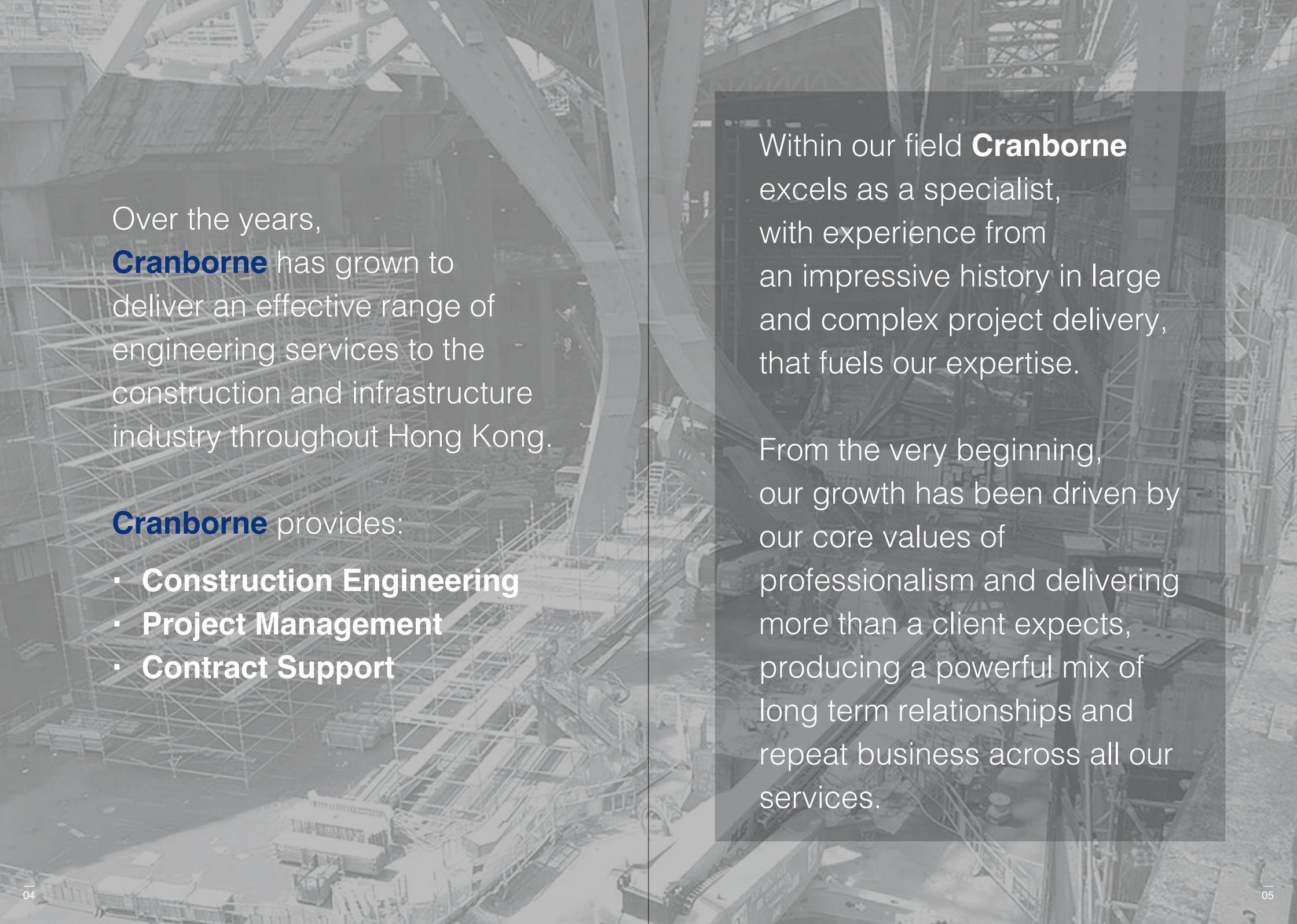




cranborne



Mega rail project in Hong Kong



Over the years,  
**Cranborne** has grown to deliver an effective range of engineering services to the construction and infrastructure industry throughout Hong Kong.

