



中華人民共和國香港特別行政區政府總部教育局

Education Bureau

Government Secretariat, The Government of the Hong Kong Special Administrative Region

The People's Republic of China

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To: Supervisors / Heads of Primary, Secondary and Special Schools

24 May 2016

Dear Sir/Madam,

Works and Maintenance of Green Roofs

This circular letter aims to remind schools of the importance to comply with the regulations for green roof projects in school premises and to carry out inspection and necessary maintenance to green roofs.

The Education Bureau (EDB) attaches great importance to the safety of green roofs in school premises. We understand that some schools may conduct student activities on green roofs. When schools formulate plans for green roof projects, which involve structural alterations to the school premises concerned, they should apply for approval from EDB in accordance with the Education Regulations. If schools intend to conduct teaching and learning activities on green roofs, they should also observe the structural requirements for roof playgrounds as stipulated in the Education Regulations, including a certificate of stability given by an Authorized Person to certify that the roof is suitable for such use, and the maximum number of pupils who may be allowed to use the playground.

Schools should obtain prior approval from EDB before the commencement of the installation of green system with funds obtained from the Environment and Conservation Fund. When conducting the relevant works, schools should engage an Authorized Person and Registered Structural Engineer to assess if the implementation of the works project would involve any change to the building structure as stipulated

under the Buildings Ordinance, or whether a submission to the Buildings Department (for non-estate schools) or Independent Checking Unit of the Transport and Housing Bureau (for estate schools) is required for formal approval and consent. For the implementation of green roof projects in government schools, schools are required to submit detailed information to the Architectural Services Department for approval. Matters related to the vetting procedures and the points to note/ information required for application submission to EDB are available at the website of the Environmental Education and Community Action Projects (path to the webpage:

<http://eeca.ecc.org.hk/english/guide/guide.html>).

If schools carry out green roof projects with their own fund, they should submit their proposals to the Buildings Department/Housing Department, Architectural Services Department (applicable to government schools only), Department of Health and Fire Services Department. Should the relevant departments raise no objection, schools may submit their formal applications to EDB. Detailed information on maintenance and alteration works in aided schools is set out in Chapters 8.5 and 8.6 of the School Administration Guide at the following path of the EDB homepage:

EDB homepage (<http://www.edb.gov.hk/>) > School Administration and Management > Regulations > School Administration Guide

To ensure the safety of school premises, schools with green roof projects should arrange Qualified Persons to carry out routine inspection and conduct necessary maintenance works. The Buildings Department has prepared reference material on the points to note on the conduct of green roof projects at schools. Please refer to the Annex for details.

For aided schools which notice seepage, cracks or loose concrete on the ceiling of the storey below the green roof, they should seek professional advice from an Authorized Person or Registered Structural Engineer as soon as possible to ensure the safety of school premises. Schools may also submit applications for emergency repairs according to the established mechanism. The Term Consultants appointed by EDB will visit the schools concerned to assess the condition and advise on the follow-ups as appropriate. Government schools should contact the Architectural

Services Department immediately for follow-up or conducting repairs to ensure safety.

If schools have not submitted applications for their works of green roofs according to the requirements of relevant ordinances, please contact your respective Senior School Development Officers as soon as possible for immediate follow-up.

(Ms Teresa CHAN)
for Permanent Secretary for Education

Notes on Provision of Green Roofs in School Buildings

Introduction

The following notes provide tips on the provision of green roofs in school buildings to ensure safety of the premises and their occupants.

New Installations in Existing School Buildings

2. Installation of a green roof will impose loading on building structures. The loading capacity of structural members in a building varies depending on the original design when the building was first built as well as the subsequent use, alterations and additions and maintenance conditions of the building throughout its life. A particular type and extent of green features may be feasible in certain locations but not the others. It is therefore important that professional advice from an authorized person (AP) and/or a registered structural engineer (RSE) registered under the Buildings Ordinance (BO) is sought prior to embarking on a proposal to install green roofs in an existing school building. Where no new building works is involved, application for prior approval and consent from the Building Authority would not be required. However, it should be assessed whether the capacity of the existing building structure is adequate for the work.

Assessment of Existing Green Roofs

3. If there was no greening facilities in the original design of the existing school buildings, and roof greening has been carried out without seeking prior professional advice from AP/RSE, the schools should take the following actions as described in paragraphs 4 and 5 below to ensure safety of the school premises.

4. The schools should consult AP/RSE as soon as possible under the following circumstances which may pose a higher risk to building safety:

- (a) greening on inaccessible roofs¹;

¹ Inaccessible roofs generally refer to roofs which are not intended for any activities and are only accessible using cat ladders or the like for carrying out maintenance works.

- (b) greening on long-span roof structures such as those commonly found in assembly halls, sports halls, canteens, large libraries etc.;
- (c) greening on cantilevered slab structures; or
- (d) where water ponds are provided on the roof.

5. Generally speaking, AP/RSE should also be consulted where accessible roofs² have been provided with roof greening and

- (a) stepping onto the greening area is allowed;
- (b) the soil depth exceeds 75 mm; or
- (c) there are signs of building defects on the ceiling below such as dampness, rust stains, corrosion of reinforcement, cracks or signs of distress, spalling, exposed reinforcement, etc. found in the ceiling below the green roof.

Maintenance of Green Roofs

6. Adequate fall and drainage outlets on the roofs shall be provided to avoid ponding of water which may overload the roofs. They should be maintained in good working order without defects. All such drainage provisions shall be inspected regularly and where leakage, blockage or defects are detected, they should be rectified immediately.

7. Regular inspection to the ceiling below the green roofs is required. If building defects or phenomena as described in paragraph 5(c) above are spotted, the school should enlist the professional advice from AP/RSE promptly.

8. Proper planning, design, installation and maintenance of green roof are essential to safeguard the structural safety of green roofs. Professional advice from AP/RSE should be sought in case of doubt.

Buildings Department
May 2016

² Accessible roofs generally refer to roofs where proper staircases have been provided.