

REDLAND PRECAST



中威預製混凝土產品有限公司





Who we are

Redland Precast specializes in the design, manufacture and installation of high quality precast concrete products. The company headquarters are located in Hong Kong and its manufacturing facility is in Dongguan – the heart of the Pearl River Delta region of China.

Redland Precast represents a variety of products including precast, prestressed concrete, and glassfibre reinforced concrete (GRC) products, etc.

公司簡介

中威預製混凝土產品有限公司（簡稱中威公司）從事高質量混凝土產品的設計、製造和安裝。公司的總部設在香港，生產廠房則設在位於珠江三角洲中心地帶的廣東省東莞市。

中威公司為客戶提供的產品和服務包括：鋼筋混凝土和預應力混凝土預製構件，以及玻璃纖維增強混凝土(GRC)產品等等。



REDLAND PRECAST
CONCRETE PRODUCTS LIMITED
中威預製混凝土產品有限公司



A Tradition of Excellence

Redland Precast's commitment to excellence began with the founding of the company in 1991. The increasing demands of specifiers, rising expectations of quality and growing environmental awareness have led the construction industry to focus on prefabrication. Redland Precast promotes and supports this

paradigm shift in design and construction.

The company culture has developed from the original goals of the founders – not to compromise on quality, to support our customers, fully embrace technological innovation and be aware of environmental outcomes.

優良傳統

中威公司自 1991 年成立以來，一直謹守承諾，以向客戶提供最優秀的產品和服務為己任。在我們不斷的推廣下，預製混凝土產品的應用不但受到了更廣泛的重視，並

且革新了設計方案和施工技術的模式。在此一形勢下，中威公司秉承自己的一貫宗旨，堅持以客為本，質量第一，積極採用新技術，並牢記對環境保護的責任。

The People

Redland Precast management is a balanced blend of expatriate and local expertise that is focused on world's best practice and customer satisfaction. The workforce has been individually selected and trained in all aspects of precast concrete production.

專業隊伍

中威公司羅致擁有豐富國際經驗的外籍及本地員工。不論是生產技術人員、設計人員、還是管理人員，都經過精心挑選和培訓。



Residential Development at
42 Island Road, Hong Kong:
Architectural GRC façade panels form
part of the modernist design of this
exclusive residential development in
Hong Kong

香港香島道 42 號住宅項目
採用外掛式 GRC 板作外牆裝飾的高
級私人住宅。

Design and

Technical Support

Redland Precast offers assistance to architects and engineers during project design and documentation phases in order to ensure maximum benefit is reaped from precast technology.

Redland Precast offers assistance to specifiers in the preparation of project specifications. Specifiers are encouraged to contact Redland Precast at an early stage of specification compilation since this will enable them to prepare the most appropriate specification for the project.

An extensive sample library is maintained to give designers and

specifiers an appreciation of the wide variety of colours and textures that is available. A bespoke sample service is also provided.

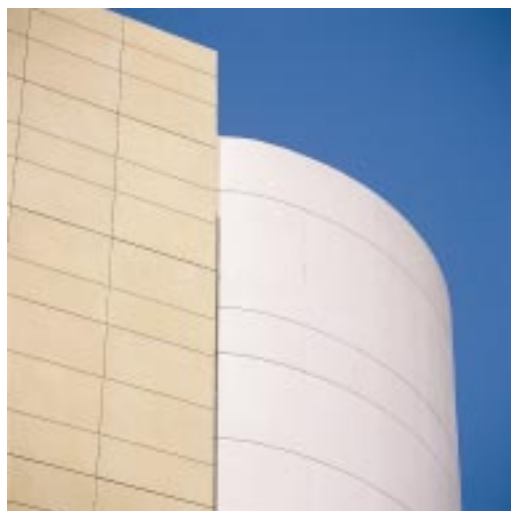
Architectural precast concrete.

