Briefing on the 10-Year Hospital Development Plan

15 September 2016
Programme

1. Welcome Message
   Dr S V Lo  
   *Director, Strategy & Planning Division*

2. Introduction of the 10-year Hospital Development Plan
   Mrs Sheila Mair  
   *Senior Manager (Planning & Development)*  
   *Capital Planning Department, Strategy & Planning Division*

3. Delivery of the 10-year Hospital Development Plan
   Mr Andrew Wong  
   *Chief Project Manager (Capital Projects)*  
   *Capital Planning Department, Strategy & Planning Division*

4. Q&A
Briefing on the 10-Year Hospital Development Plan

15 September 2016
To use $200 billion to implement various hospitals projects in the next 10 years
Introduction

to the 10-Year Hospital Development Plan
10-year Hospital Development Plan

Portfolio of work

1  Construction of New Acute Hospital at Kai Tak Development Area

11  Redevelopment / Expansion of existing hospitals

Including:

- Queen Mary Hospital (Phase 1)
- Prince of Wales Hospital (Phase 2, Stage 1)
- Kwong Wah Hospital
- United Christian Hospital
- Operating Theatre Block for Tuen Mun Hospital
- Haven of Hope Hospital
- Grantham Hospital (Phase 1)
- Kwai Chung Hospital
- Our Lady of Maryknoll Hospital
- Lai King Building in Princess Margaret Hospital
- North District Hospital
10-year Hospital Development Plan

Portfolio of work

1. Construction of New Acute Hospital at Kai Tak Development Area

11. Redevelopment / Expansion of existing hospitals

3. Construction of new Community Health Centres

1. Construction of new Supporting Services Centre
10-year Hospital Development Plan

Deliverables

5,000 additional hospital bed spaces

90+ additional Operating Theatres

430,000 additional annual capacity of general outpatient clinic attendances

2,800,000 additional annual capacity of specialist outpatient clinic attendances
Portfolio of Work
New Acute Hospital
at Kai Tak Development Area, Kowloon City

Area  ~ 500,000m² CFA

Scope of Works

• Construction of a new acute hospital at the Kai Tak Development Area with inpatient and ambulatory services of major specialties
  - Provision of 2,400 beds
  - Major acute services
  - Ambulatory services
  - A&E department
  - Operating theatre
  - Oncology centre
  - Neuroscience centre
Portfolio

Redevelopment of
Queen Mary Hospital – Phase 1
Southern District

Area  ~ 135,000m² CFA

Scope of Works

• Demolition of Clinical Pathology Building, University Pathology Building and Houseman Quarters

• Construction of a new hospital block to accommodate:
  - A&E department
  - Diagnostic radiology
  - Cardiac catheterization laboratories,
  - Intensive care unit
  - In-patient wards for major specialties

• Provision of a new vehicular access point to the new block and a roof helipad
Portfolio

Redevelopment of
Prince of Wales Hospital - Phase 2 (Stage 1)
Sha Tin

Area  ~ 190,000 m² CFA

Scope of Works

- Demolition of 4 Staff Quarters Blocks, Nursing School Lecture Theatre and Hospital old buildings
- Construction of a new in-patient extension block
  - Provision of around 450 additional beds
  - Major acute services
  - Additional operating theatres
  - Expanded radiology
  - Cardiac catheterization laboratories
Portfolio

Redevelopment of
Kwong Wah Hospital
Yau Tsim Mong

Area ~ 270,000m² CFA

Scope of Works

• Demolition of all existing buildings in phases except Tsui Tsin Tong Out-patient Building and Tung Wah Museum

• Enhancement of the museum setting

• Construction of a new hospital complex for expansion of facilities including:
  - Major ambulatory care centre
  - 350 additional beds
  - Expanded specialist out-patient department
  - Additional operating theatres
  - Expanded diagnostic and radiology services
Portfolio

Expansion of
United Christian Hospital
Kwun Tong

**Area** ~ 200,000m² CFA

**Scope of Works**

- Demolition of 3 existing blocks and Block P (Low)
- Construction of a new ambulatory block
  - Expanded specialist out-patient department
  - A new oncology centre
- Extension and renovation of Block S for expansion of facilities including:
  - Additional 560 beds
  - Additional operating theatres
  - Intensive care unit
Extension Operating Theatre Block for Tuen Mun Hospital
Tuen Mun

