

香港大學
百周年校園
The University
of Hong Kong
Centennial
Campus



Meet the
Exhibitor

社會與文化和諧的
鄰舍

香港大學的歷史是與香港人不能分隔。故此一路以來，香港大學的校園是一個開放的校園，並為許多社區人士所使用。當香港大學與地下鐵連接之後，香港大學將會更開放及方便。

香港大學百週年校園設計成為一個西區的綠洲，有許多綠化及公共設施。百週年校園完成之後，香港大學將成為一個更加開放的大學城，成為和諧社區重要的一部分。

Social and cultural
harmony with neighbour-
ing community

The University's history is inseparable from that of the Hong Kong people. As such, the campus grounds traditionally have been an 'open campus' accessible and used by the local community and many visitors on a daily basis. With the HKU MTR Station and entrances directly into the campus, the University will become even more accessible. The Centennial Campus was designed to offer the community a new green oasis in Western District, including plenty of trees, with public facilities and green open spaces. The accessibility of the Centennial Campus and University Street provides much improved interaction between "town and gown", or the University and the people of Hong Kong, through facilities and welcoming open spaces.

香港大學 百周年校園

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鄰社共融及城市設計

香港大學百週年校園的整體設計是基於一個中心思想：

整個校園將會是一個學習空間，而這個空間能支持多元的大學社羣，鼓勵環保設計，活化及保存現有的古建築及園境，妥善使用空間，有效地連接地下鐵路及其他主要交通工具，具成本效益及具獨特地方特色的校園。

在這個緊密的校園，豐富的綠化是其中一個重要特色。綠化特別設置在三個中庭、空中花園及室外走火樓梯。

連接大學街是百週年校園其中一個最重要的議題。大學街是一條兩層高的行人走道，連接兩個新建造的門廊，使行人能有一個無障礙通道，使用地下及其他交通工具。

Designing with neighbourhood and cityscape considerations

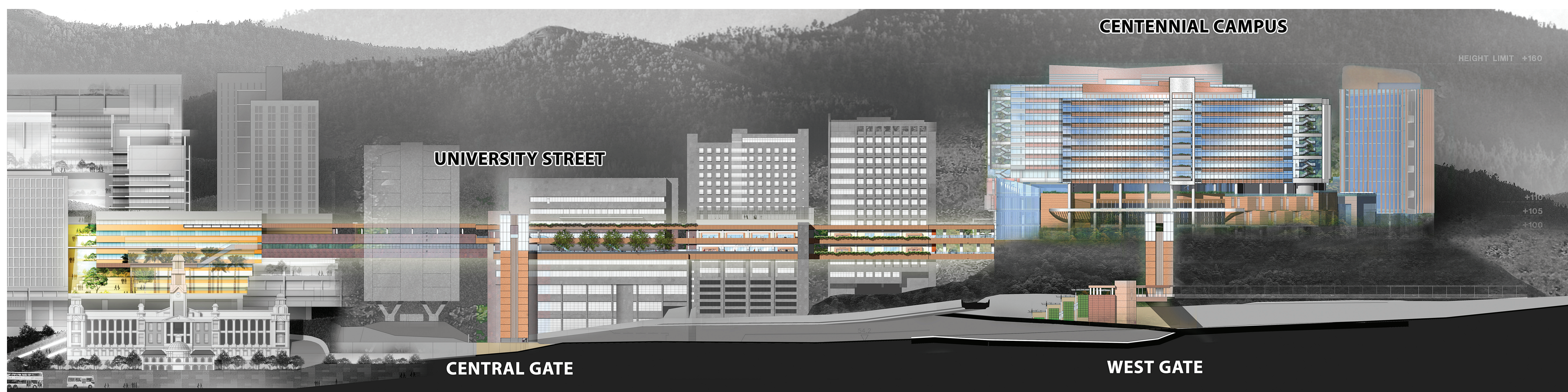
The master plan for the Centennial Campus was developed on the core value that the entire campus is a place for learning that could sustain a diverse campus community and promote environmental quality, rediscovery and preservation of heritage buildings and landscape, efficient use of space, effective integration with the MTR and other public transport systems, cost-effectiveness, and a sense of place that is unique to the University.

Extensive greening is a key feature in this compact site with three landscaped academic courtyards, the use of all roof areas for greening and sky gardens that are integrated with external fire escape stairways.