裝飾性預製混凝土產品。

設計和 技術支援

為確保工程項目的順利進行，並使預製混凝土技術的優越性得到充分體現，中威公司在項目的設計階段向建築師和結構工程師提供全面的協助和技術支援。事實證明，中威公司的早期參與，對優化設計方案，及取得最佳的技術和經濟效果起到明顯而重要的作用。

在用於外牆裝飾的預製混凝土和 GRC 產品方面，中威公司備有現成的樣本供客戶選擇。公司也可根據客戶在裝飾混凝土的顏色，表面紋理和質感等方面的要求研製新的產品，以期達到最佳的裝飾效果。





The Factory

The factory extends to more than 250,000m² in area, making it one of the largest precast concrete production facilities in the world. It is equipped with three batching plants, one of which is dedicated to the production of architectural concrete. Equipment also includes pre-stressing beds, high

capacity cranes, a state-of-the-art automated GRC production facility, on-site laboratories and mould making workshops.

The factory is accessible by road and has a large wharf for marine transportation.



廠房設施

中威公司的廠房設於中國廣東省境內，佔地二十五萬平方米，是世界上最大規模的混凝土預製件生產廠之一。廠內設有三座混凝土攪拌站，其中一座專供裝飾

性混凝土生產；並設有設備先進的專業混凝土試驗室，使混凝土質量得到嚴格控制；主要設施還包括預應力張拉台、重型起重機、玻璃纖維增強混凝土生產設

備、以及模具製作車間等等。

廠房所在地的交通便利並設有深水碼頭，使我們可將產品經陸路或水路運送至世界各地。



Credentials

Redland Precast is a member of:

- The International Glassfibre Reinforced Concrete Association
- The Chinese GRC Association
- The National Precast Concrete Association
- Australia
- The Precast Prestressed Concrete Institute

The Redland Precast quality assurance system has been accredited by the Hong Kong Quality Assurance Agency (HKQAA) and China National Accreditation Board for

Certifiers (CNAB) as being in compliance with the requirements of ISO 9001:2000.

專業資格

中威分別擁有以下專業機構的會員資格:

- 國際 GRC 協會
- 中國 GRC 協會
- 澳洲國家預製混凝土協會
- 美國預應力混凝土學會

中威公司的品質管理體系符合國際 ISO 9001:2000 的標準，得香港品質保證局和中國認證機構國家認可委員會認可。



ISO 9001 : 2000
Certificate No. CC 300



Hong Kong Central Library: This project features architectural GRC façade panels incorporating many complex detail elements.

香港中央圖書館：中威公司提供的GRC外牆裝飾板以及其中的許多局部細節，是這一建築的主要特色。

Environmental Responsibility

Society expects the construction industry to take responsibility for the environmental impact of its activities and use methods that involve less environmental impact and improve safety. The use of precast concrete supports these initiatives through such benefits as:

- reduced waste;
- reduced pollution;
- greater construction speed;
- increased quality; and
- improved site safety

Redland Precast products are manufactured in a controlled, factory environment in an

industrial zone. The products are recyclable and are composed of materials that exist in plenty. Where possible, moulds and packing materials are re-cycled.

The production process of precast concrete embodies little

energy, compared with other common building materials, a fact highlighted by this survey conducted by the Environmental Council of Concrete Organisation.

The survey considers three product groups – concrete, wood, and

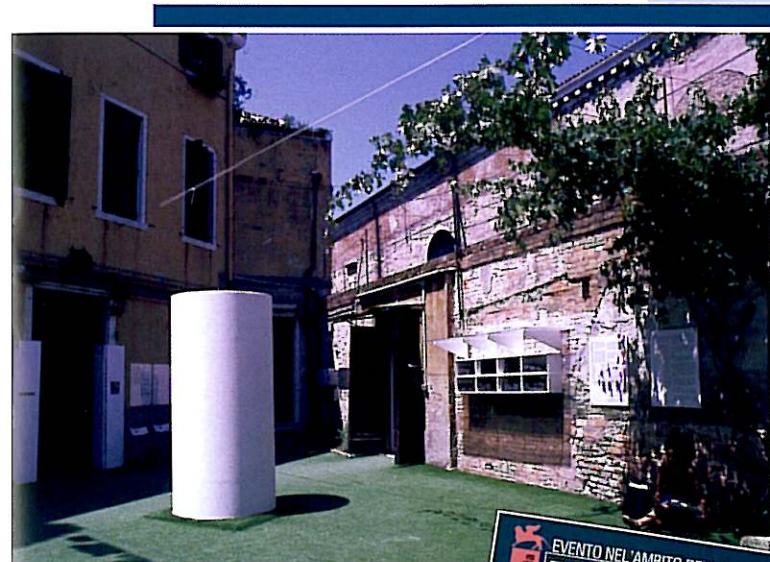
steel. For each group, researchers considered the cradle-to-grave impacts on energy expended in all phases of production, transportation, and construction; gaseous and solid wastes generated at each stage; and resource depletion.