Area  ~ 34,000m² CFA

Scope of Works

- Construction of a new block adjacent to the existing Operating Theatre Block to accommodate:
  - 20 x OTs and 2 x Delivery OTs
  - Expanded A&E and radiology departments
  - Day surgery / delivery suites
  - Intensive care unit and isolation facilities
  - Expanded Central Sterile Supplies Department
Portfolio

Redevelopment of
Grantham Hospital - Phase 1
Southern District

Area  ~ 93,000m² CFA

Scope of Works

- Demolition of Senior Staff Quarters, Nurse Quarters Block 1 and Block 2
- Construction of a new block to accommodate
  - In-patient services
  - Oncology centre
  - Ambulatory care centre
  - Research facilities
  - Ancillary and other services
Portfolio

Redevelopment of

**Kwai Chung Hospital**

Kwai Tsing

**Area**  ~ 160,000m² CFA

**Scope of Works**

- Phased demolition of existing hospital buildings
- Construction of a new hospital campus with inpatient wards and rehabilitation facilities for delivery of a full range of psychiatric services
- Provision of 1,000 beds upon completion of the project
Portfolio

Redevelopment of
Our Lady of Maryknoll Hospital
Wong Tai Sin

**Area**  ~ 48,000 m² CFA

**Scope of Works**

- Redevelopment of North and East wings into a new block
- Refurbishment of the Out Patient Building
- Provision of:
  - Inpatient care services
  - Ambulatory services
  - Day surgery services
  - Endoscopy unit and electro-diagnostic unit
  - Cardiac diagnostic & care centre
  - Renal dialysis centre
Portfolio

Expansion of **Lai King Building** of Princess Margaret Hospital
Kwai Tsing

**Area**  ~ 60,000m² CFA

**Scope of Works**

- Construction of a new extension block
  - Provision of around 400 additional beds
  - Expansion of diagnostic radiology service
  - Provision of a geriatric day hospital with enhanced rehabilitation services
Portfolio

Expansion of
North District Hospital
Sheung Shui

Area  ~ 100,000m² CFA

Scope of Works

- Expansion of the existing hospital
  - Provision of additional 600 beds
  - Increased capacity of specialist out-patient clinic attendances
Development of Community Health Centres

- Provision of general out-patient services, multi-disciplinary support services and patient empowerment services in a community setting

North District

Ex-Mong Kok Market Site

Shek Kip Mei
Summary

10-Years...

Portfolio

1 New Acute Hospital
11 Redeveloped / Expanded Hospitals
3 Community Health Centres
1 Support Services Centre

Complexity

Teaching Hospital – Community Hospital

Total CFA

~1.8 Million m²
Huge Opportunity
+
Huge Challenge

So how do we deliver it?
Delivery of the 10-Year Hospital Development Plan
Delivery of the 10-Year Hospital Development Plan

Background

Hospital Categorization

Hospital Authority Ordinance categorizes all Hong Kong hospitals into 2 broad categories:

**Schedule 1**  
Hospitals Built on **Government** Property

*Examples:*
- Queen Mary Hospital
- New Acute Hospital (Kai Tak)
- Prince of Wales Hospital

**Schedule 2**  
Hospitals Built on **Non-Government** Property

*Examples:*
- Kwong Wah Hospital
- United Christian Hospital
- Grantham Hospital
Delivery of the 10-Year Hospital Development Plan

Background

Historically

The procurement route and process would vary according to the hospital categories

<table>
<thead>
<tr>
<th>Schedule</th>
<th>Hospitals Built on</th>
<th>Works Agent</th>
<th>Approval &amp; Consent</th>
<th>Independent Design Checker</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Government Property</td>
<td>No</td>
<td>No</td>
<td>Yes</td>
</tr>
<tr>
<td>2</td>
<td>Non-Government Property</td>
<td>Yes</td>
<td>Yes</td>
<td>No</td>
</tr>
</tbody>
</table>
## Delivery of the 10-Year Hospital Development Plan

