

Have 20+ years of professional experience in engineering project life cycle, especially expertise in water industry with diverse professional and academic qualifications; and have demonstrated ability to manage teams and collaborate with multi-discipline in complex projects and achieve objectives in engineering.

Professional Qualifications

2023	CIC-Certified BIM Manager Construction Industry Council (CIC), Hong Kong
2023	BSI Project Information Professional British Standard Institution
2021	Certified NEC Professional Chartered ICES NEC Register
2021	Chartered Engineer (CPEng) - Mechanical Engineering & Project Management (MIEAust APEC Engineer IntPE(Aus)) Engineers Australia
2019	Registered Professional Engineer (RPE) - Mechanical (MCL) Engineer Registration Board
2018	Member (MHKIE) - Mechanical (MCL) The Hong Kong Institution of Engineers
2017	Chartered Engineer (CEng MIMechE) The Institution of Mechanical Engineers

Education

2025	HKIE Adjudication Training School of Law, City University of Hong Kong
2024	Certificate of Marketing Principles University of South Australia
2023	Project Management Professional Institution of Mechanical Engineers
2023	BSI BIM Professional Qualification Training, BIM British Standard Institution
2015 – 2022	Certificate of Higher Education in Laws The University of London
2021	Professional Certificate for Building Information Modelling (BIM) Manager, Building Construction Technology Hong Kong Institute of Construction
2021	Certified NEC ECC Professional Training Course BK SURCO
2017	Certificate of Computational Intelligence and Operational Water Management UNESCO-IHE Institute for Water Education, the Netherlands
2009 – 2012	Master of Science in Environmental Engineering The University of Hong Kong
2003 – 2006	Bachelor of Engineering (Honours) in Mechanical Engineering Hong Kong University of Science and Technology

Job History

2021 – Present	Head of Estimating Department Bestwise Envirotech Limited, subsidiary of SFK Construction Holdings Limited Project securing, marketing and sales and project management, commercial strategy formulation, client relationship management, supply chain management, subcontracting management, brand building, partnership management, project estimation and budgeting, project programming, tender strategy formulation, technical proposal formulation, project management, digitalisation, lead design, supervise and implement in project
2019 – 2020	General Manager Philia International Trading Limited & Philia Engineering Limited
2017 – 2019	Senior Engineer China State Mechanical and Electrical Engineering Limited, China State Group
2010 – 2017	Project Engineer Kingsford Environmental (HK) Limited, Sewage Treatment Specialist in Hong Kong
2008 – 2010	Assistant Engineer Hitachi Elevator Engineering (Hong Kong) Limited
2006 – 2008	Cadet Engineer Hong Kong Productivity Council

Estimation Experience (As of 2024)

1. DSD Contract No. DE/2023/05
Expansion of Floating Photovoltaic System at San Tin Polder
2. DSD Contract No. DEMP/2023/29
Provision of Online Digital Twin for Sewage Treatment Process at Membrane Bio-reactor No.1 & No.2 of Shek Wu Hui Sewage Treatment Works
3. DSD Contract No. DE/2023/01
Provision of Electrical and Mechanical Equipment for Sha Tin Intermediate Sewage Pumping Station
4. DSD Contract No. 2023T085
Upgrading of Sludge Pipe at Sludge Holding Tanks at Stonecutters Island Sewage Treatment Works
5. DSD Contract No. DE/2023/08
Site Trial of New Type Screen Plants and Odour Suppressing Agent at Preliminary Treatment Works
6. WSD Contract No. 16/WSD/23
Provision of Mechanical and Electrical Equipment for Remote Operation of Sham Tseng Water Treatment Works
7. DSD Contract No. DC/2022/01
Drainage Improvement Works in Tsim Sha Tsui
8. CEDD Contract ND/2024/06
Fanling North New Development Area, Remaining Phase: Fresh Water and Flushing Water Service Reservoirs and Associated Works
9. CEDD Contract No. ND/2024/07
Fanling North New Development Area, Remaining Phase: Site Formation and Infrastructure Works (East)

