's website at www.bd.gov.hk.

- b. The provision of means of escape in any particular floor of a building or in any building as a whole can only accommodate a specified maximum number of persons at any one time. The current FS Code sets out such limits and relates them to the width and number of exit routes and exit doors provided for each floor and for the whole building. It follows that if, as a result of the operation of a school, the existing population figure for a floor or for the building exceeds these limits, a recommendation for rejection of the application will be made. In assessing the population figures, applications in respect of premises located within the same building will be treated on a first-come-first-served basis. Some general requirements are listed below for reference:
- i. For premises on the ground floor having direct access to a street, there would generally be no major problem on means of escape provision. For premises on upper storeys and basements, at least two exit staircases are required. **Schools are not permitted to operate on the upper floors of single-staircase buildings, unless two extra exit staircases are provided to the school premises and the single staircase serving the whole building is sealed off therefrom.**
 - ii. Any room/area/premises with a capacity exceeding 30 persons shall be provided with at least 2 exits. The exit doors shall open in the direction of exit and shall not obstruct any part of the exit route by the swing of the doors. The lines of direct distance from any point in the room/area/premises to the two exits shall form an angle of not less than 30°.
 - iii. Normally, the minimum width of an exit route shall be not less than 1050mm and greater width would be required depending on the total capacity of the school and that particular floor in which the school is situated. The exit doors shall have a minimum width of not less than 750mm for capacity between 4-30 persons; and 850mm for capacity between 31-200 persons with a total width of 1 750mm. Reference should be made to Table B2 of the FS Code for the detailed requirements.
 - iv. All required exit routes shall lead directly to a street and the staircase enclosure wall shall be so continued at G/F as to separate from the remainder of the building in accordance with Clause B9.1 of the FS Code. All exit routes shall have a clear height of not less than 2m and be kept free from obstruction. Every part of each exit route shall be provided with lighting of a horizontal illuminance at floor level of not less than 30 lux.

The lighting can be a combination of natural and artificial lighting and should be backed up by an emergency lighting system that complies with the Code of Practice for Minimum Fire Service Installations and Equipment.

- v. All exit doors shall be capable of being readily opened from the inside without the use of a key. In the event of power failure/ emergency, the automatic sliding doors shall stay open to the full width and the electrical locking device of the doors should be released automatically.
- vi. Security shutters across exits must be kept open during school hours.
- vii. A solid separation of 450mm should be provided between the school and the final discharge point of an exit staircase of a building. The FRR of the solid separation should be not less than that of the enclosure wall of the staircase.
- viii. Where the direction of travel from an exit door of a room to a staircase is possible in one direction only (i.e. dead-end), the dead-end travel distance from any part of a room to a protected exit or a point, from which travel in different directions to 2 or more exits is available, is limited to 18m. In other cases where alternative exit routes are available in more than one direction, it may vary from 36m to 45m, depending on the fire resisting construction of the exit routes.
- ix. For the purpose of assessing the adequacy of means of escape, the capacity of the school is determined based on the sum of the population of the classes and the number of staff employed. In case that the maximum class size is not marked on the submitted plans, the population of the class is assessed in accordance with Regulation 40 of the Education Regulations.
- x. All exit routes and the treads of steps and required staircases should have slip-resistant surfaces. The edges of the tread of steps and staircases along the exit route should be conspicuous.

7. Minor Works Control System

- a. With the enactment of the Buildings (Amendment) Ordinance 2008 and a set of new regulations, the B(MW)R has been made to introduce a new system, the MWCS to control the carrying out of minor works. Apart from the original system under which prior approval and consent of the ICU have to be obtained for the carrying out of building works, a set of prescribed requirements that are simpler than the original system has been added to the BO by the above Amendment Ordinance and new regulations. The MWCS came into operation on 31 December 2010.
- b. A new category of building works, namely “minor works”, and a new register of “registered minor works contractors” (RMWC) for carrying out such minor works, have been introduced under the BO. In respect of minor works, the requirement to seek BA’s prior approval of plans and consent to the commencement of works can be dispensed with. Minor works are classified into three classes according to their nature, scale and complexity as well as the risk to safety they pose. Typical minor works associated with school premises include:
 - i. Removal of architectural projection, canopy, unauthorized floor slab or unauthorized structure;
 - ii. Erection, alteration, removal or strengthening of non-concrete canopy or supporting structure for an air-conditioning unit / water cooling tower;
 - iii. Erection, alteration or removal of drains;
 - iv. Erection, alteration or removal of internal staircase;
 - v. Formation or reinstatement of opening in a floor slab;
 - vi. Replacement of display surface, erection, alteration or removal of signboards; and
 - vii. Construction, alteration, repair or removal of window or window wall.
- c. Alternatively, applicants may also appoint an AP to make formal submission of plans for minor works together with other building works of larger scale to the ICU for obtaining the requisite approval and consent prior to the commencement of such works.