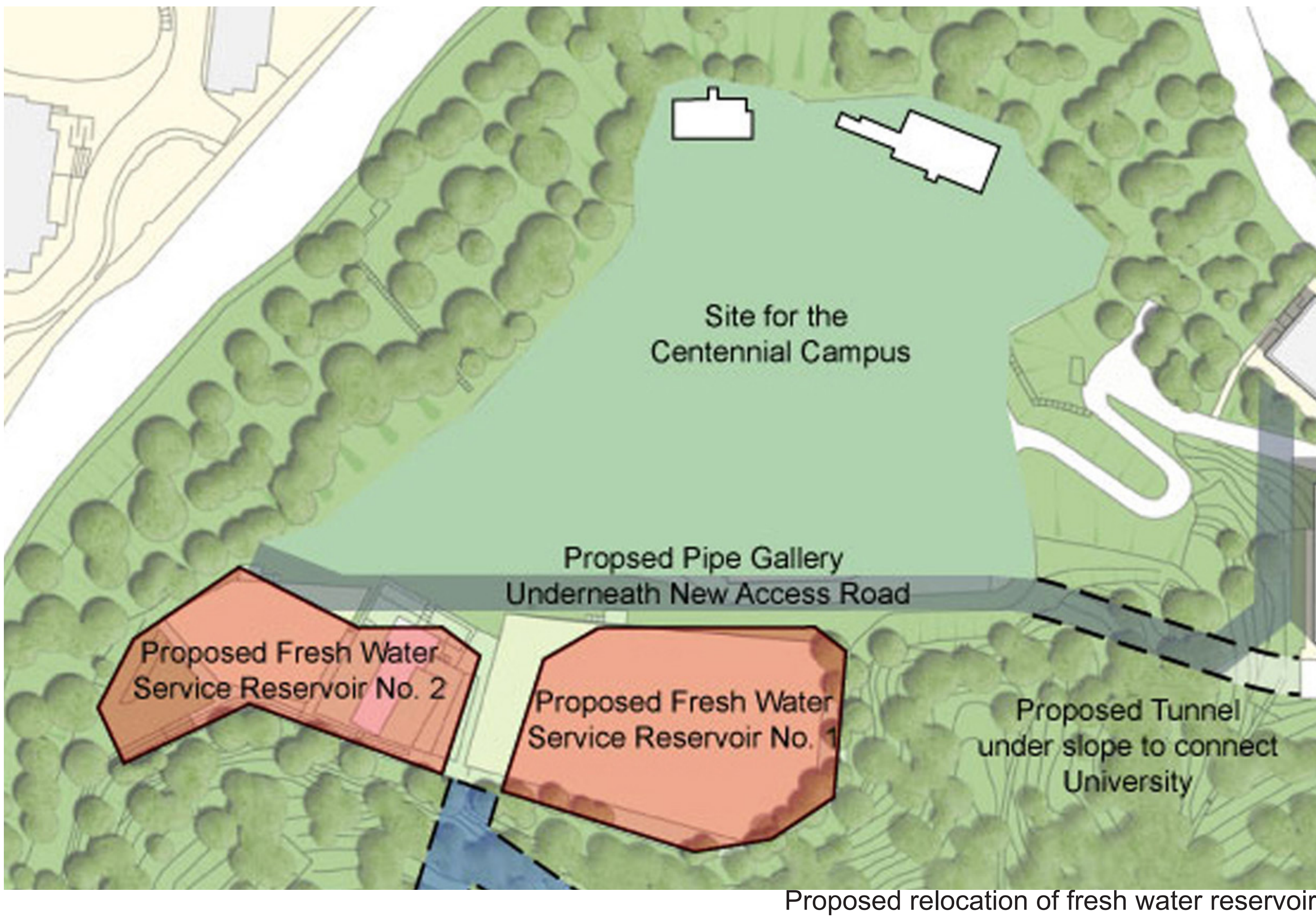
Key to the Centennial Campus, is the seamless connection with the University Street, an extensive linked learning and recreation space, which at its core, is a two-level covered pedestrian thoroughfare that provides a level link that greatly eases pedestrian movement, particularly for the disabled. Direct connections to the MTR and other public transport facilities at Pok Fu Lam Road are provided via two new entrance "Gates".



