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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25 May 2009

Miss Odelia Leung
Clerk to Panel on Education
Legislative Council Secretariat
3rd floor, Citibank Tower
3 Garden Road
Hong Kong

Dear Miss Leung,

Capital works projects of
University Grants Committee-funded institutions

At the meeting on 11 May 2009, the Panel on Education discussed the proposed capital works project by the Chinese University of Hong Kong (CUHK) to construct an extension to the University Library at Central Campus. A number of questions concerning conservation, green features of the building and the proposed basement were raised. As requested by Members, CUHK has provided some supplementary information vide the enclosure.

I should be grateful if you could circulate the above information to Members for their reference.

Yours sincerely,

Amy Wong

(Amy Wong)
for Secretary for Education

c.c. SG, UGC (Attn: Miss Joyce Lee)

Enclosure

The Chinese University of Hong Kong
50EF –Extension to the University Library at Central Campus

Supplementary information provided by the Chinese University of Hong Kong in response to the LegCo Panel on Education meeting on 11th May 2009

Facilities in relation to conservation, environmental protection and natural lighting

1. On conservation of trees, the architect has endeavored to minimize the project's impact on existing trees at the site as far as possible by careful layout and design of the extension building as well as proper construction method. Seven existing trees will have to be transplanted inevitably and a tree of poorer health and unsuitable for transplantation will have to be removed. All trees affected are not important trees. As one tree will be removed, the University will plant four new trees on the campus as compensation.

2. At the affected part of the University Mall, existing bushes will be transplanted and the ground cover will be cleared for the basement construction works. Original landscaping in the area will be reinstated after the completion of basement works. Moreover, green feature will be adopted on the roof of the extension such that not only the vegetated area will be increased, but also less electrical power will be consumed as less heat gain is anticipated.

3. As regards environmental-friendliness and energy conservation, the extension will have its major façade facing north. The southern façade will connect to the University Library, while the northern façade will face the rock cliff. The eastern and western facades will be relatively narrow such that heat gain is well controllable. Moreover, light wells will be built in the central part of the extension to introduce natural lighting into the depth of the extension in order to reduce the use of electric lighting. Other environmental-friendly and energy efficient facilities will also be widely adopted in the extension, including water-cooled chillers, heat wheels for heat energy reclaim of exhaust air, occupancy and daylight sensors for lighting control, automatic on-off switching of lighting and ventilation fan inside lifts, light-emitting diode (LED) type exit signs, etc.

4. The extension will connect to the existing University Library and provide reading, study and stack spaces. In order to provide a healthy and comfortable study space for teachers

and students and making good use of the narrow site area, the architect designed several light wells in the new building to allow natural light to come into the indoor area for reducing electricity consumption and for the sake of environmental-friendliness.

The necessity and cost of constructing the basement

1. The expansion of the University Library should not only provide sufficient study and stack spaces, but also tie in with the new teaching and learning method of further education. Hence, the project will comprise two parts. The first part is the extension connecting to the existing University Library so as to provide sufficient stack and reading spaces. The second part is the basement which will provide learning commons to promote self-motivated study and interactive learning.

2. The learning commons at the basement will be open 24 hours daily. For security, management and operation purposes, the learning commons require clear differentiation from the Library proper. The independence of the basement provides favorable conditions to satisfy the above special operation, security management and usage requirements.

3. In order to protect the historical significance and the existing landscape of the University Mall, the height of the extension must be the same as that of the existing University Library. Therefore, the additional space required has to be built in the basement. Various options were deliberated at the design stage and details are as follows:

    a. Single building without basement – the height of the new building would have to be changed from 6 storeys as planned to 10 storeys. The extra 4 storeys would seriously affect the original principle of preserving the present scenery of the University Mall; and the historical significance and profound collective memory of the Mall. Furthermore, because of the geographical constraints such as the Central Avenue and the cliff, the footprint of the extra 4 storeys would be lengthy and narrow and could not fulfill the required functions of the learning commons as mentioned in point (1).

    b. Two buildings without basement – two extensions at both sides of the University Library (the north and the south). Under the current scheme, a 6-storey building will be located at the northern side where 15 swift nests, representing 6.6% of the total, are located. At the south, however, there are 102 nests, accounting for 44.7% of the total. To minimize the impact on the ecology and the swifts, and to address the concern of the University and the general public, an extension at the southern side

will not be considered further. Moreover, the main access to the University Administration Building and the Council Meeting hall would be blocked and the link between the University Mall and the new Teaching Complex at Western Campus would be disconnected if a new extension were built at the southern side.

c. Two buildings without basement – two new buildings at the northern side of the University Library on the cliff across the Central Avenue. The cliff is a very steep rock cliff with 80 degree slanting. Small rocks occasionally rolled down and stabilization works have been recently completed with government funding. The construction cost of a building on the cliff would be extremely expensive due to the difficulties in construction. In addition, the useable area near the cliff is relatively small and bridges would be required to connect the new buildings together. The scheme is technically very complicated and the cost effectiveness will be quite low.

Because the basic requirements could not be fulfilled, the above 3 options were not considered further.

4. Although the current scheme would require more excavation, the slight increase of construction cost is controllable as there are 2 meters of backfill below the ground made at the early stage of campus development before reaching rocks underneath. If the floor area of the basement is redistributed to the top of the extension, four additional storeys will be required. The foundation and structural cost will increase due to the increase in the weight and wind load of the four extra storeys. However, foundation for the basement will be saved as it will sit on the rock as footing. By providing a more flexible and efficient space to meet the needs of teaching and learning, the basement will provide a larger net operating floor area and hence better efficiency. The efficiency ratio is now raised from the average 55% to 58% of the present scheme, such that about 580m^2 construction floor area and its construction cost can be saved. Hence, the present scheme is considered cost effective.

The Chinese University of Hong Kong
May 2009