

Efforts Towards an Environmentally Responsible Industry

建立著重環保的建造業

Russell Black

**Member, Provisional Construction
Industry Co-ordination Board**

柏立恒
臨時建造業統籌委員會委員

CIRC Recommendations on Environmental Performance (1)

建造業檢討委員會有關環保表現的建議(1)

- Founded on concept of sustainable construction
建基於可持續的建造模式
 - Minimize the negative impact of construction activities 盡量減低施工程序對環境的不利影響
 - Maximize the positive impacts 充分發揮設計和建築的效益
 - Balance environmental, economic and social aspects 在環保、經濟和社會效益三方面取得平衡

CIRC Recommendations on Environmental Performance (2)

建造業檢討委員會有關環保表現的建議 (2)

- **Policy framework for sustainable construction**
合乎可持續發展原則的政策架構
- **Life cycle costing**
壽命周期成本
- **Energy efficiency**
能源效益
- **Waste reduction**
減少拆建物料
- **Environmental assessment schemes**
環境評估計劃

Waste Reduction

減少拆建物料



Construction Waste 建築廢物

Inert 惰性

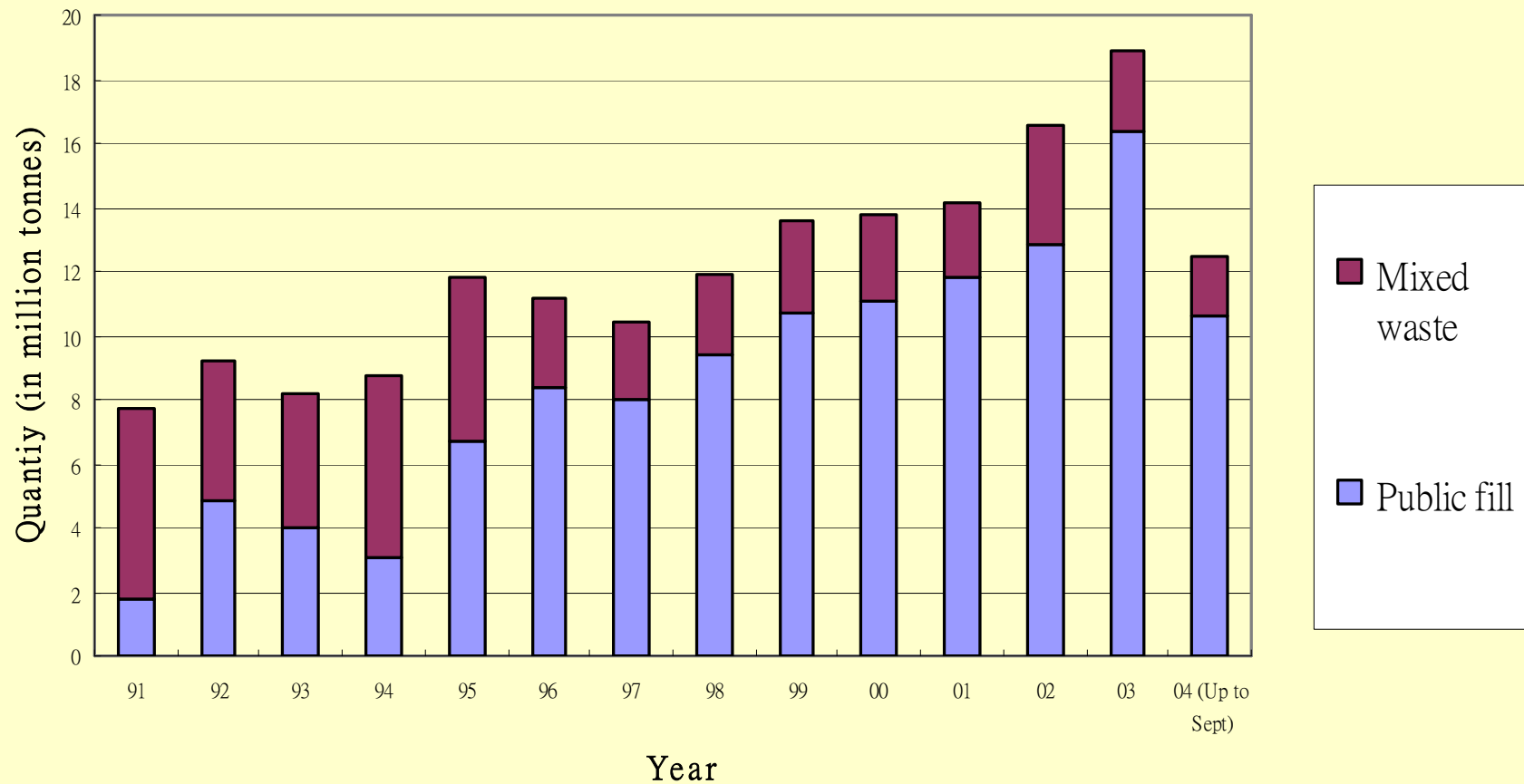


Non-inert 非惰性



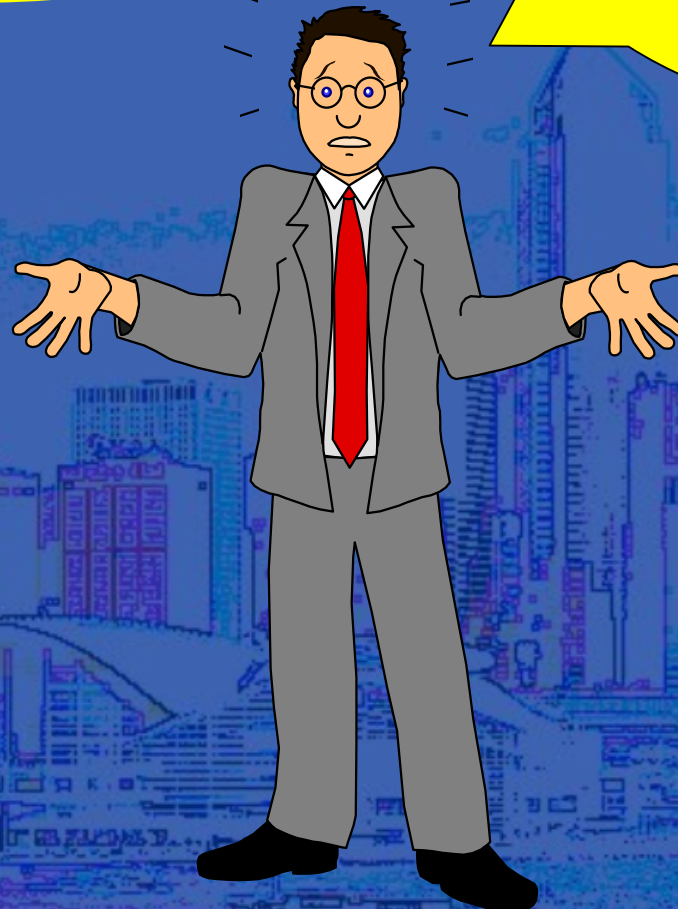
Construction Waste Generation

建築廢物的產生數量



Public fill capacity will be
exhausted by **mid-2005 !!**
現有公眾填料容量將於 **2005**
年中耗盡 !!

**All landfills will be exhausted
in 4 to 6 years !!**
因此，現有堆填區將於
4 至 6 年間被填滿 !!



Crisis!!
危機 !!

Working Group on Construction Waste

建築廢物工作小組

- Promote good practices in waste management
推動廢物管理的良好作業模式
- Promote use of recycled aggregates
推廣循環再造碎石料的使用
- Monitor implementation of the construction waste disposal charging scheme
監察建築廢物處置收費計劃的實施
- Identify opportunities for export of fill materials to the mainland
尋求向內地輸出公眾填料的機會
- Strengthen training on waste reduction
加強建造業從業員在減少廢物的培訓

Good Practices in Waste Management

廢物管理的良好作業模式



Waste Management in Public Works Projects

公共工程項目的廢物管理

- Waste management plan 廢物管理計劃
- Trip ticket system 運載記錄制度
- C&D Material Management Plan
拆建物料管理計劃
- Results 成果
 - Building projects - 40% waste reduction
建築項目 – 減少廢物 40%