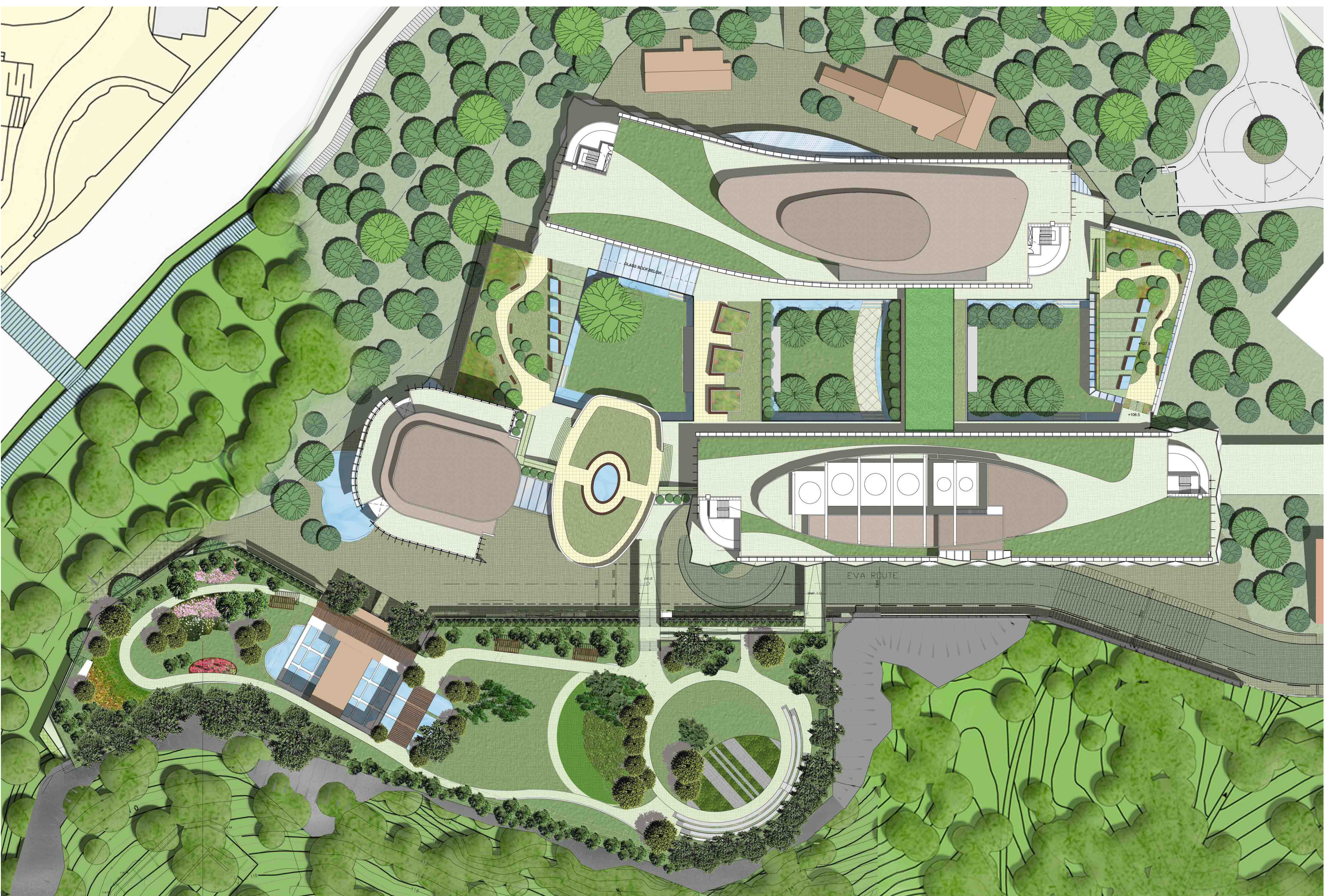
Centennial campus view from main campus



New connection through out campuses



Proposed relocation of fresh water reservoir



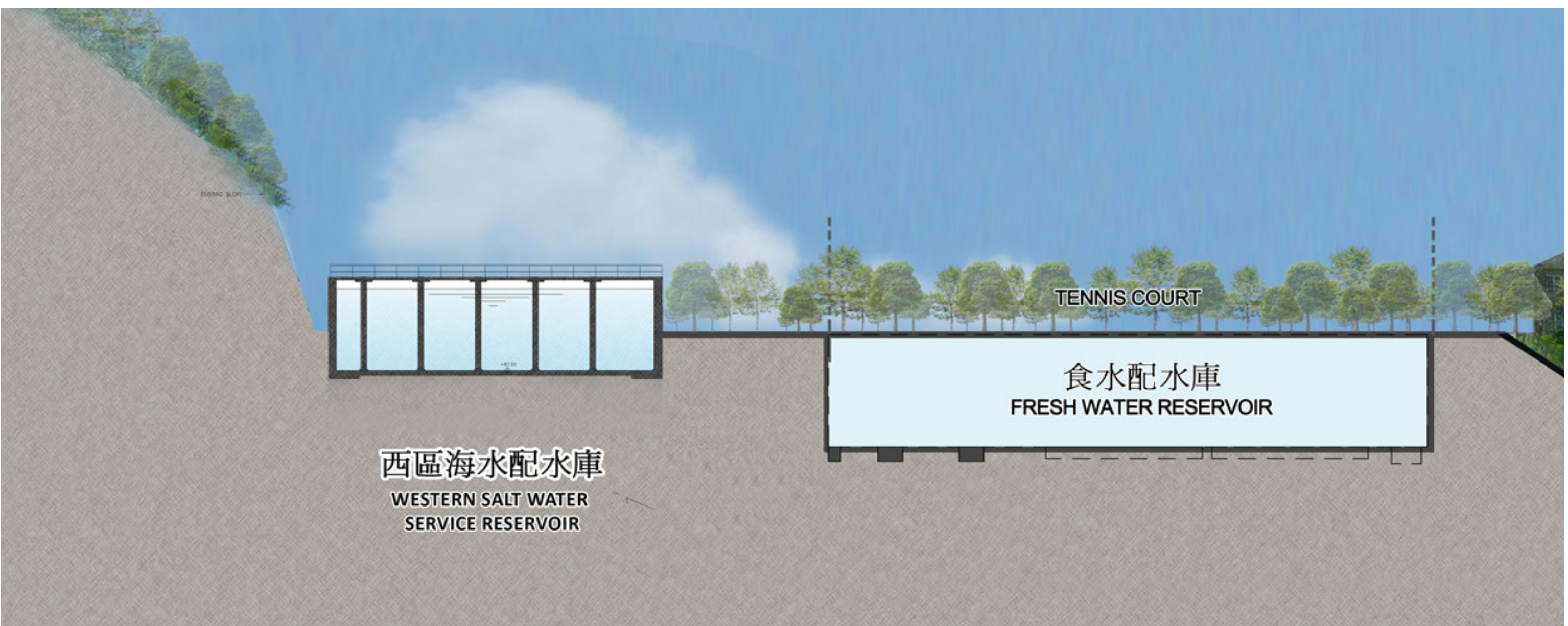