**Cranborne** provides:

- **Construction Engineering**
- **Project Management**
- **Contract Support**

Within our field **Cranborne** excels as a specialist, with experience from an impressive history in large and complex project delivery, that fuels our expertise.

From the very beginning, our growth has been driven by our core values of professionalism and delivering more than a client expects, producing a powerful mix of long term relationships and repeat business across all our services.

From our incorporation in 2013, Cranborne has provided its engineering-led services to some of the most iconic projects in Hong Kong, including:

- Airport airfield works
- Airport terminals
- Complex free-form steel buildings
- Cut-and-cover tunnels
- High-speed rail stations (largest below ground in the world)
- Light (mass transit) rail stations
- Long-span steel footbridges, and
- Museums

Innovative and forward thinking we are educated and experienced in **modular and component led construction** projects utilising **off-site manufacturing**, Lean construction, and **3D modelling**, in particular with projects characterised by **DfMA processes**.

Our key strengths include **construction engineering including planning and methodology, project management and programming,**

which both utilise our **in-house 3D modelling** capability.

Our experienced engineers operate using robust processes and procedures, which they apply to the projects we undertake. Our extensive use of **digital technology** allows us to identify and **resolve constructability issues** virtually before the start of physical construction.

Our engineers work both in the office, as well as in the field, allowing Cranborne to excel at even the most challenging projects. Cranborne has worked on mega-projects with a value in excess of US\$2bn, and turned project in distress into successes, **increasing productivity by 50% and in some cases by 200%.**

In addition to construction engineering and project management services, Cranborne has on a number of occasions provided **Specialist Construction (Means and Method) Advice** and also prepared **Delay and Quantum Claims**.



HKIA 3RS - C3138: APM and BHS Tunnels and Related Works (3802 Co-ordination Assistance)



Mega rail project in Hong Kong

# expertise and capabilities

Cranborne  
provides world class  
Construction Engineering,  
Project Management, and  
Planning services.

Our core areas of expertise and  
specialism include:

**Construction methodology**

**Temporary Works definition**

**Design for Manufacture and  
Assembly**

**Modular and Industrialised  
construction**

**Lean Project Management**

**Planning and Programming**

**3D modelling**

**Site logistics**

**Optioneering and Value**

**Engineering**

**Railways**

**Airports**

**Tunnels**

**Bridges**

**Complex buildings**



HKIA 3RS - C3138: APM and BHS Tunnels and Related Works (3802 Co-ordination Assistance)



Mega rail project in Hong Kong



Signature museum project in Hong Kong

Our services are structured around a value-driven approach based on a Lean project management model, and are a combination of the three key areas of construction project delivery.

**1 / Construction Engineering**

where we focus on construction methodology, interfaces co-ordination, planning, 3D modelling and, DfMA.

**2 / Project Management**

where we focus on managing project teams, programming, and production control

**3 / Contract Support**

where we focus on scope, obligations, contract administration, and contract claims.

Our construction engineering 3D modelling team supports Cranborne in the provision of all its services.

Utilising advanced 3D modelling software, we also assist our clients in early planning, logistics, design development and methodology as well as 3D modelling and detailing to co-ordinate interfaces between contracts, during all phases of a project.

Our construction engineering 3D modelling team is key during temporary works definition and temporary works design which we undertake using experienced engineering consultants working with our project teams.

Our construction engineering 3D modelling team also works with our programmers to incorporate our 3D into 4D programmes, which really bring to life the project plans.

All our services are monitored and controlled by our in-house Quality Management System.

Our people bring solid technical governance to projects, ensuring full compliance with laws, standards, regulations, and codes, and compliance with contracts, specifications, and drawings.

Our people are real experts in their fields, and possess the values and behaviours that means they will add value to your project without disrupting your existing teams. These values and behaviours are driven by our Directors, Clive Randall and Lee Smollett.

Clive has over 40 years of engineering and planning experience in major infrastructure projects, and leads our Contract Support Services.

Lee is a civil engineer and project leader with over 30 year's experience in project delivery, and leads our Construction Engineering and Project Management Services.

With these structured services and with our experience we know exactly what is needed to make a project successful.

# construction engineering

Our engineers are skilled in analysing the scope of works with a systematic methods approach, identifying repeatable and robust construction engineering processes.