Environmental Comparison

Material	Energy Use Gj/metric ton	Solid Waste Kg/metric ton	Carbon Dioxide Kg/metric ton	Carbon Monoxide Kg/metric ton	Methane Kg/metric ton	Nitrogen Oxides Kg/metric ton	Sulphur Dioxide Kg/metric ton
Wood Kiln-dried softwood	5.81	282	517	1,062	65	1,627	251
Plywood Softwood structural plywood	10.40	65	587	986	64	1,621	148
Steel Hot-rolled sheet	25.79	217	1,731	24,920	90	2,570	6,130
Precast Concrete	1.59	6	215	127	6	1,771	62

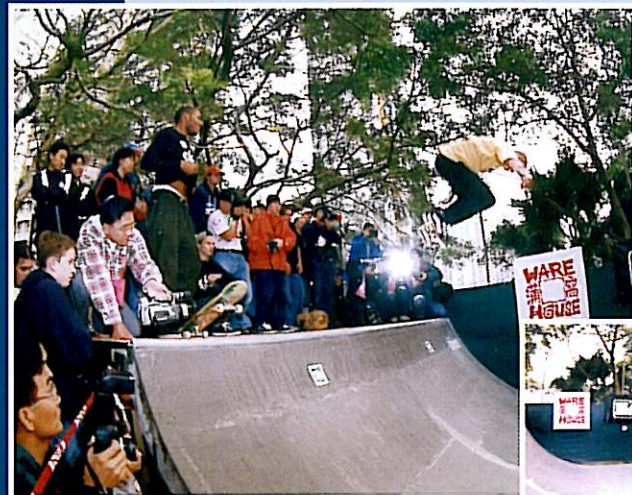
Community Activities

社會參與



Redland Precast supports various community activities including educational establishments, sports clubs and associations, and the arts. The company sponsored Hong Kong's exhibit at the 2003 Venice Biennale art festival in Italy.

中威公司積極參與各種社會活動，包括教育和藝術的推廣和發展。2003年，我們贊助香港藝術團體參加義大利威尼斯舉行的藝術展覽會。



Skateboard Ramp: In 1998, Redland Precast donated a skateboard ramp to the Warehouse Youth Club in Aberdeen.

滑板場地: 1998年，中威公司贊助香港仔蒲高青少年中心滑板場地物料和建造。

環保責任

社會公眾的環保意識日益增強，建築界在參建工程時肩負保護環境的重要責任；而預製件的應用，可為保護環境帶來多方面裨益：

- 減少建築廢物
- 減低環境污染
- 加速施工進度
- 提高工程質量
- 改善工地安全

預製混凝土及 GRC 產

品在工廠生產，過程受到嚴格控制，從而大大減低對環境的污染。混凝土的主要原材料在自然界資源豐富並可重複使用，加上大部分模具和包裝材料可重複使

用，也大大減少了對環境的影響。

與其他建築材料相比，預製混凝土的生產和使用過程消耗更少的能源，排放更少量的有害氣體。附表是一個關注混凝土製造業與環保組織的研究數據。該研究全面考慮了木材、鋼材和混凝土等建築材料在生產、運輸和建築施工等各個階段所消耗的能源、排放的廢物廢氣、及其對自然資源的影響。

不同材料對環境的影響

材料種類	消耗能源 GJ/噸	固體廢料 公斤/噸	二氧化碳 公斤/噸	一氧化碳 公斤/噸	甲醇 公斤/噸	氧化氮 公斤/噸	二氧化硫 公斤/噸
木材	5.81	282	517	1,062	65	1,627	251
夾板	10.40	65	587	986	64	1,621	148
熱軋鋼板	25.79	217	1,731	24,920	90	2,570	6,130
預製混凝土	1.59	6	215	127	6	1,771	62





Residential Development at 28 Gough Hill Road, The Peak, Hong Kong: Hong Kong's most prestigious residential development features architectural precast concrete and GRC.