Site available for the Centennial Campus

水塘重置

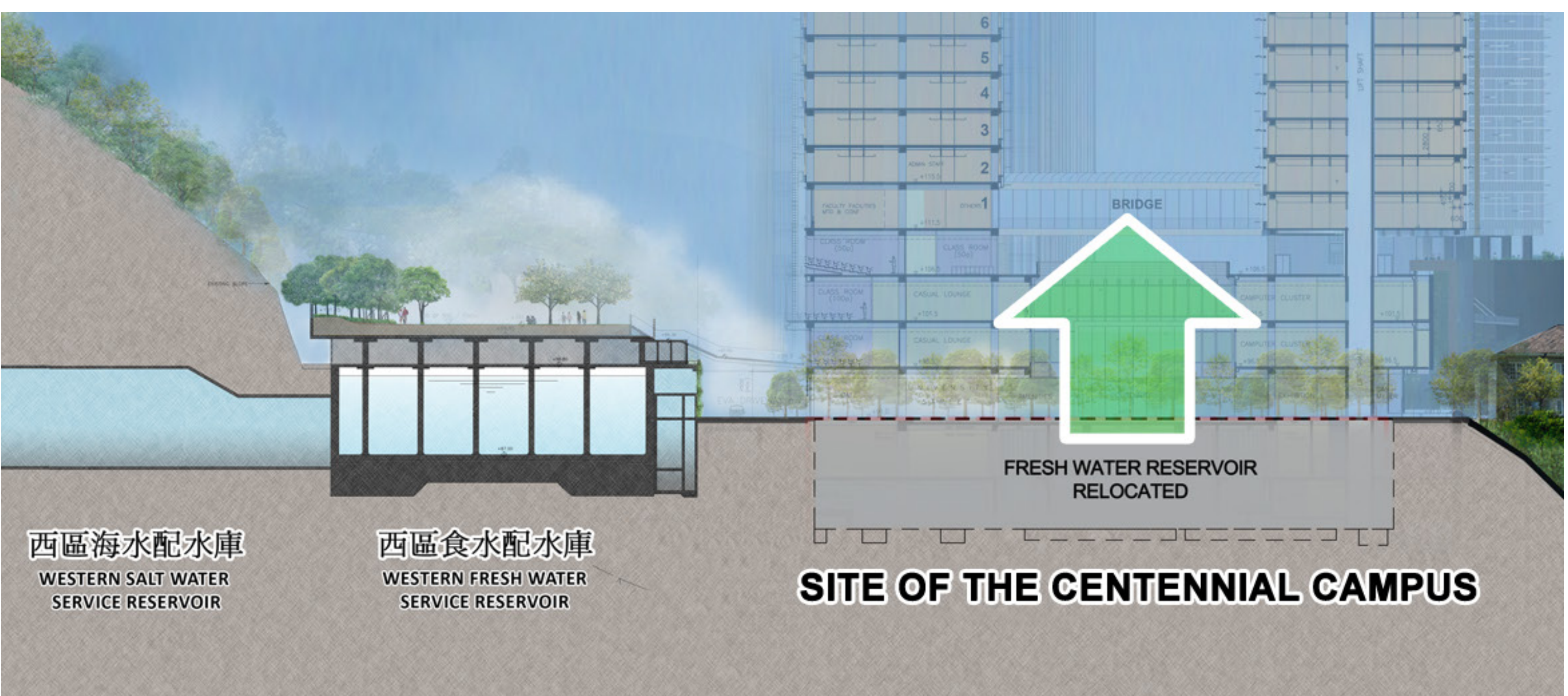
為了騰空用地以興建百週年紀念校園，原有的淡水及鹹水塘需要移位並重置。這個前所未有的工程需與水務署緊密合作，重置工程採用了創新的概念及鑽探方法，將新水塘重置於龍虎山裡，因此保留了超過一千顆樹木。

