Penny's Bay Development Project
Fire Station, Ambulance Depot and Police Post - "Green Architecture"

Architectural Services Department and Gammon Construction Limited have completed the above to serve the surrounding areas in Penny's Bay, Lantau and the theme park. Construction commenced in late 2002 and completed on schedule in September 2004. The contract sum is $160 million approximately. The works form part of Civil Engineering Development Department's project for infrastructure development in Penny's Bay.

Good planning at the initial stage allowed a better site configuration to suit the special functional needs. Key design objectives were to comply with the 15m building height restriction while developing a sustainable design using a "garden architecture theme", and to minimise the visual impact in relation to the theme park by reducing the mass of the buildings thus creating neat roofscapes. The low rise development required a deep plan approach for the main fire service building therefore to maximise the use of daylight, a central landscaped courtyard was created which fits well with the garden theme.

The complex consists of a 7-bay fire appliance building contained within a light and airy single-storey structure utilizing photovoltaic panels integrated as part of the roof. This has the double benefits of natural light and ventilation whilst generating renewable solar energy. Adjacent to the appliance bay are offices, barracks and ancillary accommodation contained within a two-storey building with a central landscaped courtyard. A separate four-storey practice centre enables confined space, height and ladder practice. A central utility building shares electrical and mechanical plants. The single-storey Police Post is individually expressed at the east side of the complex.

Natural materials are recreated through prefabricated columns, latticework, roof support brackets, artificial stone walls and paving materials. Environmental features achieve high sustainability including, maximization of the use of daylight, natural ventilation and renewable energy, achieving higher energy efficiency by low overall thermal transfer value of 12.64W/m2 through the roof overhang design, landscaping, the use of prefabricated and environmental friendly materials and use of rainwater recycling for vehicle washing and irrigation. The partnering spirit among all those involved enabled the smooth completion project.

竹篙灣發展計劃
消防局暨救護站及警崗 -《綠化建築》

建築署與金門建築有限公司已經完成一項座落於大嶼山竹篙灣的綜合設施基建工程，該設施包括一所消防局暨救護站和一所警崗，用以提供該區和將來迪士尼主題公園所需的緊急服務。 建築工程於二零零二年底展開，並於二零零四年九月準時竣工。這項工程是土木工程拓展署所負責的竹篙灣基建發展計劃內的一部份，建築工程費用約爲一億六千萬元。

在策劃工程的初段，工地的位置及樓房的佈置均經過悉心的規劃，配合將來消防局和警崗在運作上的需要。 在設施的設計上， 主要要達到的指標是所有樓房的高度均需符合在發展規劃中規定不可超過十五米的高度限制，並在園林建築的主題下加入可持續發展的設計， 利用整齊雅致的樓頂佈置， 減少大型綜合設施對附近景觀的影響。 低層建築的設計促使在主消防大樓內設置綠化的中庭， 從而配合園林設計的主題， 而室內則可引入更多自然光，達到環保的目的。

竹篙灣消防局暨救護站的設施，包括一座有七個停車間間隔的單層建築物，它的屋頂是由光電太陽能板合成構造，一方面可引入更多的天然光線及自然通風，另一方面則可提供再生能源。 停車間旁設有一座兩層高配有優美園景中庭的主消防大樓，以作辦公室、休息室等用途。在消防局內的露天操場，亦興建有一座四層高的訓練大樓，作爲前線消防員進行密閉空間、救火梯等練習用途。共用設施如發電機等則設於中央的設備樓。位處於綜合設施東面的竹篙灣警崗是一座單棟式單層建築物，融合於綜合設施的整體設計。

大樓採用了預製支柱、格子組件、屋頂托架、人做石牆及鋪路物料來減少資源浪費。 綜合設施具備有可持續發展的特點，包含促進環保的設計概念及不同種類的環保裝置，包括採用露天中庭的大樓設計，使日光能盡量透射入室內、盡量引入自然通風、在屋頂內裝置太陽能發電板， 提供再生能源、樓房外牆的設計達到低傳熱系數至 12.64 瓦特/平方米、在設施內大量栽種各色各樣的樹木及加入園藝設計、採用環保物料及預製組件、在屋頂設置雨水收集循環系統，利用雨水作一般灌溉及洗車用途等。 此項目得以順利完成全有賴各方面的充份合作。