We develop solutions to complex or unusual problems, using ingenuity and innovation, creating repeatable, long-term process and product quality solutions.

Where further engineering of design of any defined temporary works is required we use our dedicated and proven supply chain in Hong Kong

Our dedicated and proven supply chain allows us to mitigate risk by packaging project in a way that is best suited to meet a project's needs. These specially chosen suppliers provide the necessary resources, skill and expertise to deliver high quality services in a short period of time.

Our core specialisms are:

- Defining and designing logistics, methods, sequence, plant, resources, and temporary works in a digital engineering model
- Using DfMA to identify and define the parts of a design that are best suited to traditional, modular or an industrialised system of delivery; and,
- Co-ordinating the scope, sequences, and statutory obligations at major interfaces between contracts.

All our engineers and teams are trained and proficient in the use of 3D modelling software and that is the environment in which they work.





Mega rail project in Hong Kong

# project management

We bring teams together to manage the delivery of all aspects of a project during the design, procurement, or delivery stages.

Cranborne have provided their project management services to some of the largest and most complex design projects, construction projects and construction tenders in Hong Kong.

We directly employ the necessary resources to create our Project Management teams to guarantee control, quality, and programme.

When managing project and programmes we apply standard and non-standard techniques and procedures to perform our assignment, ensuring they are delivered to agreed time schedules.

We bring solid technical governance to the teams

ensuring full compliance with laws, standards, regulations, and codes, as well as ensuring compliance with contracts, specifications, and drawings.

Our people are specialists in:

- Managing teams in the design, procurement, or, construction of projects; and,
- Producing tender or project programmes in P6 or other software as required.
- 4D Digital Planning – Model based scheduling and simulation in various software platforms.

Our skilled project management teams ensure that our methodology and programmes add value and are Best for Project and highly focused on modern methods of construction.