香港歌賦山道 28 號住宅項目：香港頂級私人住宅發展項目，採用外掛式裝飾混凝土及 GRC 產品作外牆裝飾。



KCRC West Rail: This project features matchcast viaduct segments, parapets and cable troughs.

九廣鐵路 — 西鐵: 中威公司為該項目供應預製高架橋節段、傍板和電纜槽。

Precast Concrete for Infrastructure and Engineering



The use of concrete as a structural material began in ancient times. The Egyptians used precast concrete blocks in the construction of the pyramids around 2000BC. The use of precast concrete in modern infrastructure and engineering projects began in the 1950s and today the use of precast and prestressed concrete is widespread. Redland Precast produces a wide range of precast and prestressed concrete products, including:

- segmental viaducts;
- parapets;
- bridge beams;
- retaining structures;
- tunnel linings;
- railway sleepers;
- culverts and channels; and
- sea defences.

基建及 土木工程

混凝土作為建築材料始於遠古時代。早在公元前二千年，古埃及人已懂得採用混凝土磚塊建造金字塔。二十世紀五十年代開始，預製混凝土產品被廣泛應用於多項基建及土木工程。時至今日，預製混凝土及預應力混凝土產品的使用已更為普遍和多樣化。中威為客戶提供的產品，計有：

- 高架橋節段
- 建築物外牆板
- 預應力和非預應力樑
- 擋土牆板
- 隧道管片
- 軌枕
- 排水渠道
- 防波堤

The Lantau and Airport Railway: Redland Precast supplied sleepers, floating slab tracks, turn-outs and GRC cable troughs for this project.

大嶼山地鐵機場快線: 中威公司為此項目供應軌枕、浮置板、轉彎板和GRC電纜槽等。





Grand Promenade Residential Development at Sai Wan Ho, Hong Kong: One of the tallest residential buildings in the world constructed largely from precast concrete. This project features tiled precast concrete façade panels with integral windows and architectural features.

香港西灣河嘉亨灣住宅項目：世界上最高的住宅建築之一，在建築過程中大量採用預製混凝土技術。中威公司提供預製混凝土外牆、陽台以及其他外部裝飾。安裝窗框和粘貼瓷磚的工序均在工廠完成。

Building Structures

建築結構工程

Precast concrete offers an economical, flexible and fireproof structural solution for buildings of all kinds and these qualities have spurred interest in total precast structural solutions.

In Hong Kong, the use of precast concrete façades, floors and stairs is commonplace in high rise housing projects, however it can also benefit the construction of public buildings such as airports, schools, commercial buildings, industrial buildings and correctional facilities.

Products in this category include:

- beams;
- columns;
- floors;
- façades;
- walls;
- stairs;
- service ducts; and
- prefabricated buildings.

預製混凝土的應用，為各種類型的建築提供了一個既經濟、又靈活的結構方案。其一系列的優點也促成了全預製混凝土的建築結構方案的誕生。

在香港，預製混凝土外牆、樓面及樓梯已普遍地應用於高層住宅建築。預製混凝土產品的優點也可體現在機場、學校、商業大廈及工業廠房等建築中。中威為客戶提供的產品，計有：

- 樑
- 柱
- 地台
- 外牆
- 樓梯
- 電線槽
- 預製樓宇組件

ASD Government Quarters: Tiled precast concrete façade panels were supplied for two developments in Kowloon.

香港建築署 - 公務員宿舍: 位於九龍的兩個公務員宿舍建設項目，由中威公司提供粘貼瓷磚的預製混凝土外牆。





出路



KCRC Lok Ma Chau Terminus: Redland Precast provided the precast concrete elements for this total precast structure ensuring construction speed and quality.