- d. The applicant should note that minor works violating the BO and its subsidiary regulations (including B(MW)R) are unauthorized building works and hence the application may not be accepted by the Permanent Secretary for Education. The ICU will separately process the minor works submission and conduct audit checks to ascertain compliance with the statutory requirements and ensure the quality and standards of minor works. Should these minor works be not completed in compliance with the BO and its subsidiary regulations (for example, without appointment of prescribed building professional (if required) and/or prescribed registered contractor to carry out minor works), separate enforcement actions may be taken by the ICU against such works. The applicant should note that the issue of a certificate under the Education Ordinance should not be construed as these minor works being completed in accordance with the BO and its subsidiary regulations.
- e. Designated Exempted Works (DEW) are also introduced under the MWCS. They can be carried out without prior approval and consent to the commencement of works from the ICU nor following the simplified requirements of MWCS. The typical DEW meeting certain criteria that are associated with the premises include:
- i. Erection or alteration of wall signboard (including the replacement of the display surface);
 - ii. Removal of a wall signboard;
 - iii. Removal of supporting structure on ground or on a slab for air-conditioning units/ water cooling towers/ solar water heating systems/ photovoltaic systems;
 - iv. Erection, alteration or removal of canopies;
 - v. Erection, alteration or removal of metal supporting frame for an air-conditioning unit or any associated duct from external wall of building;
 - vi. Formation of an opening in a floor slab; and
 - vii. Reinstatement of an opening in a floor slab according to the original design.
- f. More comprehensive guidance is available and can be downloaded from BD's website at www.bd.gov.hk.

8. Unauthorized Building Works Affecting Public Safety
- a. Unauthorized building works in premises under application for school registration may pose a risk to the safety of the staff, teachers and students. Applicants are therefore advised to exercise extreme care in selecting premises for school use, as the presence of unauthorized building works, such as unauthorized sub-division of a floor into separate units without the provision of protected internal corridor required in paragraph 5(b)(ii) above, unauthorized cockloft, unauthorized slab over staircase or cockloft void and unauthorized building works in common areas resulting in obstruction of means of escape from the school or other occupancies, may render the premises unsuitable for school registration. If the premises selected for school use contains unauthorized building works, the applicant is strongly advised to effect removal of such works before submitting an application. Such removal works may also be subject to the control of the B(MW)R. Details of the minor works items and the associated requirements can be viewed at BD's website at www.bd.gov.hk.
 - b. A list of unauthorized building works affecting public safety is provided at Appendix 5b for reference.
 - c. If the applicant intends to erect advertising signboard, submission of plans to ICU for approval is necessary unless such signboard will be constructed under the B(MW)R as appropriate. In general, advertising signs projecting over a pavement should have a minimum vertical clearance of 3.5m and a minimum horizontal clearance of 1.0m from the curb of such pavement. Advertising signs projecting over a carriageway should have a minimum vertical clearance of 5.8m. Advertising signs which fall within the classes of minor works should be commenced and carried out according to the B(MW)R.
 - d. The applicants' attention is drawn to the Disability Discrimination Ordinance and Design Manual: Barrier Free Access (DM) issued by BD in regard to the provision of access and facilities for persons with a disability. The removal or alteration of existing approved access and facilities (e.g. ramps and toilets, etc.) that hinder the access and facilities for persons with a disability may be subject to enforcement and prosecution actions under the BO and the prevailing policy. The DM can be obtained from the BD or downloaded from its website at www.bd.gov.hk.

9. Viewing and Copying of Approved Plans and Related Documents

Requests for viewing or copying of approved plans and documents of the buildings that are under HA can be made with payment of prescribed fee by the following means:

- a. Access the Housing Electronic Building Records Online System (HeBROS) at <https://hebros.housingauthority.gov.hk>; or
- b. Visit the service counter at 8/F, Lung Cheung Office Block, 138 Lung Cheung Road, Wong Tai Sin, Kowloon during the opening hours from 09:00 to 17:00 from Monday to Friday except public holidays.

For enquiries, please call the Service Hotline at 3162 0621 or send email to hebros_cs@housingauthority.gov.hk

List of Unauthorized Building Works Affecting Public Safety

The following unauthorized building works in school premises may constitute a risk to the safety of staff, teachers and students. Applicants are strongly advised to effect removal of such works before submitting an application:

1. Unauthorized rooftop/flat roof/yard structures forming part of the school premises.
2. Structures on or suspended from approved canopies including air-conditioning/mechanical plants and signboards.
3. Unauthorized canopies/projections/signboards over pavements or common areas³.