Build cavern for relocation of reservoirs

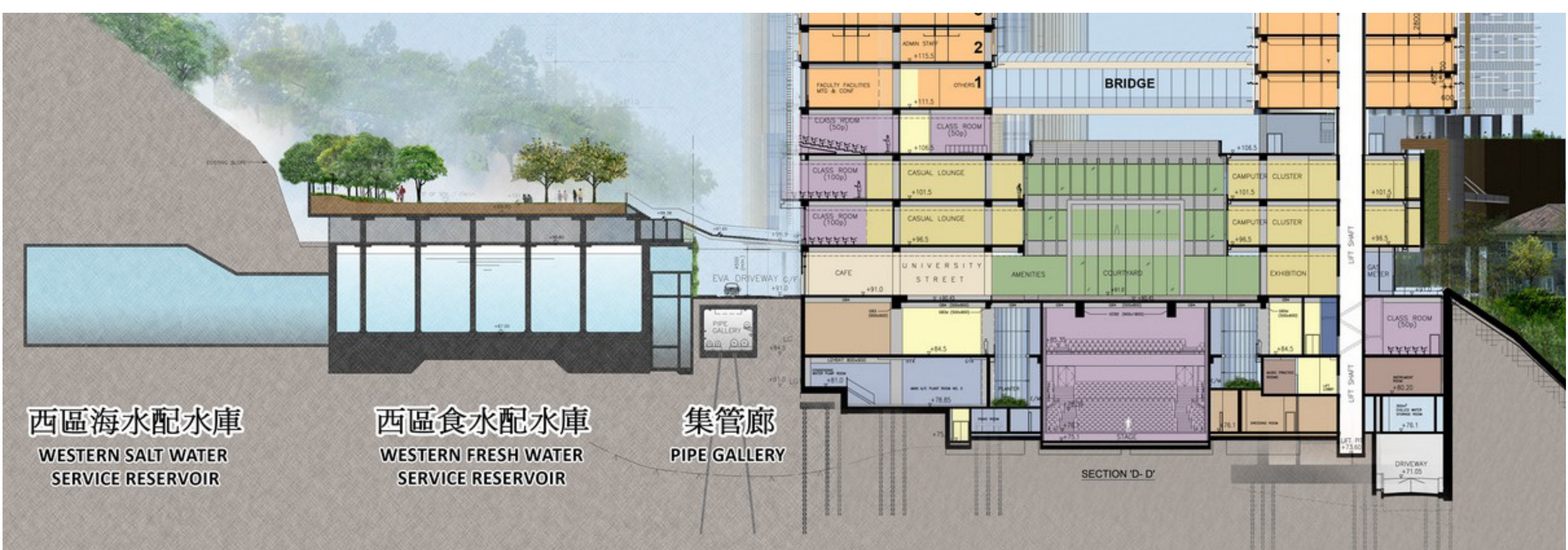
Simply to make the site available for new buildings, the freshwater and saltwater reservoirs had to be relocated without disrupting continuous supply. This became an unprecedented collaborative and innovative partnership with WSD. A never before used concept of putting the saltwater reservoirs into the adjacent hillside in caverns using innovative drilling techniques produced a win-win solution that retained the Lung Fu Shan hillside and preserved over 1,000 trees.