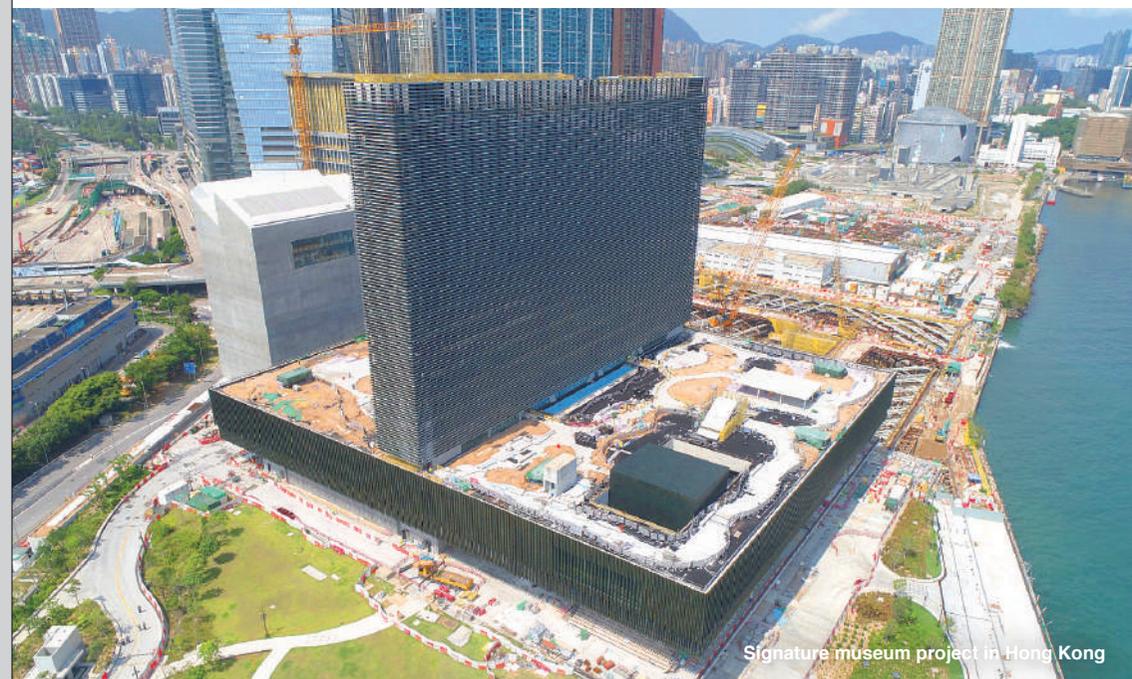
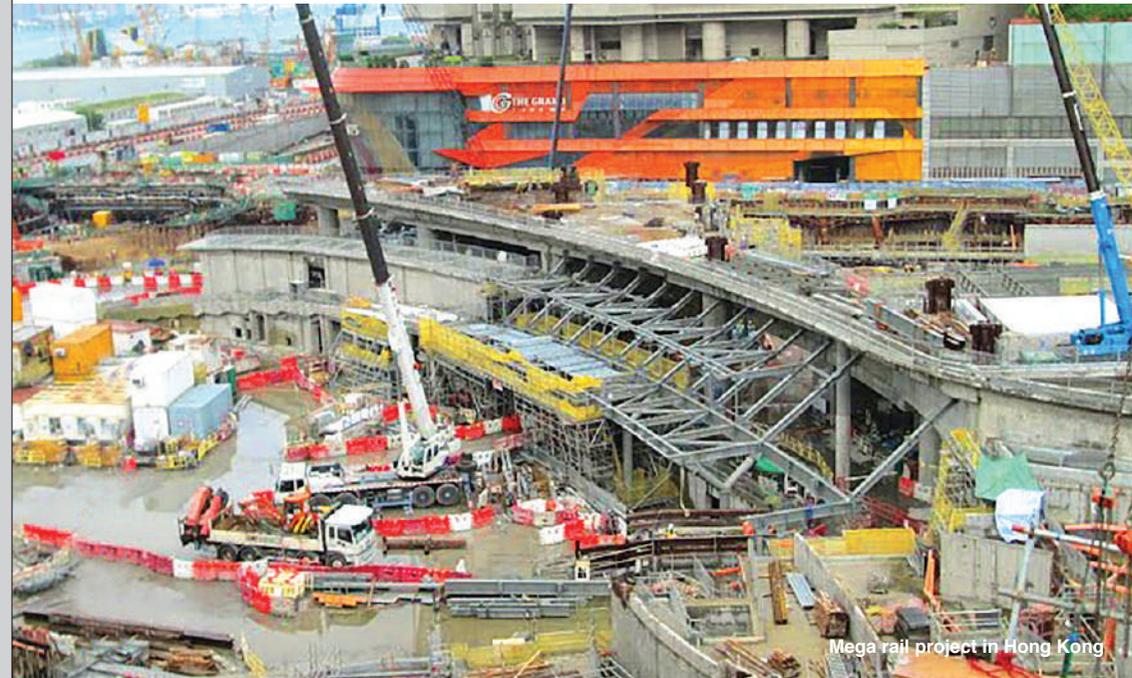
# contract support

Our specialists, identify and manage contract risks through the administration of the contracts in use.

We work with project teams to increase profitability and minimise exposure to the effects of risk, where possible working collaboratively with the parties to achieve agreements and avoid costly disputes.

Our main areas of focus are:

- **Specialist Advice** – Provision of advice on means & method and/or delay disputes, and the creation of 4D simulations;
- **Expert Witness** – Provision of Expert opinion on means & method and/or delay disputes, including the role of Lead Expert;
- **Dispute Management** – Managing teams in the dispute process; and,
- **Claims Management** – Preparation of delay claims, and quantum claims.



# projects

We work on mainly complex construction projects in the Infrastructure, Building, and Industrial sectors throughout Hong Kong and South East Asia. Browse through our experience below, to get a feel for what we've done in the last few years.

## :: Construction Engineering

### HKIA 3RS - C3138 : APM and BHS Tunnels and Related Works (3802 Co-ordination Assistance)



**Client**  
Mott MacDonald Limited

**Appointment**  
June 2018

**Completion**  
September 2019

**Project sector**  
Infrastructure – Airports

**Service sector**  
Construction Engineering

The Airport Authority Hong Kong awarded Contract 3138 to Mott MacDonald for the provision of detailed design consultancy services, including associated construction stage design support services, for the new Terminal 2 to Third Runway Concourse tunnels, to accommodate the new Automatic People Mover system and Baggage Handling System, as part of the Three Runway System (3RS) project. Cranborne worked with Mott MacDonald and the Airport Authority to co-ordinate the Works during detailed design and contractor procurement phases, and provide assistance to the Airport Authority to co-ordinate the inputs from all relevant consultants to the 3802 Works Contract documents.