### Hospital Development Plan

**Works Agent**

### Projects

<table>
<thead>
<tr>
<th>Schedule 1</th>
<th>Schedule 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redevelopment of Queen Mary Hospital (Phase 1)</td>
<td>New Acute Hospital at Kai Tak Development Area</td>
</tr>
<tr>
<td>Redevelopment of Kwai Chung Hospital</td>
<td>Redevelopment of Prince of Wales Hospital (Phase 2) (Stage 1)</td>
</tr>
<tr>
<td>Community Health Centre in North District</td>
<td>Extension of Operating Theatre Block of Tuen Mun Hospital</td>
</tr>
<tr>
<td>Community Health Centre in Shek Kip Mei &amp; Ex-Mong Kok Market</td>
<td>Expansion of North District Hospital</td>
</tr>
<tr>
<td>Hospital Authority Supporting Services Centre in Tin Shui Wai</td>
<td>Expansion of Lai King Building in Princess Margaret Hospital</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of Kwong Wah Hospital</td>
</tr>
<tr>
<td></td>
<td>Expansion of United Christian Hospital</td>
</tr>
<tr>
<td></td>
<td>Expansion of Haven of Hope Hospital</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of Grantham Hospital, Phase 1</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of Our Lady of Maryknoll Hospital</td>
</tr>
</tbody>
</table>
### Projects

#### By ArchSD
- Redevelopment of Queen Mary Hospital (Phase 1)
- Redevelopment of Kwai Chung Hospital
- Community Health Centre in North District
- Community Health Centre in Shek Kip Mei & Ex-Mong Kok Market
- Hospital Authority Supporting Services Centre in Tin Shui Wai

#### By HA
- New Acute Hospital at Kai Tak Development Area
- Redevelopment of Prince of Wales Hospital (Phase 2) (Stage 1)
- Expansion of Operating Theatre Block of Tuen Mun Hospital
- Expansion of North District Hospital
- Expansion of Lai King Building in Princess Margaret Hospital
- Redevelopment of Kwong Wah Hospital
- Expansion of United Christian Hospital
- Expansion of Haven of Hope Hospital
- Redevelopment of Grantham Hospital, Phase 1
- Redevelopment of Our Lady of Maryknoll Hospital
Delivery of the 10-Year Hospital Development Plan

Hospital Development Plan

Projects

By ArchSD
- Redevelopment of Queen Mary Hospital (Phase 1)
- Redevelopment of Kwai Chung Hospital
- Community Health Centre in North District
- Community Health Centre in Shek Kip Mei & Ex-Mong Kok Market
- Hospital Authority Supporting Services Centre in Tin Shui Wai

By HA
- New Acute Hospital at Kai Tak Development Area
- Redevelopment of Prince of Wales Hospital (Phase 2) (Stage 1)
- Extension of Operating Theatre Block of Tuen Mun Hospital
- Expansion of North District Hospital
- Expansion of Lai King Building in Princess Margaret Hospital
- Redevelopment of Grantham Hospital, Phase 1

Conventional method:
- Design
- Main Contract tender
- Construction

Works Agent
Procurement Principles
Goal

- International Best Practice
- Innovative Designs
- Efficient and effective planning
- State-of-the-art technology

Process

- Open and fair competition
- Probity and Ethics in procurement
- Align with government tendering procedures
- World Trade Organization Compliant
HA Procurement Routes
HA Procurement Routes

Projects procured in 2 routes

**Route 1 [PMC Route]**
- Appointment of Project Management Consultant
- Each consultant individually appointed
- Main Contractor directly appointed

**Route 2 [Architectural Lead]**
- Appointment of Architect as Lead Consultant by HA
- Sub-consultants are directly appointed by Architect
- Main Contractor directly appointed
## Delivery of the 10-Year Hospital Development Plan

