

Replacement and Rehabilitation of Water Mains In Hong Kong

INTRODUCTION

Atkins has played a major role in the 15-year water mains replacement and rehabilitation programme for the Hong Kong Government, Water Supplies Department (WSD). The programme includes replacing / rehabilitating (R&R) some thousands of kilometres of both fresh and salt water mains to minimise leakage and prevent further deterioration of the water supply networks.

Atkins initially undertook the Asset Management Study for WSD in the late 1990's which led to the development of the R&R programme and since that time have had a major role in the investigation, design and construction supervision of over 560km of water mains throughout Hong Kong, including:

- Stage 1 Phase 1 Kowloon (2000 – 2008), comprising about 160km of water mains located in the densely populated urban areas in New Territories South and Kowloon.
- Stage 1 Phase 2 Hong Kong & Islands (2004 – 2010), comprising replacement and rehabilitation of about 66km of water mains on Hong Kong Island.
- Stage 3 Kowloon (2006 – 2013), comprising another 340km of water mains in Kowloon.



OUR SOLUTION

The water mains range from primary trunk mains, as large as 1200mm in diameter, to service pipes and consumers' premises connections as small as 20mm in diameter. For these packages Atkins has relied on our in-house multidisciplinary services for site investigation, detailed design, development of the specification, tender preparation and evaluation, trenchless rehabilitation, traffic impact assessment, environmental review, pipeline condition assessment, project coordination and programming, risk assessment, contract management, site supervision, public liaison and consultation.

OUR APPROACH

To minimise traffic disruption and environmental nuisance to general public, innovative trenchless rehabilitation techniques have been adopted. Fully coordinated designs have been produced and the works are being constructed safely and with minimum disruption to the existing water supplies system, traffic, and general public. Particular care has been taken to minimise impacts to consumers and a strong liaison team was formed to liaise with the stakeholders in the area to minimise complaints and to respond promptly to enquiries.

OUTCOMES

Atkins has played an instrumental role in establishing the framework for Hong Kong's water supply network and have strengthened the water supply network in Hong Kong through the use of innovative design and cost effective solutions.