The key scope of work Cranborne delivered included :

- Identifying and defining the physical, Works Contracts, Design Contracts, and statutory interfaces in the Works;
- Identifying the required approach to BD design approvals;
- Identifying the required approach to Statutory approvals;
- Reviewing the Particular Technical Specification (PTS) prepared by consultants; and,
- Identifying the Drawing and Particular Technical Specification requirements for the Works Contract

## HKIA 3RS - C3408 : Third Runway Concourse and Approach Works



**Client**  
**China State Construction Engineering (Hong Kong) Ltd**

**Appointment**  
December 2019

**Completion**  
September 2020

**Project sector**  
Infrastructure – Airports

**Service sector**  
Construction Engineering

The Airport Authority Hong Kong sought tenders for Contract 3408 – Third Runway Concourse and Apron Works for the construction of the Third Runway Concourse with fixed link and aircraft loading bridges; 36 serviced aircraft frontal stands, 27 serviced remote stands and taxilanes and apron areas; two cross-field taxiways; 22 ancillary buildings; parts of the Eastern Vehicular Tunnel; associated infrastructure works; and testing, commissioning. Cranborne acted as the key representative of China State to the Airport Authority Hong Kong, in terms of the technical aspects to the Airport Authority Hong Kong during the ECI and tender.

The key scope of work Cranborne delivered included leading the creation of the Preliminary Method Statements for:

- Site Arrangements, Temporary Facilities and Logistics;
- Construction of the Third Runway Concourse (TRC)
- Aprons and Taxiways;
- Infrastructure Works;
- Interface Coordination and Management; and,
- Anticipated Statutory Approval and Management Process

## HKIA 3RS - C3310: North Runway Modification Works



**Client**  
**China Road and Bridge Corporation**

**Appointment**  
December 2020

**Completion**  
May 2021

**Project sector**  
Infrastructure – Airports

**Service sector**  
Construction Engineering

The Airport Authority Hong Kong sought tenders for the Works under Contract 3310 – North Runway Modification Works for geotechnical, civil and structural engineering works with earthwork, excavation and temporary works and the construction of the Western and Eastern Vehicular Tunnels, Infrastructure and Airfield Works paving and utility installations, ground stabilisation, and ABWF, E&M, airport systems installations and ancillary buildings, to obtaining the Aerodrome Licence for the operation of the 3RS. Cranborne worked with China Road and Bridge Corporation to produce two of the most important method statements for the tender, and strengthen China Road and Bridge Corporation's performance.

The key scope of work Cranborne delivered included :

- A review of tender documents applicable to the Services;
- The provision of method statement and phasing for the new runway and taxiway works, resurfacing of the existing North Runway and taxiways, installation of stormwater drainage, potable and fire fighting water mains, power cable ducting system, telecoms ducting system, gas pipelines, aviation fuel supply system and AGL ducting system;
- The provision of Interface Co-ordination method statement; Interface Management Plan and Interface Schedule identifying all major interfacing issues and how to ensure effective delivery of the Works.