**Hospital Development Plan**

**Works Agent**

### Projects

<table>
<thead>
<tr>
<th>By ArchSD</th>
<th>By HA</th>
</tr>
</thead>
<tbody>
<tr>
<td>Redevelopment of Queen Mary Hospital (Phase 1)</td>
<td>New Acute Hospital at Kai Tak Development Area</td>
</tr>
<tr>
<td>Redevelopment of Kwai Chung Hospital</td>
<td>Redevelopment of Kwong Wah Hospital</td>
</tr>
<tr>
<td>Community Health Centre in North District</td>
<td>Redevelopment of Prince of Wales Hospital (Phase 2) (Stage 1)</td>
</tr>
<tr>
<td>Community Health Centre in Shek Kip Mei &amp; Ex-Mong Kok Market</td>
<td>Extension of Operating Theatre Block of Tuen Mun Hospital</td>
</tr>
<tr>
<td>Hospital Authority Supporting Services Centre in Tin Shui Wai</td>
<td>Expansion of North District Hospital</td>
</tr>
<tr>
<td></td>
<td>Expansion of Lai King Building in Princess Margaret Hospital</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of Grantham Hospital, Phase 1</td>
</tr>
<tr>
<td></td>
<td>Redevelopment of Our Lady of Maryknoll Hospital</td>
</tr>
</tbody>
</table>
Delivery of the 10-Year Hospital Development Plan

Hospital Development Plan

Works Agent

Projects

Route 1
[PMC Route]

Route 2
[Architectural Lead]

By HA

New Acute Hospital at Kai Tak Development Area
Redevelopment of Prince of Wales Hospital (Phase 2) (Stage 1)
Extension of Operating Theatre Block of Tuen Mun Hospital
Expansion of North District Hospital
Expansion of Lai King Building in Princess Margaret Hospital

Redevelopment of Kwong Wah Hospital
Expansion of United Christian Hospital
Expansion of Haven of Hope Hospital
Redevelopment of Grantham Hospital, Phase 1
Redevelopment of Our Lady of Maryknoll Hospital
Procurement of Consultancy Services Under PMC Route

[ Route 1 ]
Procurement of Consultancy Services Under PMC Route

Contractual Relationship & Scope

**Project Management Consultant**
- Client Rep
- Building Information Modelling (BIM) Checker
- Project Management
- Risk Management
- Programming
- Ensure Project meets HA objectives

**Architect**
- Architectural Services
- Authorized Person
- Design Coordinator
- Healthcare Planning
- Traffic Engineering
- Façade Engineering
- Arch BIM
- BIM manager
- Landscape Arch Services
- BEAM Adviser
- Way-finding Consultancy
- Environmental Consultancy
- Heritage Consultancy
- Acoustic Consultancy

**Structural & Civil Engineer**
- Civil Engineering
- Geotechnical Engineering
- Vibration Consultancy
- SE BIM

**Building Services Engineer**
- Building Services Engineering
- Fire Engineering
- BS BIM

**Quantity Surveyor**
- Cost Control
- Contract Adviser
- QS BIM

* Schedule 1 hospitals only

Contractual Relationship
Procurement of Consultancy Services Under PMC Route

**Functional Relationship**

PMC works very closely with HA to define project strategies and objectives.

- **Architect**
- **Structural & Civil Engineer**
- **Building Services Engineer**
- **Quantity Surveyor**
Procurement of Consultancy Services Under PMC Route

Functional Relationship

PMC Leads and manages the team

- Architect
- Structural & Civil Engineer
- Building Services Engineer
- Quantity Surveyor

Leadership
Team Management
Risk Management
Quality Management
Task Management
Resource Management
Issues Management

Functional Relationship
Introduction of Building Information Modelling (BIM)
Building Information Modelling (BIM)

Consultancy

Goal
• To facilitate End Users engagement process
• To do spatial coordination to reduce clash and discrepancies
• To assist tender preparation & quantity takes off

Extent
• 3D model to allow clash analysis with approximate size, shape and location of major building components
• Anticipated Level of Details LOD 200/300

Main Contract

Goal
• Contractor develops tender BIM model for the use in construction
• Produce As-built BIM model for Facility Management
Building Information Modelling (BIM)

Consultant BIM Roles

Project Management Consultants
- Establishes BIM policy through BIM Execution Plan