 - Civil engineering projects - 46% reduction in surplus
excavated materials
土木工程項目 – 減少剩餘的物料 46%

Selective Demolition

選擇性拆卸方法



Storage and sorting site
儲存及廢物分類工地



Reinforcement and Concrete debris for recycling
可供循環再用的鋼筋及混凝土碎片

Prefabrication and System Formwork

預製件及系統模板



Prefabrication
預製件

System formwork
系統模板



Recycled Aggregates 再造碎石

- Pilot C&D material recycling facility in Tuen Mun Area 38
屯門第38區試驗拆建物料再造設施
- Design output capacity of 1,200 tonnes/day
設計產量每日1 200 公噸
- Use of recycled aggregates
再造碎石的應用
 - public works projects 公共工程項目
 - research & development 研究及開發

Training of Construction Personnel

建造業從業員的培訓

- Heighten the awareness on waste reduction
提高員工的減廢意識
- Better equip the workforce with necessary knowledge and skills
更好裝備員工所需的知識和技術
- Inculcate a new mindset across the industry
培養建造業新的思維

Other CIIRC recommendations on Environmental Performance

其他與環保表現有關的建檢會建議



Life Cycle Costing and Energy Efficiency

壽命周期成本及能源效益

- Hong Kong Housing Authority
香港房屋委員
 - Life cycle costing (LCC) and life cycle analysis (LCA) of public housing blocks
公共房屋生命周期成本和生命周期評估研究
- Electrical and Mechanical Services
Department 機電工程署
 - LCC/LCA for commercial buildings
商業樓宇生命周期成本和生命周期評估研究
 - Life cycle energy efficiency
生命周期能源效益

Environmental Assessment Schemes

環境評估計劃

- Objectives 目的
 - To assess environmental performance
評估樓宇環保表現
 - To encourage development of environmentally friendly buildings
鼓勵發展環保樓宇
- Assessment schemes 環境評估計劃
 - Hong Kong Building Environmental Assessment Method (HK-BEAM) 香港建築環境評審法
 - Comprehensive Environmental Performance Assessment Scheme (CEPAS)
全面評估樓宇環境表現計劃

Future Outlook 未來路向

- Disseminating good practices in waste management through PCICB website
透過臨時建會網站發放廢物管理的良好作業模式
- New ways for using public fill
公共填料的新用途
 - Quarry restoration 修復石礦場
 - Contouring of new developments
在新發展區塑造地形輪廓