**HKIA 3RS - C3138 :  
APM and BHS Tunnels and Related Works**  
(3802 Co-ordination Assistance)



**Client**  
Mott MacDonald Limited

**Appointment**  
June 2018

**Completion**  
September 2019

**Project sector**  
Infrastructure – Airports

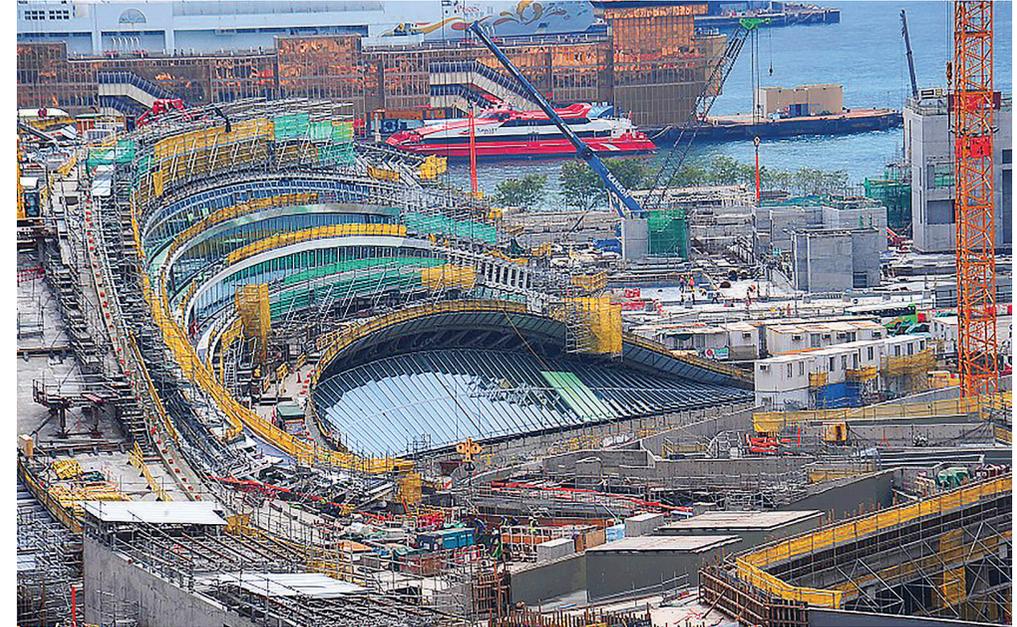
**Service sector**  
Construction Engineering

The Airport Authority Hong Kong (AAHK) awarded Contract 3138 to Mott MacDonald for the provision of detailed design consultancy services, including associated construction stage design support services, for the new Terminal 2 to Third Runway Concourse tunnels, and modification of the existing Terminal 1 to SkyPier tunnels to accommodate the new Automatic People Mover (APM) system and Baggage Handling System (BHS), as part of the Three Runway System (3RS) project at Hong Kong International Airport (HKIA). Contract 3802 Co-ordination Assistance was to provide assistance to the Airport Authority to co-ordinate the inputs from all relevant design and statutory management consultants and bodies, to the 3802 Works Contract tender documents.

The scope of Work Cranborne delivered included :

- Assisting the AAHK to establish a summary master programme;
- Establishing conventions for consistency in the tender documentation;
- Reviewing each consultant’s design and BD design submission programme;
- Reviewing each consultant’s design and Statutory submission programme.

**Mega rail project in Hong Kong**



**Client**  
Confidential

**Appointment**  
2015

**Completion**  
2017

**Project sector**  
Infrastructure – Railways

**Service sector**  
Project Management

The client was undertaking a project for the preparation of shop drawings; fabrication, delivery and erection of over 15,000 tonnes of structural steel, and 6,275 sqm of metal decking. The contract had suffered from a number of significant issues leaving the client in an untenable position, facing a massive increase in cost, and the threat of significant Liquidated Damages, without any obvious chance of recovery, relief, or release.

The key scope of work we delivered on this turnaround included:

- Re-organised our clients project team to operate more effectively, and at a lower cost within 2 months;
- Unlocked fabrication facilities within 4 months, improving erection from 160 tonnes/month erected, to 700 tonnes/month erected;
- Facilitated a Supplemental Agreement within 6 months between our client and their client, resulting in a double-digit profit for our client; and
- Completed the Works 6 weeks ahead of the Supplemental Agreement dates.



VietinBank Business Center, Hanoi, Vietnam

## :: Project Management

### Various projects in Hong Kong and Asia



Various projects in Hong Kong and Asia



Sydney International Convention, Exhibition and Entertainment Precinct

**Client**  
**Alfasi Constructions (Hong Kong) Limited**

**Appointment**  
August 2017

**Completion**  
August 2018

**Project sector**  
Infrastructure – Various

**Service sector**  
Project Management

Alfasi Constructions (Hong Kong) Ltd needed a flexible arrangement to support tenders and projects in Hong Kong and Vietnam as well as managing their staff resources. The tenders and projects included the provision of detailing, supply, fabrication, delivery and erection of permanent and temporary structural steel included the tender in Joint Venture with Vinci for the Skybridge at Hong Kong International Airport, and the fabrication management of Vietinbank, Hanoi. Cranborne provided the GM and Projects Director to Alfasi Constructions (Hong Kong) Ltd for Hong Kong and across Asia.