Original site condition



Construction of new building at foot print of reservoir



Centennial Campus at completion

為了減低樓宇的高度，新校園使用了原有水塘的空間，作為地庫的課室。由於欄無障礙地連接地下鐵路站，車輛的數量故此能減至最低，使百週年校園能成為一個沒有汽車的校園。

To minimize the height of the new buildings, the underground space of the old reservoirs were used as part of a larger basement to house an extensive floor of lecture rooms various sizes. Car park spaces were reduced to bare minimum by providing seamless access to the new MTR Station. Cars have separated street access making the campus virtually car-free.



Photo of construction in progress



Reservoir roof garden



Donor's Brick Wall on reservoir roof garden

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Grand Hall

重用水塘結構及空間

為了盡量減少土地挖掘，1000人的音樂廳盡量使用水塘原有的空間。

建築成本有很大部份是關於結構及岩土的部份。故此，為了減低建築成本，結構及土木工程師運用了具創意及邏輯的設計。

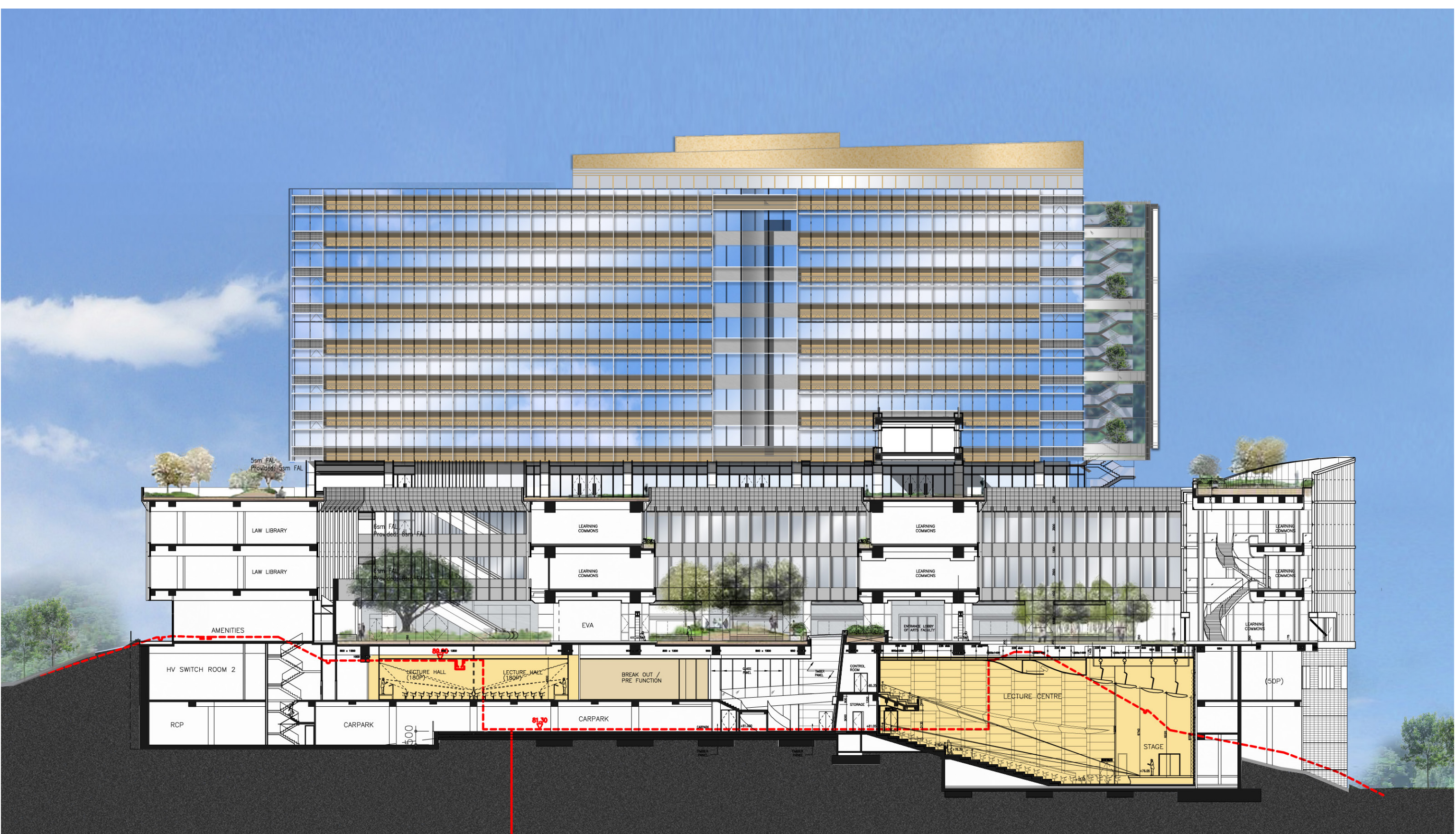
為了滿足音樂廳30米長跨度的要求，結構工程師採用了後張力橫樑的設計以代替傳統的鋼結構建築，大大減低了工程的建築成本。除此之外，土木工程師亦使用了泥釘去穩固原來的斜坡。除了減輕建築成本外，亦保留了大量山坡上的樹木。