[Exception (i) : Decorative shopfront projections/extensions, which do not consist of stone, tiles, glass or cement mortar and are not constructed of concrete, projecting not more than 150mm beyond the building line.]

[Exception (ii) : Shopfront overhead projections, which do not consist of stone, tiles, glass or cement mortar and are not constructed of concrete, projecting not more than 600mm beyond the building line and having a minimum vertical clearance of 2.5m and not accommodating any air-conditioning plants.]

[Exception (iii) : Canopies, which do not consist of stone, tile, glass or cement mortar and are not constructed of concrete, projecting not more than 500mm from the external wall of building and having a minimum vertical clearance of 2.5m.]

[Exception (iv) : Retractable canopies over flat roofs, main roofs or yards, where to be covered not designated as a place for means of escape or refuge, projecting from the external wall of building not more than 2m when fully extended and not more than 500mm when retracted, having a height of not exceeding 2.5m from the floor level, and no part of the canopies/ awnings projects beyond the edge of the roof/ flat roof.]

³ Erection of canopy, erection of wall signboard and erection of metal supporting frame for an air-conditioning unit or any associated duct from external wall of building may be the DEW subject to fulfilment of certain requirements which can be carried out without prior approval and consent from the BD nor following the simplified requirements of MWCS. The DEW are NOT considered as unauthorized building works and excluded from the “List of Unauthorized Building Works Affecting Public Safety” in the Annex. Details of the DEW and the associated requirements can be viewed at BD’s website at www.bd.gov.hk.

[Exception (v) : Existing signboards had joined the voluntary Validation Scheme for Unauthorized Signboards. Details of the Scheme can be viewed at BD's website at www.bd.gov.hk.]

4. Metal ventilation ducts and the associated metal supporting frames projected from the external walls of building or suspended from approved canopy and balcony.

[Exception : Metal ventilation ducts and the associated metal supporting frames projecting not more than 600mm from the external wall of building and at a height not less than 2.5m from the ground.]

5. Supporting structures for air-conditioning plants and its accessories projected from external walls of building or suspended from approved canopy and balcony³.

[Exception : Supporting structures for air-conditioning plants and its accessories projecting not more than 600mm from the external wall of building and at a height not less than 2.5m from the ground.]

6. Supporting structures for overhead air-conditioning plants and associated supporting structures installed within the licence areas.

[Exception : Unless otherwise justified by AP/RSE as being structurally safe with supporting calculations.]

7. Unauthorized permanent obstructions to smoke vents.
8. Unauthorized alteration or removal of compartment walls or fire resisting walls and doors.
9. Unauthorized openings or slab over existing floors for pipe ducts⁴.

⁴ Formation of an opening in a floor slab and reinstatement of an opening in a floor slab according to the original design may be the DEW subject to fulfilment of certain requirements which can be carried out without prior approval and consent from the BD nor following the simplified requirements of MWCS. The DEW are NOT considered as unauthorized building works and excluded from the "List of Unauthorized Building Works Affecting Public Safety" in the Annex. Details of the DEW and the associated requirements can be viewed at BD's website at www.bd.gov.hk.

[Exception : Unless otherwise justified by AP/RSE as being structurally safe with supporting calculations and should not result in additional gross floor area under the Building (Planning) Regulations.]

10. Unauthorized reinforced concrete slabs filling up approved cockloft and staircase voids.
11. Unauthorized cocklofts, intermediate floors and floor extensions.
12. Unauthorized staircases; unauthorized openings through existing slabs for staircases.
13. Unauthorized removal, partial removal or major alteration of structural members.
14. Unauthorized building works in common areas resulting in obstruction of means of escape from the school premises or the building (such as: unauthorized sub-division of a floor into separate units resulting in some units without adequate means of escape, and unauthorized blocking up of access to an exit staircase rendering the means of escape of other occupancies inadequate).
15. Unauthorized sub-division of a floor into separate units without the provision of internal corridors protected by fire resisting walls and doors.
16. A material and unacceptable change of use (e.g. conversion of plant room to usable floor area).
17. Openings on external walls above the ground floor without the provision of protective barriers.
18. Unauthorized removal of approved facilities for persons with a disability (e.g. toilet or access ramp) and unauthorized building works which hinder the access to the school for persons with a disability (e.g. raised platform).

If the removal or rectification of the unauthorized building works⁵ involves the carrying out of building works not exempted under section 41 of the BO, it will be necessary for the applicant to appoint an AP and/or RSE and to obtain the prior approval and consent of the ICU for such building works.

⁵ Some removal works as stipulated in Schedule 2 Part 2 of the B(MW)R are classified as designated exempted works which may be carried out under the said Regulation.