The key scope of work Cranborne delivered included:

- Co-ordinate and oversee general business operations ;
- Engage and represent Alfasi in key or targeted customer business development activities;
- Ensure overall delivery and quality of offerings to customers.
- Ensure the implementation of the Alfasi business strategy;
- Provide direct management of key functional/operational staff;
- Ensure compliance with OH&S, contractual and legal obligations

**North-East New Territories (NENT) Landfill at Ta Kwu Ling**

**Client**  
Alchmex –  
Sertego Joint Venture

**Appointment**  
July 2021

**Completion**  
July 2021

**Project sector**  
Infrastructure – Waste

**Service sector**  
Project Management

China State Construction (CSC) and Urbaser formed a Joint Venture to tender to the Hong Kong Government Environmental Protection Department to undertake an extension to the existing North-East New Territories (NENT) Landfill at Ta Kwu Ling. The scope of project comprises all works necessary for the design and construction for the NENT Landfill Extension (including site formation, installation of landfill liner system, and provision of leachate treatment and landfill gas management systems), environmental monitoring, landfill operation, restoration and aftercare. The DBO (Design Build Operate) project will commence in 2021 and complete some 36 years later.

- The key scope of work Cranborne delivered included :
- Production of cashflow model for the Joint Venture during the D&C, Operation, monitoring, restoration and aftercare project stages, incl. Tax;
  - Calculation of initial working capital, CAPEX requirements over the whole project, and forecasted financing costs;
  - Undertake sensitivity analysis on income from D&B and revenue from operations.

**Mega rail project in Hong Kong**



**Client**  
Confidential

**Appointment**  
2018

**Completion**  
2019

**Project sector**  
Infrastructure – Railways

**Service sector**  
Contract Support

Our client had reached a stalemate in the agreement of their final account with their client. The stalemate centred around the recovery of the cost for the provision of additional labour and plant by our client, and the disagreement on the categorisation of the cost and as such, the records required to substantiate the cost.

- The key scope of work Cranborne delivered included :
- Provision of memorandum outlining the contractual approaches to obtaining a negotiation;
  - Arrange meeting between the Parties to negotiate a way forward;
  - Development of best worst option
  - Facilitate meeting between the Parties and obtain negotiated agreement.



Façade Works to  
development footbridge in Hong Kong

## Façade Works to development footbridge in Hong Kong

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**Client**  
**Confidential**

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**Appointment**  
June 2019

**Completion**  
July 2019

**Project sector**  
Infrastructure – Bridges

**Service sector**  
Contract Support

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Our client had reached a stalemate in the agreement of their final account with their client. The stalemate centred around the recovery of the cost for the provision of additional labour and plant by our client, and disagreement on the validity of contractual claims which had been prepared and submitted by our client in advance of our appointment.

The key scope of work Cranborne delivered included :

- Review of contract for entitlement to claim for delay, and loss & expense
- Review of compliance with contractual claims notification process
- Peer review of contractual claims
- Memo presenting strategy and tactics to be deployed.

