

Case Study Recycling of Cable Drums



Gammon Construction Limited, one of Hong Kong's market leading construction contractors, has been building a wide range of construction projects in Hong Kong and the Asia region for the past 50 years. Employing over 2,000 full-time staff, giving us one of the strongest technical teams in Asia. Our services cover design, project management and construction services for buildings, civil engineering, foundations, electrical and mechanical, infrastructure maintenance and operation, and interior refurbishment and fit out. To support our services we own and maintain a comprehensive range of heavy construction plant and equipment, a concrete batching business and a steel fabrication business provided from the Gammon Technology Park in Hong Kong and our Pristine Works factory in Dounguan, mainland China.

Gammon Construction is a private company jointly owned by Jardine Matheson, an Asian-based conglomerate and Balfour Beatty, a UK based world-class engineering, construction and services group. It has an annual turnover around US\$1billion.

The Problem – The Need to Dispose of the Used Cable Drums

In recent years, Hong Kong has seen the levels of landfill waste increase consistent with its economical development and growth. Hong Kong's landfills are under significant pressure and current estimates suggest that based upon current waste generation rates, they only have capacity for the next 6-10 years. Construction wastes are a key consideration as they account for up to 40% of wastes sent to landfill.

Gammon, in our commitment to reducing wastage reviewed the various areas of our business to see where reductions in waste generation can be made. Recycling opportunities have been initiated for a wide range of materials throughout our various businesses, however, we found a lack of opportunities for the recycling of timber waste in Hong Kong.

The Main Objective – to Reduce Waste

The spent drums from the installation of electric cabling at our Eagle's Nest Tunnel and Associated Works project, a Hong Kong Highway Route 8 contract, accounted for a large amount of waste generated on site. These drums are typically made from timber and cardboard which is easily damaged and cannot be reused. Balfour Beatty E&M Limited, Gammon's 100% owned Hong Kong electrical and mechanical company engaged with our cable and wire manufacturers to encourage the use of more durable plastic drums which can be returned to the manufacturers for re-wiring and thus offer a more sustainable waste management solution



The Benefits of Recycling the Cable Drums

The introduction of the recycling of cable drums had immediate waste reduction and other environmental benefits.



- Reduced waste sent to landfill
- Reduced labour for the breaking up of the old timber drums prior to disposal
- Reduced transportation to landfill
- Manufacturer/supplier collected recycled drums at the same time as making deliveries to site

A. 簡介

公司資料

金門建築為香港首屈一指的建築承建商，在過去五十年於香港及亞洲完成了多項不同類型的建築項目。我們的技術隊伍更屬亞洲最強團隊之一，僱用超過二千名全職員工。我們為客戶提供的服務包括設計、項目管理及建造樓宇、土木工程、地基、機電、基礎設施維修及運作、及內部裝修。為了支援多元化的服務，我們擁有自己的機械隊伍、混凝土攪拌廠及鋼結構製造廠，於香港金門科技園及東莞金屬結構廠房提供。

金門建築是一家私營公司，由以亞洲為基地的怡和及以英國為基地世界級的工程建造及服務集團 Balfour Beatty 共同持有。每年的營業額高達十億美元。

個案背景資料

問題 – 須處置經使用的電纜捲筒

近年，隨著香港經濟不斷發展及增長，堆填區的廢物量亦持續增加。香港堆填區面對不少壓力，現有估計數據顯示，以目前的廢物產生率計算，堆填區的容量僅可應付未來六至十年的需要，當中建築廢料是主要的考慮因素，因為這類廢料佔運往堆填區的廢物的 40%。

金門一向致力減少廢物，因此已檢討多項業務程序，以研究可從哪些方面著手減少廢物。在多項業務營運中，我們已開始循環再用多類物料，但卻發現難以在香港循環再用木材廢料。

B. 目標

主要目標 – 減少廢料

我們根據八號幹線合約在尖山隧道及相關工程中安裝電纜，當中耗用的捲筒是工地產生的主要廢料。這些捲筒一般以木材和容易損毀及無法循環再用的硬紙板製造。金門全資擁有的保富機電工程有限公司經已與電纜電線製造商合作使用較耐用的膠捲筒，這些膠捲筒可交回製造商作重新捲線之用，因此是一項可持續性較高的廢料管理方案。



C. 結果

循環再用電纜捲筒的好處

循環再用電纜捲筒可即時減少廢料，並帶來其他環保好處。



- 減少運往堆填區的廢物
- 減少在棄置舊木捲筒前把其折斷所需的人手
- 減少前往堆填區的運輸架次
- 製造商/供應商在運送捲筒至工地時，可同時收集循環再用的捲筒