Project Management Consultant BIM Policy / checker
- Administer BIM process
- Report clash analysis
- BIM Execution Plan

Architect
BIM Lead & BIM Manager
- Produce & update architectural model & drawings
- Consolidate models
- Lead the coordination

Structural & Civil Engineer
BIM Lead
- Produce & update structural model & drawings

Building Services Engineer
BIM Lead
- Produce & update building services model & drawings

Quantities Surveyor
BIM Lead
- Produce quantity takes off from model & drawings
Consultancy Tenders

Consultancy Tender Invitation

Project Management Consultant

- Open Tender
- For Schedule 1 Hospitals, Independent Design Checker must be a Band I Architectural Consultant on the List of the Architectural and Associated Consultants Selection Board (AACSB) to take up the role of Building Department/Statutory Compliance
- Sub-consultants permitted; Joint Venture not permitted
Consultancy Tenders

Design / Survey Consultants Tender Invitation

Architectural Consultant
Quantity Surveying Consultant
Structural & Civil Engineering Consultant
Building Services Consultant

- Selective Tendering
- All Band I on the List of The Architectural and Associated Consultants Selection Board (AACSB)
- Sub-consultants permitted; Joint Venture not permitted
Multi-Disciplinary Tenderers

- Multi-disciplinary firms are permitted to tender and be awarded any or all of the following Agreements:
  - Architectural
  - Structural & Civil Engineering,
  - and
  - Building Services

- Firms awarded the following Agreements cannot be awarded any of the other agreements to avoid conflict of interest:
  - Project Management Consultant
  - Quantity Surveyor Agreement
Consultancy Assessment

Two Envelope

Two envelope Assessment with Screening Criteria

- Screening Criteria:
  (Only Tenders who pass the screening criteria will be considered for assessment)
- 70% Technical Proposal
- 30% Fee Proposal
Consultancy Assessment

Screening Criteria

Proven record of COMPLETING ONE

- Major hospital project (at a certain value) in Hong Kong or elsewhere / public or private sector

  OR

- Building project of similar complexity and scale (at a certain value) in HK or elsewhere / public or private sector

Reflecting complex building services.

<table>
<thead>
<tr>
<th>Complex</th>
<th>YES</th>
<th>NO</th>
</tr>
</thead>
</table>

Example

Large Institutional Buildings

Residential Housing Blocks
Consultancy Assessment

Marking Scheme

70% Technical Proposal

• Consultant’s Experience
  Hong Kong, International

• Response to the Brief
  Understanding of key objectives, identification of project constraints and innovative design

• Approach to Cost Effectiveness and Sustainability
  Energy efficiency, green initiatives

• Methodology and Program
  Efficient and effective planning, master program, risk management,

• Staffing
  Staff experience, qualification and resourcing
Consultancy Assessment

Marking Scheme

70% Technical Proposal

Overall and sectional passing mark will be set.

Those failing to pass Technical assessment will not be considered further.
Consultancy Assessment

Scores

Agreements awarded to the conforming tender with the highest combined score calculated:

\[
\text{30} \times \frac{\text{The lowest tender fee}}{\text{The tender fee of the tenderer}} + \text{70} \times \frac{\text{The tenderer’s score}}{\text{The highest technical score}}
\]
Procurement of Contractors for Main Contracts
Procurement of Contractors for Main Contracts

Contractual Relationship

Contractor
Procurement of Contractors for Main Contracts

Functional Relationship

- Project Management Consultant
- Contractual Relationship
- Contractor
- Architect / Health Planner
- Structural & Civil Engineer
- Building Services Engineer
- Quantity Surveyor
- Resident Site Staff

Functional Relationship
Procurement of Contractors for Main Contracts

Tender Invitation

Main Contractor

• Selective Tendering

• Normally Confirmed Group C of Category of Buildings on the List of Approved Contractors for Public Works published by DEVB

• Joint Venture permitted (must have leader with major share holding)
Procurement of Contractors for Main Contracts

Contractors Tenderer Assessment

Formula Approach with Screening Criteria

- **60%** Price
- **40%** Past Performance
Contractors Tender Assessment

Screening Criteria

Proven record of COMPLETING ONE

- Major hospital project (at a certain value) in Hong Kong or elsewhere / public or private sector

