

Appendix: An Overview of Drainage Development in Hong Kong

Year	Notable Developments
1854	The Government's first identification of local drainage and sewerage needs
1860	Completion of Bowrington Canal (600 ft long, 90 ft wide), the first nullah
1882	Hong Kong's first study report on sanitation by Sir Osbert Chadwick
1891	Establishment of the Water and Drainage Department under the Public Works Department
1902	Chadwick's third visit to Hong Kong for a sanitation study followed by his recommendation of separate systems for stormwater and sewage
1906	Construction of the first water storage tank in Blake Garden
1908	The first major sewer rehabilitation works in Connaught Road
1911	The first use of sewers for sewage discharge into Craigmin Road
1924	Completion of the first stormwater drain from Wan Chai Road to the harbour-front
1951	Successive decking of urban nullahs for road construction and development
1956	Commissioning of the sewage screening plant in Anchor Street as the first large sewage treatment works
1971	Release of a report entitled <i>Marine Investigation into Sewage Discharges: Brief Report</i> setting out the sewage treatment and disposal strategy for Hong Kong
1974	Commissioning of the first pilot secondary sewage treatment works in Shek Wu Hui
1975	Commissioning of the first secondary sewage treatment works (interim) in Sha Tin
1979	Commissioning of the Tai Po Sewage Treatment Works
1980	Enactment of the Water Pollution Control Ordinance
1982	Inclusion of the Shenzhen River Regulation Project in the agenda Commencement of the first flood prevention study for the northwestern New Territories Commissioning of the Sha Tin Sewage Treatment Works, the largest secondary sewage treatment works in Southeast Asia
1986	Establishment of the Environmental Protection Department tasked with sewerage planning Launch of the Tolo Harbour Action Plan to mitigate the water pollution in Tolo Harbour Establishment of the Drainage (Design) Division, Drainage (Construction) Division, Urban Drainage Division and New Territories Drainage Division under the Civil Engineering Office of the Civil Engineering Services Department
1987	Declaration of the first water control zone in Tolo Harbour Commencement of the first Sewerage Master Plan for East Kowloon
1988	Commissioning of the first village flood protection scheme in Sik Kong Wai
1989	Establishment of the Drainage Services Department Formulation of the Strategic Sewage Disposal Scheme, later renamed as the Harbour Area Treatment Scheme (HATS)
1990	Completion of the Territorial Land Drainage and Flood Control Strategy Study – Phase I
1993	Completion of the Territorial Land Drainage and Flood Control Strategy Study – Phase II
1994	Introduction of the Sewage Services Charging Scheme to implement the "polluter pays" principle with the charges depending on the sewage volume and pollution level Enactment of the Land Drainage Ordinance Commencement of Drainage Master Plans and implementation of proposed improvement works in stages Commencement of construction works for HATS Stage 1
1995	Commissioning of the Tolo Harbour Effluent Export Scheme Commissioning of the Stanley Sewage Treatment Works, the first secondary sewage treatment works built in a cavern in Asia
1997	Completion of the Territorial Land Drainage and Flood Control Strategy Study – Phase III Commissioning of the Stonecutters Island Sewage Treatment Works, the first chemically-enhanced primary sewage treatment works in Hong Kong Completion of the Shenzhen River Regulation Project Stage 1

Appendix: An Overview of Drainage Development in Hong Kong (Continued)