九廣鐵路 - 落馬洲支線總站: 九廣鐵路公司的落馬洲支線總站工程採用了全預製建築方案，以保證工程的進度和質量。中威公司是此項目的預製構件供應商。

Architectural Precast Concrete

Architectural precast concrete allows architects to 'design' their own stone. A wide variety of colours is available through the use of pigments, cements and aggregates and many interesting textures are available, such as acid etching the surface to create a sandstone effect, and polishing.

The plasticity of the materials during manufacture makes it ideal for the creation of mouldings and complex shapes.



裝飾性預製 混凝土工程

裝飾混凝土的特性，為建築師帶來無限創造空間。通過各種水泥、骨料、顏料的不同組合而帶來的豐富色彩；以及不同表面處理（包括酸洗、噴沙等）而創造出多變的紋理和質感 - 大大地豐富了建築師的表現力，讓建築師得以按不同需要而設計出獨一無二的建築。

Transport Interchange and Shopping Centre at Tseung Kwan O, Hong Kong: This transport interchange and shopping centre for the Hong Kong Housing Department features architectural precast concrete cladding.

香港將軍澳房屋署物業發展項目: 此項目專案為巴士總站及購物中心，以外掛式裝飾混凝土板作為外牆裝飾。

St. Anthony's School, Singapore. Both architectural precast and GRC feature in this splendid, modern school in Singapore. 新加坡聖安東尼學校。中威公司提供的外掛式裝飾性預製混凝土及GRC產品使這一現代風格的校舍更加完美出色。



AsiaSat's Tai Po Earth Station: The AsiaSat project features architectural precast concrete used as permanent formwork for the external wall.

亞洲衛星 — 大埔衛星站: 此一建築的特點是，裝飾混凝土預製板同時作為外牆裝飾和現澆混凝土牆體的永久性模板。



Glassfibre Reinforced Concrete (GRC)

GRC is a lightweight cementitious material composed of cement, fine aggregates, alkali-resistant (AR) glassfibre, water and admixtures. It is particularly useful where durability, fire resistance and strength are required but where weight is an issue.

GRC is used in engineering applications for cable troughs, permanent formwork and equipment enclosures.

GRC is also ideal for architectural and decorative applications and can be incorporated into curtain wall systems.

Redland Precast has been awarded the Glassfibre Reinforced Concrete Association International Award on two occasions: for the Hong Kong City Plaza project and for the Chinachem residential development at 129 Repulse Bay, Hong Kong.

玻璃纖維 增強 混凝土 (GRC) 工程

玻璃纖維增強混凝土 (GRC) 是水泥、砂、石、耐鹼玻璃纖維、水及外加劑經混合及養護而成的混凝土材料。耐鹼玻璃纖維的使用，提高了混凝土的結構強度，從而大大降低了構件的截面厚度和混凝土的使用量，達到減輕產品重量的效果。GRC 產品具有良好的耐久性和防火性能，是一種非常理想的建築材料。

GRC 可應用於製造電線槽、永久性外牆模板和外牆的裝飾工程等。裝飾性 GRC 產品的魅力充分展現於香港太古城中心項目及香港淺水灣道 129 號華懋集團住宅發展項目的建造。中威公司有幸參與其中，並因此兩個項目先後獲國際 GRC 協會頒發獎狀。

Residential Development at 129 Repulse Bay Road, Hong Kong: Spectacular luxury development featuring GRC cladding. Redland Precast secured the Glassfibre Reinforced Concrete Association International Award for this project in 2003.

香港淺水灣道 129 號住宅項目：此豪華物業以裝飾性 GRC 產品創造出線條流暢的外形，中威公司有幸因此項目獲得 2003 年國際 GRC 協會獎。

GRC cable troughs: light, strong and safe to install.

GRC電纜槽：既輕巧、耐用和堅固，又便於安裝。





Making Architectural GRC

裝飾性 GRC 的製造過程

- 1 Placing architectural concrete face mix in mould
澆築裝飾性混凝土面層
- 2 Spray application of GRC mix on to facing fix
噴漿法成型 GRC 背層
- 3 Compacting GRC mix layer by layer
將 GRC 逐層滾壓至密實
- 4 De-moulding GRC panel
拆模
- 5 Polishing architectural GRC panel
裝飾性 GRC 板表面拋光

Projects Architecture



Residential Development at 28 Gough Hill Road, The Peak, Hong Kong

Hong Kong's most prestigious residential development features architectural precast concrete and GRC.