Reuse reservoir structure & void for teaching facilities

To reduce the amount of excavation, the architectural design deliberately made use of the void left by the existing fresh water reservoirs as the volume of the 1000-seats auditorium to reduce excavation.

Structural and geo-technical works contribute to a significant portion of the construction cost, especially with deep excavation in close proximity to natural slopes. To minimize costs, the structural and geo-technical engineers exercised logical design and innovative solutions.

To meet the long span requirements for the Grand Hall, a 30m long span structure was achieved by post-tensioned beam system in lieu of the original steel design to achieve a significant cost saving. A soil nail system was proposed by the team. The particular soil nail design took into account possible reduction in strength of old fill materials. The system achieved a significant saving and preserved the a great number of trees on the hillside.



Section shows the existing reservoir extent



Demolition of existing water reservoir

大學講堂設於教學設施的中心，主要功用為演講設施。大學講堂具有高水準的自然音效及視線設計，故此可以作為表演古典音樂及放映電影的場地。而“盒中盒”的設計使整個大學講堂能滿足NC15高水平的靜音要求。

The centre piece of the formal teaching spaces is the Grand Hall. This 980 seat auditorium with a raked main seating area and balcony is designed with the primary function as a lecture theatre, but also has excellent natural acoustics and sightlines to host classical concerts and film presentations. A 'box-in-box' construction was employed to achieve a Noise Criterion 15 (NC15) standard.



Revitalized heritage buildings



Previously workmen's quarters (left) and previously senior staff quarters (right)



Excavation near heritage buildings

活化古建築

為了滿足工程進度的要求，古建築物原有地基穩固工程是進行於舊有水塘還在應用的時候，故此結構工程師採用了嶄新的設計，安裝了一排連續的灌漿樁牆，以保護原有的水塘，將對水塘的影響減至最低。

建築工程涉及很深的地底挖掘。由於鄰近有古建築物及原有水塘，加上地盤進出口的限制，有限的建築用地，不可延遲的完工時間及盡量採用環保建築方法，以上種種要求都需要建築團隊高度的合作性及創新的設計，以滿足各樣法例的要求。

