Use of Local Granite in the Construction of the Central Government Offices Complex

The Central Government Offices (CGO) complex on Government Hill is one of the few samples of 1950s reinforced concrete and granite-faced public buildings in Hong Kong. Michael Wright, the chief architect of the CGO, in an interview with the Government Hill Concern Group in December 2011, emphasized that the government had put in "a lot of thought, a lot of care" into finding the right granite for building the CGO complex.[1] This paper will provide information regarding the use of local granite in the construction of the CGO complex. The references are based on archival research of public records of that period, supplemented by information from an academic publication.

Finding the right granite

The Public Records Office has a detailed file on the construction of the CGO (HKRS 156-1-1803). There are several correspondences on granite testing.

Professor S.G. Davis of the Department of Geography and Geology, University of Hong Kong, was commissioned by the Public Works Department (PWD) in 1952 and 1954 to conduct testing of granite facing slabs for use in facing the CGO complex.

In a letter written by Davis to the PWD in June 1952[2], Davis said "*I presume your main concern in the testing of these granites is that they shall be durable and not rust in the same way as the granites which face the Hongkong & Shanghai Bank Building and the Bank of China*." He added that a minimum of three weeks spot-testing in the lab was required and he had to do his own sampling from the quarry as "*granite textures and structures are often highly variable over a small area."* This series of testing was supposedly to obtain the granite for building the East Wing, Stage I of the CGO construction.

In September 1954, Davis was again asked by the PWD to conduct testing of granite samples, presumably for surfacing the Stage II and III of the CGO (Central Wing and West Wing). In a letter written by Michael Wright to Davis[3], it was said that "*The necessity for additional tests arises from the fact that the Grampian Road quarry area is to be levelled early next year as part of the new airport extension scheme and, in the circumstances, it is not feasible to cut from this quarry the facing slabs required for the second and third blocks of the Government Offices. It is, therefore, necessary to find another quarry producing granite which is practically identical to that of Grampian Road quarry.*"

Michael went on to say that "*the Hakka mason employed on the Government Offices has produced samples from a quarry at Diamond Hill (near Kai Tak) which are almost identical in appearance and texture to the granite at Grampian Road. It is hoped, therefore, that you (Davis) will select and test samples from this quarry.*"

There was "a complication" which "arises from the fact that the Diamond Hill quarry is already being worked by a private firm under Government permit. It would simplify matters, therefore, if a reasonably accessible but unworked area could be located, producing a similar stone to that at Grampian Road."

Davis, in his reply letter[4], said he needed to undertake several procedures: "*(a) Sampling of likely*

granite areas by my staff and myself. (b) Laboratory micro-testing and sectioning for a minimum period of one month. (c) Weekly visits to the quarry and the stone-masons' workshops with permission to reject faulty dressed stones. The above technique is necessary to ensure masonry that will not rust."

It is evident that the government had made much effort in finding the right granite for building the CGO complex. The emphasis is on the quality, rather than the use of expensive materials. In a government memo titled " Building Costs" dated 15 July 1959[5], from the Director of Public Works to the Colonial Secretary, it was reported that the CGO buildings had a much lower cost than private buildings of the same period (cost per square foot is 62% of Jardine House, 53% of Wing On Life Building, etc), and one of the reasons given was "*the 'expensive' appearance of the government buildings is obtained by careful detailing and insistence on a high standard of finish rather than by the use of expensive materials.*" This reflects the government's taste and philosophy at that time and the attempt to win the hearts of the people through the means of good architecture. "*If the Hong Kong Government is to command respect of the local population, its departments must be worthily housed.*" (from a government correspondence dated 11 July 1949)

Hong Kong Granite

Professor Davis published a book titled ***Building Stones and Rock Materials Used in Hong Kong*** in 1965[6]. There was a section on Hong Kong granite and some references on how it was applied in the construction of the CGO.