10. DSD Contract No. DEMP/2022/54
Provision of Coarse Screen and associated E&M facilities
at Tung Chung Sewage Pumping Station
11. CEDD Contract No. YL/2023/04
Hung Shui Kiu/ Ha Tsuen New Development Area Second Phase Development – Contract 4 – Site
Formation and Engineering Infrastructure Works
12. DSD Contract No. DC/2022/01
Drainage Improvement Works in Tsim Sha Tsui
13. CEDD Contract No. NL/2023/10
Tung Chung New Town Extension – Infrastructure Works at Tung Chung Valley, Yu Tung Road and
Ma Wan Chung
14. DSD Contract No. DC/2024/07
Sha Tin Park Stormwater Storage Scheme and Tai Po Old Market Stormwater Storage Scheme
15. DSD Contract No. DC/2024/08
Kwun Tong Promenade Stormwater Storage Scheme
16. CEDD Contract No. NL/2023/11
Tung Chung New Town Extension – Infrastructure Works at Tung Chung Valley, Phase 2
17. DSD Contract No. DE/2023/03
Provision of Electrical and Mechanical Installations for New Sha Tau Kok Stormwater Pumping Station
18. DSD Contract No. DE/2024/07
Upgrading of Screw Pump No. 5 for To Kwa Wan Preliminary Treatment Works
19. DSD Contract No. DE/2024/01
Upgrading of Ma On Shan Sewage Pumping Station
20. DSD Contract No. DE/2024/00
Hung Shui Kiu Effluent Polishing Plant Phase 1 – E&M Works and Biological Treatment Building

Water Industry Related Experience

2021 – 2025 **DSD Contract No. DE/2018/04 (NEC Contract Option C)**
**Shek Wu Hui Effluent Polishing Plant – Main Works Stage 1 – E&M Works for Sewage
Treatment Facilities, in Northern Metropolis Development, Hong Kong**

Technology involved: Vortex Grid Removal, Laminar Plate Settler, 4-Stage MBR Process for Biological Nitrogen Removal with Membrane Filtration for Solid-Liquid Separation, PV panel system, and Chemical Dosing System, 3D Design Review, 3D Coordination, Cost Estimation, Engineering Analysis, Space Programming, 4D Modelling, Drawing Generation, Virtual Reality, BIM Collaboration, Electronic Document Management System, Digital Works Supervision System.

Duty: lead and supervise engineering team, BIM team, suppliers and subcontractor implement the design and implementation in project including design, procurement, delivery, storage, installation, quality assurance, and liaise with stakeholders, such as DSD, *Project Manager* delegate, *Supervisor*, other interfacing contracted parties, and lead and supervise BIM team and BIM specialist implement BIM execution plan with compliance to contract, statutory and guideline in Hong Kong and international standard, ISO19650, and liaise with stakeholders, such as DSD, *Project Manager* delegate, BIM consultant, and BIM team of other interfacing contracted parties.

2017 – 2019 **HKIA Contract No. P561**

North Commercial District Enabling, in Skycity development, Hong Kong

Scope: Plumbing, Drainage, Rain Drainage System and Staff Toilet for underground Airport Automated People Mover Depot for train washing and normal operations

Duty: To lead, supervise and assist engineering team, BIM team, suppliers and subcontractor implement the design phase and construction phase in project including design, procurement, delivery, storage, installation, quality assurance, and liaise with stakeholders, such as HKIA, Project *Manager* delegate, *Supervisor*, other interfacing contracted parties.

HKIA Contract No. C3801

APM and BHS Tunnel on Existing Airport Island, in Skycity development, Hong Kong

Scope: E&M design and build of 2 nos. Pumping Stations (PS12 & SPS20) and 1 nos. Deodorization Unit

Duty: To lead, supervise and assist engineering team, BIM team, suppliers and subcontractor implement the design phase in project including design, procurement, delivery, installation, quality assurance, and liaise with stakeholders, such as HKIA, *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2016 – 2017 **Design, Supply and Installation of Sewage Treatment Plant in Proposed Residential Development at Lot No. 70, Tsing Lung Tau, Hong Kong**

Technology involved: Sequential Batch Reactor (SBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase in project and liaise with stakeholders, such as client and interfacing contracted parties.

2016 – 2017 **CEDD Contract No. CV/2013/08**

Liantang / Heung Yuen Wai Boundary Control Point Site Formation and Infrastructure Works – Contract 6

Scope: Design and Construction of Sewage Treatment Plant

Technology involved; Membrane Bioreactor (MBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase in project and liaise with stakeholders, such as client and interfacing contracted parties.