香港歌賦山道 28 號住宅 項目

香港頂級私人住宅發展項目，採用外掛式裝飾混凝土及 GRC 產品作為外牆裝飾。



Hong Kong Housing Department

Redland Precast has supplied tiled precast concrete façade units and other precast elements for Housing Department projects throughout Hong Kong.

香港房屋署

多個香港房屋署工程項目由中威公司提供粘貼瓷磚的預製混凝土外牆和其他構件。

Huawei Data Centre – Shenzhen

Architectural precast concrete cladding panels for a high tech facility in Shenzhen, China.

深圳華為數據中心

這一容納大量高科技裝備的重要建築採用外掛式裝飾混凝土板作為外牆裝飾。

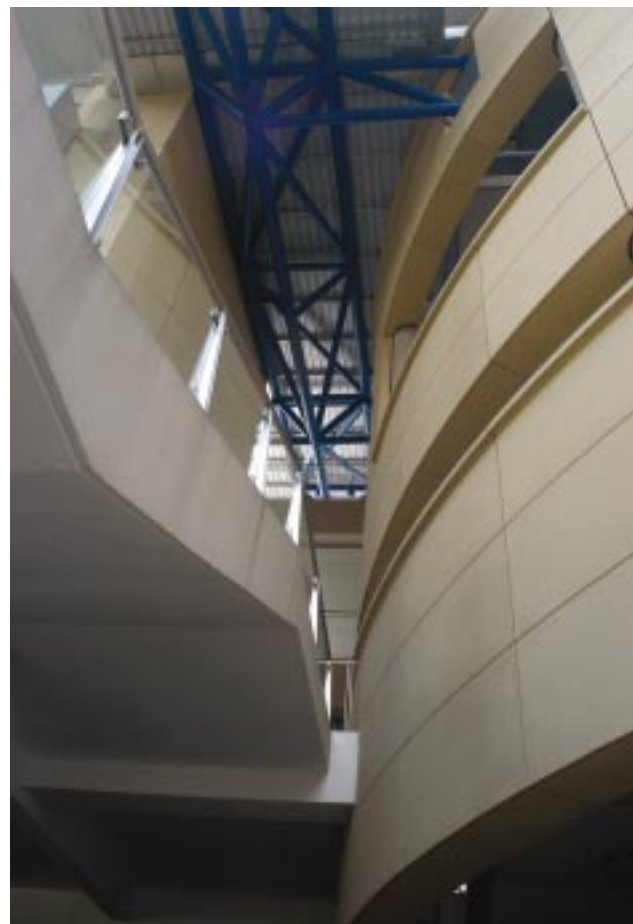


St. Anthony's School, Singapore

Both architectural precast and GRC feature in this splendid, modern school in Singapore.

新加坡聖安東尼學校

中威公司提供的外掛式裝飾性預製混凝土及 GRC 產品使這一現代風格的校舍更加完美出色。





Tradeport Logistic Centre, Hong Kong International Airport
Logistics facility at Chek lap Kok airport, Hong Kong, featuring architectural precast concrete used as permanent formwork.

香港赤 角機場物流中心

裝飾性預製混凝土板同時作為外牆裝飾和現澆混凝土牆體的模板。

IBM Shenzhen

The IBM facility in Shenzhen features both architectural precast concrete and architectural GRC.

IBM 深圳廠房

IBM深圳廠房採用外掛式裝飾性混凝土和GRC板作為外牆裝飾。



Disneyland - Hollywood Hotel

Finely moulded precast concrete cladding panels featuring "mouse ears" and sunburst emblems and incorporating window frames

香港迪士尼樂園 — 好萊塢酒店

此項目採用預製混凝土外牆連同在工廠安裝的窗框，以精心澆築的米奇老鼠圖案為其主要特色。

Penny's Bay Development Contract 1

Architectural precast concrete panels employed as retaining structures provide a handsome, durable landscape feature.