"*Granite is by far the most popular of all building stones and quarries in it are widely scattered wherever there are suitable and conveniently placed outcrops. In recent years (1960s), because of the tremendous demands of the building industry, it has become obvious that although there is an abundance of granite there is only a limited amount that is suitable as a high quality building stone. Such requirements as strength, texture, durability, mineral stability, colour, accessibility and ease of cutting do not always occur together.*" (p.2)

"*Hong Kong granite is the best known of all the Hong Kong building stones. When fresh it has a fine appearance, is tough and hard and can take bearing loads of hundreds of tons. Its strength and rough fracture also make it highly regarded for use in concrete aggregates*." (p.2)

"*Granite has been used widely in a great number of large buildings in Hong Kong. Prominent among the pre-World War Two buildings are the Supreme Court, the Hong Kong Club and the Hong Kong and Shanghai Bank Head Office. Post-war buildings in granite are best represented by the Bank of China, Chartered Bank, the American Consulate and the large complex of the Administrative Offices of the Hong Kong Government. This last group of buildings is handsomely characterized by plain high walls of white granite that glisten in the early morning or late afternoon sun. The stone for all these post-war buildings was quarried in Grampian Road and Diamond Hill in Kowloon. At the time of writing dressed granite from Diamond Hill to the value of more than two million dollars is being prepared for the new Bank of Canton being built on the Ice House Street. Until June 1964 the Government quarry at Diamond Hill was reserved solely for building stone.*" (p.4-5)

Local craftsmanship

Davis' book also discussed the quality of stone masonry in Hong Kong.

"*Stone masonry in Hong Kong is a traditional industry that is well established. It is run and controlled almost entirely by the Hakka people who make up the vast majority of the stonemasons. These stonemasons have a reputation for high-class work that compares favourably with the best in the world.*" (p.37)

"*Great care should be exercised to ensure that the cement mortar used in high class granite ashlar should be free from impurities that are likely to cause staining or rusting in the joints. Instead of using sand it is a wise precaution to use granite fines ground from the same rock as the stonework. The excellence of this technique is beautifully shown on the high granite wall at the east end of the Colonial Secretariat on Garden Road opposite the Peak Tramway Station.*" (p.38)

It is clear from the above review that the CGO complex is a fine example of post-war reinforced concrete and granite-faced buildings in Hong Kong. The use of local granite was carefully planned by the Public Works Department with professional support from the university to obtain high-quality materials, and the result was enhanced by the superior craftsmanship of the Hakka stonemasons.

The sources of these granites which built the CGO complex had long been exhausted. The two quarries in Grampian Road and Diamond Hill ceased operation in the 1950s and 1970s.

The CGO complex is therefore an architectural reminder of the time when grand Hong Kong buildings were built of local granite. Many of the buildings mentioned above had long gone – the old Hong Kong Bank and the old Chartered Bank (two of the big three granite banks), the old Hong Kong Club, etc. The CGO complex - its East, Central and West Wings - which served the public for more than half a century have now become our heritage. It is one of the few surviving examples of 1950s reinforced concrete and granite-faced public buildings in Hong Kong. In its essence, the use of local materials has created a wonderful connection between the buildings and our land. It will be a waste to destroy this architectural heritage.

"*I think these Central Government Offices are very fine-looking. They are of what I believe is called functional design and they can certainly be considered a very great credit to our architects and also to the contractors who, in one form or another, erected them and I hope you will agree with me that the Central Government Offices are in every way worthy of the Colony of Hongkong*."
- Sir Alexander Grantham, Governor, 1957

Notes
1 The video of the interview of Michael Wright by the Government Hill Concern Group can be viewed on www.governmenthill.org
2 Correspondence re "New Government Offices: Testing of Granite Facing Slabs" from S.G. Davis, Head of Department of Geology and Geography, University of Hong Kong to Chief Architect (J.C. Charter), The Public Works Department, 25 July 1952 (HKRS 156-1-1803)
3 Correspondence re "New Government Offices: Testing of Granite Samples" from A.M.J. Wright, Chief Architect, The Public Works Department to S.G. Davis, 9 September 1954 (HKRS 156-1-1803)
4 Correspondence re " New Government Offices: Testing of Granite Samples" from S.G. Davis to A.M.J. Wright, 1 October 1954 (HKRS 156-1-1803)
5 Government Memo from Director of Public Works to Colonial Secretary, 15 July 1959 (HKRS 156-1-1803)
6 *Building Stones and Rock Materials Used in Hong Kong*, S.G. Davis, First Edition 1965, published by Davis Publications Limited, Hong Kong

Government Hill Concern Group
30 May 2012