OR

- Building project of similar complexity and scale (at a certain contract value) with 20% value in building service in HK or elsewhere

AND

- The tenderer or his proposed specialist sub contractors possess all licenses, permits and other authorization required to perform the specialist works in accordance with all applicable laws and regulations
Contractors Tender Assessment

Marking Scheme – Formula Approach

• **40%** Past Performance

  Performance Score:
  
  Both performance and safety rating retained by:
  
  DEVB (the latest score), and
  
  HA (the latest available score under the same category will be considered on equal basis)

• **60%** Price (Lump Sum based on Bill of Quantities)

\[
\text{the lowest Tender Price among those conforming Tenders} \times 60 + \text{the Tenderer's performance score} \times 40
\]

\[
\text{the Tender Price of the Tenderer} \times 60 + \text{the highest performance score among those conforming Tenders} \times 40
\]
Tentative Tender Invitation Dates
Tentative Tender Invitation Dates

Timeline

Planned for 2016

Consultancy

- New Acute Hospital (Kai Tak)
Consultancy Agreements & Preparatory Works
Tentative Tender Invitation Dates

Timeline

Planned for 2017

**Consultancy**
- Prince of Wales Hospital (Stage 1, Phase 2) Consultancy Agreements & Preparatory Works

**Works**
- Queen Mary Hospital Design & Build Main Contract
- Tuen Mun Hospital Operating Block Main Works
- New Acute Hospital (Kai Tak) Foundation Works
Tentative Tender Invitation Dates

Timeline

Planned for 2018

Works

• Kwong Wah Hospital (Phase 1)
  Superstructure Works

• United Christian Hospital (Ambulatory Block and Block S Extension)
  Superstructure Works
**Tentative Tender Invitation Dates**

**Timeline**

<table>
<thead>
<tr>
<th>Year</th>
<th>Works</th>
</tr>
</thead>
<tbody>
<tr>
<td>2016</td>
<td>Grantham Hospital (Phase 1) Demolition, site formation and foundation works</td>
</tr>
<tr>
<td>2017</td>
<td>Grantham Hospital (Phase 1) Superstructure works</td>
</tr>
<tr>
<td>2018</td>
<td>Kwong Wah Hospital (Phase 2) Demolition, site formation, foundations and superstructure works</td>
</tr>
<tr>
<td></td>
<td>Lai King Building in Princess Margaret Hospital Main works</td>
</tr>
</tbody>
</table>

**Beyond 2018**

**Consultancy**

- Grantham Hospital Consultancy Agreements & Preparatory Works
- Our Lady of Maryknoll Hospital Consultancy Agreements & Preparatory Works
- North District Hospital Consultancy Agreements & Preparatory Works

**Works**

- Grantham Hospital (Phase 1) Demolition, site formation and foundation works
- Grantham Hospital (Phase 1) Superstructure works
- Kwong Wah Hospital (Phase 2) Demolition, site formation, foundations and superstructure works
- Lai King Building in Princess Margaret Hospital Main works
Beyond 2018

**Works...continued**

- New Acute Hospital (Kai Tak)
  Main works
- **Our Lady of Maryknoll Hospital**
  Substructure works
- **Our Lady of Maryknoll Hospital**
  Superstructure works
- North District Hospital
  Main works
- Prince of Wales Hospital (Stage 1, Phase 2)
  Substructure works
- Prince of Wales Hospital (Stage 1, Phase 2)
  Superstructure works
- United Christian Hospital (Blocks P & S)
  Main works
Conclusion

- Hospital Authority Hospital 10-year Development Plan information available on:
  
  http://www.ha.org.hk

- You can communicate with the Hospital Authority on the 10-Year Hospital Development Plan via email:
  
  ha10yrhdp@ha.org.hk

- Further tender briefings will be arranged

- Today’s presentation will be uploaded to HA Website

- Monitor the Hospital Authority’s website for exact tender notices
Q & A
Please clearly declare in English your:

1. Name
2. Company
3. Question
Thank you & good luck!