

COMPANY  
**Architectural Services Department,  
 HKSAR Government**

PROJECT  
**Fishermen Cultural Centre**

LOCATION  
**Aberdeen Promenade**

TYPE  
**Park facilities**

# Pioneering BIM-assisted Statutory Submission



## BIM PARTNERS INVOLVED

**Advanced Construction Information  
 Development Limited**

**Building Information Technology  
 Limited**

## About Architectural Services Department, HKSAR Government

The Architectural Services Department (ArchSD) of the Government of Hong Kong SAR is committed to providing quality services to the public. It has been performing monitoring and advisory services, and development and upkeep of government-owned buildings and facilities, since 1986. ArchSD promotes best practices in the building industry, with quality professional advisory services to ensure the quality and sustainable development of community facilities.

## The Project

This was a Signature Project proposed in Southern District in 2014, to capitalise on the unique characteristics of Aberdeen and promote tourism. The project was proposed by Home Affairs Department (HAD) with the support of Southern District Council and Home Affairs Bureau.

## The Challenges

It was proposed that the project would be built within existing park facilities. It involves complex construction sequence including permanent strengthening works, partial demolition of existing buildings and construction of new structures.

Additionally, utilisation of BIM technology in a statutory submission is still fresh to the local building industry, as conventional submission is a long-established administrative procedure for checking compliance with building standards and codes. The project team aimed to explore and expedite the design, documentation and submission process with BIM, making the project a pioneer BIM-assisted Statutory Submission.

## The Solution

In this project, ArchSD experimented with statutory submissions for the first time, by using 2D drawings generated from a BIM model – including general building plan, structural plan, drainage and Fire Services Department submissions. Discrepancies between drawings in the same sets of submissions were eliminated. BIM-generated drawings successfully fulfilled submission requirements of different authorities giving approval, yet can equally be used for consecutive collaboration in design consideration and buildability.

## The Benefits

The BIM model allows project team members to examine the relationship between the existing and new structures in an unprecedented manner, assisting evaluation of various design solutions through several scenario analyses. It facilitates the design with its accurate identification of extent of the existing structure to be demolished, early identification of conflicts between existing and proposed building elements – e.g. conflict between existing footing and proposed drainage run – and, through construction simulation, estimation of the stability of the existing structure during different construction stages. BIM allows the project team to utilise 3D visualisation, which helps to make sound decisions in the design development process.

## Better with BIM

The BIM model contains a central source of information from which drawings are extracted, which provides a better alternative to traditional design. Unlike 2D monochromatic drawings created in traditional manner, rather than wasting resources in checking consistency of individual drawings, effort is better spent in ensuring the BIM model is a fair representation of the design.

Additionally, BIM can accurately pass applicable and consistent information from the design stage to the construction stage and then to the maintenance stage. It is also a very effective tool for enhancing communication with stakeholders in different professions, who have varying visual and technical expertise.



BIM model was linked to an architectural visualization software for real-time 3D demonstrative walkthrough, professional rendering of images and animations  
Image courtesy of Architectural Services Department, HKSAR Government



In early design stage, traditional photo montage was composed by architect to highlight the impression of the project  
Image courtesy of Architectural Services Department, HKSAR Government



BIM model was sent to modeling professional in production of large scale model for S16 submission to Town Planning Board  
Image courtesy of Architectural Services Department, HKSAR Government



BIM model facilitated project team to explore the best design option and be more responsive to the local community  
Image courtesy of Architectural Services Department, HKSAR Government