香港竹篙灣發展工程一期

裝飾性預製混凝土板作為擋土牆，具有美觀耐用的園林裝飾效果。



Retaining Structures

Redland Precast has provided precast retaining structure units for many projects in Hong Kong.

擋土牆: 中威公司為香港多項斜坡維修工程提供預製混凝土擋土牆板。

Projects

Building Structures



Les Saisons

The use of precast concrete façade elements eliminated the requirement for time-consuming formwork and falsework.

逸濤灣

預製混凝土外牆構件的使用減少了此住宅項目施工過程中對模板和腳手架的需求。



Hong Kong Airport - East Hall Extension

Precast concrete double-tees and shell beams helped the contractor complete this complex project on-time and with minimum disruption to the functioning airport.

香港國際機場 — 東面大樓

香港國際機場東面大樓的擴建工程採用了中威公司生產的雙T型預製混凝土樑和模板式疊合樑，從而保證工程如期完成並使施工對機場日常運作的干擾減至最低。

KCRC Lok Ma Chau Terminus

Redland Precast provided the precast concrete elements for this total precast structure ensuring construction speed and quality.

九廣鐵路 - 落馬洲支線總站

九廣鐵路公司的落馬洲支線總站工程採用了全預製建築方案，以保證工程的進度和質量。中威公司是此項目的預製構件供應商。



Infrastructure and Engineering



KCRC East Rail Matchcast viaduct segments for this railway project.

九廣鐵路 — 東鐵 中威公司為此項目供應預製高架橋節段。



Redland Precast is a licensed manufacturer of the Sonneville low vibration transmission (LVT) block

中威公司是美國 Sonneville 公司低震動混凝土軌枕的特許生產商

Hong Kong Strategic Sewage Disposal System

Segmental tunnel linings were supplied for the modernization of Hong Kong's sewage system.

香港策略性排污計劃

中威公司為這項排污系統的現代化改造工程提供預製隧道管片。

Singapore Mass Rail Transit

Redland Precast provided precast concrete segments manufactured on a carousel production line for North-east Line Contract # 704.

新加坡地下鐵路系統

中威公司設於當地的自動化生產線，為新加坡地鐵東北支線按 704 號合約生產預製混凝土隧道管片。

Singapore Deep Tunnel Sewerage System

Precast concrete segmental lining for Contract # T-03.

新加坡深海排污計劃

中威公司按 T-03 號合約為該工程項目生產預製混凝土隧道管片。

China – The Focus for Growth

Redland Precast sees China as the principal engine of business growth in the future and is committed to supplying world's best standard precast concrete and GRC products to this important market.

The Way Forward

Redland Precast is located in the Pearl River Delta – the engine-room of China's modern growth. The company is well-placed to service this growing market and to market products in the Asia-Pacific region and the rest of the world.

The company has grown through its participation in the Hong Kong market and its project list parallels the phenomenal growth of the city and its infrastructure.

The use of architectural precast concrete and GRC continues to grow as architects become familiar with their design possibilities, developers appreciate the value they add to their properties and builders appreciate

their speed, quality and economy.

展望

中威公司設廠於珠江三角洲地區內。此地區的經濟發展是中國經濟增長的動力來源之一。中威公司將發揮自身的優勢，致力服務這一高速增長的區域，發展國內市場，並將繼續服務香港、亞太地區、以及其他海外市場。

通過參與多個香港重要工程項目，中威公司壯大了自身的實力，並見證著香港的成長和變遷。

預製混凝土的需求將會持續增長。事實上，裝飾性預製混凝土及 GRC 的應用，豐富了建築師的想象力、美化了建築外型、同時為物業帶來增值的效果；建築商也已經體會到使用預製混凝土產品在施工進度、質量以及經濟效益等方面的好處。



The IBM facility in Shenzhen.

IBM 深圳廠房。





目標市場 — 中國內地

中威公司視中國內地市場為未來業務增長的主要來源，我們將為這一迅速發展的市場提供最優質的預製混凝土和 GRC 產品。



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