## Signature museum project in Hong Kong

**Client**  
Confidential

**Appointment**  
2018

**Completion**  
2020

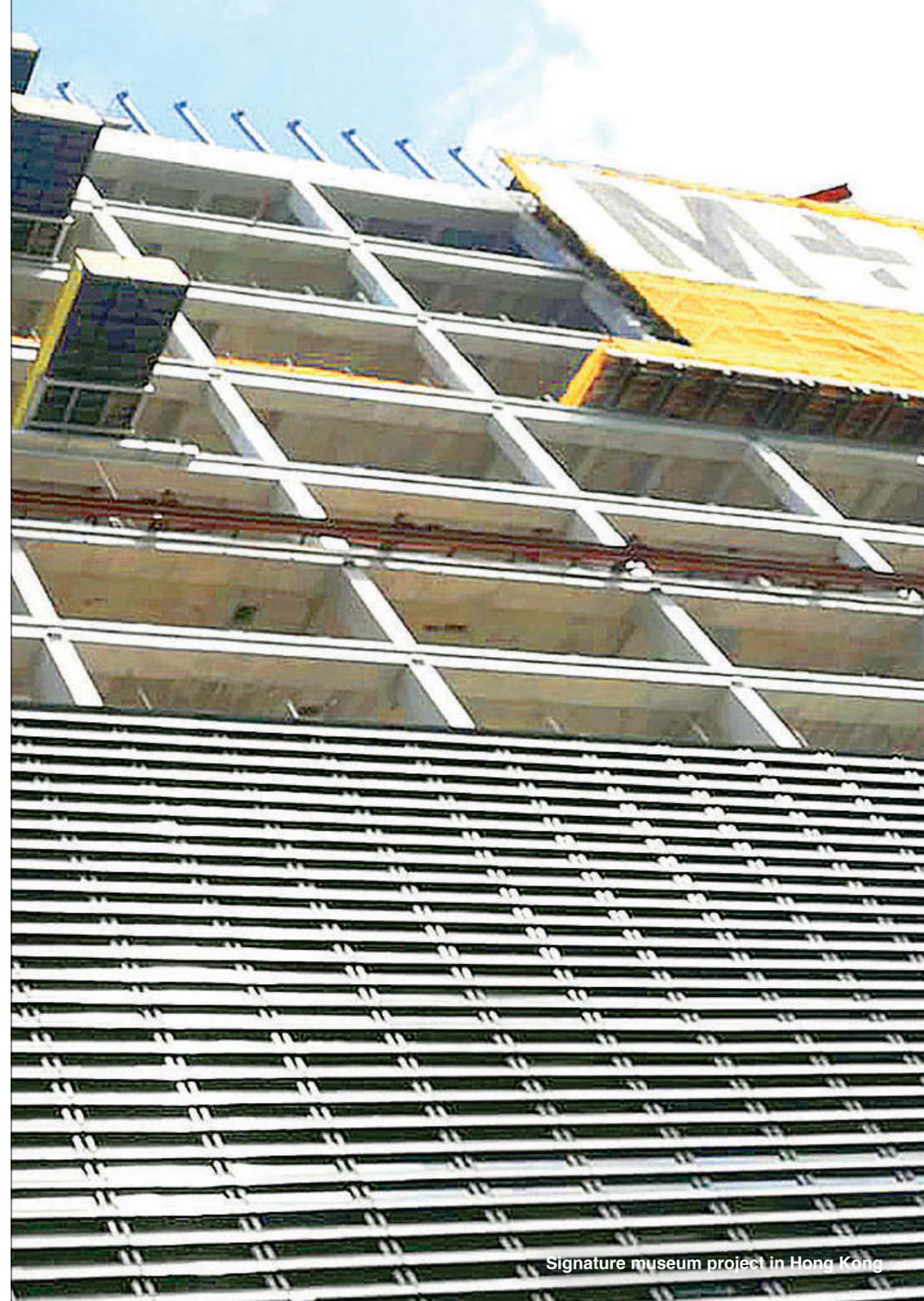
**Project sector**  
Building – Non-residential

**Service sector**  
Contract Support

Our client had suffered from the commencement of the Contract, from delay and disruption through the administration of the design, co-ordination, review, and approval obligation; administration of the co-ordination and provision of information obligation; imposition of multiple and varied design stages to suit the construction programme; and, other acts of prevention. This resulted in our client being unable to complete the Works in accordance with the contract duration, causing them to incur delays, losses and expense, from which they sought relief.

The key scope of work Cranborne delivered included :

- Research and identification of the causes of the delays and losses, and a route for an Extension of Time and recovery of Loss & Expense;
- Research, identification, and assessment of the effects of the causes of the delays, and development of an EoT entitlement programme claim;
- Research, identification, and assessment of the of loss and expense caused by the issues identified in the claim for EoT;
- Preparation of contractual letters, and claim narratives.



# cranborne

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