2016 – 2017 **DSD Pilot Test Project
for Relocation of Sha Tin Sewage Treatment Works to Caverns, Hong Kong**

Scope: Design and Construction of MBBR plant for the pilot test

Technology involved: Moving Bed Biofilm Reactor (MBBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the construction phase in project and liaise with stakeholders, such as DSD, *Project Manager* delegate, *Supervisor* and interfacing contracted parties.

2013 – 2016 **HKIA Contract No. P533
Midfield Concourse Works, in Hong Kong International Airport Hong Kong**

Scope: Design, Supply, Installation, Test and Commissioning of Sewage Treatment Plant, with application of Membrane Bioreactor (MBR) technology and treated water reuse application, Hong Kong

Technology involved: Membrane Bioreactor (MBR), Greywater reuse

Duty: To lead, supervise and assist engineering team, BIM team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as HKIA, *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2012 – 2017 **DSD Contract No. DC/2012/02
Upgrading of Mui Wo Sewage Treatment Works and Village Sewerage at Wang Tong
and Yue Kwong Chuen, in Mui Wo, Hong Kong**

Scope: Design and build of biological sewage treatment facility

Technology involved: Membrane Bioreactor (MBR), 2-stage Nitrogen Removal

Duty: To lead, supervise engineering team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as DSD, *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2012 – 2013 **Design, Supply, Installation, Test and Commissioning of Sewage Treatment Plant at Po Leung Kuk Pak (PLK) Tam Chung Holiday Camp, Hong Kong**

Technology involved: Membrane Bioreactor (MBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as PLK, Project Manager delegate, Supervisor, other interfacing contracted parties.

2012 – 2013 **Design, Supply, Installation, Test and Commissioning of Sewage Treatment Plant at Hong Kong Federation of Youth Group (HKFYG) Outdoor Training Camp, Hong Kong**

Technology: Membrane Bioreactor (MBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as HKFYG, Project Manager delegate, Supervisor, other interfacing contracted parties.

2012 **Design, Supply, Installation, Test and Commissioning of Sewage Treatment Plant at Harrow International School, Hong Kong**

Technology involved: Sequential Batch Reactor (SBR)

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2011 – 2013 **HKIA Contract No. M668
Enhancement Works for Wastewater Treatment Plant, in Hong Kong International Airport**

Technology involved: Membrane Bioreactor (MBR) and Wastewater Reuse

Duty: To lead, supervise and assist engineering team, suppliers and subcontractor implement the design phase, construction phase and commissioning phase in project including design, procurement, delivery, storage, installation, quality assurance, test, and liaise with stakeholders, such as HKIA, *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2010 – 2011 **Process Design, Supply, Fabrication, Installation, Testing & Commissioning of Sewage Treatment Plant, in Yen So Park Economic Development, Vietnam**

Technology involved: Sequential Batch Reactor (SBR)

Duty: To lead, supervise and assist engineering team, supplier, subcontractor and site laboratory team implement the construction phase and commissioning phase in project including procurement, fabrication, delivery, storage, installation, quality assurance, test, laboratory execution and liaise with stakeholders, such as *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

2010 **Design, Supply and Installation of Sewage Treatment Plant at Kwai Chung Logistic Centre**

Technology involved: Sequential Batch Reactor (SBR)

Duty: To lead, supervise and assist engineering team, supplier, subcontractor and site laboratory team implement the construction phase and commissioning phase in project including procurement, fabrication, delivery, storage, installation, quality assurance, test and liaise with stakeholders, such as *Project Manager* delegate, *Supervisor*, other interfacing contracted parties.

Abbreviations

DSD: Drainage Service Department; WSD: Water Service Department, CEDD: Civil Engineering and Development Department; HKIA: Hong Kong International Airport; PLK: Po Leung Kuk; HKFYG: Hong Kong Federation of Youth Group; MBR: Membrane Bioreactor; SBR: Sequential Batch Bioreactor; MBBR: Moving Bed Biofilm Bioreactor

Please feel free to contact me via email at jeffsham@philia.hk to discuss potential collaboration opportunities. For additional information about my professional background, you are also welcome to visit my personal portfolio website at <https://jeffsham.philia.hk>.