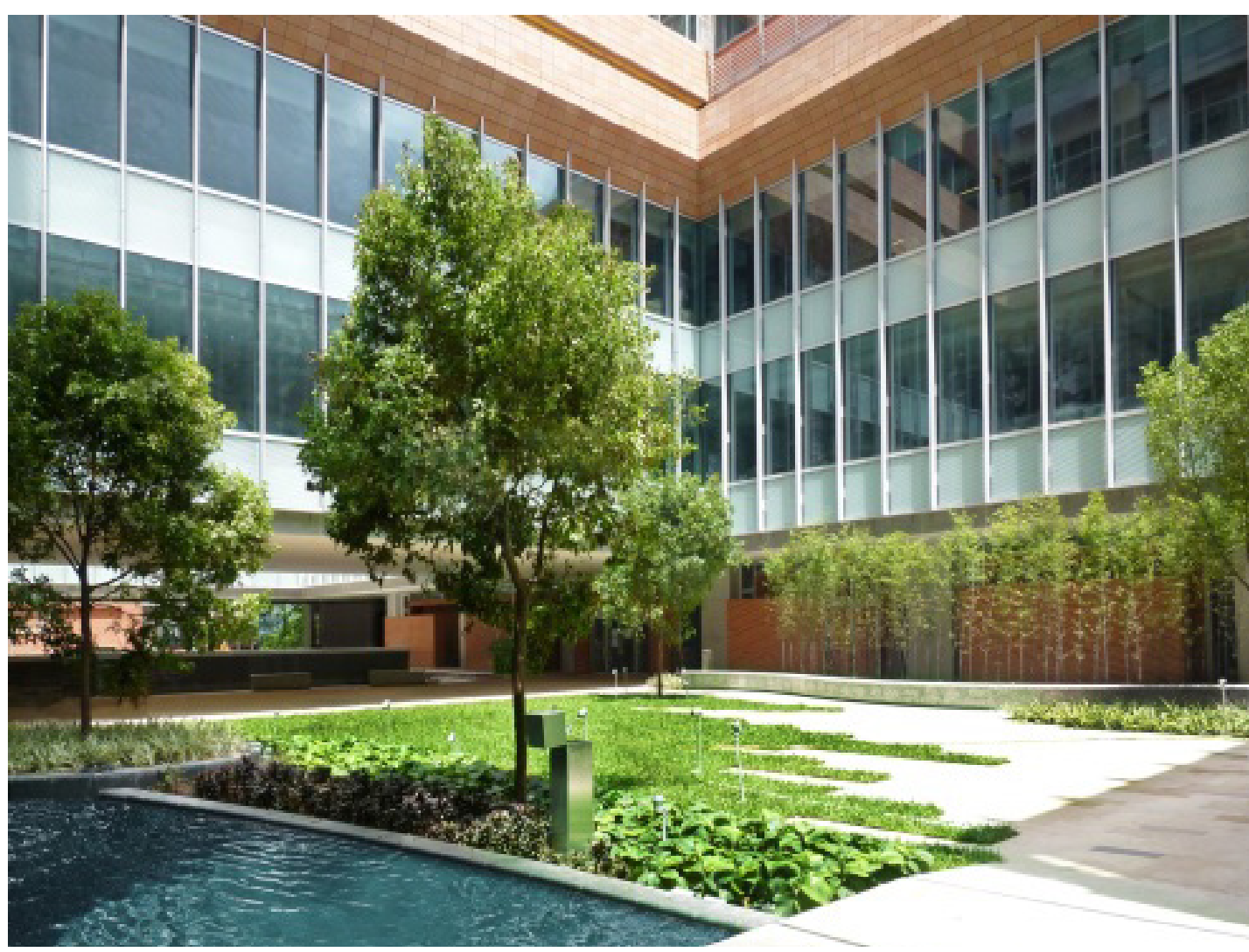
Revitalized heritage buildings

Foundation Underpinning for Heritage Buildings - due to programme constraint, the foundation stabilization works for the Heritage Buildings were carried out at a time when the old freshwater reservoir was still in use. An innovative contiguous grout pile wall system was installed to protect the reservoir from possible adverse effects of the foundation stabilization works. A series of 219mm holes were drilled next to the reservoir by non-percussive boring method. The holes were filled up by non-pressurized grouting to form a protective barrier.

With deep excavation, building near heritage buildings and water reservoirs, very difficult site access, a tight working site area, a definite completion date, responsibility to build sustainably and eliminate environmental impacts to the neighbours, the team could only resort to high levels of innovation and cooperation. Many of the construction processes, particularly associated with the deep excavation, were very complicated and the team worked with the statutory authorities to overcome any concerns.



Centennial campus view from main from west



中庭再造

百週年校園的設計圍繞着三個綠化中庭。這三個中庭重新演繹了大學堂中庭設計，為的是要向大學具歷史價值的空間致敬。其他容納不同的室外活動，鼓勵學術交流及自然通風，這三個中庭亦連接大學街，難怪在建成後便迅速成為大學一個十分受歡迎的聚腳點。

Recreating the courtyards

The Centennial Campus is organized around three landscaped academic courtyards that pay homage to the University's heritage, recreating the character and history of the Main Building's courtyards, the most memorable of spaces on campus. Designed as outdoor-rooms, they facilitate social interaction as well as air movement and are integral with the University Street. They have quickly become some of the most pleasant and popular spaces at the University.



Courtyard