Year	Notable Developments
1998	Commencement of the West Kowloon Drainage Improvement Scheme
2000	Completion of the Shenzhen River Regulation Project Stage 2
2001	Completion of HATS Stage 1 Commencement of construction works for the Tai Hang Tung Stormwater Storage Tank Commencement of construction works for the Kai Tak Transfer Scheme The pioneer incorporation of an engineered wetland into the flood prevention works in San Tin
2004	Commissioning of the Tai Hang Tung Stormwater Storage Tank, the first of its kind in urban areas Completion of the Kai Tak Transfer Scheme
2005	Decking of 16 nullahs for environmental improvement as proposed in the Policy Address Commissioning of the Ngong Ping Sewage Treatment Works, the first tertiary sewage treatment works with water reclamation facilities in Hong Kong
2006	Commencement of a pilot scheme on reclaimed water at the tertiary sewage treatment works in Ngong Ping Completion of the Shenzhen River Regulation Project Stage 3 Completion of the Yuen Long Bypass Floodway Commencement of construction works for the Sheung Wan Stormwater Pumping Station Completion of the Ping Yuen River Training Works Opening of the first sewage treatment information centre at the Stonecutters Island Sewage Treatment Works
2007	Commencement of construction works for the Hong Kong West Drainage Tunnel Commencement of construction works for the Tsuen Wan Drainage Tunnel
2008	Commencement of construction works for the Lai Chi Kok Drainage Tunnel Commencement of Drainage Master Plan Review Studies for various districts in stages
2009	Commissioning of the Sheung Wan Stormwater Storage Scheme Commissioning of the new Emergency Control Centre
2010	Commissioning of advance disinfection facilities at the Stonecutters Island Sewage Treatment Works under HATS Stage 2A Elimination of all major flooding blackspots in Hong Kong Commissioning of the water reclamation facilities and information centre at the Sha Tin Sewage Treatment Works Commencement of construction works for the Provision of Interception Facilities at Kowloon Bay stormwater box culvert
2011	Commencement of construction works for the Happy Valley Underground Stormwater Storage Scheme Completion of the Drainage Master Plan Review Studies for Yuen Long, North District and Happy Valley Commencement of the River Flood Risk Study in stages
2012	Commissioning of the Hong Kong West Drainage Tunnel Commissioning of the Lai Chi Kok Drainage Tunnel Completion of the Improvement of Fuk Man Road Nullah in Sai Kung, the first project under the new engineering contract (NEC) Commencement of construction works for the Kai Tak River Improvement Works Commencement of the feasibility study on the relocation of the Sha Tin Sewage Treatment Works to caverns Completion of the River Flood Risk Study, Stage 1
2013	Commissioning of the Tsuen Wan Drainage Tunnel Commencement of construction works for the Shenzhen River Regulation Project Stage 4 Commissioning of the new information centre at the Sha Tin Sewage Treatment Works
2014	Commissioning of the Butterfly Valley Road Pet Garden atop the stilling basin of the Lai Chi Kok Drainage Tunnel Launch of DSD Eco-channels Database Management System Completion of the Provision of Interception Facilities at Kowloon Bay stormwater box culvert Completion of the Upgrading of Pillar Point Sewage Treatment Works, the first project of its kind under the design-build-operate (DBO) contract DSD International Conference on "Sustainable Stormwater and Wastewater Management"

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Interviewees:

Mr Chan Hok-fung	Vice Chairman of Central and Western District Council
Mr Chan Kam	a Tai O resident
Dr Cheng Luk-ki	Division Head of Scientific Research and Conservation of Green Power
Mr Cheung Hoi-ping	Vice-chairman of the Joint Association of Traditional Dragon Boats in Tai O, Hong Kong
Mr Fan Sum-kee	Chairman of the Joint Association of Traditional Dragon Boats in Tai O, Hong Kong
Professor Jim Chi-yung	Chair Professor of the Department of Geography of the University of Hong Kong
Mr Lam Hon-wah	Director of the Nam Pak Hong Association
Professor Lee Hun-wei Joseph	Vice President for Research and Graduate Studies of the Hong Kong University of Science and Technology
Ms Leung	a Tai O resident
Mr Liu Hing-hung	Indigenous Inhabitant Representative of Sheung Shui Heung
Mr Mak Ching-po	Chairman of the Hong Kong Dried Seafood and Grocery Merchants Association
Mr Ng Cheng-cheong	Vice-chairman of the Joint Association of Traditional Dragon Boats in Tai O, Hong Kong
Mr Ng Shui-ching	Indigenous Inhabitant Representative of Mui Tsz Lam Village
Ms Sia Siu-ping	Resident Engineer for the Water and Urban Development team of AECOM Asia Company Limited (Hong Kong)
Mr Wong Dong-keung	Resident Representative of Ma Tin Tsuen
Mr Wong Man-chiu	Honorary Secretary of the Hong Kong Amateur Swimming Association
Ms Wong Shau-ping	a Wan Chai resident

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